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# **ECONOMIC SURVEY**

## **1999 - 2000**

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**GOVERNMENT OF ORISSA**

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# **ECONOMIC SURVEY**

## **1999 - 2000**

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**DIRECTORATE OF ECONOMICS AND STATISTICS,  
PLANNING AND CO-ORDINATION DEPARTMENT  
GOVERNMENT OF ORISSA**

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# CHAPTER 1

## SOCIO-ECONOMIC PROFILE

1.01 The Economic Survey seeks to present a status report on the State's economy, and its strengths and weaknesses. The survey also briefly outlines the strategy adopted by the State and the programmes which have been undertaken to transform an economy characterised by poverty and unemployment, low per-capita income, low capital formation, inadequate exploitation of abundant natural resources, and inadequate development of socio-economic infrastructure into a vibrant economy on the path to self-sustaining economic growth with equity.

### SOCIO-ECONOMIC BACKDROP

1.02 Orissa, comprising 4.74% of India's landmass and with 31.66 million people (1991 census), accounts for 3.74% of the population of the country. Nearly 67% of its population lives in rural areas and depends mostly on agriculture for its livelihood. The State has good resources of minerals including precious and semi-precious stones. It has also abundant water resources. According to the estimate of the Central Ground Water Board, the total replenishable ground water resources from normal recharge in Orissa in 1992 were 16,48,573 hectaremeter. The gross annual draft in 1992 was 1,66,875 hectaremeter. Accordingly 10.12 percent of ground water resources had been harnessed till 1992. The total cultivable land of the State is nearly 65.59 lakh hectare of which only 24.69 lakh hectare were irrigated by the end of 1998-99. Planned exploitation and optimum utilisation of rich mineral, land, water and other resources including human resources holds the key to rapid economic development of the State.

1.03 The State can be divided into ten agro-climatic zones with varied characteristics. Its land can be classified into three categories, low (25.6%), medium (33.6%) and up-lands (40.8%) with various types of soil like red, yellow, red-lemmy, alluvial, coastal alluvial, laterite and black soil etc. with low and medium texture. Characteristics of different agro-climatic zones in Orissa presented in Table 1.1.

Table 1.1

## Agro-climatic Zones in Orissa

Sl No	Agro-climatic zone	Climate	Mean annual rainfall (in mm)	Soil group
1	2	3	4	5
1	North western plateau	Hot and moist	1648	Red and yellow
2	North central plateau	Hot and moist	1535	Red loamy
3	North eastern coastal plateau	Hot and moist sub-humid	1568	Alluvial
4	East and south eastern plateau	Hot and humid	1449	Costal alluvial saline (near the coast line)
5	North eastern ghat	Hot and moist sub-humid	1597	Laterite and brown forest
6	Eastern ghat high land	Warm and humid	1522	Red
7	South eastern ghat	Warm and humid	1522	Red, mixed red and yellow
8	Western undulating	Warm and moist	1527	Black, mixed red and black
9	West central table land	Hot and moist	1527	Red, heavy textured colourous
10	Mid central table land	Hot and dry sub-humid	1421	Red loamy, laterite mixed red and black

## DEMOGRAPHIC PROFILE

1.04 Demographic profile has an important bearing on the development process. The population of Orissa increased from 263.70 lakh in 1981 to 316.60 lakh in 1991. The decennial growth rate of population of Orissa during 1981-91 was 20.06% as against 20.17% in the previous decade. The marginal decline in the growth rate may be attributed to the rise in literacy rate, effective dissemination of the benefits of small family, and the drive launched by the State Government to provide access to family planning measures. The sex ratio in the State i.e. number of females per 1000 males declined from 981 in 1981 to 971 in 1991 as compared to the all india average which declined from 933 to 927 during the corresponding period. The density of population which was 169 persons per sq km in 1981 increased to 203 per sq km in 1991. The urban population of 11.8% in 1981 increased to 13.38% in 1991. On the literacy front, the achievement has been noticeable as the literacy rate increased from 34.2% in 1981 to 49.1% in 1991 as against an increase from 36.2% to 52.1% at the national level during the same period. The male and female literacy rates which were 47.1% and 21.1% in 1981 have increased to 63.1% and 34.7% respectively in 1991.

## ECONOMIC SURVEY

1.05 Scheduled castes and scheduled tribes, as per the 1991 Census, constitute 16.20% and 22.21% respectively of the total population of the State. The scheduled areas cover nearly 45% of the total geographical area. The literacy rate of scheduled caste and scheduled tribe populations was 36.78% and 22.31% respectively according to 1991 census.

## **EMPLOYMENT SITUATION**

1.06 With the increase in population and consequent addition to the labour force, the supply of labour continues to outstrip demand resulting in accentuation of the problems of unemployment and under-employment. The occupational classification as per 1991 census data shows that the total workers in the State account for 118.83 lakh constituting 37.53% of the total population of the State. Out of the total number of workers, main workers accounted for 87.33%. The main workers comprised of cultivators (44.31%), agricultural labourers (28.68%), household workers (3.13%) and other workers (23.88%).

1.07 The unemployment situation is a major problem for the State. It has been estimated that the total backlog of unemployment at the beginning of 1998-99 was of the order of 8.79 lakh. The employment generation during 1998-99 and 1999-2000 is estimated at 3.05 lakh and 3.43 lakh respectively. Keeping in view the backlog of unemployment at the beginning of 1998-99, the average annual addition to the labour force at the rate of 2.62 lakh, and the employment generation during 1998-99 and 1999-2000, the levels of un-employment at the end of 1998-99 and 1999-2000 are expected to be around 8.36 lakh and 7.55 lakh respectively. To tackle the problem of un-employment, the wage employment and self-employment programmes that were implemented during the Eighth Plan would continue during the Ninth Plan with special emphasis on generation of employment opportunities in the secondary sector.

1.08 As per the Live Register maintained by employment exchanges, at the end of 1998, the number of educated unemployed in the State was 7.60 lakh which comes to 76 % of the total number of applicants which was 10.00 lakh. The number of registrations made in employment exchanges during 1998 was 209,036 and vacancies notified were 8,074. Out of the notified vacancies, placement was made in respect of 4,369 constituting 54.11% of the vacancies notified.

**STATE INCOME**

1.09 The Gross State Domestic Product (GSDP) of Orissa increased from Rs.18,612.73 crore in 1993-94 to Rs.23,417.98 crore in 1998-99 at 1993-94 prices, showing a compound annual growth rate of 4.70 percent over the period. The per capita income of Orissa in 1998-99 has been estimated at Rs.5,648 at 1993-94 prices.

1.10 The GSDP increased from Rs.22,358.34 crore at 1993-94 prices in 1997-98 (provisional estimates) to Rs.23,417.98 crore (quick estimate) in 1998-99. The increase in GSDP in 1998-99 over the corresponding figure for 1997-98 is mainly attributable to the increase in SDP of Manufacturing and Tertiary sector during 1998-99.

**AGRICULTURE**

1.11 Agriculture continues to be the main-stay of the State's economy with contribution of about 30% to NSDP during 1998-99. Taking into account the high contribution of this sector to the State's income and the large percentage of people dependent of this sector, the State Government have formulated the Agriculture Policy 1996 with the main objectives of doubling the production of food grains and oilseeds by the end of the Ninth Plan, to generate employment opportunities, and to adopt agriculture as the main route for eradication of poverty. The Agricultural Policy 1996 is expected to provide the much needed boost to this sector for all-round development of the agricultural sector. Agriculture has been given the status of an industry under the new Agricultural Policy.

1.12 According to Agricultural Census conducted by the Board of Revenue, there were 39.48 lakh operational holdings in Orissa in 1990-91 of which small and marginal holdings accounted for 79.88% while the remaining 20.12% came under the category of semi-medium, medium and large holdings. As much as 46.66% of the total operated area was owned by small and marginal farmers and the remaining 53.34% by the semi-medium, medium and large farmers.

1.13 A bumper harvest of 72.3 lakh tonne of food grains was recorded during 1991-92. The foodgrain production during 1992-93 was 59.6 lakh tonne which was 17.56% less than the production during 1991-92. However, during the three succeeding years, the level of production of foodgrains recovered. In 1993-94, the foodgrain production

was 72.2 lakh tonne which was just below the level of production in 1991-92. In 1994-95, because of unfavourable weather conditions, production of foodgrains declined to 69.0 lakh tonne. The production of foodgrains further declined to 67.8 lakh tonne in 1995-96 and to a record low 48.1 lakh tonne in 1996-97. During 1997-98 and 1998-99 the production was 66.1 lakh tonne and 57.9 lakh tonnes respectively. The production of pulses and oilseeds in the State during 1998-99 was 2.5 lakh tonne and 1.7 lakh tonne respectively. The contribution of Orissa to the foodgrain basket of the country which was 3.61% in 1994-95 declined to 2.97% in 1998-99. Paddy was the major cereal crop in the State with coverage of about 74.4% of the total gross cropped area under principal crops in 1998-99 followed by pulses (11.8%) and oil seeds (6.4%). Similarly the area under fibre crops and cash crops accounted for 1.2% and 3.0% respectively of the gross cropped area under principal crops

1.14 Due to increase in population, the State's percapita availability of cultivated land which was 0.39 hectare in 1950-51 declined to 0.18 hectare in 1998-99 and percapita foodgrain production declined from 230.44 kg to 162.23 kg per annum during the same period. The average yield rate of rice in Orissa was 9.93 quintal per hectare which was much below the national average of 18.8 quintal per hectare during 1996-97. However, the average yield rate of rice in Orissa increased to 12.12 quintal per hectare in 1998-99. Consumption of fertiliser in the State was 36.2 kg per hectare during 1998-99 in comparison to 30.5 kg per hectare during 1996-97.

## **IRRIGATION**

1.15 In the absence of adequate irrigation facilities, agriculture has to depend on monsoon. As a result of the erratic behaviour of the monsoon, agricultural production fluctuates widely from year to year. The net irrigation potential created by the end of 1998-99 from all sources was 24.69 lakh hectare which is 41.85% of the total irrigable area of the State. Out of 24.69 lakh hectare of irrigated area, 11.42 lakh hectare of land are irrigated through major and medium irrigation projects, 4.39 lakh hectare through minor (flow), 3.32 lakh hectare through minor (lift), and 5.55 lakh hectare through other sources which include private tanks, ponds, dugwells, water harvesting structures and the like.

## **FISHERIES**

1.16 With a coast line of 480 km and a continental shelf area of 24,000 sq km, Orissa offers excellent scope for marine fish production. The inland fishery resources of the State include fresh water area of 7.06 lakh hectare and brackish water area of 4.18 lakh



hectare. The State has thus vast scope for development of fish industry. The total fish production in the State was 2.84 lakh tonne in 1998-99 of which the marine fish accounted for 43.74%, brackish water fish 5.24% and fresh water fish 51.02%. Export of fish to other States and countries during 1998-99 was estimated at 0.86 lakh tonne. The total fish production in the State was 1.59 lakh tonne in 1990-91 which increased to 2.84 lakh tonne in 1998-99. The percapita consumption of fish in the State has decreased from 8.60 kg in 1997-98 to 8.23 kg in 1998-99.

## **FOREST**

1.17 The forest area in the State during 1998-99 was 58,135 sq km, which constitutes 37.3% of the total geographical area of the State, as against 59,963 sq km in 1981. Therefore, the main thrust in the forestry sector is on afforestation of waste lands and restoration of degraded forests. Besides, conservation of forests is being ensured by intensifying protective measures and enlisting people's involvement in checking illegal felling and removal of trees. During 1998-99, plantations and reforestation programmes have been carried out over 16,991 hectare of area as against 17,960 hectare during 1997-98.. The revenue receipts from forest produce were Rs.86.81 crore during 1998-99 as against Rs.73.11 crore in the previous year.

## **ANIMAL RESOURCES**

1.18 Animal resources sector plays an important role in providing and supplementing income of rural households. The total livestock population in the State was 250.20 lakh as per livestock census of 1995 of which cattle population accounted for 147.66 lakh, buffaloes 16.52 lakh, goats 54.12 lakh, sheep 18.65 lakh, pigs 5.72 lakh and other livestock 7.53 lakh. The total milk production in the State in 1998-99 was 8.33 lakh tonne, with per-capita availability of 64 gm. per day. The production of milk during 1998-99 was 24.33% higher than the production of 6.70 lakh tonne in 1997-98. Egg production in 1998-99 was 9402.50 lakh showing an increase of 13.93% over the production level of 8252.80 lakh during 1997-98. Meat production in 1998-99 was 35 thousand tonne in comparison to 48 thousand tonne in 1997-98. There were 541 Veterinary Hospitals and dispensaries, and 2939 Livestock Aid Centres in the State by the end of 1998-99. During 1998-99, 113.64 lakh animals were treated against diseases and 17.10 lakh castrations were done. The number of Milk Producer's Cooperative Societies in the State was 1055 at the end of 1998-99 with procurement of 72.72 MT milk per day on an average during 1998-99.

**EDUCATION**

1.19 Education serves as the base for development of human resources. While the overall literacy rate in 1951 was 15.8%, it was only 4.5% among females. The overall literacy rate in Orissa has increased to 49.1% and that for females to 34.7% as per 1991 census. The literacy rates of scheduled caste and scheduled tribe populations were comparatively low at 36.8% and 22.3% respectively as per the 1991 census. A major factor responsible for low educational level among females and persons belonging to scheduled castes and scheduled tribes is the high drop-out rate at primary level especially in tribal and inaccessible areas.

1.20 By the end of 1998-99, there were 42,104 primary schools in the formal stream with enrolment of 40.80 lakh students and 1.11 lakh teachers. In the non formal stream there were 23,448 educational institutions with enrolment of 5.86 lakh students and 23,448 teachers. By the end of 1998-99, the number of upper primary schools in formal stream was 11,510 with enrolment of 13.68 lakh students and 0.39 lakh teachers. In the non-formal stream, there were 896 institutions at the upper primary level with enrolment of 0.22 lakh students and 1,792 teachers. During the same period, 6,072 high schools were functioning in the State with about 0.51 lakh teachers and enrolment of 10.31 lakh students.

1.21 The State has 7 universities and 1034 general colleges with 5.15 lakh students and 17,400 teachers. In the field of technical education, the State has made significant progress. By the end of 1998-99, there were 20 Engineering Colleges with intake capacity of 4,000 students and 25 Engineering Schools/Polytechnics with intake capacity of 3,600 students. There were 86 Industrial Training Institutes, both under Government and private management, with intake capacity of 9,678 students. In the field of medical science, the State has three Medical Colleges, one Dental College, one Pharmacy College, five Ayurvedic Colleges, six Homoeopathic Colleges and one Nursing College.

**POWER**

1.22 During 1998-99, State's share in installed capacity in the State sector was 1691.92 MW (hydro 1271.92 MW and thermal 420 MW) against which power was available to the extent of 668.87 MW. In addition to this, 401.92 MW of power was received from Central sector projects towards State share and 115.94 MW of power was purchased

from captive power plants installed in the State by different industries. Thus, from all sources, 1206.73 MW power was available against the estimated demand of 1,234 MW. Out of 46,989 villages in the State, 34,442 villages including 10,459 tribal villages and 3,784 scheduled caste villages have been electrified by the end of 1998-99.

1.23 Power sector reforms and restructuring have been implemented for promoting efficiency in the system. Consequently, Orissa State Electricity Board has been dissolved and generation, transmission and distribution systems have been entrusted to Orissa Hydro Power Corporation (hydro generation), Orissa Power Generation Corporation (thermal generation), Grid Corporation of Orissa (transmission), and four distribution companies. An independent Regulatory Authority has been established to administer, regulate and monitor various aspects relating to generation, transmission and distribution of power.

## **HEALTH SERVICES**

1.24 The National Health Policy aims at providing universal health care and access to medical services, covering preventive, promotive and curative aspects, to all sections of the society. By the end of 1998-99, there were 180 Hospitals, 157 Community Health Centres, 184 Public Health Centres (PHCs), 1167 PHCs (New) and 14 Mobile Health Units in the State providing curative health services. Apart from 14 established mobile health units in the State 80 more mobile health units are also operating in KBK districts with assistance from Government of India of which 44 in tribal and 36 in non-tribal areas. In addition to these Institutions there were 5 Ayurvedic Hospitals, 519 Ayurvedic Dispensaries, 9 Unani dispensaries, 4 Homoeopathic Hospitals and 460 Homoeopathic Dispensaries. Health care and population control are the two main objectives of the Ninth Plan. The Family Welfare Programme is being implemented by the State Government with the objective of motivating eligible couples to adopt spacing and terminal methods and ensuring child survival through universal immunisation. The number of persons covered under the Family Welfare Programme increased from 104.8 lakh in 1994-95 to 138.0 lakh in 1998-99 registering an increase of 31.68% over these years. The death rate per thousand has been brought down from 21.6 in 1951 to 11.1 in 1998 and the infant mortality rate has been reduced from 188 to 98 per thousand during the same period.

## **MINERALS**

1.25 The State is endowed with vast mineral deposits like coal, iron-ore, manganese ore, bauxite, chromite etc. According to All India Mineral Resources Estimates, the mineral deposits of Orissa in respect of chromite, bauxite, iron ore were about 98.4%,

8.7% and 20.0% and 20.5% respectively of the total deposits of India. Other important mineral resources of the State are limestone, china clay, nickel, quartz, precious and semi-precious stones, copper, vanadium etc. However, the rate of exploitation of different minerals is much below the potential. During 1985-86, the mineral production of the State was 654.5 lakh tonne valued at Rs.2,366.88 crore. The export of minerals and ores to different countries during the same period was 11.68 lakh tonne valued at Rs.255.88 crore. Mining revenue and cess collecting during 1985-86 stood at Rs.318.88 crore as against Rs.320.88 crore in 1987-88 showing a decline of 1.57%.

## INDUSTRY

1.26 With vast mineral resources, abundance of raw materials and comfortable power situation, the State has an immense potential for industrialisation. Large industries like Bourkela Steel Plant, National Aluminium Company (NALCO), Indian Charge Chrome Ltd., Paradeep Phosphate, and coal based power plants at Talcher, Kanina and Baniharpali have been set up in the State during different Plan periods. At present, three nodal agencies namely Industrial Promotion and Investment Corporation Ltd. (IPIICOL), Industrial Development Corporation Ltd. (IDICOL) and Orissa State Electronics Development Corporation (OSEDC) are engaged in promoting large and medium industries in the State. By the end of 1988-89, Orissa had 334 large and medium industries with an investment of Rs.1841.88 crore and employment potential for 61,188 persons. At the end of 1997-98, the total number of registered factories was 2423 with employment potential for 1.78 lakh persons.

1.27 In recognition of the importance of small scale and village and cottage industries, efforts have been made to provide institutional and financial support, in addition to various incentives and concessions, for promoting this sector. By the end of 1988-89, 58,679 small scale industries with an investment of Rs.1,383.08 crore were operating in the State providing employment to 3.68 lakh persons. Besides, 50,807 cottage industries had been set up in the State with an investment of Rs.58.88 crore and provision of employment to 62,522 persons.

## RURAL DEVELOPMENT

1.28 As per the latest estimates of Planning Commission available for the State, the percentage of population below the poverty line was 48.72 in rural areas and 41.54 in urban areas in 1983-84. Several anti-poverty and wage employment programmes are

being implemented in the State since 1980-81 to create income generating assets and employment on daily wage basis for identified beneficiaries of target groups so as to enable them to cross the poverty line. Since its inception till the end of 1998-99, 31.65 lakh families have been assisted under Integrated Rural Development Programme (IRDP) with an investment of Rs.1,620.45 crore. Training of Rural Youth for Self Employment Programme (TRYSEM), which is a supporting component of IRDP, has played an important role in imparting training to rural youths in the age group of 18-35 years to enable them to take up self employment and wage employment activities by utilising the skills acquired through training. Under this scheme, 2.41 lakh rural youths have been trained and 1.85 lakh have been rehabilitated by the end of 1998-99 with an expenditure of Rs.51.72 crore. Under Development of Women and Children in Rural Areas (DWORA), another sub-scheme of IRDP, groups of 15 to 20 rural women are being assisted to increase their family income through income generating activities. A total of 12,799 groups covering 185,700 women beneficiaries have been formed by the end of 1998-99. During 1998-99, 296.64 lakh mandays of employment were generated under the Jawahar Rozgar Yojana (JRY) with a cost of Rs.152.19 crore. Under Indira Awas Yojana (IAY), 50,871 low cost houses were constructed at a cost of Rs.106.08 crore during 1998-99. Employment Assurance Scheme (EAS) was introduced for providing assured employment up to 100 days in the lean agricultural season. During 1998-99, 340.14 lakh mandays of employment were generated under the scheme.

## DEVELOPMENT OF WOMEN

1.29 Several welfare programmes are being implemented in the State which include setting up of women's training centres, provision of short stay homes for women, rehabilitative services for women in distress, provision of old age pension etc. The female literacy rate in the State has increased from 4.5% in 1951 to 34.7% in 1991. The proportion of women to total employees in the organised sector has increased from 5.77% in 1990 to 11.49% <sup>in 1998</sup>. To increase the number of women in public services, 30% of the vacancies in the State Government Departments in Group B, Group C and Group D services/posts to be filled up by direct recruitment have been reserved for women candidates. During 1998-99, 275 women in distress were rehabilitated with an expenditure of Rs.6.00 lakh. Under State Old Age Pension Scheme 2.97 lakh women beneficiaries were covered during 1998-99. Similarly under National Old Age Pension Scheme 1.47 lakh women were benefited. Under DWORA programme, financial assistance amounting to Rs.407.94 lakh has been provided to 2,557 DWORA groups benefiting 34,921 women during 1998-99.

## WELFARE OF SCHEDULED CASTES AND SCHEDULED TRIBES

1.30 One of the major concerns of the State has been the welfare and development of scheduled tribes and scheduled castes who together constitute 38.41% (STs 22.21% and SCs 16.20%) of the total population of the State as per the 1991 census. For historical reasons, this segment of the society has remained socially and economically backward and concerted efforts have been made under different Plans to bring them into the mainstream of society. The State Government is committed to the development of these communities and special programmes have been launched for their benefit which include legal aid, rehabilitation of victimised STs and SCs, housing facilities, establishment of special employment exchanges, reservation in employment etc.

1.31 The Tribal Sub-Plan approach was adopted in the Fifth Plan and the Special Component Plan for SCs in the Sixth Plan. Allocations are being earmarked for the Tribal Sub-Plan and Special Component Plan apart from the general programmes of economic development undertaken by the Government which are also available to the members of these communities.

## GRAND BUDGET

1.32 The State Budget for 1999-2000 was a balanced one. Under consolidated fund the receipts and expenditure were estimated at Rs.10,693.0 crore and Rs.11,801.1 crore respectively showing a deficit of Rs.1,108.1 crore. Under public account the receipt and expenditure were estimated at Rs.4,699.6 crore and Rs.3,655.5 crore, thus showing a surplus of Rs.1,044.1 crore. Under contingency fund the receipt and expenditure were balanced, each being Rs.60.0 crore. The State's own resources which comprise of State's own tax and non-tax revenue were estimated at Rs.2,971.7 crore in 1999-2000 as against the revised-estimate of Rs.2,592.7 crore in 1999-99. The per capita tax revenue in Orissa for the year 1999-2000 has been estimated at Rs.1,345.8 against Rs.860.1 in 1999-99. The per capita non-tax revenue of the State was estimated at Rs.609.9 in 1999-2000 as against Rs.499.6 as per the revised-estimate for 1999-99. Orissa's own tax revenue and own non-tax revenue together constitute 46% of total estimated revenue receipts in 1999-2000 while the resources transferred from Central Government in the form of shared tax and grants and contribution from Centre together constitute 54% of the total estimated revenue receipts.

**EXTERNALLY AIDED PROJECTS (EAPs)**

1.33 The State avails external assistance in the form of Additional Central Assistance (ACA) for implementation of Externally Aided Projects (EAPs) in the State. External agencies such as World Bank, United Nations International Children's Emergency Fund (UNICEF), and agencies of different countries such as Germany, Denmark, Switzerland, Sweden, Norway, U.K. etc. have extended financial assistance in selected areas for economic development.

1.34 During the Ninth Plan, it has been envisaged to allocate Rs.4,344.84 crore for Externally Aided Projects in the State, out of the total State Plan outlay of Rs.18,000 crore. It is expected that an amount of Rs.3,935.39 crore of ACA will be made available to the State during the Ninth Plan period. Additional Central Assistance to the tune of Rs.532.54 crore and Rs.418.88 crore have been received during the years 1997-98 and 1998-99 respectively. For the year 1999-2000 a provision of Rs.1141.21 crore has been earmarked under State Plan for execution of 19 Externally Aided Projects in the State. It has been projected that Additional Central Assistance to the tune of Rs.1091.21 crore will be received during the year 1999-2000. Some of important EAPs presently under implementation in the State are Orissa Power Sector Reforms Project, Orissa Health System Development Project, Water Resources Consolidation Project and Orissa State Highway Project.

**PUBLIC SECTOR ENTERPRISES (PSEs)**

1.35 At present 36 public sector enterprises registered under the Companies Act or created under Special Acts of the State legislature are functioning in the State. The total investment in these PSEs in the form of share capital and term loan was of the order of Rs.1,364.61 crore and Rs.3,318.06 crore of which the State Government's share was Rs.1306.00 crore and Rs.1,201.70 crore respectively as on 31.03.99. During 1997-98, 14 PSEs have made profit amounting to a total of Rs.1,82.89 crore. An amount of Rs.130.00 crore has been realised by the Government from the PSEs towards advances and repayment of loans during 1998-99.

1.36 The Government is according top priority to Public Enterprises Reform in pursuance of the changed industrial scenario in the country. The steps contemplated include disinvestment, financial restructuring, creation of social safety net for redundant

employees, and implementation of voluntary retirement schemes for the employees of the State PSEs. Financial assistance is being sought from international financial institutions for restructuring State PSEs.

### **CYCLONES IN OCTOBER 1999**

1.37 A severe cyclonic storm at a speed of 150-200 kmph, coupled with torrential rain measured at 400 mm and consequential flood devastated four coastal districts of Orissa namely Ganjam, Balasore, Puri and Khurda on October 17 and 18, 1999. Ganjam was the worst affected district. A total of 368 human lives and 10,816 animal lives were estimated to have been lost, 78,215 houses were destroyed fully and 2,55,661 houses partly. Crops in 3.32 lakh hectare of land were destroyed. More than 400 persons sustained injuries. Extensive damage was caused to public infrastructure and buildings and private properties.

1.38 Close on the heels of the devastating cyclone of October 17-18 a super cyclonic storm of much greater ferocity hit the coastal districts of the State, on October 29 and 30, 1999 which ravaged 12 coastal districts. The super cyclone with wind velocity of 270-300 kmph was followed by torrential rains ranging from 447 to 998 mm causing very high floods in Baitarani, Budhabalanga and Solandi basins which severely affected the districts of Jajpur, Bhubaneswar, Balasore and Mayurbhanj. After hitting the Paradeep coast, the cyclonic storm with tidal waves of 5 to 7 metres in height ravaged the coastal districts of Jagatsinghpur, Kendrapara, Puri, Khurda and Cuttack. The population of 1.25 crore in 94 thousand villages and 28 urban areas of 12 districts namely Balasore, Bhubaneswar, Cuttack, Dhenkanal, Jagatsinghpur, Jajpur, Kendrapara, Keonjhar, Khurda, Mayurbhanj, Mayasahi, and Puri were severely affected. Human casualties estimated at 8000, of which 8110 numbers in Jagatsinghpur district alone. As many as 5.32 lakh animals and 18.53 lakh poultry birds are reported to have perished. A total of 17.32 lakh hectare of agricultural land was affected. As many as 16.50 lakh houses were damaged of which 8.23 lakh were washed away, 7.46 lakh collapsed fully and the remaining 8.50 lakh collapsed partly.

1.39 The effect of the cyclones on the economy of the State and lives of the people in the affected districts has been devastating. A very large section of the population in the affected districts has lost its source of livelihood. Public infrastructure has suffered extensive damage affecting various services. The economy of the State has suffered a serious set back with consequential adverse impact on the development of the State.





## CHAPTER 2

### MANPOWER AND EMPLOYMENT

2.01 Amelioration of poverty and reduction in unemployment continue to be

basic objectives of the planning process. In order to achieve these twin objectives, several self employment and wage employment programmes have been launched in the rural and urban areas particularly for economically backward and socially vulnerable target groups.

The problem of unemployment of educated persons, who generally seek employment in Government and semi Government offices, public sector undertakings, factories, business establishments etc. is particularly acute. The Eighth Plan aimed at achieving near-full employment by the end of the Ninth Plan. However, the problem of high levels of unemployment continues to persist. During 1988-89 only 6.5% of the labour force was employed in the organised sector.

2.02 The population of the State, according to the 1981 census, was 216.80

Lakh. Nearly 87% of the total population lives in rural areas and the remaining 13% comprise of the urban population of the State as compared to 74% and 26% respectively at the all India level. The decennial growth rate of population of 20.06% in the State during the decade 1981-81 was only marginally lower than the growth rate during the previous decade (20.17%). The density of population which was 163 per sq km in 1961 increased to 209 per sq km in 1981, compared to the all India averages of 202 and 257 during the corresponding years. The sex ratio which was 961 females per 1000 males in 1961 declined to 971 in 1981. The literacy rate of males and females in the State according to 1981 census stood at 68.1% and 34.7% as compared to 47.1% and 21.1% respectively in 1961.

2.03 As per the 1981 census, the proportion of workers to total population

was 37.58%. This is marginally lower than the proportion of workers to total population in 1961 (38%). Man workers accounted for 87.3% of the total number of workers while marginal workers accounted for 12.7%. The proportion of workers in rural areas was 80% and in urban areas 11%. The proportion of male workers to total workers was 75% in 1981 as compared to 74% in 1961. The proportion of male workers to male population and female workers to female population in 1981 stood at 37% and 21% respectively as compared to 35% and 20% in 1961.

2.04 Out of the active labour force of 118.83 lakh, 38.7% were cultivators, 25.1% were agricultural labourers, 2.7% were household industrial workers, 3.1% were other industrial workers, and 30.4% were other workers as per 1991 census. The corresponding figures in 1981 census were 40.4% cultivators, 23.9% agricultural labourers, 2.5% household industrial workers, 3.1% other industrial workers, and 29.8% other workers. The economic classification of workers in Orissa as per 1981 census and 1991 census is given in Table 2.1. There has been no reduction in the pressure of population on agriculture during these 10 years. The proportion of cultivators has gone down despite increase in absolute number while that of agricultural labourers has gone up, thus keeping the total pressure on agriculture almost at the same level in proportionate testing.

Table 2.1  
Economic Classification of Workers in Orissa

		(In thousands)	
Sl. No.	Category of Workers	As per 1981 Census	As per 1991 Census
1	2	3	4
<b>A</b>	<b>MAIN WORKERS</b>		
1.	Cultivators	4053 (40.4)	4009 (38.7)
2.	Agricultural labourers	2997 (29.9)	2677 (25.1)
3.	Live stock, forest, fisheries etc.	207 (2.1)	198 (1.8)
4.	Mining and quarrying	72 (0.7)	101 (0.8)
5.	Manufacturing and processing		
	I. Household industries	285 (2.8)	324 (2.7)
	II. Other than household industries	313 (3.1)	364 (3.1)
6.	Construction	95 (1.0)	90 (0.8)
7.	Trade and commerce	355 (3.5)	508 (4.7)
8.	Transport, storage and communication	135 (1.4)	151 (1.5)
9.	Other services	721 (7.2)	991 (8.8)
	Total main workers	8838 (88.1)	10576 (87.3)
<b>B</b>	<b>MARGINAL WORKERS</b>	1557 (15.9)	1655 (12.7)
<b>C</b>	<b>TOTAL WORKERS (A+B)</b>	10395 (100.0)	12231 (100.0)
<b>D</b>	<b>TOTAL NON-WORKERS</b>	16948	19777

N.B: Figures in brackets are percentages to total workers  
Source: 1981 and 1991 Census of India.

## EDUCATED UNEMPLOYMENT

2.05 The stock of educated job seekers (matrioulates and above) has been increasing over the years as may be seen from Table 2.2. In 1980, there were 5.20 lakh educated unemployed in the State, which increased to 7.60 lakh at the end of 1988. The number of educated job seekers in 1988 was almost the same as in 1987 while its trend increased steadily over the period from 1980 to 1987. There has been a high growth in the number of educated job seekers with above matric qualifications during the current decade while the magnitude of job seekers with below matric qualifications shows a downward trend.

Table 2.2  
Live Register Position in Orissa

(In thousand)

Sl. No.	Year	Total applicants	Below matric	Matriculate and under graduates	Graduate and post-graduate (general)	Graduate and post-graduate (technical)	Other diploma holder	Total educated unemployed (col. 5+6+7+8)
1	2	3	4	5	6	7	8	9
1	1980	670	350	337	120	6	7	520
2	1981	680	378	305	118	8	8	512
3	1982	681	342	308	127	8	8	548
4	1983	694	304	318	137	8	8	570
5	1984	878	279	442	141	8	10	660
6	1985	920	248	507	149	8	12	674
7	1986	978	231	583	153	8	13	748
8	1987	1000	246	674	188	5	18	780
9	1988	1000	240	688	187	5	23	760

Source : Directorate of Employment, Orissa, Bhubaneswar.

2.06 The trend of unemployment in respect of technical manpower as per the Live Register is presented in Table 2.3. The number of registered technical job seekers as on 31.12.88 was 4868. It increased from 6199 in 1982 to 8388 in 1994 and has there after shown a declining trend.

**Table 2.3**  
**Live Register Position of Technical Manpower in Orissa**

Sl. No.	Category	By the end of the year						
		1982	1983	1984	1985	1986	1987	1988
1	2	3	4	5	6	7	8	9
<b>1.</b>	<b>Technical graduates</b>							
a.	Engineering							
	i. Civil	840	871	882	847	481	483	483
	ii. Electrical	1031	1019	1028	1181	940	983	868
	iii. Mechanical	880	838	884	880	788	722	806
	iv. Electronics	731	828	888	887	700	818	389
	v. Chemical	27	24	24	23	25	28	33
	vi. Metallurgical	18	18	22	23	12	22	30
	vii. Agri. Engineering	80	47	41	83	80	64	78
	viii. Others	118	148	184	181	881	128	78
	<b>Total (a)</b>	<b>5885</b>	<b>5888</b>	<b>6080</b>	<b>6778</b>	<b>3488</b>	<b>3818</b>	<b>3811</b>
b.	Medical	1878	1848	1784	1841	1884	1742	1848
c.	Veterinary	83	48	30	35	41	34	19
d.	Agriculture	482	448	388	348	388	382	410
	<b>Total (b)</b>	<b>2883</b>	<b>2738</b>	<b>2686</b>	<b>2668</b>	<b>2688</b>	<b>2498</b>	<b>2688</b>
<b>2.</b>	<b>Technical post-graduates</b>							
a.	Engineering	32	31	42	84	5	5	-
b.	Medical	40	38	30	34	3	2	-
c.	Veterinary	23	28	20	18	10	3	2
d.	Agriculture	88	173	208	242	188	212	178
	<b>Total (c)</b>	<b>183</b>	<b>278</b>	<b>288</b>	<b>348</b>	<b>218</b>	<b>222</b>	<b>181</b>
	<b>Grand Total (1+2)</b>	<b>6188</b>	<b>5887</b>	<b>6388</b>	<b>6342</b>	<b>6188</b>	<b>6088</b>	<b>4888</b>

Source : Directorate of Employment, Orissa, Bhubaneswar

2.07 Table 2.4 shows that during 1988, vacancies notified work out to 3.88% of the total registrations made during the year in the State. During the year 1988, 4369 placements have been made which comes to 54.11% of the total vacancies notified.

Table 2.4

## Registration, Notification of Vacancies and Placement.

(In nos.)

Sl. No.	Year	Registrations made in employment exchanges	Vacancies notified	Vacancies notified as percentage to registrations made	Placement made		
					Number	Percentage to vacancies notified	Percentage to registrations made
1	2	3	4	5	6	7	8
1	1990	2,36,844	20,779	8.77	12,491	60.11	5.27
2	1991	2,03,298	16,642	7.89	7,675	49.07	3.78
3	1992	1,66,576	12,035	6.45	7,839	65.14	4.20
4	1993	2,08,338	11,785	5.66	4,885	41.51	2.35
5	1994	2,15,599	10,057	4.66	4,015	39.92	1.86
6	1995	2,22,042	13,599	6.10	4,020	29.59	1.80
7	1996	2,46,842	38,057	15.43	4,577	12.03	1.86
8	1997	2,29,896	16,314	7.10	10,083	61.80	4.36
9	1998	2,09,039	6,074	2.86	4,369	64.11	2.09

Source : Directorate of Employment, Gurgaon, Haryana.

## EMPLOYMENT IN THE ORGANISED SECTOR

2.08 Table-2.5 shows that the total employment in the organised sector by the end of 1998 was 8.11 lakh as compared to 7.70 lakh by the end of 1990 showing an increase of 5.32%. The total employment in the public sector increased from 6.51 lakh in 1990 to 7.12 lakh in 1998 registering an increase of 7.7% whereas in the organised private sector it decreased from 1.09 lakh to 0.99 lakh during the same period. Organised private sector in the State contributes only 12.21% of the total employment. With economic liberalisation, the proportion of employment in the private sector is expected to increase in the coming year.

2.09 Government attached high priority to providing jobs to women. As a result, the proportion of women employees in the organised sector has been gradually increasing. Women employees constituted 11.5% of total employees in the organised sector at the end of 1998 as against 8.7% at the end of 1990. In public sector, the number of women employees increased from 79 thousand in 1997 to 82 thousand in 1998. However, the number of women employees in the organised private sector came down from 12 thousand in 1996 to 11 thousand in 1997 and remained unchanged in 1998.

Table 2.5  
Employment in the Organised Sector

(in thousand)

Sl. No.	Year	Public sector		Private sector		Total organised sector employment	Women employees in organised sector	Percentage of women employees to total employees
		Total	Women	Total	Women			
1	2	3	4	5	6	7	8	9
1	1990	661	54	109	13	770	67	8.7
2	1991	683	60	111	13	794	73	9.2
3	1992	707	64	102	12	809	78	9.4
4	1993	699	68	80	9	779	77	9.9
5	1994	705	71	94	12	799	83	10.4
6	1995	710	74	96	12	806	86	10.7
7	1996	776	73	96	12	872	85	9.7
8	1997	713	79	97	11	810	90	11.1
9	1998	712	82	99	11	811	93	11.5

Source : Directorate of Employment, Orissa, Bhubaneswar.

## EMPLOYMENT IN THE UNORGANISED SECTOR

2.10 A number of self employment and wage employment schemes/programmes initiated during earlier Plans will continue during the Ninth Plan.

2.11 The Integrated Rural Development Programme (IRDP) has been launched with the objective of assisting identified poor rural families to cross the poverty line through income generating ventures. During 1998-99, 0.95 lakh poor families were assisted under this programme.

2.12 Training of Rural Youth for Self Employment (TRYSEM) Programme was launched to develop technical and entrepreneurial skills among rural youth in the age group of 18-35 belonging to families below the poverty line. During 1998-99, 11614 rural youth were trained and 4040 youths were rehabilitated through self employment and 3276 youths through wage employment.

2.13 During 1996-99, a sum of Rs.15216.53 lakh has been spent for generating 256.84 lakh mandays of wage employment under JRY scheme.

2.14 Prime Minister's Rojgar Yojana (PMRY) which was launched in 1984-85 aims at providing employment to educated unemployed youth. During 1996-99, an amount of 6,553.00 lakh was sanctioned for 8,353 beneficiaries of which a sum of Rs.424.00 lakh has been disbursed to 756 beneficiaries. The disbursement during 1997-98 was Rs.4,832.00 lakh for 7,024 beneficiaries.

2.15 Under DWORA scheme during 1996-99, 2637 groups consisting of 34,921 women were formed at a cost of Rs.407.94 lakh to create supplementary employment opportunities for rural women.

#### EMPLOYMENT GENERATION DURING 1996-99 AND 1999-2000

2.16 The backlog of unemployment in the State at the beginning of 1996-99 was estimated as 8.79 lakh of labour force on the basis of revised plan expenditure for 1997-98. The expected employment generation in the State during 1996-99 and 1999-2000 is based on the sectoral investment-employment norms developed/fixed by National Council of Applied Economic Research (NCAER) in 1973-74 and on the assumption that the magnitude of employment generated through State Plan investment is equal to the employment generated through investment by Central Government, through investment in the private sector and through investment in Public Sector Undertakings taken together. With a provision of State Plan investment of Rs.1,373.55 crore during 1996-99 and State Plan outlay of Rs.1,716.46 crore for 1999-2000, employment generation during 1996-99 and 1999-2000 is estimated at 5.05 lakh and 5.43 lakh respectively. Keeping in view the backlog of unemployment of 8.79 lakh at the beginning of 1996-99 and average annual addition to the labour force at a rate of 2.62 lakh, the level of unemployment at the end of 1996-99 and 1999-2000 is expected to be around 8.95 lakh and 7.55 lakh respectively. Sector-wise estimates for employment generation during 1996-99 and 1999-2000 are indicated in Table 2.6.

Table 2.6

## Employment Generation Scenario during 1998-99 and 1999-2000

Sl. No.	Sector	Estimated investment employment norm at April 1998 prices (no. of persons per lakh of Rs.)	Estimated investment component of the exp made during 1998-99 (Rs. In lakh)	Estimated employment generation during 1998-99 (no. of persons)	Estimated investment employment norm at April 1999 prices (no. of persons per lakh of Rs.)	Investment component of agreed outlay for 1999-2000 (Rs. In lakh)	Estimated likely employment generation during 1999-2000 (no. of persons)
1	2	3	4	5	6	7	8
<b>A. Through State Plan Funds</b>							
i)	Agriculture and allied	1.83	2107.02	3855.85	1.69	3050.77	5155.5
ii)	Rural development	1.33	41.21	54.81	1.23	2650.01	3259.5
iii)	Irrigation and flood control	1.83	60180.90	110131.05	1.69	63393.21	107134.5
iv)	Energy	0.18	38949.51	7010.91	0.17	93436.8	15884.1
v)	Industries and minerals	0.27	2119.52	572.27	0.25	1349.46	337.1
vi)	Transport	0.36	13221.52	4759.75	0.33	26492.89	8742.1
vii)	Science technology and environment	1.33	40.85	54.33	1.23	48.00	59.1
viii)	General economic services	1.33	2606.92	3467.20	1.23	3556.18	4374.1
ix)	Social services	1.23	16562.35	20371.69	1.14	21259.31	24235.1
x)	General Services	1.33	1236.63	1644.72	1.23	1696.14	2086.1
xi)	Forestry and wildlife	1.83	288.02	527.08	1.69	223.02	376.1
<b>Total</b>			<b>137354.45</b>	<b>152449.66</b>		<b>217155.79</b>	<b>171616.6</b>
<b>B. Through Central Plan, Public Sector Undertakings and Private Sector (equal to A)</b>				<b>152449.66</b>			<b>171646.6</b>
<b>Grand Total (A+B)</b>				<b>304899.32</b> or 3.05 lakh			<b>343292.1</b> or 3.43 lakh





## DECENNIAL BREAK-UP OF POPULATION IN ORISSA

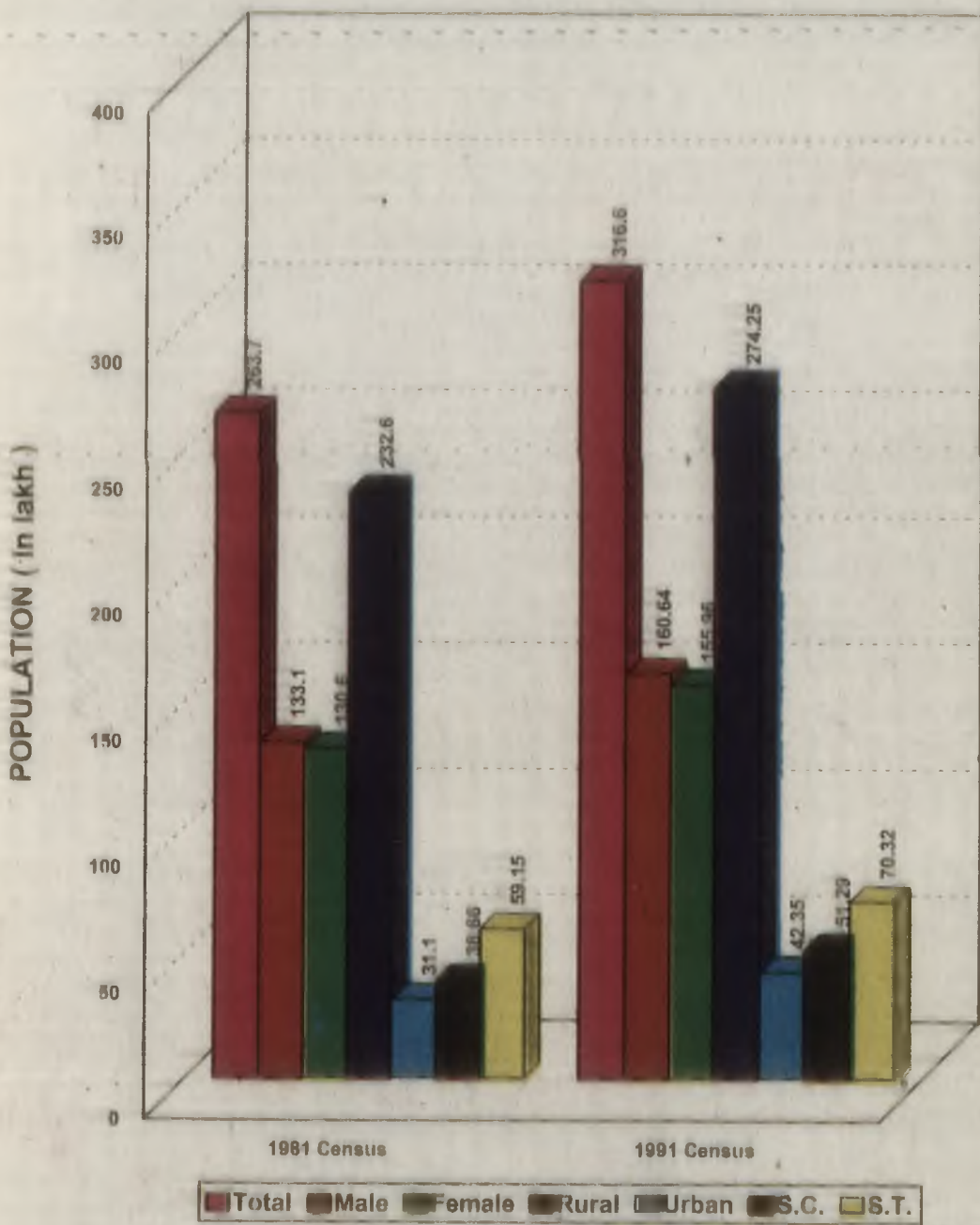


Figure - 1

# ECONOMIC CLASSIFICATION OF WORKERS IN ORISSA OVER LAST TWO CENSUS

( In percentage )

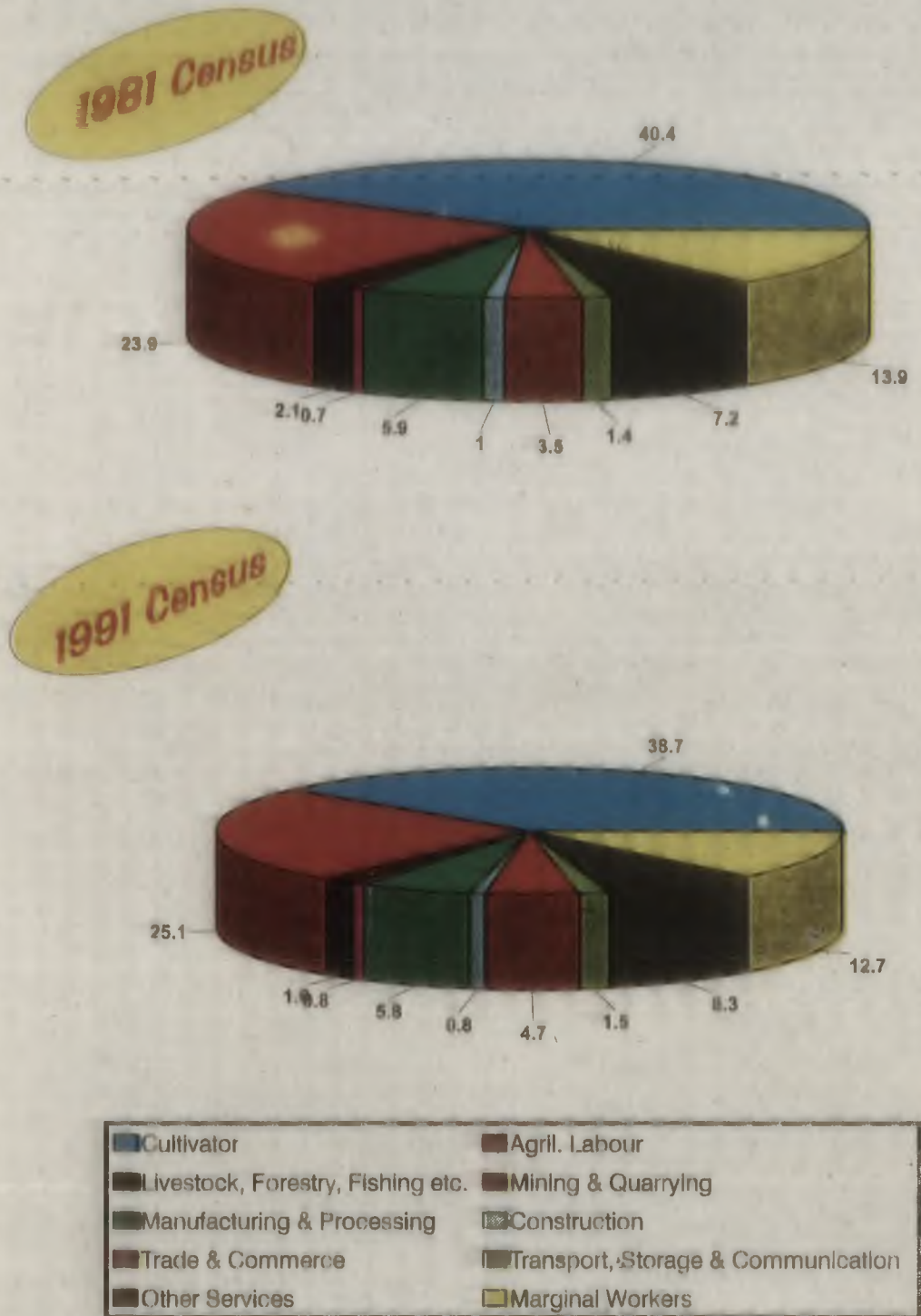
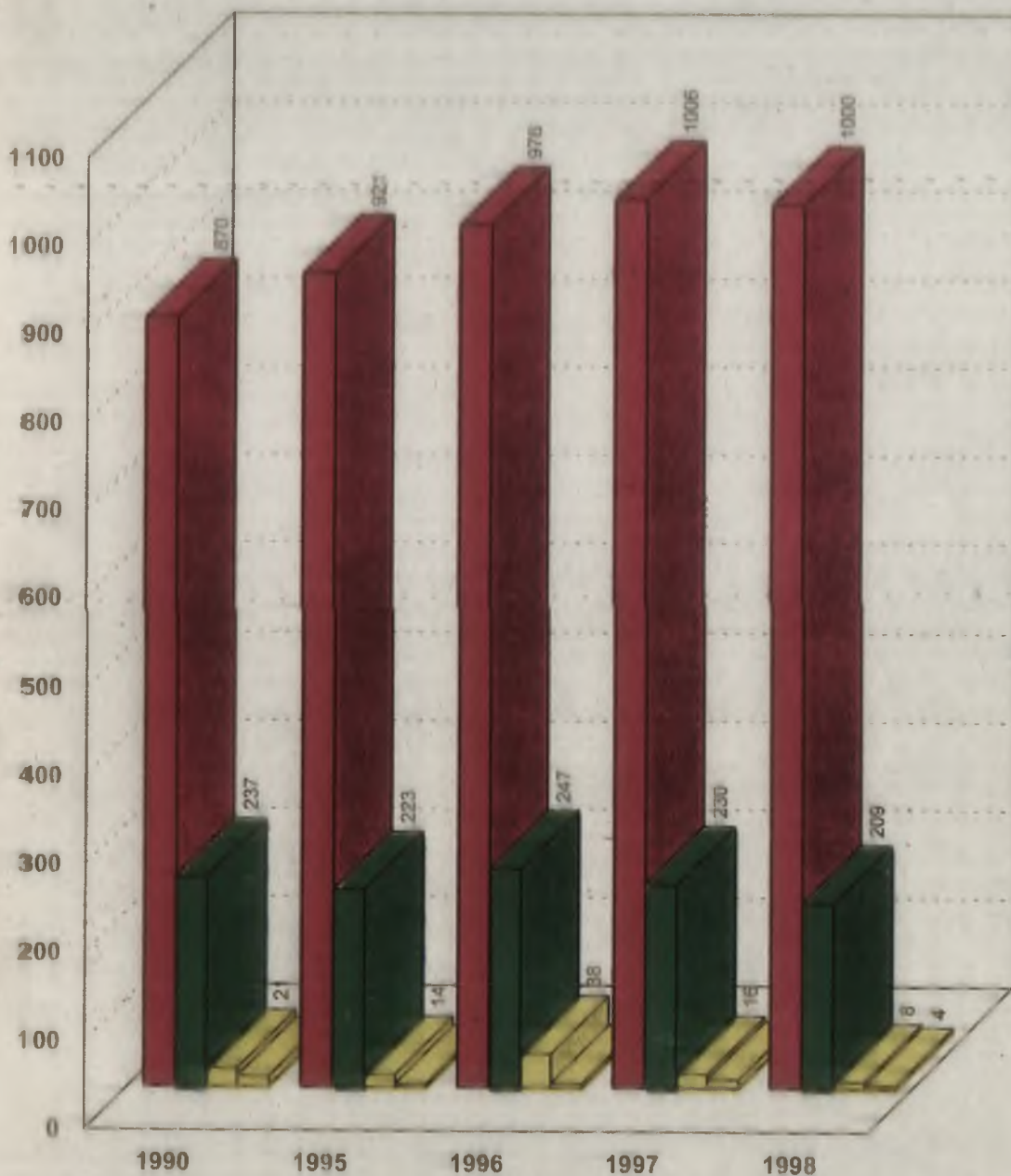


Figure - 2

# REGISTRATION AND PLACEMENT IN ORISSA

( In thousand )



Live Register position
  New registration
  Vacancies Notified
  Placement

Figure - 3

## CHAPTER 3

### CONSUMER EXPENDITURE

3.01 The expenditure incurred by a household on domestic consumption is the household's consumer expenditure. The level of consumer expenditure is a measure of the economic well being of the household. Data on private consumption is also useful for observing changes in the quality of life over a period of time.

3.02 Data on average monthly percapita consumer expenditure (MPCE) on different food and non-food items for Orissa and at the all India level based on the findings of 53rd Round of National Sample Survey (1987) is presented in Table 3.1. The data shows that :

i) The monthly percapita consumer expenditure in rural areas of Orissa was Rs.298.46 as against the all India average of Rs.355.01. The MPCE in rural areas of Orissa under food items was higher being 64.63% of the total expenditure as against 55.73% at the all India level. The expenditure under non-food items was 35.47% of the total expenditure as against the all India average of 41.27%. This indicates that the average living standard in rural Orissa as reflected by Consumer Expenditure is below the average living standard in rural India.

ii) In urban areas of Orissa, the MPCE was Rs.562.59 as against the all India average of Rs.645.45. Here again, the percentage of expenditure under food items was higher (54.35) as compared to the corresponding all India figure (48.62). The proportion of expenditure under non-food items to total expenditure in urban areas of Orissa was 45.65% as against the all India level of 50.38%. This shows that the living standard in urban Orissa also lags behind the average living standard in urban India.

iii) Cereals alone accounted for 20.50% of the total expenditure under food items in rural area and 35.65% in urban areas of Orissa as against 37.29% and 29.76% in the rural and urban areas respectively at the all India level.

iv) The proportion of expenditure under food and non-food items to total expenditure was 54.35% and 45.65% in the urban areas of Orissa against 54.52% and 35.47% in the rural areas. This is indicative of the quality of life in urban areas being better than that in rural areas.

Table 3.1

Average Monthly Per capita Expenditure on Groups of Items of Consumption for Rural and Urban Areas of Orissa and at All India Level during January to December 1997 (53rd Round NSS)

Sl. No	Items	ORISSA					
		Rural			Urban		
		Amount [Rs.]	% to expenditure on food/non-food	% to total expenditure	Amount [Rs.]	% to expenditure on food/non-food	% to total expenditure
1	2	3	4	5	6	7	8
1	Cereals	116.16	60.30	38.92	109.28	35.83	19.44
2	Gram	0.13	0.07	0.04	0.36	0.12	0.06
3	Cereal substitutes	0.04	0.02	0.01	0.04	0.01	0.01
4	Pulses and pulse products	7.87	4.08	2.64	15.23	4.97	2.71
5	Milk and milk products	8.76	3.51	2.27	29.29	9.55	5.21
6	Edible oil	6.44	4.38	2.83	17.51	5.71	3.11
7	Meat, fish, egg	10.03	5.21	3.35	23.08	7.52	4.10
8	Vegetables	21.55	10.83	7.05	38.89	11.85	6.47
9	Fruits (fresh)	2.55	1.34	0.85	7.77	2.53	1.38
10	Fruits (dry)	0.17	0.08	0.05	0.72	0.23	0.13
11	Sugar	4.86	2.52	1.63	9.42	3.07	1.68
12	Salt	0.96	0.50	0.32	1.20	0.39	0.21
13	Spices	5.94	2.82	1.69	8.33	2.72	1.48
14	Beverages etc.	5.51	4.42	2.85	45.12	15.89	8.56
	<b>Food Total</b>	<b>192.82</b>	<b>100.00</b>	<b>64.55</b>	<b>305.73</b>	<b>100.00</b>	<b>54.55</b>
15	Fun	2.53	2.30	0.85	5.90	2.24	1.07
16	Tobacco	2.53	2.30	0.85	3.49	1.36	0.62
17	Intoxicants	1.95	1.85	0.68	3.03	1.18	0.54
18	Fuel and light	28.04	24.60	8.72	39.93	15.92	7.10
19	Clothing	24.40	23.05	8.17	35.03	14.10	6.41
20	Footwear	1.83	1.73	0.61	3.40	1.33	0.60
21	Miscellaneous consumer goods	18.82	9.75	3.48	27.73	10.85	4.93
22	Miscellaneous consumer services	5.92	5.59	1.98	30.88	12.05	5.49
23	Rent	0.89	0.21	0.07	33.62	13.18	5.98
24	Tax and cesses	0.06	0.06	0.02	0.87	0.26	0.12
25	Education	4.89	4.33	1.54	27.32	10.89	4.86
26	Medical (institutional)	3.89	3.67	1.30	4.74	1.86	0.84
27	Medical (non-institutional)	12.75	12.05	4.27	16.60	6.50	2.95
28	Durable goods	6.52	6.33	2.97	22.15	6.67	3.94
	<b>Non-food Total</b>	<b>105.99</b>	<b>100.00</b>	<b>35.47</b>	<b>255.87</b>	<b>100.00</b>	<b>46.44</b>
	<b>TOTAL</b>	<b>298.81</b>		<b>100.00</b>	<b>561.60</b>		<b>100.00</b>
	<b>CONSUMPTION EXPENDITURE</b>						

Contd.

Table 3.1 [Contd.]

Sl. No	Items	All India					
		Amount [Rs]	Rural % to expenditure on food/non-food	% to total expenditure	Amount [Rs]	Urban % to expenditure on food/non-food	% to total expenditure
1	2	9	10	11	12	13	14
1	Cereals	86.48	37.28	21.89	85.77	26.78	13.29
2	Gram	0.85	0.37	0.22	1.12	0.35	0.17
3	Cereal substitutes	0.25	0.11	0.06	0.38	0.12	0.06
4	Pulses and pulse products	14.81	6.38	3.75	18.21	5.69	2.82
5	Milk and milk products	39.31	16.94	9.95	62.75	19.59	9.73
6	Edible oil	15.98	6.89	4.05	23.60	7.37	3.66
7	Meat, fish, egg	11.79	5.08	2.98	19.58	6.11	3.09
8	Vegetables	21.10	9.10	5.34	30.50	9.52	4.73
9	Fruits (fresh)	5.20	2.24	1.32	11.40	3.56	1.77
10	Fruits (dry)	1.45	0.62	0.37	2.71	0.85	0.42
11	Sugar	10.75	4.63	2.72	12.47	3.89	1.93
12	Salt	0.78	0.34	0.20	1.02	0.32	0.16
13	Spices	8.65	3.73	2.19	10.44	3.26	1.62
14	Beverage etc.	14.59	6.29	3.69	40.31	12.59	6.24
	<b>Food Total</b>	<b>231.99</b>	<b>100.00</b>	<b>58.73</b>	<b>320.26</b>	<b>100.00</b>	<b>49.62</b>
15	Pan	1.95	1.20	0.49	2.76	0.85	0.42
16	Tobacco	6.53	4.00	1.65	6.25	1.92	0.97
17	Intoxicants	3.19	1.96	0.81	2.98	0.92	0.46
18	Fuel and light	28.30	17.36	7.16	45.68	14.05	7.08
19	Clothing	27.60	16.93	6.99	37.62	11.57	5.83
20	Footwear	4.59	2.82	1.16	6.41	1.97	1.00
21	Miscellaneous consumer goods	18.83	11.55	4.77	36.74	11.30	5.69
22	Miscellaneous consumer services	18.72	11.48	4.74	50.65	15.57	7.35
23	Rent	1.22	0.75	0.31	28.36	8.72	4.39
24	Tax and cesses	0.49	0.30	0.12	3.85	1.18	0.60
25	Education	11.73	7.19	2.97	38.57	11.86	5.97
26	Medical (institutional)	6.23	3.82	1.58	12.41	3.82	1.92
27	Medical (non-institutional)	16.30	10.00	4.13	20.58	6.33	3.19
28	Durable goods	17.34	10.64	4.39	32.33	9.94	5.01
	<b>Non-food Total</b>	<b>163.02</b>	<b>100.00</b>	<b>41.27</b>	<b>325.19</b>	<b>100.00</b>	<b>50.38</b>
	<b>TOTAL</b>	<b>395.01</b>		<b>100.00</b>	<b>645.45</b>		<b>100.00</b>
	<b>CONSUMPTION EXPENDITURE</b>						

3.03 The MPCE on food and non-food items separately for rural and urban areas of Orissa as well as at the all India level over different NSS Rounds is presented in Table 3.2. Although the proportion of expenditure on food items has always been higher than the expenditure under non-food items, the ratio of expenditure on food items to total expenditure in Orissa has generally declined over the years. The proportion of expenditure on food items to total expenditure was around 75% in rural areas and 72% in urban areas in the year 1972-73 (27th Round NSS) which declined to 63.9% in rural areas and to 49.9% in urban areas in the year 1995-96 (52nd Round NSS). This is indicative of a gradual improvement in the living standards of the people both in rural and urban areas of Orissa. However, as per the figures of the 53rd round of NSS conducted in 1997 the proportion of expenditure on food items to total expenditure has risen marginally both for rural and urban areas – to 64.5% in rural areas and to 54.6% in urban areas

Table 3.2

**Value (Rs.) of Consumption of Food and Non-Food Items of a Person for a Period of 30 Days in Rural and Urban Areas over different Rounds of NSS for Orissa and at All India level.**

Sl. No	NSS Round and Period	ORISSA					
		Rural			Urban		
		Food	Non-food	Total	Food	Non-food	Total
1	2	3	4	5	6	7	8
1	27th Round (1972-73)	26.24 (75.06)	8.72 (24.94)	34.96 (100.00)	44.77 (71.80)	21.58 (34.61)	62.35 (100.00)
2	32nd Round (1977-78)	37.47 (71.41)	15.00 (28.59)	52.47 (100.00)	57.43 (66.02)	29.56 (33.98)	86.99 (100.00)
3	38th Round (1983)	72.72 (73.64)	26.03 (26.36)	98.75 (100.00)	98.89 (65.31)	52.51 (34.68)	151.41 (100.00)
4	42nd Round (1986-87)	79.19 (69.35)	35.00 (30.65)	114.19 (100.00)	135.52 (62.47)	81.42 (37.53)	216.94 (100.00)
5	47th Round (1991-92)	149.70 (69.82)	64.72 (30.18)	214.42 (100.00)	204.57 (61.76)	126.64 (38.24)	331.21 (100.00)
6	51st Round (1994-95)	164.51 (67.55)	79.02 (32.45)	243.53 (100.00)	246.28 (56.04)	193.21 (43.96)	439.49 (100.00)
7	52nd Round (1995-96)	197.17 (63.90)	111.38 (36.10)	308.55 (100.00)	283.81 (49.88)	285.21 (50.12)	569.02 (100.00)
8	53rd Round (1997)	192.62 (64.53)	105.86 (35.47)	298.48 (100.00)	306.72 (54.55)	255.57 (45.45)	562.29 (100.00)

Contd.

TABLE 3.2 [Contd.]

Sl. No	NSS Round and period	ALL INDIA						Per capita expenditure for Orissa as percentage of all India average	
		Rural			Urban			Rural	Urban
		Food	Non-food	Total	Food	Non-food	Total		
1	2	9	10	11	12	13	14	15	16
1	27th Round (1972-73)	32.16 (72.81)	12.01 (27.19)	44.17 (100.00)	40.84 (64.49)	22.49 (35.51)	63.33 (100.00)	79.15	98.45
2	32nd Round (1977-78)	44.33 (64.35)	24.56 (35.65)	68.89 (100.00)	57.67 (59.98)	38.48 (40.02)	96.15 (100.00)	76.16	90.47
3	38th Round (1983)	73.73 (65.57)	38.71 (34.43)	112.44 (100.00)	96.97 (59.12)	67.06 (40.88)	164.03 (100.00)	87.82	92.31
4	42nd Round (1986-87)	92.55 (65.67)	48.38 (34.33)	140.93 (100.00)	128.97 (57.93)	93.66 (42.07)	222.63 (100.00)	81.03	97.44
5	47th Round (1991-92)	153.59 (63.08)	89.91 (36.92)	243.50 (100.00)	207.77 (56.10)	162.57 (43.90)	370.34 (100.00)	88.06	89.43
6	51st Round (1994-95)	188.89 (61.04)	120.54 (38.96)	309.43 (100.00)	271.49 (53.44)	236.58 (46.56)	508.07 (100.00)	78.70	86.50
7	52nd Round (1995-96)	207.76 (60.34)	136.53 (39.66)	344.29 (100.00)	299.98 (50.06)	299.28 (49.94)	599.26 (100.00)	89.62	94.95
8	53rd Round (1997)	231.99 (58.73)	163.02 (41.27)	395.01 (100.00)	320.26 (49.62)	325.19 (50.38)	645.44 (100.00)	75.56	87.11

\* Figures in bracket indicate percentages.

3.04

Monthly percapita consumer expenditure in Orissa as per the 53rd

Round of NSS (1997) is one of the lowest amongst the major States of the country as may be seen from Table 3.3 below.

APR 1998  
National Educational  
Policy Commission  
Ministry of Education  
New Delhi



Table 3.3

**Average Monthly Percapita Consumer Expenditure in Orissa vis a vis  
Other Major States as per 52nd and 53rd Rounds of NSS  
in Rural and Urban Areas.**

Sl. No.	States	Average Monthly Percapita Consumer Expenditure (Rs.)			
		52nd Round (1995-96)		53rd Round (1997)	
		Rural	Urban	Rural	Urban
1	2	3	4	5	6
1.	Punjab	492.92	644.79	670.32	753.35
2.	Haryana	491.49	647.38	536.21	655.25
3.	Maharashtra	350.74	720.37	386.09	772.87
4.	Tamilnadu	322.43	535.63	440.56	657.53
5.	Karnatak	346.03	537.47	344.30	669.50
6.	Andhra Pradesh	324.84	552.59	420.75	623.56
7.	Kerala	506.35	674.34	568.57	794.11
8.	Uttar Pradesh	348.88	536.71	390.26	547.47
9.	West Bengal	298.18	521.37	366.15	560.11
<b>10.</b>	<b>ORISSA</b>	<b>308.55</b>	<b>569.02</b>	<b>298.48</b>	<b>562.29</b>
11.	Rajasthan	363.72	508.57	452.28	608.42
12.	Madhya Pradesh	310.45	485.64	325.94	546.47
13.	Gujrat	358.23	499.67	484.54	686.82
14.	Bihar	298.44	441.97	294.93	492.37
15.	Assam	316.40	536.83	360.43	584.89
	<b>ALL INDIA</b>	<b>344.29</b>	<b>599.28</b>	<b>395.01</b>	<b>645.44</b>

3.05 In the 52nd Round (1995-96), the average MPCE of rural areas for West Bengal and Bihar was lower than that of Orissa while in the 53rd Round (1997), the average MPCE for Bihar only was lower than that of Orissa. In 52nd Round (1995-96), the average MPCE in urban areas of 10 major States was lower than that of Orissa. However, in the 53rd Round, the average MPCE in urban areas of only 4 major States was lower than that of Orissa. The MPCE in rural areas declined in Orissa, Bihar and Karnatak from the 52nd Round to the 53rd round.

3.06 Engel's ratio, which is calculated as the proportion of consumption expenditure under food items to total consumer expenditure, is an index of standard of living of the people. The smaller the ratio, higher the standard of living. Engel's ratio in fifteen major States of the country is presented in Table 3.4.

Table 3.4

## Statewise Engel's Ratio during 51st, 52nd and 53rd Rounds of NSS

Sl. No	States	51st Round (1994-95)		52nd Round (1995-96)		53rd Round (1997)	
		Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8
1.	Punjab	63.91	45.54	56.46	50.32	49.36	48.57
2.	Haryana	56.72	57.13	55.58	48.91	57.07	50.68
3.	Maharashtra	58.93	47.67	58.55	47.46	55.54	47.60
4.	Tamilnadu	62.81	57.23	64.37	53.09	60.76	48.50
5.	Karnatak	61.13	56.10	59.01	53.37	64.33	45.71
6.	Andhra Pradesh	61.35	50.65	60.64	50.06	56.67	47.91
7.	Kerala	58.50	62.63	58.43	53.43	56.53	49.59
8.	Uttar Pradesh	53.24	53.03	53.93	48.39	55.66	50.80
9.	West Bengal	68.57	58.47	70.40	55.74	62.57	54.69
10.	<b>ORISSA</b>	<b>67.55</b>	<b>56.04</b>	<b>63.90</b>	<b>49.88</b>	<b>64.53</b>	<b>54.55</b>
11.	Rajasthan	63.84	56.51	63.85	57.65	60.33	53.34
12.	Madhya Pradesh	58.67	55.84	57.46	50.75	58.57	48.92
13.	Gujarat	62.40	56.76	67.33	59.15	59.16	50.86
14.	Bihar	69.79	60.19	61.80	56.09	65.99	55.94
15.	Assam	65.73	60.27	67.51	55.07	65.53	54.96
	<b>ALL INDIA</b>	<b>61.04</b>	<b>53.44</b>	<b>60.34</b>	<b>50.06</b>	<b>58.73</b>	<b>49.62</b>

3.07 Engel's ratio in Orissa, both in rural and urban areas, was higher than that at the all India level during all the three Rounds except for urban areas in the 52nd Round. This is indicative of a generally lower standard of living in Orissa as compared to the national average.

3.08 The table reveals that as per the 53rd Round of NSS conducted in 1997 the standard of living in rural areas of Orissa was better than the standard of living in rural areas of Bihar and Assam. In respect of urban standard of living, Orissa was better placed than West Bengal, Bihar and Assam.

3.09 Engel's ratio in Orissa, which improved from the 51st Round to the 52nd Round with a decline from 67.55 to 63.90 in rural areas and with a decline from 56.04 to 49.88 in urban areas, worsened from the 52nd Round to the 53rd Round with an increase to 64.53 in rural areas and to 54.55 in urban areas. As compared to the 52nd Round, the ratio for rural areas deteriorated in the 53rd Round for Haryana, Karnatak, Uttar Pradesh, Madhya Pradesh, Bihar and Orissa. The deterioration in the case of Orissa is marginal being 0.63 whereas the deterioration in respect of the other states is significantly higher. In respect of urban areas, Engel's ratio deteriorated from the 52nd Round to the 53rd Round for Haryana, Maharashtra and Uttar Pradesh besides Orissa.

3.10 Engel's ratio for rural areas deteriorated from the 51st Round to the 53rd Round for Haryana from 56.72 to 57.07, for Karnataka from 61.13 to 64.33 and for Uttar Pradesh from 53.24 to 55.66 while it improved for Orissa from 67.55 to 64.53 registering an improvement of 3.02 points. This improvement was higher than that registered by Tamilnadu, Kerala, Madhya Pradesh and Assam. Engel's ratio for urban areas deteriorated over the period for Punjab from 45.54 to 48.57 while it improved for Orissa from 56.04 to 54.55.

3.11 Distribution of rural and urban population by MPCE classes indicates the change in the standard of living of the people and the magnitude of poverty. A higher concentration of population in the lower expenditure classes is indicative of a higher proportion of population living in poverty. The distribution of number of persons by MPCE classes in rural and urban areas separately for Orissa and India as a whole based on the results of the 53rd Round of NSS (1997) is presented in Table 3.5.

Table 3.5

## Percentage Distribution of Population by MPCE Classes (NSS 53rd Round, 1997)

Sl No	MPCE Class	Percentage of Population			
		Rural		Urban	
		ORISSA	ALL INDIA	ORISSA	ALL INDIA
1	2	3	4	5	6
1.	Less than Rs. 190	16.90	11.10	3.60	2.80
2.	Rs. 190-265	37.30	21.10	12.00	8.60
3.	Rs. 265-355	23.70	25.50	15.30	16.20
4.	Rs. 355 & above	22.10	42.30	69.10	72.40
	<b>All Classes</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

3.12 The proportion of population in the MPCE classes of less than Rs.190 and Rs.190 to Rs.265 in both rural and urban areas of Orissa was higher than the corresponding all India figures in both these classes. For the two higher MPCE classes this proportion, both for rural and urban areas, was lower for Orissa than the all India figures. This indicates a lower standard of living in Orissa compared to the all India level.



# CHAPTER 4

## AGRICULTURE

4.01 The Agriculture sector has a vital place in the economy of the State. While Agriculture and Animal Husbandry contributed 28.68 percent of the Net State Domestic Product of the State in 1997-98, the Agriculture alone provide direct and indirect employment to around 64 percent of the total work force of the State as per the 1991 Census.

4.02 Agriculture in Orissa continues to be characterised by low productivity. The major factors contributing to low productivity are predominance of traditional agricultural practices, inadequate capital formation and low investment, inadequate irrigation facilities, and uneconomic size of holdings. Nearly 63% of the cultivable land is rainfed and exposed to the vagaries of monsoon. The percapita availability of cultivated land which was 0.39 hectare in 1950-51 has declined to 0.18 hectare in 1998-99. The State has around 31.54 lakh small and marginal farmers accounting for 79.88% of the total operational holdings. These farmers do not have the means to make appropriate investment in agriculture due to poverty. Moreover, modern technology in agricultural operations is yet to reach most of the cultivators.

4.03 Agriculture is a complex and multi-dimensional enterprise. Its development depends on various factors like agro-climatic conditions, technology, inputs, system of land holdings, and other socio-economic factors. During the Seventh Plan, several new programmes like Integrated Cereals and Oil Seeds Programme, National Pulses Development Programme and Special Jute Development Programme were launched under Centrally Sponsored Plan and Central Plan. These programmes continued during the Eighth Plan period with the objective of improving the level of production and productivity. Priority was laid on location specific crop planning, increasing productivity, expansion of area under cash crops like pulses, oil seeds, sugarcane and fibres, increasing cropping intensity, popularising use of bio-fertilisers and bio-agents in pest management, improving marketing of agricultural produce, and popularisation of use of modern agricultural implements and farm machinery.

4.04 In recognition of the crucial role of this sector in the State's economy, the State Government have formulated a comprehensive Agriculture Policy in 1996 according to agriculture the status of an industry. The State Agriculture Policy 1996 aims at doubling the production of foodgrains and oil seeds, generation of adequate employment opportunities in the rural sector and eradication of rural poverty within a specific time frame. The main objective set out in the State Agriculture Policy 1996 are as follows:

- i. To double the production of foodgrain and oil seed crops by the end of the Ninth Plan period.
- ii. To enhance the status of agriculture from the present level of subsistence agriculture to a profitable and commercial venture, so that young persons can accept agriculture as a means of self employment
- iii. To generate adequate employment opportunities.
- iv. To make agriculture the main route of poverty eradication.
- v. To make available the knowledge of modern farming systems at the door step of the farmer.
- vi. To adopt integrated programmes for problem soils such as water logged areas, areas with soil erosion, dry/rainfed areas, area under shifting cultivation, waste land, saline and alkaline soil etc.
- vii. To create entrepreneurship in the field of agriculture.
- viii. To create skilled labourers for management of modern agriculture.
- ix. To help mechanisation of agriculture to increase productivity.
- x. To establish agro-based industries and food processing industries.
- xi. To be self-sufficient in the production of fruits, flowers, vegetables, potato, onion, milk, egg, fish and meat.
- xii. To increase area under tea, coffee, rubber, cashew and other plantation crops.
- xiii. To provide irrigation facilities to 50% of cultivable land through completion of incomplete irrigation projects and promotion of individual and group enterprise.
- xiv. To take up extensive training in the field of agriculture and related activities
- xv. To promote private enterprise in the marketing of agricultural produces.
- xvi. To identify and promote thrust crops in different agro-climatic zones of the State
- xvii. To eradicate agricultural lease and tenancy

## PRODUCTION OF FOODGRAINS

4.05 Table 4.1 presents data on production of foodgrain in the State for the years 1992-93 to 1998-99. The table reveals that the production of foodgrains has fluctuated over the years. There was a bumper harvest of foodgrains during 1993-94 with a production of 72.2 lakh MT of which the share of rice alone was 91.69%. The production continuously declined during the next three years. The production reached the record low level of 48.1 lakh MT during 1996-97 owing to unprecedented drought. Around 28,637 villages out of the total of 51,536 villages in the State were affected by drought with estimated crop loss of more than 50%. Foodgrain production rose to 66.1 lakh MT during 1997-98 and declined again to 57.9 lakh MT during 1998-99. The major factor which contributed to low production of foodgrains (particularly of rice) in 1998-99 was late and erratic monsoon in northern and western parts of the State. The foodgrain production during 1999-2000 is expected to decline further on account of the devastation caused by the cyclones that hit the fertile coastal districts of the State in October 1999.

4.06 The average yield rate of rice in Orissa which was 13.79 quintal/hect in 1997-98 decreased to 12.12 quintal/hect during 1998-99. Over-dependence on monsoon and low application of recommended inputs are the two main factors responsible for low productivity of rice in Orissa. The per capita availability of foodgrains per annum which was 217 kg in 1992-93 decreased to 162 kg in 1998-99. The contribution of Orissa to the food grain basket of the country is estimated at 2.97% in 1998-99.

Table 4.1  
Foodgrain Production in Orissa

(In lakh MT)

Sl. No.	Name of the crop	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7	8	9
1	Rice	53.9	66.2	63.5	62.2	44.4	62.1	59.9
2	Total cereals	55.6	68.4	64.9	63.7	46.1	63.5	58.4
3	Total pulses	4.0	3.8	4.1	4.1	2.0	2.5	2.5
4	Total foodgrains	59.6	72.2	69.0	67.8	48.1	66.1	57.9

P: Provisional

Source : 1) Directorate of Economics and Statistics, Orissa, Bhubaneswar.

2) Directorate of Agriculture and Food Production, Orissa, Bhubaneswar.

## RICE

4.07 The Centrally Sponsored " Integrated Rice Development Programme " launched during the Seventh Plan period has been redesignated as " Integrated Cereal Development Programme-Rice" and is being implemented in the State since 1994-95. The main objective of this programme is to augment paddy production and enhance productivity of rice through adoption of a package of scientific practices.

4.08 A major component of the programme for raising agricultural production is to increase coverage of area under High Yielding Variety (HYV) seeds. Despite inadequate irrigation facilities, shortage of HYV seeds, low use of fertilisers and pesticides, there has been significant expansion of area under HYV crops in the State. Area under HYV paddy has increased by more than 53% during the period from 1991-92 to 1998-99. The Agriculture Policy 1996 accords priority to multiplication of high yielding variety of seeds to replace the traditional varieties being used in the State. Seed multiplication is organised through agricultural farms of the Agriculture Department, Orissa State Seed Corporation, Seed Village Programme and private registered seed growers. Certified seeds are supplied to farmers through 628 departmental sale centers located in all the 314 blocks of the State. It has been targetted to supply 3,72,991 quintals of HYV seeds to farmers during 1999-2000, out of which 1,39,498 quintal had been supplied to farmers up to June 1999. Table 4.2 presents data relating to area under HYV paddy in the State for the period from 1991-92 to 1998-99.

**Table 4.2**  
**Area under HYV Paddy in Orissa**

(in thousand hectare)

Sl No.	Year	Autumn		Winter		Summer		Total	
		Irrigated	Un-irrigated	Irrigated	Un-irrigated	Irrigated	Un-irrigated	Irrigated	Un-irrigated
1	2	3	4	5	6	7	8	9	10
1	1991-92	19.00	174.00	431.00	492.00	289.05	-	739.05	666.00
2	1992-93	14.00	185.00	453.00	516.00	211.63	-	678.63	701.00
3	1993-94	14.00	204.00	484.00	561.00	244.00	-	722.00	765.00
4	1994-95	14.00	194.00	525.00	643.00	268.00	-	807.00	837.00
5	1995-96	14.00	226.00	591.00	710.00	275.00	-	880.00	936.00
6	1996-97	22.67	232.52	638.89	735.18	264.14	-	925.70	967.70
7	1997-98	18.24	269.38	646.70	875.87	232.66	-	897.60	1145.25
8	1998-99(P)	38.43	265.68	835.13	758.18	263.27	-	1136.83	1023.81

P : Provisional

Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar

**PULSES**

4.09 The total area under pulses accounted for about 13.19% (7.05 lakh hectare) of the area under foodgrains and contributed about 3.95% (2.45 lakh MT) of total foodgrain production of the State during 1998-99. As against the total demand of 12 lakh MT of pulses in the State, only about 2.37 lakh MT has been produced on an average in a year during the preceeding 3 years. In order to increase production of pulses, It is proposed to increase the coverage of area under pulses and to raise productivity through the adoption of dry farming technology, adoption of mixed and inter-cropping system, use of quality seeds, use of phosphatic fertilisers, and need based plant protection measures. It has been targetted to produce 13.42 lakh MT of pulses in the State during 1999-2000.

**OIL SEEDS**

4.10 Groundnut, sesamum, mustard and niger are the main oil seed crops in the State. Sun-flower cultivation has also been introduced in western Orissa. Emphasis is laid on production of certified seeds, supply of input kits, subsidised sale of quality seeds, plant protection chemicals, plant protection equipments, and farm implements under the Centrally Sponsored Plan scheme " Oil Seeds Production Programme" (OPP). The coverage under oil seeds in 1998-99 was 3.84 lakh hectare with production of 1.77 lakh MT as against coverage of 4.23 lakh hectare and production of 2.00 lakh MT during 1997-98. Out of the total area under oil seed crops during 1998-99, niger was cultivated in 44% followed by groundnut in 22%. The oilseed production in the State contributed only 0.83% to the total production of oilseeds in the country during 1998-99.

**COMMERCIAL CROPS**

4.11 Commercial crops like sugarcane, jute, mesta, cotton, soyabean, groundnut, potato, chilly, onion etc. are being given more attention. Paddy and other foodgrains will be encouraged only in land which is suitable for their cultivation. In low rainfed areas of Kalahandi, Koraput, Bolangir, Nowrangpur and Rayagada, cotton cultivation has been encouraged. In the coastal districts, river bed potato cultivation is being promoted by using certified potato seeds and other improved planting materials. Sugarcane cultivation has been accepted by farmers in the State because it is a high value commercial crop. Steps are being



taken to cover at least 1,50,000 hectare under sugarcane during the next five years. The resulting production should provide sufficient feedstock not only to the seven sugar mills currently in operation in the State but also to the sugar mills likely to come up in the coming years. Sugarcane growers are provided with quality cane seeds, farm implements and drip irrigation under two schemes namely Sugarcane Development Programme under the State Plan and Sustainable Development of Sugarcane Based Cropping System under the Centrally Sponsored Plan.

### CROPPING PATTERN

4.12 More than 70% of the cultivated area in the State is covered under paddy crop. Since the Eighth Plan, efforts are being made to divert land from paddy to cash crops like pulses, oil seeds, sugarcane, potato etc. to ensure better returns. Table 4.3 presents the cropping pattern of principal crops in Orissa from 1991-92 to 1998-99.

Table 4.3  
Cropping Pattern of Principal Crops in Orissa.

(Figures in percentage)

Sl. No.	Principal crop	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7	8	9
1.	Paddy	70.9	71.3	70.8	71.8	76.7	74.7	74.4
2.	All cereals	74.8	75.2	74.4	75.0	79.6	78.0	77.6
3.	Total pulses	14.4	14.2	14.8	14.2	10.6	12.2	11.8
4.	Total foodgrains	89.2	89.4	89.2	89.2	90.2	90.2	89.4
5.	Oil seeds	7.7	7.7	7.4	7.3	6.9	7.0	6.4
6.	Fibers	0.7	0.7	1.0	1.0	1.2	1.2	1.2
7.	Other crops (sugarcane, potato, tobacco, chilly and ginger)	2.4	2.2	2.4	2.5	1.7	1.6	3.0
	All crops	100	100	100	100	100	100	100
	Total Area (thousand hectare)	6267	6387	6296	6309	5897	6022	5980

P : Provisional

Source : 1) Directorate of Economics and Statistics, Bhubaneswar.

2) Directorate of Agriculture and Food Production, Bhubaneswar.

4.13 Table 4.3 shows that during 1998-99 paddy was the major cereal crop in the State with coverage of about 74.4% of the total gross cropped area under principal crops, followed by pulses (11.8%), and oilseeds ( 6.4%). The area under fibre crops accounted for only 1.2% and other cash crops which include sugarcane, potato, chilly, ginger, onion and tobacco etc. constituted only 3.0% of the total gross cropped area under principal crops.

### CROPPING INTENSITY

4.14 Cropping intensity is one of the indices of the level of agricultural development. Table 4.4 shows that cropping intensity in the State has varied between 136% in 1998-99 to 159% in 1993-94.

Table 4.4.

#### Cropping Intensity for the Period from 1990-91 to 1998-99

(Area in thousand hectare)

Sl. No	Year	Net area sown	Gross cropped area	Cropping intensity (%)
1	2	3	4	5
1	1990-91	6304	9642	153
2	1991-92	6337	9822	155
3	1992-93	6304	9416	149
4	1993-94	6303	10032	159
5	1994-95	6279	9691	154
6	1995-96	6210	9668	156
7	1996-97	5968	8216	138
8	1997-98	6122	8645	141
9	1998-99 (P)	6093	8268	156

P : Provisional

Source : Directorate of Agriculture and Food Production, Bhubaneswar.

### HORTICULTURE

4.15 Orissa has vast potential for development of horticulture. Different agro-climatic zones have been identified for development of specific fruits, vegetables and spices. Hill tracts of KBK districts and of Phulbani and Gajapati districts are suitable for intensive

horticultural activities. Cultivation of commercial fruits, use of hybrid vegetable seeds, propagation of off-season vegetable cultivation, establishment of bio-centres for production of quality planting materials, use of quality potato seeds, installation of drip irrigation systems, beneficiary oriented cultivation of oil palm etc. are the major thrust areas in horticulture. The area under different fruit crops was 3,03, 940 hectare during 1998-99. It is targetted to bring an additional area of 30,000 hectare under fruit crops during 1999-2000. A compact area approach would help in developing the market and also facilitate establishment of food processing units and other down stream activities. The Agriculture Policy 1996 envisages establishment of at least one agricultural farm or nursery at block level to produce and supply quality seeds and seedlings to the cultivators. At present 171 sale outlets are functioning in the State through which seeds and planting materials are being supplied.

4.16 Out of the total area of 303.94 thousand hectare under fruit crops in the State during 1998-99, mango orchards accounted for 109.77 thousand hectare, banana 24.73 thousand hectare, citrus fruits 23.57 thousand hectare, papaya 17.88 thousand hectare and coconut 54.52 thousand hectare. All other fruits covered 72.53 thousand hectare. Table 4.5 presents data on area, production and yield rate of different fruits during 1998-99.

Table 4.5

## Area, Production and Yield Rate of Fruits in Orissa during 1998-99

Sl. No.	Name of the fruits	Area (thousand hect.)	Production (thousand MT)	Yield rate (qtl/ hect)
1	2	3	4	5
1	Mango	109.77	490.68	44.70
2	Banana	24.73	276.48	111.80
3	Citrus	23.57	177.42	75.27
4	Pine apple	0.94	15.04	160.00
5	Papaya	17.88	285.05	159.42
6	Coconut	54.52	7951 (lakh nuts)	1458 (nuts)
7	Other fruits	72.53	473.73	65.31
	<b>Total</b>	<b>303.94</b>	<b>1718.40</b> <b>+ 7951 (lakh nuts)</b>	<b>56.54</b> <b>and 1458 (nuts)</b>

Source : Directorate of Horticulture, Orissa, Bhubaneswar

4.17 During the Ninth Plan period it is proposed to cover an area of 5 lakh hectare under mango, coconut, citrus fruits and banana. To accelerate plantation activities, it has been proposed to produce 724 lakh quality plants during the Ninth Plan period through

departmental production farms located at block level and through private nurseries. During 1998-99, 28.30 lakh quality plants have been produced and supplied to farmers. Potato and onion development is being given importance and use of quality seeds has been promoted. During 1998-99, potato and onion were grown over an area of 15,150 hectare and 45,750 hectare respectively in the State. A total of 22,500 quintal of quality potato seeds and 200 quintal of onion seeds were supplied to farmers.

4.18 Oil palm plantations and use of drip irrigation system are being given priority during the Ninth Plan. During 1998-99, cultivation of oil palm was taken up in an area of 1,382 hectare as against 1,327 hectare in 1997-98. Drip irrigation facilities were provided over an area of 2,050 hectare under fruit crops during 1998-99. It has been targeted to bring an additional area of 1,500 hectare under drip irrigation during 1999-2000.

## **LAND REFORMS**

4.19 Land reforms continue to be an integral part of the overall strategy of poverty alleviation. Land reform measure include abolition of intermediary rights, tenancy reforms such as regulation of rent, provision of security of tenure to tenants, distribution of ceiling surplus land to the land less agricultural labourers and small land holders, consolidation of land holdings, and updating and maintenance of land records.

4.20 The basic objective of land ceiling laws is to acquire ceiling surplus land and to distribute it among landless persons. By the end of 1998-99, 1,61,314.21 acre of ceiling surplus land has been distributed among 1,42,971 landless persons as against 1,60,822.64 acres distributed to 1,41,922 persons by the end of the previous year.

4.21 Consolidation of holdings includes preparation, correction, and updating of land records and amalgamation of small and scattered holdings in a rational manner with a view to ensuring better land management and optimum utilisation of limited water resources. During 1998-99, consolidation work was completed in 326 villages and was taken up in 350 new villages. During the year, an area of 0.63 lakh hectare was consolidated. By the end of 1998-99, operations for consolidation of holdings had been completed in 7244 villages covering an area of 10.83 lakh hectare.

**CROP INSURANCE**

4.22 In order to provide financial support to cultivators in the event of crop failure on account of natural calamities, a Comprehensive Crop Insurance Scheme was in operation in the State since 1985. The scheme was voluntary in nature and covered all farmers availing crop loans from Co-operative Banks, Commercial Banks and Regional Rural Banks. A modified scheme formulated by Government of India has been implemented since Rabi season of 1999-2000.

4.23 Crops like paddy, ground-nut and mustard were covered under the crop insurance scheme. During Rabi season of 1997, amounts of Rs.31.81 lakh and Rs.138.84 lakh were paid to 4,221 and 14,223 farmers towards compensation for the loss of paddy and groundnut crops respectively. Similarly during Kharif season of 1998, an amount of Rs.1,602.13 lakh was paid to 4,54,954 farmers for the loss of paddy crop over an area of 5.54 lakh hectare and an amount of Rs.7.67 lakh was paid to 785 farmers on account of loss of ground-nut crop in an area of 1,104 hectare. The State Agriculture Policy 1996 envisages extension of insurance cover to crops like sugarcane, cotton, jute, biri, mung, arhar, gram, peas, sunflower, soyabeans, til, niger and maize etc.

**DRY LAND FARMING**

4.24 Nearly 63% of the cultivable land in the State is rainfed and depends on monsoon. The farmers in the State grow paddy widely in all situations despite the risk of moisture stress and low yield. In respect of upland paddy, it has been observed that only early varieties group (of 90 days or less duration) has a reasonable chance of success. In drought situation, even early varieties suffer a setback. Under such situations, other upland crops like ragi, gram, biri, groundnut etc. give a more stable yield with smaller fluctuations. Hence, for stabilising production in rainfed areas, more particularly in the KBK, Gajapati and Phulbani districts, farmers need to be motivated to divert uplands for growing drought resistant crops. Inter-cropping is a commendable practice in dry land agriculture since it offers a kind of insurance against total crop failure in drought years. It also ensures proper utilisation of soil moisture as well as plant nutrients. The ideal inter-cropping system in Orissa is cereals and pulses, pulses and ragi, maize and arhar, and groundnut and arhar.

4.25 Dry-land farming technology, however, has to be location specific depending on the type of soil, rainfall pattern and agrarian practices. Sustainability in crop production can be achieved through appropriate soil and water management, run-off water collection and recycling, provision of farm ponds, percolation tanks, adoption of improved agronomic practices, crop substitution, inter-cropping, mixed cropping, use of fertilisers at optimum levels, use of improved implements, and need based pest control measures.

4.26 Adoption of land and water conservation techniques and alternative land use systems like agro-forestry, agro-horticulture, and silvi pasture development can be taken up in dry land areas for increasing and stabilising production.

### **CONSUMPTION OF FERTILISERS**

4.27 Application of chemical fertilisers and organic manure plays a vital role in increasing productivity. It also protects land fertility by meeting the nutrient requirement of crops. Consumption of chemical fertilisers in the State, which was 1.37 kg per hectare in 1964-65, has risen to 12.99 kg per hectare in 1984-85 and further to 36.2 kg per hectare in 1998-99. During 1998-99, the total fertiliser consumption in the State was 299.14 thousand MT as against 290.80 thousand MT during 1997-98. In order to boost agricultural production, the Agriculture Policy 1996 emphasises increased use of chemical fertilisers and organic manure. The fertiliser consumption is proposed to be increased to 100 kg per hectare within a period of five years.

4.28 Continuous use of chemical fertilisers with gradual decline in application of organic manure such as farmyard manure and compost affects the nutrient status and physical and chemical properties of the soil. Besides, injudicious use of chemical fertilisers can also pollute the environment, particularly water. Bio-fertilisers are the present need for sustained agricultural production as they not only enrich soil fertility but also provide continuous supply of nitrogen and minimise the need for inorganic fertilisers. Hence, production and use of bio-fertilisers like blue green algae, azolla, rhizobium and azospirillum need to be encouraged along-with composting of water hyacinth and farm waste, and green manuring with dhanicha.

4.29 Table 4.6 presents data relating to per hectare consumption of fertilisers for major States in the country from 1990-91 to 1996-97. The per hectare consumption of fertilisers in Orissa at 30.5 kg in 1996-97 was much below the national average of 77.5 and lower than the consumption in all the States except Assam. The per hectare consumption of fertiliser was highest in Punjab at 160.5 kg, followed by Andhra Pradesh (135.6 kg), Haryana (131.7kg), Tamilnadu (114.8 Kg), Uttar Pradesh (107.9 kg), Bihar (78.6 kg), Karnataka (65.2 kg), Gujarat (76.6 kg), Kerala (61.9 kg) and Maharashtra (63.3 kg). The per hectare consumption of fertiliser has increased to 36.2 kg in Orissa during 1998-99.

4.30 In order to provide assistance to the farmers of tribal areas, where off-take of fertilisers is very low, a transport subsidy of Rs.100 per tonne has been made available by State Government.

Table 4.6

## Consumption of Fertiliser in Selected States

		(kg / hectae)					
Sl No	Name of the State	1990-91	1991-92	1992-93	1994-95	1995-96	1996-97
1	2	3	4	5	6	7	8
1.	Andhra Pradesh	133.2	119.3	114.2	125.2	137.3	135.6
2.	Assam	10.5	9.5	6.9	10.9	12.8	14.6
3.	Bihar	56.8	57.9	57.2	64.3	77.0	78.6
4.	Gujarat	64.9	74.9	73.3	77.9	68.5	76.6
5.	Haryana	128.3	112.8	107.8	127.9	123.7	131.7
6.	Karnataka	66.3	74.8	64.4	67.5	75.5	65.2
7.	Kerala	84.4	74.4	67.2	65.1	66.7	61.9
8.	Madhya Pradesh	35.4	36.1	35.3	38.8	34.7	41.3
9.	Maharashtra	66.4	58.2	52.1	69.2	65.3	63.3
10.	Orissa *	20.1	20.0	21.6	22.7	24.6	30.5
11.	Punjab	171.2	168.4	162.2	170.9	167.3	160.5
12.	Tamil Nadu	115.1	123.0	117.1	113.4	106.9	114.8
13.	Uttar Pradesh	90.1	88.7	86.0	96.0	101.4	107.9
14.	West Bengal	90.3	90.5	87.5	86.6	99.3	103.9
15.	Rajasthan	28.9	24.6	27.4	33.3	31.3	46.5
	<b>All India</b>	<b>72.4</b>	<b>75.5</b>	<b>72.0</b>	<b>74.0</b>	<b>74.84</b>	<b>77.5</b>

\*. Figures of Directorate of Agricultural and Food production, Orissa, Bhubaneswar.

Source : CMIE Report, September 1992, 1993, 1994 and March 1997 and September 1998.

**PEST CONTROL**

4.31 As high yielding varieties of crops are susceptible to pests and diseases, plant protection measures are essential for sustaining agricultural production. However, excessive use of pesticides may be hazardous to human health. As a result, integrated pest management technology has been given a major thrust during the Ninth Plan period in order to achieve effective pest control on one hand and to curb its possible adverse effects on environment on the other. This technology inter-alia envisages encouraging the use of biological pest control measures, identifying the most poisonous/toxic pesticides and putting a ban on their use, and restricting the use of pesticides in a sustainable manner. During 1998-99, 870.50 MT of pesticides/insecticides were consumed in the State as against 916.65 MT during the previous year with a decline of 5.03%.

**AGRICULTURAL MARKETING**

4.32 The Orissa State Marketing Federation has been functioning as the apex organisation of 55 Regional Co-operative Marketing Societies distributed all over the State. At present there are 33 rice mills and 16 oil mills managed by RCMs, which are processing paddy and oil seeds procured from cultivators. The Orissa State Tribal Development Co-operative Corporation and Orissa State Oil Seeds Growers' Federation are also functioning as apex marketing institutions. The 223 LAMPS functioning in the TSP area provide a package of services at a single contact point. One Jute Marketing Co-operative Society, one Coconut Growers' Marketing Co-operative Society, eighteen Cashew-nut Marketing Co-operative Societies, three Betel Marketing Co-operative Societies, three Forest Marketing Co-operative Societies, 28 Fruit and Vegetable Co-operative Societies and eight Cotton Co-operative Societies are functioning for assisting the growers in marketing their products.

4.33 It is proposed to restructure the existing Regulated Market Committees so as to adopt the pattern of Mandi system in operation in Maharashtra, Punjab, Tamil Nadu, Karnataka and Andhra Pradesh. The Orissa State Agricultural Marketing Board will have to educate the growers and develop market yards for the purpose. Storage and other marketing facilities are also proposed to be provided by the Regulated Market Committees.



## AGRICULTURAL CREDIT

4.34 The total amount of agricultural loans advanced by different Commercial Banks, RRBs, and Co-operative Banks during 1998-99 was to the tune of Rs.624.05 crore as compared to Rs.467.96 crore in 1997-98. Out of the total crop loan and term loan financed during 1998-99, the share of Co-operative Banks was 55.98% followed by Commercial Banks (27.69%) and RRBs (16.33%). The investment made by different financing agencies in the agricultural sector in 1998-99 has increased by 33.36% over the previous year. The amount of loans financed by Co-operative banks and RRB's has increased substantially by 54.93% and 28.69% respectively in 1998-99 in comparison to the previous year. However in case of Commercial Banks there has been only a marginal increase of 5.83%.

4.35 The amount of loans provided by Commercial Banks for agricultural operation in the State is low when compared to the amount advanced in some of the major States. Of the total investment of Rs.22,872.9 crore by the Commercial Banks in the agricultural sector in the country during 1993-94, the share of Orissa was only 2.4% whereas Andhra Pradesh occupied the highest place with 12.11%, followed by Uttar Pradesh (11.33%), Tamil Nadu (11.19%), Karnataka (9.54%), Maharashtra (7.91%), Madhya Pradesh (6.44%), Gujarat (5.67%), Punjab 6.17%, Bihar (5.40%) and Rajasthan (4.84%). Information on agricultural credit provided by Commercial Banks, RRBs and Co-operative Banks in Orissa from 1992-93 to 1998-99 has been presented in Table 4.7.

Table 4.7

## Agricultural Credit Advanced in Orissa from 1992-93 to 1998-99

(Rs. in crore)					
Sl No	Year	Commercial Banks	RRBs	Co-operative Banks	Total
1	2	3	4	5	6
1	1992-93	372.01	98.45	Nil	470.46
2	1993-94	408.48	113.31	102.09	823.88
3	1994-95	491.90	145.97	224.89	862.76
4	1995-96	151.78	49.47	176.10	377.35
5	1996-97	175.06	76.28	189.22	440.56
6	1997-98	163.30	79.18	225.48	467.95
7	1998-99(P)	172.82	101.90	349.33	624.05

P: Provisional

Source : State Level Bankers' Committee Bhubaneswar.

## IRRIGATION

4.36 Inadequacy of assured irrigation in the State has been a major bottle-neck in the development of the agricultural sector. Nearly 63% of the cultivable land is rainfed and exposed to vagaries of monsoon. Erratic and uneven distribution of rain-fall affects agricultural production adversely. The State Government have therefore assigned high priority to optimum utilisation of both surface and ground water.

4.37 The State has 65.59 lakh hectare of cultivable land of which 59.00 lakh hectare can be brought under assured irrigation through different types of sources of irrigation. By the end of the Eighth Plan (1996-97), 23.44 lakh hectare of net irrigation potential had been created through all sources which constitutes 39.73% of the estimated irrigable land. It is proposed to provide irrigation facilities to 11.60 lakh hectare of additional agricultural land from different types of sources during the Ninth Plan period as shown below.

Sl No		(Lakh hectare)
1	Major and medium irrigation projects	5.30
2	Ground water (dug wells, shallow tube wells etc.)	1.30
3	Minor irrigation (flow and lift)	3.00
4	Water harvesting structures etc.	2.00
	<b>Total</b>	<b>11.60</b>

4.38 A major part of the programme for the Ninth Plan is proposed to be funded out of World Bank aid and assistance from other external sources. Priority is accorded to completion of the incomplete irrigation projects within a reasonable time. Private irrigation points will also receive special encouragement.

4.39 Additional irrigation potential for 1.25 lakh hectare has been created during 1997-98 and 1998-99. Thus the total net irrigation potential increased to 24.69 lakh hectare at the end of 1998-99 and the proportion of irrigated area to irrigable land went up to 41.85%. Data on irrigation potential created in the State from 1991-92 to 1998-99 through different types of sources has been presented in Table 4.8. Figures for the category "Other Sources" do not exclude irrigation potential relating to sources that may have become derelict in the course of time.

Table 4.8

## Net Irrigation Potential in the State through different Types of Sources

(Area in thousand hectare)

Sl No	Irrigation source	Irrigation potential created up to end of							
		1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7	8	9	10
1	Major and medium	953.00	966.42	971.52	992.69	1028.17	1067.83	1102.40	1142.79
2	Minor (flow)	380.70	386.10	396.10	409.93	415.77	422.79	434.63	439.00
3	Minor (lift)	274.52	280.12	287.51	294.51	301.66	314.24	325.04	332.07
4	Other sources*	469.93	487.43	508.25	518.48	528.20	539.10	547.44	555.36
<b>Total</b>		<b>2078.13</b>	<b>2120.07</b>	<b>2163.38</b>	<b>2215.61</b>	<b>2273.80</b>	<b>2343.96</b>	<b>2409.51</b>	<b>2469.22</b>

*P : Provisional*

\* Includes water harvesting structures, irrigation sources created under Million Wells Scheme and other schemes of Panchayati Raj Department, minor (lift) sources created from loans from co-operative institutions etc.

Source : Engineer-in-Chief, Major and Medium Irrigation, Bhubaneswar  
 Chief Engineer, Minor Irrigation (Flow), Bhubaneswar  
 Orissa Lift Irrigation Corporation, Bhubaneswar  
 Panchayati Raj Department, Bhubaneswar  
 Directorate of Soil Conservation, Bhubaneswar.

## MAJOR AND MEDIUM IRRIGATION PROJECTS

4.40 The total irrigation potential under major and medium irrigation was estimated at 39.49 lakh hectare against which 10.68 lakh hectare had been harnessed by the end of the Eighth Plan. Additional irrigation potential of 34,570 hectare and 40,390 hectare has been created during 1997-98 and 1998-99 investing Rs 546.33 crore and Rs 602.93 crore respectively. In order to achieve the target of covering 5.30 lakh hectare under assured irrigation during the Ninth Plan, another 4.55 lakh hectare of land has to be covered in the remaining three years of the Plan period at a rate of 1.52 lakh hectare per year. During 1999-2000, a sum of Rs.520.30 crore has been provided and it has been targetted to provide irrigation to 39,110 hectare and 23,410 hectare of land during Khariff and Rabi respectively.

4.41 Irrigation potential for 11.43 lakh hectare of land has been created by end of 1998-99 through major and medium irrigation projects. However, in some of these projects, water does not reach the tail end of ayacut area due to lack of maintenance and other defects. In order to tackle this problem, it has been decided to organise Water User's Associations (Pani Panchayats) with the involvement of NGOs. These Water User's Associations will distribute water, collect water taxes, maintain water channels, and ensure supply of water through outlets. In the first phase, on an experimental basis, Aunli, Darjang, Ghudahada and Rushikulya Irrigation Projects have been taken up for this activity.

#### **MINOR IRRIGATION (FLOW)**

4.42 By the end of 1998-99, the total number of minor irrigation projects in the State was 4,764 of which 2,652 were fully functioning, 793 were partly derelict, 1,161 were completely derelict and 158 were ongoing projects. During 1998-99, additional irrigation facilities for 4,378 hectare in Kharif and 549 hectare in Rabi were created as against the target of 6,884 hectare in Kharif and 1,185 hectare in Rabi. Thus, net irrigation potential of 4.39 lakh hectare has been created by the end of 1998-99 in comparison to 3.79 lakh hectare at the end of 1990-91, registering an increase of 14.17% over a period of nine years. The potential created through minor irrigation (flow) constitutes 17.78% of the total net irrigation potential created in the State through different types of sources. During 1999-2000, it is proposed to create additional irrigation potential to the extent of 6,698 hectare in Kharif and 1,323 hectare in Rabi respectively.

#### **MINOR IRRIGATION (LIFT)**

4.43 Orissa Lift Irrigation Corporation (OLIC) is in-charge of implementation of ground water development schemes in the State. Individual farmers also make some investment at their level to provide irrigation to their agricultural fields. The irrigation potential targeted under minor irrigation (lift) is 8.87 lakh hectare, against which irrigation facilities to the extent of 3.25 lakh hectare in Kharif and 1.95 lakh hectare in Rabi season had been provided by the end of 1997-98 with energisation of 14,932 lift irrigation points. During 1998-99, 307 new lift irrigation points were energised with creation of irrigation potential of 7,038 hectare in Kharif and 4,223 hectare in Rabi. During 1999-2000, it has been targeted to establish 600 new lift irrigation points with creation of additional irrigation potential of 11,900 hectare in Kharif and 7,140 hectare in Rabi respectively. A total of 127 lift irrigation points have been handed over to WUAs during 1998-99, and another 1,000 are likely to be handed over by the end of 1999-2000.

**IRRIGATION IN KBK DISTRICTS**

4.44 The KBK districts namely Koraput, Malkangiri, Rayagada, Nawarangapur, Bolangir, Sonepur, Kalahandi and Nuapada are chronically affected by drought due to low and erratic rainfall. By the end of the Eighth Plan, the total irrigation potential created in these districts was 3.54 lakh hectare constituting 14.34% of the total irrigation potential created in the State. During 1997-98 and 1998-99, additional irrigation potential for 49,493 hectare has been created. The Annual Plan 1999-2000 envisages creation of additional irrigation potential of 14,240 hectare with an outlay of Rs.212.96 crore through ongoing and new irrigation projects such as Upper Indrabati, Upper Kolab, Potteru, Lower Indra, Lower Suktel etc.

**SOIL CONSERVATION**

4.45 Soil Conservation activities are taken up on water-shed basis. An integrated Watershed Development Project aided by the World Bank, Indo-Danish Comprehensive Watershed Development Project, National Watershed Development Project in Rainfed Areas, and River Valley Scheme under Central sectors are important schemes for soil conservation being implemented in the State. The primary objectives of the programmes are to prevent land degradation, promote and balance the ecosystem enhance capacity to retain moisture, and increase the fertility and productivity of the soil. People's participation is built in into the programmes at all stages, from planning to execution. Women are also involved in a number of activities.

4.46 The total degraded land in the State is 61.21 lakh hectare which works out to 39.35% of the total geographical area of the State. Up to the end of 1998-99, 11.59 lakh hectare of land has been treated with different anti-erosion measures. Cumulatively till the end of 1998-99, 9,326 water harvesting structures have been constructed and irrigation potential of 0.83 lakh hectare (Kharif) has been created. It has been targeted to take up anti-erosion measures in an area of 10.95 lakh hectare during the Ninth Plan period of which the target for 1999-2000 is 1.51 lakh hectare.

**DRIP IRRIGATION**

4.47 In recent years Government have been laying emphasis on installation of drip irrigation systems for development of crop husbandry in agriculture and horticulture. Upto 1994-95, Government of India used to provide 50% subsidy with a maximum amount of Rs.50,000 for establishment of drip irrigation systems in farmers' orchards. The remaining 50% of cost was to be borne by the beneficiary. After 1994-95, this 50% subsidy is being shared at the rate of 45% and 5% by Centre and the State respectively. During 1998-99, 840 drip irrigation sets have been supplied to interested farmers at subsidised rates as against 2,020 in 1997-98 and it is targetted to supply another 500 sets during 1999-2000.

**AGRICULTURAL PROMOTION AND INVESTMENT CORPORATION LTD (APICOL)**

4.48 APICOL was established in 1996 as a wholly owned Government corporation with the objective of promoting agro-based and food processing industries particularly in rural areas. Up to the end of 1997-98, the Corporation has promoted 27 agro-based and food processing industries with an investment of Rs. 23.72 crore. These units have created employment potential for 200 persons. During 1998-99, APICOL has promoted 121 industrial units with an expenditure of Rs.6.65 crore with the potential of generating employment for 1210 persons. The Corporation also acts as an agent for implementing various incentive schemes provided by Government. By the end of 1998-99, it has released Rs. 16.97 crore as subsidy in favour of 8,453 eligible beneficiaries. APICOL also organises training programmes, seminars, workshops, and awareness programmes.

**AGRICULTURAL CENSUS**

4.49 The Agricultural Census 1990-91 shows that there were 39.48 lakh operational holdings in the State in comparison to 35.86 lakh as per the 1985-86 census registering an increase of 10.09% over a period of five years. The total area of the operational holdings which was 52.61 lakh hectare in 1985-86 has marginally increased to 52.96 lakh hectare in 1990-91. The average size of holdings which was 1.47 hectare in 1985-86 has decreased to 1.34 hectare in 1990-91. The distribution of number of operational holdings into different size classes and the area in each class is presented in Table 4.9.

Table 4.9

## Number and Area of Operational Holdings in Orissa

Sl No	Holding size	No of operational holdings (thousand)			Area of operation (thousand hectare)		
		1985-86	1990-91	% variation	1985-86	1990-91	% variation
1	2	3	4	5	6	7	8
1.	Marginal (below 1.0 hect)	1868 (52.09)	2118 (53.65)	13.38	920 (17.49)	1045 (19.73)	13.59
2.	Small (1.0 hect to 2.0 hect)	910 (25.38)	1035 (26.22)	13.74	1273 (24.20)	14.26 (26.93)	12.02
3.	Semi-medium (2.0 hect to 4.0 hect)	583 (16.26)	594 (15.04)	1.89	1567 (29.78)	1561 (29.47)	(-) 0.38
4.	Medium (4.0 hect to 10.0 hect)	204 (5.69)	186 (4.71)	(-) 8.82	1167 (22.18)	1012 (19.11)	(-) 13.28
5.	Large (10.0 hect and above)	21 (0.58)	15 (0.38)	(-) 28.57	334 (6.35)	252 (4.76)	(-) 24.55
<b>Total</b>		<b>3586</b> <b>(100.00)</b>	<b>3948</b> <b>(100.00)</b>	<b>10.09</b>	<b>5261</b> <b>(100.00)</b>	<b>5296</b> <b>(100.00)</b>	<b>0.67</b>

*N.B. : Figures in brackets indicate percentage to total.*

*Source : Board of Revenue, Agricultural Census Division, Cuttack.*

4.50 There were 5.41 lakh SC and 10.49 lakh ST operational holding in the State with 4.54 lakh and 15.20 lakh hectare of total area respectively in 1990-91. Table 4.10 shows that the number of operational holdings of SC farmers had a share of 13.70% in the total number of holdings while their share in the total area constituted only 8.57%. Similarly the number of holdings of ST farmers formed 26.56% to the total number of holdings and their share in the total operational area was 28.70%. Data on distribution of operational holdings among all social groups are presented in Table 4.10.

Table 4.10

## Distribution of Holdings among different Social Groups as per 1990-91 Census

Sl. No.	Holding size	No. of operational holdings (thousand)			Area of operation (thousand hectare)		
		SC	ST	All groups	SC	ST	All groups
1	2	3	4	5	6	7	8
1	Marginal	389 (18.37)	514 (24.27)	2118 (100.00)	164 (15.69)	275 (26.32)	1045 (100.00)
2	Small	103 (9.95)	295 (28.50)	1035 (100.00)	168 (9.68)	414 (29.03)	1426 (100.00)
3	Semi-medium	42 (7.07)	180 (30.30)	594 (100.00)	105 (6.73)	476 (30.49)	1561 (100.00)
4	Medium	7 (3.76)	56 (30.11)	186 (100.00)	40 (3.95)	304 (30.04)	1012 (100.00)
5	Large	NIL (-)	4 (26.67)	15 (100.00)	7 (2.78)	51 (20.41)	252 (100.00)
	<b>Total</b>	<b>541</b> <b>(13.70)</b>	<b>1049</b> <b>(26.56)</b>	<b>3948</b> <b>(100.00)</b>	<b>454</b> <b>(8.57)</b>	<b>1520</b> <b>(28.70)</b>	<b>5296</b> <b>(100.00)</b>

N.B. : Figures in brackets indicate percentage.

Source : Board of Revenue, Agricultural Census Division, Cuttack.

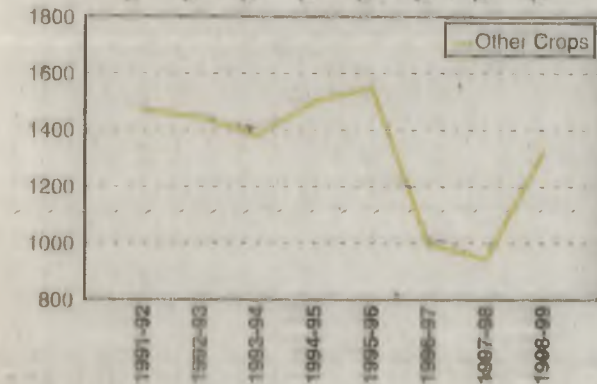
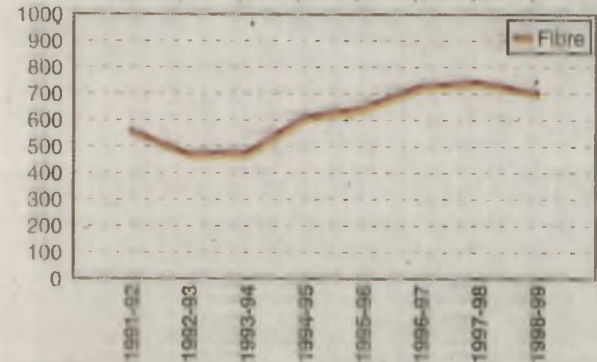
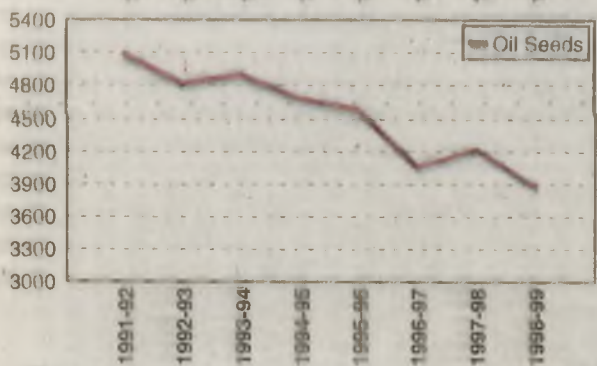
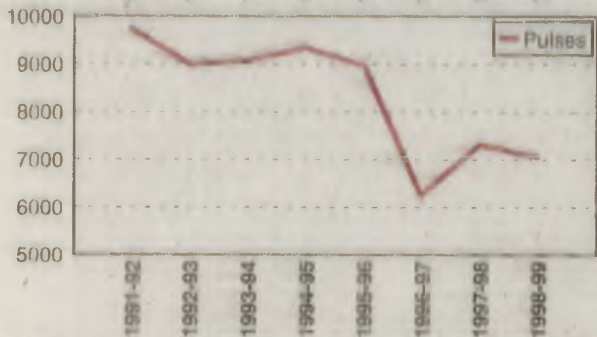
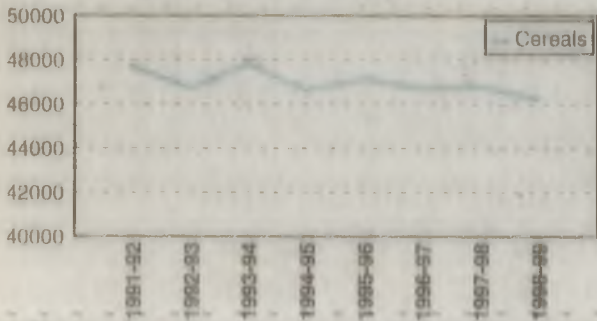




# AREA AND PRODUCTION OF MAJOR CROPS IN ORISSA

( From 1991-92 to 1997-98 )

Area ( In thousand hectare )



Production ( In thousand tonnes )

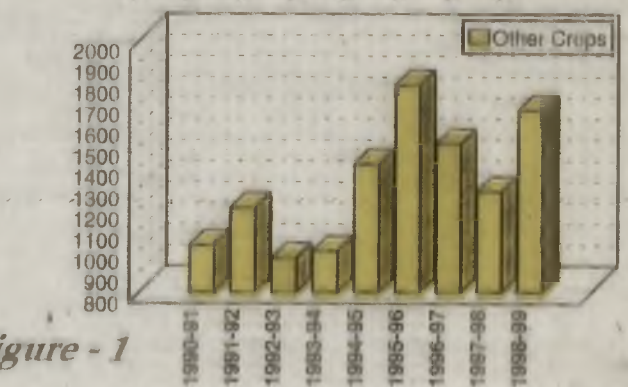
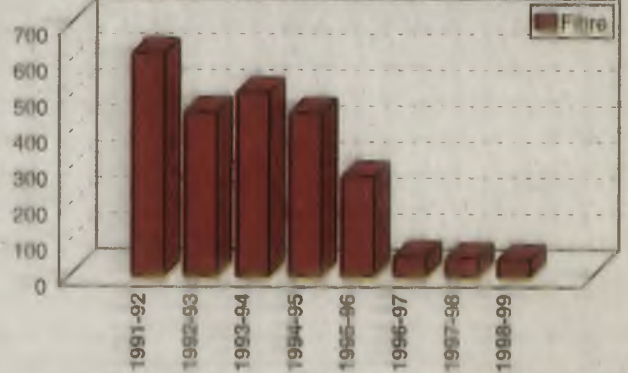
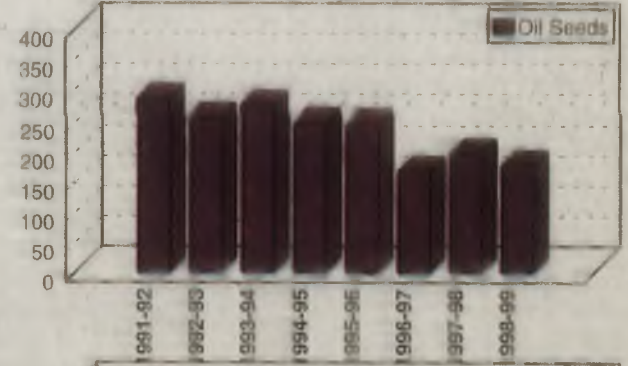
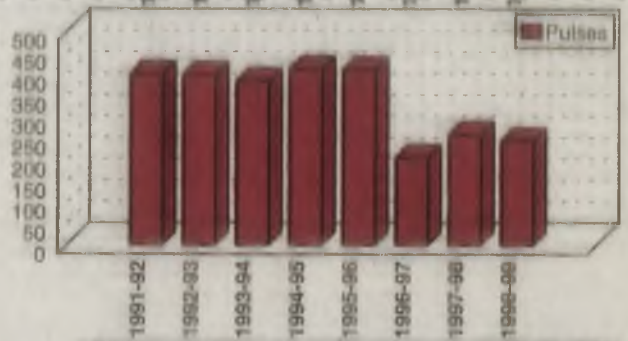


Figure - 1

# LAND UTILISATION PATTERN IN ORISSA ( 1997-98 )

( In percentage )

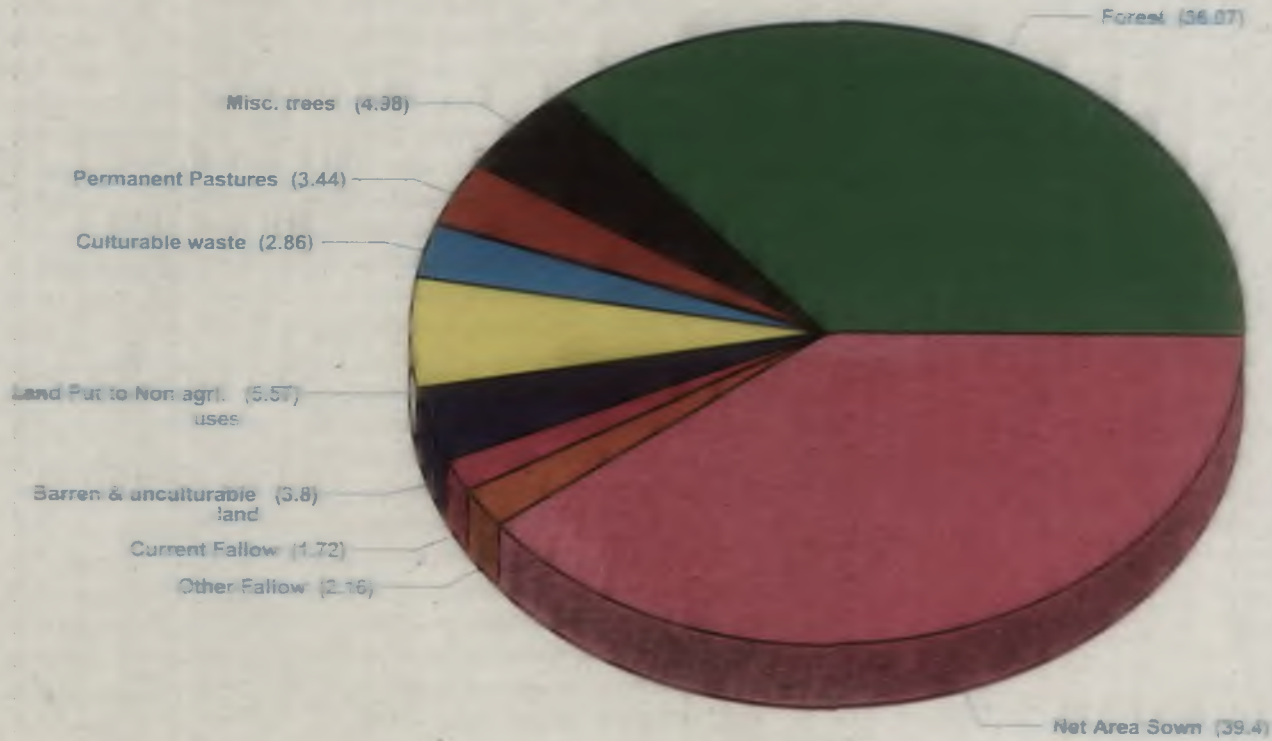


Figure - 2

## CHAPTER 5

### FORESTS AND ENVIRONMENT

#### FORESTS

5.01 Forests play a vital role in maintenance of ecological balance, and provide protection against and reduce the impact of natural calamities like drought and floods. Forests are also an important source of livelihood for certain weaker sections of society, particularly the tribals. Forests provide a wide variety of products of commercial value such as timber, lac, resins, oil seeds, kendu leaves and medicinal plants. The dwindling of forest cover in the country has become a cause of grave concern. Population growth, the rising need for fuel wood, timber and fodder, and rapid industrialisation and urbanisation, among other factors, have led to large scale deforestation. Deforestation needs to be checked and measures need to be taken for rapid reforestation in degraded forest areas

5.02 During 1981, the area under forest was 59,963 sq km which accounted for 38% of the State's geographical area and 8% of the country's forest area. By December 1997, the total forest area of the State is reported to have declined to about 58135.47 sq km which is 37.3% of the geographical area of the State. Out of the total forest area of 58135.47 sq km in the State, the area under reserved forests, demarcated and protected forests, un-demarcated forests, unclassified forests, and other forests accounts for 26329.12, 11685.68, 3838.78, 20.55 and 16261.34 sq km respectively. However, according to the State Forest Report, 1997 published by Forest Survey of India, the forest cover in the State is only 46,941 sq km (30.1% of the geographical area of the State) with the following break up.

(i)	Dense forest with crown density of above 40%	26,101 sq km
(ii)	Open forest with crown density of 10 to 40%	20,629 sq km
(iii)	Mangrove forest	211 sq km
Total		46,941 sq km

The forest area of the State is unevenly distributed. The coastal districts where population density is high have a comparatively smaller areas under forests.

5.03 The National Forest Policy, 1952 envisaged a forest cover in the aggregate of at least one third of total geographical area, with 60% coverage in the hilly tracts and 20% in the plains. Against this, the State has 37% of its geographical area under forest as compared to 23% at the national level.

5.04 The main thrust in the forestry sector is afforestation of waste forest land and restoration of degraded forests. Besides, conservation of forests has to be ensured by intensifying protective measures and enlisting people's involvement in checking illegal felling and removal of trees. Improvement of forest management has also become a necessity.

### **FOREST PLANTATION**

5.05 Forestry sector has a vast potential for creating additional employment opportunities for economically backward groups such as tribals and women. In order to prevent the fast depletion of forest resources and to preserve ecological balance, plantation programmes have been undertaken in degraded forests and waste lands under various State and Central Plan schemes. The main objective and strategy of forest planning is "development without destruction".

5.06 During 1998-99, plantation work under Block Plantation and Rehabilitation of Degraded Forests Programmes has been carried out over 16990.72 hectare of area as against 17959.83 hectare during 1997-98. In addition, the total number of seedlings distributed to the farmers during 1998-99 was 8.67 lakh. Achievement under forest plantation programmes in Orissa from 1992-93 to 1998-99 is presented in Table 5.1.

Table 5.1

**Achievement under Plantation Programmes by different Wings of Forest Department during the Period from 1994-95 to 1998-99**

Sl. No	Activity	Name of the organisation	Achievement during the year				
			1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8
1	Block Plantation (in hectare)	Territorial	2011.00	8052.67	2440.29	8852.80	6340.80
		SFP	6085.00	298.00	384.00	1554.91	680.50
		Wild Life	50.00	N.A	N.A	N.A	N.A
		OFDC	11703.00	65432.88	13074.14	159.12	309.25
		Total	19849.00	73783.55	15898.43	10566.83	7330.55
2	Rehabilitation of Degraded Forests (in hectare)	Territorial	485.00	2527.62	2643.91	5659.00	8409.17
		SFP	7020.00	19353.00	-	1734.00	1251.00
		Wild Life	-	-	-	-	-
		OFDC	-	-	60.00	-	-
Total	7505.00	21880.62	2703.91	7393.00	9660.17		
3	Farm Forestry (seedlings distributed in lakh)	Territorial	-	-	-	128.16	5.31
		SFP	300.47	191.00	151.41	23.73	3.36
		Wild Life	-	-	-	-	-
		OFDC	-	-	-	-	-
		Total	300.47	191.00	151.41	151.89	8.67
4	Avenue Plantation (Rkm)	OFDC	1450	N.A	131.41	22.20	34.29
		Territorial	-	-	-	351.30	533.17
		SFP	-	-	-	113.65	148.15
		Total	-	-	-	487.15	715.61

*Territorial : Territorial wing of Forest Department.*

*SFP : Social Forestry Project.*

*OFDC : Orissa Forest Development Corporation.*

*Source : Principal Chief Conservator of Forests, Orissa, Bhubaneswar.*

*Directorate of Social Forestry, Orissa, Bhubaneswar.*

*Orissa Forest Development Corporation, Bhubaneswar.*

**CITY FOREST AND GREENING OF THE STATE CAPITAL**

5.07 This scheme was introduced in the State during the Eighth Plan period. The objective of the scheme is to develop the Bharatpur Reserve Forest in the periphery of Bhubaneswar City and to take up avenue plantation and plantation in compact patches of vacant land in Bhubaneswar. A sum of Rs.22.60 lakh has been spent under this scheme during 1998-99 for raising plantation on 155 hectare of land and for maintenance of old plantations

**REQUIREMENT OF FOREST PRODUCTS**

5.08 It is estimated that the total requirement of fuel wood, bamboo and timber in Orissa by the year 2001 will be 141.28 lakh MT, 4.34 lakh MT and 367 lakh cum against which the present production is only 1.35 lakh MT, 2.5 lakh MT and 0.18 lakh cum respectively, thus making Orissa a zone of critical scarcity in these products.

**FUEL WOOD AND FODDER PROJECT**

5.09 This is a Centrally Sponsored Plan scheme with a funding pattern in the ratio of 50:50 between the Centre and the State. Orissa Forest Development Corporation (OFDC) is implementing this scheme. The main objective of the scheme is to augment production of fuel wood and fodder with the involvement of local people by associating them in planning, implementation and management. The scheme is now operating in 15 districts of the State. The outlay for the Ninth Plan under the scheme is Rs.600.00 lakh. During 1998-99, plantations were raised over 4050 hectare of land with an expenditure of Rs.160.20 lakh.

**KENDU LEAF**

5.10 Kendu leaf is one of the most important minor forest products and is used for manufacture of bidis. The State produces about 15% of the total kendu leaf production in the country. Kendu leaf trade was nationalised in 1973 with a view to ensuring fair prices to the pluckers and enhancing Government revenue. The revenue from Kendu leaf trade has increased steadily from Rs.2.92 crore during 1972 to Rs.63.50 crore during 1998-99. The purchase price has been enhanced from 13 paise for 20 leaves in 1998 to 15 paise for 20 leaves in 1999 and to 16 paise for the same number of leaves in 2000 to benefit pluckers.

**SOCIAL FORESTRY**

5.11 A Social Forestry Project was implemented in the State over a period of 13 years from 1983-84 to 1995-96 with the assistance of Swedish International Development Authority (SIDA). The project aimed at creating forest resources with the active involvement of the local community primarily to meet their needs of fuel wood, fodder, small timber and minor forest produce. After 1995-96, activities under the project have been funded from the State Plan resources. From its inception upto 1998-99, plantations have been raised over 109.89 lakh hectare. In addition, 0.63 lakh hectare of degraded forest has been reforested. During this period, 24.49 crore of seedlings have been distributed.

5.12 An agreement between Government of Sweden and Government of India has been signed to implement a project for Capacity Building for Participatory and Sustainable Management of Degraded Forest in the State. The project is to be implemented in two stages. Stage I was launched in December 1997 and continued upto May 31, 1999. Under Stage I, contact has been established with 15705 village level organisations and forest area protected by them has been ascertained and mapped by holding 13928 direct interface meetings. Degraded forest over 10660 hectare has been surveyed, demarcated and handed over for protection and natural re-generation to Village Samrakhyan Samitis. A total of 968 forest personnel have been trained, and 139 forest personnel and 1514 villagers have been taken for exposure visits to successful JFM areas. A total of 2370 persons have been trained under experience sharing and learning workshops and 3041 women have been trained for undertaking income generating activities. A sum of Rs.1.28 crore has been spent under Stage I of the project. A project report for Stage II has been submitted to SIDA.

5.13 A scheme namely "Sworna Jayanti Kunja" has been launched aiming at distribution of seedlings free of cost at the rate of 50 seedlings to every village of the State. Government of India have provided an amount of Rs.46.99 lakh for the Scheme during 1997-98. During 1998-99, 3.36 lakh seedlings were distributed and about 6700 villages were benefitted under the scheme.

**FOREST PROTECTION**

5.14 As a first step to involve people in forest protection, a Resolution was issued by Government of Orissa on 1.8.1988. As per this Resolution, village level organisations called Forest Protection Committees (FPCs) were formed for protection of reserve forest. Area adjoining the villages was assigned to these committees and in return villagers were granted certain concessions to meet their bona-fide requirement of fire-wood and small timber. This Resolution was amended in 1990 and protected forest area was also brought under this scheme of protection of forest by adjoining communities. In 1993 it was felt that the earlier scheme has not made the desired impact in re-generating degraded forests. In 1993 a new scheme of Joint Forest Management involving formation of Vana Samrakhyana Samitis (VSSs) was initiated under which Forest Department and villagers of adjoining villages were envisaged to be equal partners in the protection and regeneration of degraded forests. Under this scheme usufructory benefits were granted to VSSs. Also, under the SIDA assisted Social Forestry Project a number of village level organisations called Village Forest Committees (VFCs) were formed. At present different types of village level organisations namely FPCs, VFCs, VSSs, and some unregistered groups are engaged in protection of forests. On an average a village level organisation protects 50 to 200 hectare of forest.

5.15 Forest Protection Squads including police personnel and CRPF are also engaged in keeping vigil over vulnerable forest areas through out the year.

**FOREST REVENUE**

5.16 Forest is an important source of non-tax revenue for the State Government. Year-wise collection of revenue from 1994-95 to 1998-99 is presented in Table 5.2. The table shows that forest revenue has been increasing steadily after 1995-96.



Table 5.2

## Revenue Receipts from Forest Products

		( Rs in crore )					
Sl. No	Item	1990-91	1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8
1	Timber and firewood	21.10	17.39	7.95	11.74	10.24	6.47
2	Bamboo	6.45	8.91	10.02	8.74	9.06	8.52
3	Kendu leaf	76.85	71.09	43.58	47.86	40.60	63.50
4	Others	4.68	8.21	6.71	8.28	13.21	8.32
	<b>Total</b>	<b>109.08</b>	<b>105.60</b>	<b>68.26</b>	<b>76.62</b>	<b>73.11</b>	<b>86.81</b>

Source : Forest and Environment Department, Bhubaneswar

## WILD LIFE

5.17 Due to inadequate protection measures and the dwindling forest cover there has been a rapid decline in the wild life population in the State. In order to protect and preserve the wild life, 18 Sanctuaries and 2 National Parks have been notified in the State with 6677.50 sq km of area comprising of 4.1% of the geographical area and 10.37% of the total forest area of the State. A total of 84 species of reptiles, 446 species of birds and 85 species of mammals have been identified in these areas. As per the 1998 census, there are 246 tigers and 411 leopards are in the State. The tiger population of the State has decreased by 12.1% over the previous census conducted during 1993 while the leopard population has increased by 5.9% during the same period. As per the elephant census conducted in 1993, there were about 2000 elephants in the State.

5.18 The Similipal National Park, which is one of the Project Tiger areas, has been designated as a Biosphere Reserve by Government of India. There were 98 tigers, 115 leopards and 432 elephants in the Similipal Sanctuary as per the estimates made in 1994 and 1995.

5.19 The Bhitarkanika Wild Life Sanctuary comprises of 672 sq km, out of which the National Park area is 367 sq km. The sanctuary is the largest nesting ground in the world of Olive Ridley sea turtles. Every year about 2 to 6 lakh large turtles come to the Gahiramatha beach for nesting and lay about 5 to 6 crore eggs.

5.20 The Chilika (Nalabana) Wild Life Sanctuary was started in December 1987 over an area of 15.53 sq km. It is an ideal habitat for migratory birds and also for the endangered Irrawaddy dolphin. It attracts 94 species of migratory birds from far off countries.

5.21 Chandaka-Dampara Sanctuary with 175.79 sq km of area was set up in December 1982. As per the census conducted in 1996, there were 70 elephants in this reserve forest. Tiger, leopard, sambar and spotted deer are also found in this sanctuary. An outlay of Rs.180.00 lakh has been proposed for development of the Sanctuary during the Ninth Plan. A sum of Rs.37.47 lakh was spent during 1998-99.

5.22 The Nandan Kanan Zoological Park, established in 1960, houses 604 animals of 52 species, 425 birds of 66 species and 114 reptiles of 14 species. A White Tiger Safari, a Lion Safari, an Aquarium, a Toy Train and an Aerial Ropeway are some of the attractions of this Zoo. During 1998-99 10.61 lakh visitors visited the Zoo and a revenue of Rs.63.21 lakh was collected against 12.48 lakh visitors and revenue of Rs.55.82 lakh collected during 1997-98.

5.23 The Eco-Tourism scheme was introduced in 1995-96 to provide transport and accommodation facilities for tourists in Sanctuaries and National Parks. In the first phase Similipal, Chilika, Bhitarkanika and Nandan Kanan have been taken up. An outlay of Rs.155.00 lakh has been proposed for the scheme in the Ninth Plan. A sum of Rs.18.17 lakh has been spent during 1998-99.

## ECOLOGY AND ENVIRONMENT

5.24 The Environment Wing of the Forest and Environment Department has

the following objectives.

- i To act as the nodal agency for environmental management and conservation.
- ii Implementation of Pollution Control Acts and Rules.
- iii Environmental impact assesment of development projects and industries.
- iv Eco-management and protection of natural living resources and endangered eco-systems including land, waste land, grass land and mangroves.
- v Eco-restoration, development, protection and maintenance of selected nature reserves/locations.
- vi Promotion of environmental awareness and environmental education.
- vii Promotion of research, education and training on environmental conservation and protection
- viii Overall coordination of activities for conservation and management of Chilka and Ansupa lakes.

### ORISSA ENVIRONMENT PROGRAMME (OEP)

5.25 Orissa Environment Programme (OEP) was launched in April 1992 with

the assistance of the Norwegian Government for a period of five years but was subsequently extended upto March 2000. The total committed amount for the project is about Rs.18.0 crore.

The progress of different projects/programmes under OEP is as follows :

- 1 A project for strengthening of Orissa Pollution Control Board has been completed.

- 2 Five projects were taken up for management of fly ash. Three of these projects have been completed
- 3 A study of pollution problems due to hexavalent chromium in chrome ore mining and processing and its treatment has been completed. A pilot water treatment plant has been set up at the South Kallapani mine site at Sukinda
- 4 A processing plant with treatment capacity of 100 tonne municipal garbage per day has been set up in Puri town. A training programme on promoting awareness among citizens for proper disposal of garbage has been completed.
- 5 Projects for preparation of an Environment Management Plan for Angul-Talcher area, for raising awareness of pollution related issues in Angul and Dhenkanal districts, for preparation of an impact study on crops, vegetation, domestic animals and human beings in Angul-Talcher area, and for conducting a remote sensing study on monitoring and mitigation of environmental pollution in Angul-Talcher area have been completed. Projects for preparation of a feasibility report on desiltation of Nandira Jhor riverbed at Angul and for provision of piped water supply to eleven fluoride affected villages in Angul district are in progress.
- 6 A stream pollution atlas for Angul-Talcher area has been prepared. Preparation of a zoning atlas for siting of industries in un-divided Dhenkanal, Balasore, Ganjam and Koraput districts is in progress

## ENVIRONMENT EDUCATION AND AWARENESS PROMOTION

5.26 The State Government have taken up a number of educational and awareness promotion programmes for environmental protection and conservation. Thirty District Environment Societies, one for each district, have been constituted under the Chairmanship of District Collectors with official and non-official members. The Government have instituted "Prakruti Mitra" and "Prakruti Bandhu" awards to voluntary organisations/villages/institutions/individuals for outstanding contribution in the field of environment conservation. Upto the end of 1998-99 297 "Prakruti Mitra" awards and 151 "Prakruti Bandhu"

awards have been conferred. The State Government is also co-ordinating the implementation of National Environmental Awareness Campaign in the State for the last 5 years. During 1998-99, grants-in-aid amounting Rs 19.17 lakh have been sanctioned in favour of 352 organisations under this programme.

#### **NATIONAL RIVER CONSERVATION PLAN.**

5.27 Under National River Conservation Plan, Cuttack, Talcher, Dharmasala and Chandabali townships have been identified to avail support for treatment of effluent water and its discharge to Mahanadi, Kathajodi, Brahmani and Baitarani respectively to control the pollution load of these rivers. Both Government of India and the State Government have provided Rs 12.43 lakh each for this work. In the first phase a detailed project report for Mahanadi, Kathajodi and Cuttack has been sent to Government of India for approval.

#### **CONSERVATION AND MANAGEMENT OF THE COASTAL AREA**

5.28 The Central Government has constituted an Orissa Coastal Zone Management Authority in November 1998 under the provisions of the Environment (Protection) Act 1986 under the Chairmanship of Secretary, Forest and Environment. The main functions of the Authority are to deal with environmental issues relating to Coastal Regulation Zone (CRZ) referred to it by the State Government or the Central Government or the National Coastal Zone Management Authority, to identify ecologically sensitive areas in the CRZ and coastal areas highly vulnerable to erosion/degradation and to formulate area-specific management plans for such identified areas, and to identify economically important stretches in the CRZ and to prepare Integrated Coastal Zone Management Plans for these.

#### **CONSERVATION OF ANSHUPA LAKE**

5.29 Chilika Development Authority has been declared as the nodal agency for integrated development and conservation of Anshupa lake. A master plan for Anshupa lake is being prepared by the State Government for exploring possibilities of securing assistance from Central Government and other foreign donor agencies for its restoration and conservation.

**STATE POLLUTION CONTROL BOARD (SPCB)**

5.30 State Pollution Control Board (SPCB) was constituted in 1983. Apart from its head office and central laboratory at Bhubaneswar, it has seven regional offices at Cuttack, Sambalpur, Berhampur, Balasore, Anugul, Rourkela and Rayagada. The primary task of the Board is to ensure optimal and sustainable utilisation of natural and human resources and to control and prevent pollution from industries and urban local bodies. For control of pollution, the Board issues consent with conditions for operation of newly established industries. During 1998-99, the Board has issued 93 consents to establish and 401 consents to operate various industries.

5.31 The Board monitors the quality of the water of the rivers Mahanadi, Brahmani, Baitarani and Rusikulya. It also monitors the quality of the water of various ponds and wells in Bhubaneswar and in villages around the NALCO smelter in Angul. Apart from water, the Board monitors the quality of ambient air of industrial areas and townships in the State. It has monitored 1620 water samples and 3424 air samples during 1998-99.

5.32 The Board has established a Public Awareness and Assistance Cell (PAAC) through which it disseminates useful information to the public and interested parties. An Environmental Grievance Cell has also been created for redressal of environment related complaints received from the public. Out of 259 complaints received, action has been taken in respect of 202 in 1998-99.

**CHILIKA DEVELOPMENT AUTHORITY**

5.33 The Chilika Development Authority was established in November 1992 as an autonomous body to attend to the various problems of the lake and to ensure its conservation and around development. The lake is facing a number of problems such as siltation, shifting of Chilika mouth, loss of salinity, extensive weed growth, depletion of fishery resources etc.

5.34 The Tenth Finance Commission has provided financial assistance of Rs.27.0 crore for 1994-2000 for integrated development of Chilika lake. Out of this amount, a sum of Rs.20.25 crore has been utilised by the end of March 1999. Following activities are being undertaken for the development of Chilika lake.

- i) As per recommendation of an expert committee a lead channel measuring 2700 meter in length, 100 meter in width and 2.5 meter in depth has been dredged.
- ii) Programmes have been undertaken for habitat improvement of Nalabana bird sanctuary through Wild-life Wing of Forest Development Department at a cost of Rs 45 lakh.
- iii) Orissa Renewable Energy Development Agency (OREDA) has developed a patent for generation of bio-gas using weeds of Chilika and has been promoting the setting up of these units in the peripheries of the lake with a view to mitigate the problem of weed growth
- iv) To tackle the problem of siltation of Chilika lake, a number of soil conservation measures in catchment area are under implementation. A sum of Rs.1.96 crore has been released to the Soil Conservation Department for the purpose.
- v) During 1998-99, a sum of Rs.0.13 crore was released for removal of unauthorised gherries. Steps have been initiated for establishment of an awareness promotion centre at Satapada.

### **REGIONAL PLANT RESOURCES CENTRE**

5.35 The Regional Plant Resources Centre has been functioning since March, 1985 as an autonomous body to introduce, conserve, propagate and upgrade plants of non-agricultural importance in the State. During 1998-99, 400 cultivars of rose, 20 varieties of chrysanthemum and several species of wild plants and garden ornamentals were introduced by the Centre. About 1440 species of tropical and sub-tropical trees have been studied and a book entitled "Trees of the World" has been brought out during 1998-99. A total of 72 new cultivars of cacti have been developed by the Centre and a booklet entitled "New Cactus Cultivars" has been published during 1998-99. During 1998 and 1999 the Centre has published 54 research papers.



## CHAPTER 6

### FISHERIES

6.01 The State has a long coast line of 480 km with continental shelf area of 24,000 sq km along the Bay of Bengal. Besides, the State has a brackish water area of 4.18 lakh hectare and fresh water area of 7.06 lakh hectare. The largest Indian brackish water lagoon, Chllika lake, measuring 790 sq. km. of water spread area, offers a natural capture environment for a number of brackish water species. In view of the long coastline, there is a good prospect for improving the catch of marine fish and for boosting foreign exchange earnings without interfering with the eco-system.

6.02 The State Government have formulated the Policy for Fishery Development as a part of the Agriculture Policy 1996. The Policy aims at :

1. Increasing fish production by adopting scientific methods of culture,
2. Assisting fishermen in more efficient fishing,
3. Boosting fishing operations in deep sea,
4. Transmitting technology both for culture and capture to fishermen and fish farmers, and
5. Establishing fish feed mills for culture of fish and prawn.

Efforts are to be made for promoting inland and coastal aquaculture to generate surplus for domestic consumption and export. If the fishery sector is developed on a commercial basis, it will not only improve the socio-economic condition of the fishing communities but also generate additional employment and income in the rural areas.

**Table 6.1**  
**Production of Fish In Orissa ( 1990-91 to 1998-99 )**

( In thousand MT )

Sl. No	Year	Inland fish production			Marine fish	Total
		Fresh Water	Brackish Water	Total		
1	2	3	4	5	6	7
1	1990-91	58.72	22.04	80.76	78.19	158.95
2	1991-92	65.12	22.76	87.88	95.03	182.91
3	1992-93	70.83	22.93	93.76	119.38	213.14
4	1993-94	116.37	11.99	128.36	103.92	232.28
5	1994-95	123.96	10.81	134.77	122.89	257.66
6	1995-96	121.94	12.90	134.84	123.20	258.04
7	1996-97	127.29	16.20	143.59	133.46	276.95
8	1997-98	135.64	16.78	152.42	156.08	308.50
9	1998-99	145.00	14.90	159.90	124.33	284.23

Source : Directorate of Fisheries, Orissa, Cuttack



6.03 Table 6.1 shows that fish production in the State has generally shown an increasing trend from 1990-91 to 1998-99, there being an average annual increase of 8.76% over the period. However, the total fish production in the State sharply decreased to 284.23 thousand MT in 1998-99 from 308.50 thousand MT in the previous year registering a fall of 7.87%. This was mostly due to a substantial decline of 31.75 thousand MT in the production of marine fish amounting to a 20.34% fall from the figure for the previous year. Brackish water fish production also declined by 1.88 thousand MT amounting to a 11.20% fall from the figure for the previous year. Fresh water fish production in 1998-99 however registered an increase of 6.90% over the previous year. Fresh water fish production in 1998-99 amounted to 51.02% of the total fish production in the year.

6.04 The main reasons for the decline in marine fish production in 1998-99 were unfavourable migration pattern of marine fish and insufficient rain leading to shortage of river-led food in the river mouth. The reasons for the decline in production of brackish water fish in 1998-99 are silting of the Chilika lake near Magaramukha, indiscriminate catch of brood fish, increase of weeds in the lake, restrictions on prawn culture in the lake, and conflict between traditional fishermen and other operators over prawn culture in the lake. An Action Plan for overall development of Chilika lake with an estimated cost of Rs 27 crore is being implemented.

6.05 Out of the total fish production of 284.23 thousand MT during 1998-99, 104.64 thousand MT was cultured and the balance quantity of 179.59 thousand MT was collected from capture sources.

6.06 The total value of the fish produced in the State has increased from Rs.230.89 crore in 1990-91 to Rs.810.48 crore during 1998-99 registering an increase of 251% over 1990-91.

6.07 In regard to total fish production, the major fish producing States in the country during 1995-96 were West Bengal with 8.93 lakh MT, Gujarat with 6.60 lakh MT, Kerala with 5.82 lakh MT, Maharashtra with 4.64 lakh MT, Tamilnadu with 4.48 lakh MT, Andhra Pradesh with 3.56 lakh MT and Orissa with 2.58 lakh MT. So far as the marine fish production is concerned, Orissa ranked eighth at All India level in 1995-96 while Gujarat and Kerala occupied first and second positions respectively. In regard to fresh water fish production, Orissa ranked sixth while West Bengal occupied the first position and Bihar the second position.

6.08 The per capita annual consumption of fish in the State has decreased from 8.60 kg in 1997-98 to 8.23 kg in 1998-99. This was much less than the per capita consumption in States like Assam, Tripura, West Bengal, Arunachal Pradesh and Union Territories like Goa, Lakshadweep, Pondichery and Andaman and Nicobar Islands. Similarly in South Asia, the per capita annual consumption of fish in Bangladesh, Maldives and Sri Lanka is higher than in India. In 1992, while the per capita consumption of fish in India was 3.7 kg, it was 7.3 kg in Bangladesh, 33.1 kg in Maldives and 14.6 kg in Sri Lanka. In order to raise the per capita annual consumption of fish in Orissa to 11 kg which is the recommended per capita level of requirement of fish, it is targeted to increase the production from the present level of 284.23 thousand MT to 387 thousand MT by the end of the Ninth Plan.

6.09 The year-wise disposition of fish is given in Table 6.2. Out of the total production of 284.23 thousand MT during 1998-99, about 81% was marketed in raw form, 12% kept for sun drying, 5% for deep freezing and 2% for salting. The quantum of disposition of fish under each item was less than that in the previous year due to 7.87% fall in the total fish production in the State.

Table 6.2

## Disposition of Fish Produced in Orissa

(In thousand MT)

Sl. No	Year	Marketed in raw form	Freezing	Drying	Salting	Total
1	2	3	4	5	6	7
1	1990-91	126.6	5.9	22.4	4.0	158.9
2	1991-92	146.2	5.6	26.5	4.6	182.9
3	1992-93	168.6	7.2	32.0	5.4	213.2
4	1993-94	192.3	6.8	38.6	4.5	232.3
5	1994-95	210.4	9.3	32.8	5.2	257.7
6	1995-96	209.4	10.7	32.6	5.3	258.0
7	1996-97	222.6	13.2	35.4	5.8	277.0
8	1997-98	246.2	15.2	40.4	6.7	308.5
9	1998-99	230.8	14.2	33.8	5.4	284.2

Source : Directorate of Fisheries, Orissa, Cuttack

## INLAND FISHERIES

6.10 The inland fisheries can be classified broadly into two categories i.e. (i) fresh water fisheries, and (ii) brackish water fisheries. The fresh water fisheries resources comprise of 1,14,822 hectare of small and big tanks and ponds, 2,56,000 hectare of small, medium and major reservoirs, 1,80,000 hectare of fresh water lakes, swamps, jheels and 1,55,400 hectare of rivers and canals. Similarly, the brackish water area comprises of 79,000 hectare of Chilika lake 2,97,850 hectare of estuaries, 32,587 hectare of brackish water tanks, and 8,100 hectare of back waters.

**(I) Fresh Water Fisheries**

6.11 The production of fresh water fish from different sources is given in Table 6.3. Tanks and ponds are the major source of fresh water fish followed by rivers and canals, reservoirs and lakes, swamps and jheels. Out of the total production of 145 thousand MT fresh water fish in 1998-99, production from tanks/ponds was 98 thousand MT and the balance quantity of 47 thousand MT was produced from reservoirs, lakes/swamps/jheels and rivers/canals. Fresh water fish production was highest in Ganjam district (15 97 thousand MT) and lowest in Kandhamal district (0.12 thousand MT) during 1998-99.

**Table 6.3**  
**Fresh Water Fish Production from different Sources in Orissa**

( In MT )						
Sl. No.	Year	Tanks/ Ponds	Reservoirs	Lakes/ Swamps/ Jheels	Rivers/ Canals	Total
1	1	2	3	4	5	6
1	1990-91	49,275	3,150	4,375	1,920	58,720
2	1991-92	55,345	3,307	4,450	2,016	65,118
3	1992-93	58,966	4,192	4,539	3,132	70,829
4	1993-94	92,154	8,145	4,477	11,595	1,16,371
5	1994-95	94,113	11,982	4,661	13,202	1,23,958
6	1995-96	93,079	12,506	3,847	12,509	1,21,941
7	1996-97	92,927	14,652	5,158	14,556	1,27,293
8	1997-98	99,980	14,628	4,364	16,664	1,35,636
9	1998-99	98,386	16,202	4,100	26,318	1,45,006

Source : Directorate of Fisheries, Cuttack

6.12 A Centrally Sponsored Scheme, " Fish Farmers Development Agency " (FFDA) is being implemented in the State to develop pond areas and to impart training to fish farmers in modern pisciculture techniques. Presently, 30 FFDA's, at the rate of one in each district, are functioning in the State. By the end of 1998-99, about 48,784 hectare of fresh water tank areas have been developed and 46,359 fish farmers have been trained by these agencies to boost up production of fish. By the end of 1998-99, the total number of beneficiaries assisted by FFDA's was reported to be 1,18,966 and loans amounting to Rs.6439.80 lakh had been sanctioned to the fish farmers by different Commercial Banks.

6.13 During 1998-99, FFDA's have undertaken pisciculture in 98,641 tanks out of which 74,203 tanks and ponds comprising of 36,799.54 hectare were harvested and 75,170.29 MT of fish was produced. The average productivity in FFDA tanks was reported to

be 2,043 kg per hectare in 1998-99 as compared to 2,200 kg per hectare in 1997-98. The decrease in per hectare productivity was due to delayed harvesting in some tanks. There is a target to develop 3,500 hectare of tank areas and impart training to 2,400 fishermen and fish farmers during 1999-2000 by FFDAs.

6.14 The total reservoir resources available in Orissa were 256.00 thousand hectare out of which 197.20 thousand hectare were suitable for pisciculture. In order to increase fresh water fish production, 65 reservoirs constituting 147.81 thousand hectare of water area have been transferred to the Fisheries Department. Out of these, pisciculture has been taken up in 54 reservoirs comprising of 24.92 thousand hectare of water area with financial assistance from the World Bank. During 1998-99, 52.85 lakh fingerlings were stocked in different reservoirs and 1,861.63 MT fish worth Rs.204.78 lakh was produced creating employment for 3,442 persons under the " Special Programme for Reservoirs " funded by the World Bank.

6.15 A project for development of fisheries, with World Bank assistance of Rs.108.55 crore, has been launched in the State from the year 1992-93. The project period was initially for 5 years but was subsequently extended up to the end of December 1999. The project envisages development of 863 hectare of brackish water area and 28,364 hectare of reservoir resources of the State to produce 1,900 MT of shrimps and 2,891 MT of fish at the end of the project period.

6.16 Fresh Water Prawn Culture Programme which has been launched since 1991-92, is widely accepted by the fish farmers of the State. Demand for prawn from both within and outside the State is high and the activity generates good profits for the farmers. During 1998-99, fresh water prawn culture was undertaken in an area of 713.82 hectare, where 62.11 lakh prawn seeds were stocked against the target of 100.00 lakh.

## (II) Brackish Water Fisheries

6.17 Brackish Water Fisheries Development Agencies have been set up in seven coastal districts of the State which look after various aspects of brackish water fish farming with special emphasis on prawn culture. The total brackish water area of the State is about 4,17,537 hectare of which the Brackish Water Fisheries Development Agencies have identified 32,587 hectare as suitable for prawn culture. These agencies have developed 12,468.43 hectare for prawn culture by the end of 1998-99 since their inception out of which 907 hectare have been leased out on long term basis. During 1998-99, brackish water prawn culture was undertaken in an area of 10,245.26 hectare and 6,286.27 MT brackish water

prawn were produced. Up to the end of March 1999, since the inception of the programme, about 8,956 fish farmers had been benefited and 3,805 farmers had been trained in modern shrimp culture techniques. Up to the end of March 1999, since the inception of the programme, loans amounting to Rs.11.38 crore had been released by different financing banks to the beneficiaries and an amount of Rs.2.25 crore had been released as subsidy. For 1999-2000, a target to develop 700 hectare of brackish water area and to train 210 beneficiaries has been set.

6.18 During 1998-99, about 3,330 lakh brackish water prawn seeds were supplied to the prawn farmers of the State. There are nine brackish water prawn hatcheries in the State of which the only departmental hatchery at Chandrabhaga produced 53.83 lakh of shrimp seeds valued at Rs.21.67 lakh which were sold to the farmers. For 1999-2000, there is a target for production of 250 lakh shrimp seeds in Chandrabhaga hatchery.

6.19 Chilika lake is the main source of brackish water fish with average water spread area of 790 sq. km and island area of 223 sq. km. There are 128 fishermen villages with 12,363 families of whom 27,200 active fishermen depend on Chilika lake for their livelihood. There are 83 Primary Co-operative Societies with 18,972 members in these villages. There are 12 landing centers in which about 1,702 MT of fish/shrimps and 9 MT of crab were landed in 1998-99 against 4,273 MT and 24 MT during 1990-91. The reasons for the decline of fish, prawn and crab landing from Chilika are silting of the mouth of the lake, indiscriminate catch of brood fish and juveniles, and increase of weeds in the lake. Measures have been initiated to restore the ecosystem of the lake. The brackish water fish/shrimp production from different sources in the State is given below :

**Table 6.4**  
**Brackish Water Fish/Shrimp Production from different Sources in Orissa**  
(In MT)

Sl. No	Year	Chilika lake	Brackish water shrimp	Estuaries	Total production
1		2	3	4	5
1	1990-91	4,273	2,564	15,201	22,038
2	1991-92	4,556	3,715	14,494	22,765
3	1992-93	4,158	3,992	74,783	22,933
4	1993-94	3,485	4,344	4,156	11,985
5	1994-95	1,415	4,668	4,729	10,812
6	1995-96	1,269	6,957	4,676	12,902
7	1996-97	1,633	6,627	7,943	16,203
8	1997-98	1,652	4,873	10,257	16,782
9	1998-99	1,702	6,256	6,940	14,898

Source : Directorate of Fisheries, Orissa

**MARINE FISHERIES**

6.20 As mentioned earlier, the State has a coastline of 480 km with a continental shelf area of about 24,000 sq. km which comprises about 6% of the coastline and 4.7% of the continental shelf area of the country. Among the seven coastal districts, Puri district has the longest coastline of 155 km and Bhadrak district has the shortest of 50 km. From the off-shore and on-shore waters, 124.33 thousand MT of fish was caught during 1998-99. Prawn, hilsa and pomfret are the important species among the marine fish.

6.21 During the current year small fish landing centres at Tantiapal and Khandiapatna in Kendrapara district, Bahabalpur in Balasore district, Bandar in Jagatsinghpur district, Ballapatpur/Bhusandpur in Khurda district and Sorada in Ganjam district are under construction. There is a proposal for undertaking the next phase of construction work at the harbours at Dhamara, Chudamani and Chandipur. Administrative approval from Government of India has been received for construction of fish landing centres at Kirtania and Talasari in Balasore district, Penthakata in Puri district, and at Gopalpur-on-sea in Ganjam district.

**GENERAL**

6.22 Contribution of the fisheries sector to the Gross Domestic Product of the State at constant prices has shown a steady growth from 1990-91 to 1997-98. In 1990-91 the value added to the GSDP from the fisheries sector was Rs.101.49 crore at constant (1980-81) prices which increased to Rs.217.17 crore at constant (1980-81) prices in 1997-98. The contribution of the fisheries sector to GSDP increased from 2.1 % in 1990-91 to 3.2 % in 1997-98. Considering the vastness of the water area available, the contribution of the fisheries sector to GSDP is much below the potentiality of the sector.

6.23 In view of the importance of the fisheries sector in the State economy, the Plan investment for development of fisheries increased from a meagre amount of Rs.0.29 crore during the First Plan to Rs.51.03 crore during the Eighth Plan period. During 1998-99 an investment of Rs.11.38 crore has been made. The State Plan outlay for 1999-2000 for the fisheries sector has been kept at Rs.17.90 crore. In addition, Rs.1.00 crore and 4.15 crore have been provided under Centrally Sponsored Plan and Central Plan respectively.

6.24 Both fresh water and brackish water prawn culture have assumed considerable importance on account of their profitability and as sources of foreign exchange earnings. The State Government have decided to set up new fresh water prawn hatcheries in the next five years with World Bank assistance. In the meantime private entrepreneurs have set up prawn seed hatcheries in Puri and Ganjam districts to cater to the needs of prawn farmers. There is a shrimp hatchery at Chadrabhaga in Puri district and another at Gopalpur in Ganajm district under the Marine Products Export Development Agency (MPEDA). The Fisheries Department also has a fresh water prawn hatchery at Paradeep in Jagatsinghpur district.

6.25 In order to meet the growing demand of quality fish seed in the State, greater emphasis has been given to production of quality fish seed in departmental hatcheries and the hatcheries of Orissa Pisciculture Development Corporation. During 1998-99, about 2,617 lakh quality fries have been produced and sold to pisciculturists for stocking in their tanks.

#### EXPORT AND IMPORT OF FISH

6.26 The export of fish from the State increased from 65.71 thousand MT in 1990-91 to 100.43 thousand MT in 1997-98 but it decreased to 85.96 thousand MT in 1998-99. Out of 85.96 thousand MT fish exported during 1998-99, marine fish constituted 68.38 thousand MT, fresh water fish 10.88 thousand MT, and brackish water fish 6.70 thousand MT. In proportionate terms the respective share was 79.5 %, 12.6% and 7.8% . The total marine products exports from the State in 1997-98 amounted to 21.5% of the total marine products exports of India.

6.27 During 1998-99, about 9,411 MT of marine products valued at Rs.275.33 crore were exported to countries like Japan, China, USA, UAE, Indonesia and Hongkong. Among marine products of Orissa, frozen shrimp accounts for a major share of 7,252 MT valued at Rs.257.46 crore. The other products exported are frozen scampy, frozen pomfret, frozen ribbon fish, frozen sheer fish, frozen eel fish and dry fish

6.28 During 1998-99, about 43,530 MT of fresh water fish was imported through private trade channels from the neighbouring State of Andhra Pradesh. The import of fresh water fish from neighbouring States has been showing an increasing trend due to high demand for fresh water fish in the State and low cost of imported fish. The import of fresh water fish increased from 40.25 thousand MT in 1997-98 to 43.53 thousand MT in 1998-99.

**Table 6.5**  
**Export and Import of Fish**

(in MT)

Sl. No.	Year	Fish export to other States and Countries				Import of fresh water fish
		Marine fish	Fresh water fish	Brackish water fish	Total exported	
1	2	3	4	5	6	
1	1990-91	46,915	8,221	10,578	65,714	4,410
2	1991-92	55,115	9,116	10,927	75,158	4,865
3	1992-93	69,238	9,916	11,008	90,162	6,200
4	1993-94	60,276	11,637	5,753	77,666	15,000
5	1994-95	71,895	12,396	5,406	89,697	21,000
6	1995-96	71,455	12,194	6,322	89,971	30,000
7	1996-97	73,404	10,183	7,777	91,364	35,000
8	1997-98	83,659	11,421	5,345	1,00,425	40,250
9	1998-99	68,381	10,875	6,704	85,960	43,530

*Source : Directorate of Fisheries, Orissa, Cuttack*

### FISHERMEN WELFARE SCHEMES

6.29 The Accident Insurance Scheme was started in the year 1983-84 in the State. Under this scheme a fisherman's life is insured and an amount of Rs.25,000/- is provided in the event of his accidental death and Rs.12,500/- in the event of partial disability. The premium of Rs.11.25 for insurance coverage for each fisherman is shared by the State Government and Government of India on 50 : 50 basis. During 1998-99, 1.20 lakh fishermen were covered under this scheme and a sum of Rs.14.92 lakh was disbursed covering 37 deaths and 22 partial disability cases.

6.30 Under the scheme for Development of Model Fishermen Villages, 155 low-cost houses were constructed and distributed among the fishermen during 1998-99. In addition, 15 houses were partially constructed.

6.31 There are 643 registered Fishermen Co-operative Societies with a total membership of 81,982. There is further need to organise fish farmers in all the three areas namely, marine, brackish and Inland fisheries so that more group schemes can be launched and marketing support organised.

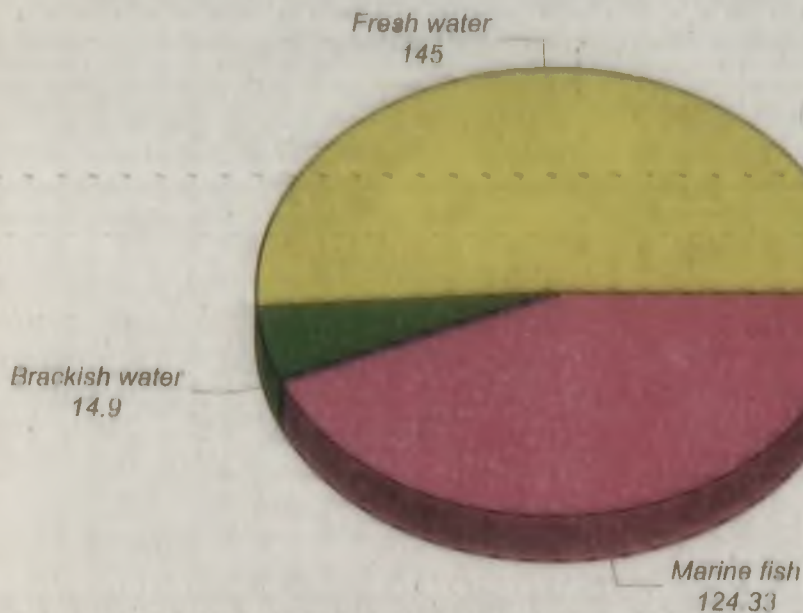




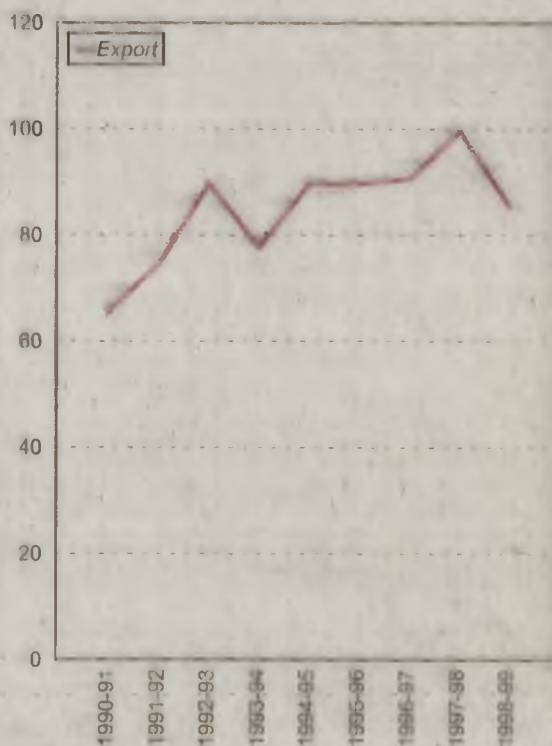
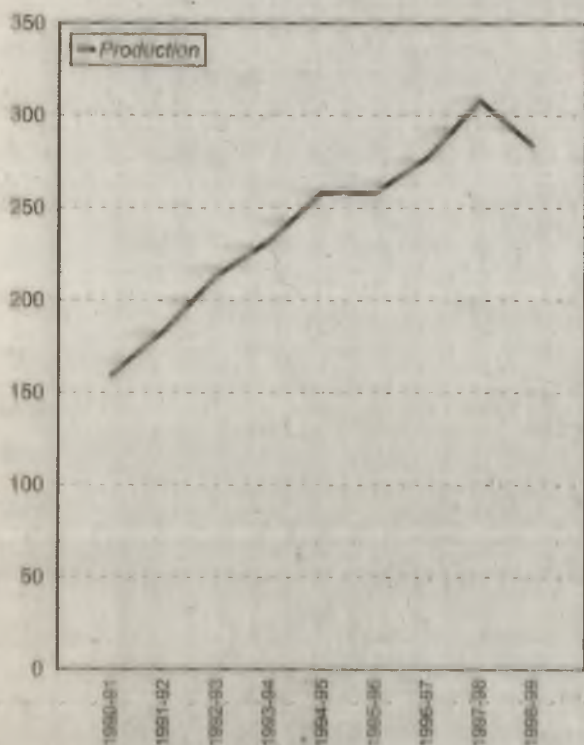
## Production and Export of Fish

( In thousand M.T. )

### Fish Production ( 1998-99 )



### Production and Export of Fish ( 1985-86 to 1998-99 )



## CHAPTER 7

### ANIMAL RESOURCES

7.01 Development of animal resources has considerable relevance and significance for development of an agrarian economy. Next to crop production, animal husbandry is the most important income generating activity in rural households of the State. Over 80% of the rural households in Orissa keep livestock of one specie or another. The contribution of this sector to NSDP in Orissa, however, is a meagre 3.89%. The State Agricultural Policy, 1996 aims at increasing the production and productivity in dairy, poultry, and other animal husbandry activities through scientific breeding, balanced feeding, adequate health care, better marketing facilities, and improved management practices. The objective of the Animal Resource Development Programme is not only to increase the animal resources and increase availability of their products but also to provide employment and income generation opportunities through both main and supplementary enterprises.

#### LIVESTOCK POPULATION

7.02 The distribution of livestock population in the State into various species in the years 1982, 1991 and 1995 is indicated in Table 7.1. The livestock population of the State was 242.68 lakh as per the livestock census held in 1995, registering an increase of 8.7% over livestock population as per the previous census held in 1991. Out of the total livestock population, cattle population was 147.66 lakh (60.8%), buffaloes 16.52 lakh (6.8%), goats 54.12 lakh (22.3%), sheep 18.65 lakh (7.7%), pigs 5.72 lakh (2.4%), and other livestock 0.01 lakh. The population of cattle, buffaloes, goats and sheep in 1995 is estimated to have increased by 8.7, 9.5, 12.7 and 1.3% respectively over the livestock population in 1991 while the population of pigs decreased by 3.1%. The proportion of cross-bred cattle population to total cattle population in the State increased from 4.2% in 1991 to 5.0% in 1995. It is estimated that the live stock population in the State will reach 260 lakh by the year 2000.

Table 7.1

## Livestock Population in Orissa

(Figures in lakh)

Census Year	Cattle		Buffaloes	Goats	Sheep	Pigs	Total	Dogs and others
	Total	Cross bred						
1	2	3	4	5	6	7	8	9
1982	129.30	N.A.	13.33	49.31	19.90	4.10	215.94	6.38
1991	135.77	5.63	15.09	48.04	18.41	5.90	223.21	6.64
1995	147.66	7.44	16.52	54.12	18.65	5.72	242.67	7.53

Source: Directorate of Animal Resource Development, Orissa, Cuttack.

## AVAILABILITY OF ANIMAL PRODUCTS

7.03 Table 7.2 shows the production and per capita availability of milk, meat and eggs in Orissa for the period from 1990-91 to 1998-99. The table shows that the per capita availability of these products has by and large gone up steadily over the period.

Table 7.2

## Year-wise Production and Percapita Availability of Milk, Meat and Eggs in Orissa

Year	Production of milk (thousand MT)	Per capita availability of milk (gms/day)	Production of meat (in tonne)	Per capita availability of meat (gm/annum)	Production of eggs (in lakh)	Per capita availability of eggs (nos/annum)
1	2	3	4	5	6	7
1990-91	471.10	41	26052.65	827	4237.40	13
1991-92	504.73	43	27198.13	859	5086.60	16
1992-93	541.84	45	29427.47	911	5267.50	16
1993-94	564.91	47	28035.36	850	5681.43	17
1994-95	584.39	48	29217.88	866	5623.42	17
1995-96	624.50	50	31567.87	933	5866.50	17
1996-97	650.00	51	34000.00	971	5996.70	17
1997-98	669.92	52	48000.00	1363	8252.80	23
1998-99	833.30	64	35000.00	981	9402.50	26

Source: Directorate of Animal Resource Development, Cuttack, Orissa

**ANIMAL HEALTH CARE**

7.04 Provision of adequate health care is a prerequisite for increasing the production potentiality of livestock. The spread of veterinary services in the State has resulted in the control of some communicable diseases and improvement in animal health. By the end of 1998-99, the State had built up a network of 541 Veterinary Hospitals/Dispensaries with 673 Veterinary Doctors, 3321 Livestock Inspectors and Technicians, 2939 Livestock Aid Centres (LACs), 3 Clinical Investigation Laboratories, 3 Disease Research Centres, one Animal Disease Research Institute at Phulnakhara in Cuttack district, and two Biological Product Institutes (one at Bhubaneswar and the other at Berhampur) to provide curative and preventive health services. During 1998-99, 113.64 lakh animals were protected against various diseases and 17.10 lakh castrations were performed.

7.05 In order to provide better health care to the animal population, it is proposed to open at least one Livestock Aid Centre in every Gram Panchayat in the State in a phased manner. The number of Livestock Aid Centres is proposed to be increased to 5263 by the end of 2009.

7.06 It was targeted to treat 4.00 lakh animals against parasitic worm diseases and to organise 35,000 infertility camps during 1998-99, against which 3.72 lakh animals have been dewormed and 13,261 infertility camps have been organised. Besides, 103.73 lakh doses of different vaccines were produced in the State during 1998-99. About 90.95 lakh animals were vaccinated during the year. It has been programmed to deworm 5.0 lakh animals, organise 40,000 Infertility camps, and produce 200 lakh doses of different vaccines during 1999-2000.

**CATTLE AND BUFFALO DEVELOPMENT**

7.07 According to the livestock census held in 1995, the cattle and buffalo population was 164.18 lakh which constituted 67.7% of the total livestock population of the State. Out of this, the number of adult female animals was 48.14 lakh and of milch animals 20.99 lakh which constitute 29.3% and 12.8% of the total cattle and buffalo population. Among the milch animals only 8.5% belong to cross bred/improved varieties.

**Table 7.3**  
**Cattle and Buffalo Population as per 1995 Animal Census**

(In thousand)

Category	Total animals	Adult female animals		Milch animals	
		Total	Cross bred	Total	Cross bred
1	2	3	4	5	6
Cattle	14766.00	4365.80	333.26	1882.77	169.22
Buffaloes	1652.00	448.52	13.63	216.11	8.17
<b>Total</b>	<b>16418.00</b>	<b>4814.32</b>	<b>348.89</b>	<b>2098.88</b>	<b>177.39</b>

7.08 In order to upgrade the production potential of cattle and buffaloes, two schemes namely Artificial Insemination through Frozen Semen Technology and Strengthening of State Cattle Breeding Farms are being implemented. While the former aims at production of superior breeds of female progeny, the latter is intended to provide breeding bulls.

7.09 There are 2939 Livestock Aid Centres in the State out of which 1431 centres have the facility of artificial insemination through frozen semen technology. During 1998-99, 6.04 lakh artificial inseminations were performed. It has been targetted to conduct 15.00 lakh artificial inseminations during the year 1999-2000. For successful implementation of this programme, it is targetted to open 200 new Artificial Insemination Centres, to produce 12.00 lakh frozen semen straws and 5.00 lakh litre of liquid nitrogen during 1999-2000.

7.10 During 1998-99, 12 livestock breeding farms were functioning in the State under the Government sector. Different breeds of cattle and buffaloes are reared in these farms to produce genetically superior bull calves. During 1998-99, 106 bull calves have been produced against the target of 174. During the year 120 quality bulls have been distributed for natural insemination in remote and in-accessible areas of the State.

7.11 Two externally aided projects namely Natural Resource Management Programme for Orissa (NRMPO) aided by the Swiss Government and the Integrated Livestock Development Project (ILDLP) aided by the Danish Government are in operation in the State. NRMPO was started in April 1991 for three years with a project cost of Rs 270.00 lakh and the operational area spread over 13 blocks of Ganjam and Gajapati districts. This programme was extended twice for three years each in April 1994 and April 1997. The

project costs of the 2nd and 3rd phase are Rs.545.55 lakh and Rs.330.40 lakh respectively. The third phase of the project is in operation in Cuttack and Puri districts. The objective of NRMPO is to improve the productivity of farm households mainly through livestock and dairy activities. ILDP was started in April 1993 with a project cost of Rs.989.66 lakh in four blocks namely Jaipur, Koraput, Kundra and Laxmpur of Koraput district. The initial project period of five years has been extended till the end of March 2002. The objective of the project is to improve the living standard of the poorer (mostly tribal) rural population through adoption of improved fodder and animal husbandry practices.

7.12 The Orissa State Cooperative Milk Producers Federation Ltd. (OMFED) came into being on 01.10.1980 for implementation of the Operation Flood Programme. At present, it functions with 5 dairy plants with a capacity of 135,000 litre per day and 12 milk chilling plants with a capacity of 70,300 litre per day functioning within the Operation Flood areas. Besides these plants four new plants with capacity of 18,000 litre per day are under construction.

7.13 Four dairy projects for women beneficiaries are under implementation in the undivided districts of Cuttack, Puri, Dhenkanal and Sambalpur with full assistance from Government of India. About 40,000 rural women will be benefitted by these projects.

7.14 An Integrated Dairy Development Project, designed for hilly and backward areas, is being implemented in 14 non-Operation Flood districts of the State with the aim of increasing milk production and generating self-employment. Infrastructure has been built up for collecting about 3,000 litres of milk per day with potentiality of generating income of about Rs.2.40 lakh to the milk producers.

7.15 During 1998-99, the 1055 Milk Producers' Co-operative Societies functioning in the State procured 72723 kg milk per day on an average. The total milk production in the State during 1998-99 was 833.30 thousand MT against the target of 745 thousand MT. The per capita per day availability of milk during 1997-98 was 52 gm which increased to 64 gm during 1998-99. This figure is however below the per capita per day requirement recommended by the Indian Council of Medical Research (ICMR) and also the per capita per day availability at the all India level which are 210 gm and 203 gm respectively. The yield of milk per adult milch animal is still very low at about 298 gm per day. This low yield is due to the poor availability of hybrid/improved animals in the State.

Awareness and infrastructure for rearing cross bred/hybrid animals is lacking in the private sector. However, by introduction of frozen semen technology and embryo transfer technology, the population of cross bred cattle has increased over the years and production of milk has also gone up considerably. Indeed milk production during 1998-99 has exceeded the target of 745 thousand MT by 88.3 thousand MT. The possibility of leasing Government's Livestock Breeding Farms to private entrepreneurs with a view to ensuring full utilisation of available infrastructure is under consideration.

### **FEED AND FODDER DEVELOPMENT**

7.16 Green fodder is essential not only for raising production of milk, meat and eggs but also for reducing the cost of rearing and keeping the animal healthy. This underlines the need for pasture development programmes. Farmers having milch cows are being encouraged to take up fodder cultivation in their own land. Fodder seeds are being supplied to farmers at subsidised rate under the fodder minikit programme. During 1998-99, 254.43 qtl of fodder seeds were produced and 9286 minikits were distributed against the target of 6600. During 1999-2000, it is targetted to produce 200 qtl of fodder seeds, to train 4000 farmers, and to distribute 4000 fodder seed minikits to ensure expansion of fodder production in the State.

### **SMALL ANIMAL DEVELOPMENT**

7.17 There is a good potential for development of sheep, goat and piggery resources in the State. The State Agricultural Policy provides incentives to farmers for production of small animals and birds.

7.18 During 1998-99, 744 sheep, 388 goats, 298 pigs and 304 rabbits were reared in the departmental farms against the target of 1300 sheep, 1250 goats, 480 pigs and 300 rabbits. There are four farms each for sheep, goats and pigs and two farms for rabbits. Besides, during 1998-99, 300 rams, 600 bucks and 125 boars were produced under the National Ram and Buck Production Programme and supplied to enterprising farmers for improvement of the local flocks. During 1999-2000, it is targetted to produce 200 rams, 200 bucks, and 100 boars under this programme. Efforts are being made for introduction of goat semen technology in the State for production of heavy weight goats to increase the yield of meat. It is also proposed to invigorate the pig breeding programme by importing boars from foreign countries.

**POULTRY DEVELOPMENT**

7.19 Poultry development in Orissa has made significant progress over the years. The total poultry population of the State as per the 1995 animal census was 160.08 lakh. The demand for poultry meat and egg has been increasing over the years. There is vast scope for generation of employment in poultry farming. The egg production in the State during 1998-99 was 940.25 million and the per capita availability was 26 eggs per annum, against 30 eggs at the all India level. The State has 11 departmental poultry and duck breeding farms to supply day old chicks to farmers. In order to increase egg production it is proposed to rear Rhode Island Red, Kaling Brown, and Commercial Parentline poultry birds in departmental farms. There are about 110 large organised commercial poultry farms in Orissa, mostly in semi-urban areas. Leasing out of departmental farms to private entrepreneurs is also under consideration.

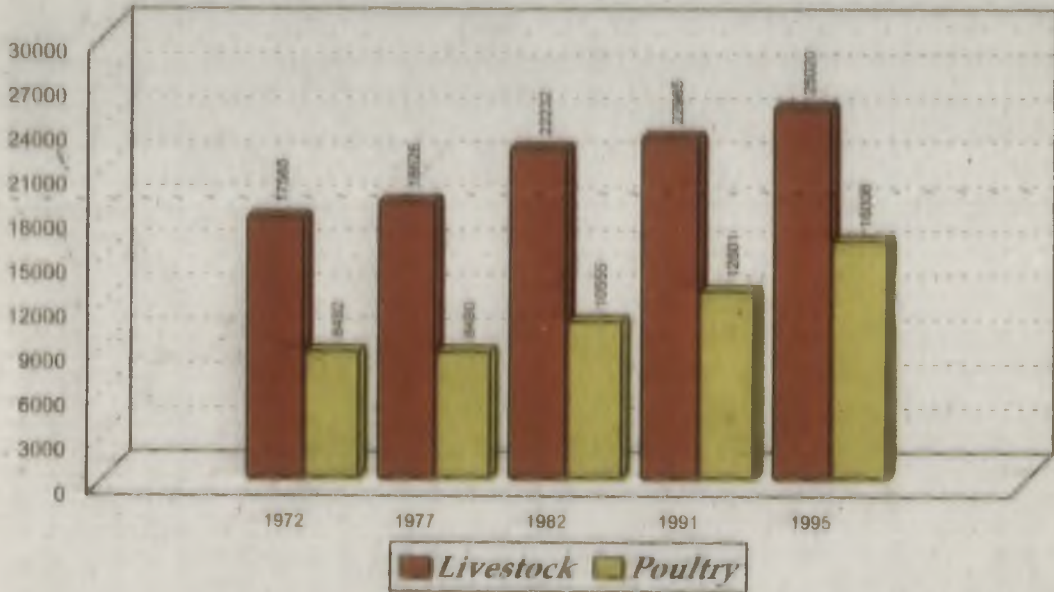
7.20 Orissa State Poultry Producers' Cooperative Marketing Federation (OPOLFED) is the apex organisation for marketing poultry products of the 72 Poultry Producers' Cooperative Societies affiliated to it. OPOLFED has four zonal offices at Bhubaneswar, Angul, Berhampur and Cuttack. It owns two feed mixing plants. There are two hatcheries one at Bhubaneswar (with production capacity of 36,000 chicks per month) and another at Similiguda (with production capacity of 50,000 chicks per month). OPOLFED assists Poultry Producers' Cooperative Societies by providing inputs like day old chicks, pre-mixed poultry feed at subsidised rate, technical guidance, and health care. It also implements self employment programmes for the educated unemployed youth. During 1998-99, OPOLFED has sold 34.64 lakh eggs, 6184 chicks, 11161 kg of birds, and 265.33 qtl of feed.



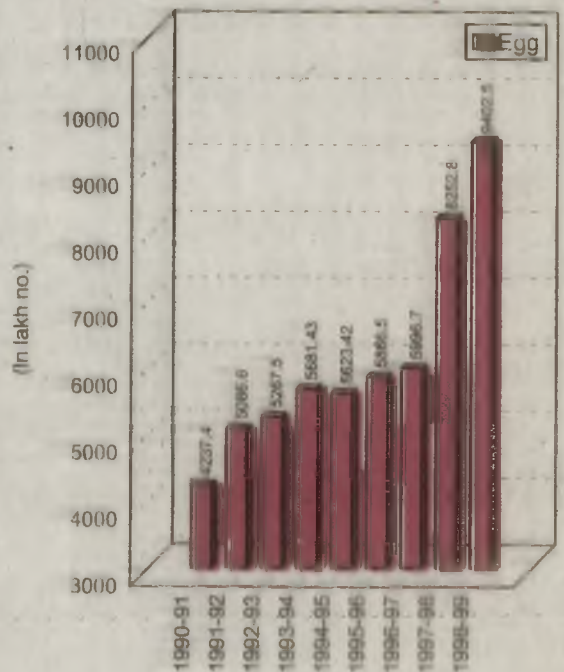
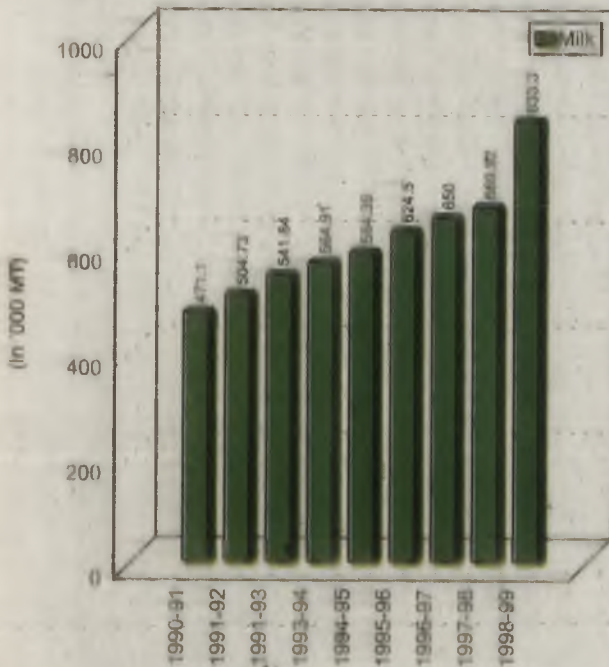


# Livestock and Poultry Production in Orissa

(In '000 Nos.)



# Milk and Egg Production in Orissa



## CHAPTER 8

### POVERTY ALLEVIATION

8.01 High incidence of poverty characterises the economy of the State. Poverty is generally measured in terms of poverty ratio which is the proportion of population in the region that lies below poverty line. Poverty ratios for rural and urban areas of Orissa and India are indicated in Table 8.1. The table shows that the poverty ratio in Orissa has declined from 67.28% in 1973-74 to 49.72% in 1993-94 in rural areas and from 55.62% to 41.64% in urban areas. These figures are much higher than the national average of 37.27% for rural areas and 32.36% for urban areas in 1993-94. The overall poverty ratio, taking both rural and urban areas together, was also the highest for Orissa among 25 States during 1987-88. During 1993-94, the position improved marginally and Orissa occupied a position above Bihar in respect of poverty ratio for rural areas as well as for the overall poverty ratio. It is noteworthy that while the combined poverty ratio for Orissa declined by only 0.89% between 1973-74 and 1983-84 as against the decline during the same period at the National level of 10.4%, the decline in the combined poverty ratio of Orissa between 1983-84 and 1993-94 was 16.73% being much higher than the decline at the National level of 8.51% during that period.

Table 8.1

#### Percentage of Population below Poverty Line in Orissa and India

Sl. No.	Year	Orissa			India		
		Rural	Urban	Combined	Rural	Urban	Combined
1	2	3	4	5	6	7	8
1	1973-74	67.28	55.62	66.18	56.44	49.01	54.88
2	1977-78	72.38	50.92	70.07	53.07	45.24	51.32
3	1983-84	67.53	49.15	65.29	45.65	40.79	44.48
4	1987-88	57.64	41.53	55.58	39.09	38.20	38.36
5	1993-94	49.72	41.64	48.56	37.27	32.36	35.97

Source : Planning Commission, Govt. of India.

8.02 Of the total population below the poverty line, a sizable section belongs to scheduled castes, scheduled tribes and other weaker sections of society. The problem of unemployment, underemployment and poor working and living conditions among these sections of society needs to be tackled in order to raise their standard of living. Since the benefits of economic growth have not reached the lower strata of society to the desired extent, there is need for continued direct State intervention for eradication of poverty. As such, programmes for self-employment and supplementary wage employment and other anti-poverty programmes started earlier have been continued during the Ninth Plan period.

### **INTEGRATED RURAL DEVELOPMENT PROGRAMME (IRDP)**

8.03 The IRD Programme, which is being operated in the State from the year 1979-80, is a centrally sponsored anti-poverty programme designed for amelioration of rural poverty. The objective underlying the programme is to enable identified rural poor families to cross the poverty line through provision of financial assistance, in the form of bank credit and Government subsidies, for acquisition of productive assets. The target group consists of small and marginal farmers, agricultural and non-agricultural labourers, rural artisans and freed bonded labourers having annual income of less than Rs.11,000/- per family. As per IRDP norms atleast 50% of the beneficiaries should be SC and ST, 40% women and 3% physically handicapped. The subsidy is 50% of the cost of the scheme for SC and ST beneficiaries and handicapped persons, 33.5 % for marginal farmers, agricultural labourers and rural artisans, and 25% for small farmers. With effect from April, 1999 this programme has been merged in to a new scheme called Swarnajayanti Gram Swarajgar Yojana (SGSY) with a funding ratio of 75 : 25 between the Centre and the State.

8.04 During the Seventh Plan period (1985-90), 10.98 lakh families were assisted under IRDP with an investment of Rs.303.73 crore. In 1990-91 and 1991-92, assistance was provided to 2.61 lakh families with an investment of Rs.134.31 crore. During the Eighth Plan period (1992-97), 6.05 lakh families were covered with an investment of Rs.608.59 crore under this programme. It has been targetted to cover 3.75 lakh families during the Ninth Plan period by investing about Rs.150.00 crore in providing subsidy. During 1998-99, Government of India have released Rs.37.11 crore under the programme against which the State Government have released Rs.30.13 crore. A total of 94671 families have been covered during 1998-99 with loan and subsidy components of Rs.127.93 crore and Rs.60.24 crore respectively. The total investment under IRDP was Rs.153.04 crore benefiting 75,348 families during 1997-98.

8.05 Since the inception of the scheme upto the end of 1998-99, 31.65 lakh families have been assisted under IRDP with a total investment of Rs.1620.48 crore of which loan and subsidy components are Rs.980.84 crore and Rs.639.64 crore respectively. Per family quantum of investment has increased from Rs.2,765/- during the Seventh Plan to Rs.17,154/- at the end of the Eighth Plan and has further increased to Rs.19,876/- during 1998-99. Similarly the figures for per family subsidy and credit which were estimated at Rs.2058/- and Rs.2174/- respectively in 1990-91 have gone up to Rs.6,363/- and Rs.13,513/- respectively at the end of 1998-99. However, the subsidy-credit ratio has declined from 49.51 in 1990-91 to 32.68 in 1998-99. Table 8.2 shows the coverage (number of families) and investment made under IRDP.

Table 8.2

## Progress under IRDP

Sl. No.	Period	Number of families covered				
		SC	ST	Others	Total	Women
1	2	3	4	5	6	7
1	Upto the end of Sixth Plan	1,90,606	2,19,660	6,20,228	10,30,494	11,362
2	Seventh Plan(1985-90)	2,51,822	3,00,306	5,46,153	10,98,281	1,78,259
3	1990-91	36,501	48,327	64,784	1,49,612	50,337
4	1991-92	30,429	34,535	46,748	1,11,712	47,360
5	Eighth Plan (1992-97)	1,58,791	1,80,992	2,65,198	6,04,981	2,36,184
6	1997-98	17,979	18,934	38,430	75,343	25,902
7	1998-99	22,136	24,795	47,740	94,671	33,467

Table 8.2 (Contd.)

Sl. No.	Period	Investment (Rs. in crore)			Per family investment (In Rs.)
		Subsidy	Credit	Total	
1	2	8	9	10	11
1	Upto the end of Sixth Plan	83.23	149.41	232.64	2258
2	Seventh Plan(1985-90)	121.41	182.31	303.72	2765
3	1990-91	30.79	32.53	63.32	4232
4	1991-92	32.30	38.69	70.99	6354
5	Eighth Plan (1992-97)	250.50	357.80	608.30	10,055
6	1997-98	50.88	102.16	153.04	20313
7	1998-99	60.24	127.93	188.17	19876

Source : Panchayati Raj Department.

8.06 Table 8.2 shows that SC and ST families constituted 22.93% and 27.34% respectively of the total families assisted during the Seventh Plan period. The coverage of woman beneficiaries during the Seventh Plan period was 16.23%. The percentages of SC, ST and women beneficiaries assisted in 1998-99 work out to 23.38, 26.19 and 35.35% respectively. There has been a substantial improvement in regard to the coverage of women beneficiaries although the coverage is still below the prescribed norm of 40%.

### TRAINING OF RURAL YOUTH FOR SELF EMPLOYMENT (TRYSEM)

8.07 The objective of the programme is to equip rural youths in the age group of 18-35 years from families below the poverty line with professional skills in different trades and vocations so as to enable them to take up self employment ventures in the fields of agriculture and allied activities and in business. A total of 2.41 lakh youths have been trained since the inception of the scheme till the end of 1998-99 with an expenditure of Rs.51.72 crore, out of which, 1.85 lakh have been rehabilitated in self or wage employment. During 1998-99, 11,614 rural youths were trained with an expenditure of Rs.3.82 crore of whom 4040 were rehabilitated in self-employment and 3,276 in wage employment. Against the target to cover an additional 85,000 rural youths under the scheme during the Ninth Plan period, 26,565 rural youth have been covered so far. Table 8.3 presents the year-wise achievement under the scheme. With effect from April, 1999 this scheme has been merged into the new scheme called Swarnajayanti Gram Swarajgar Yojana (SGSY) with a funding ratio of 75 : 25 between the Centre and the State.

**Table 8.3**  
**Achievement under TRYSEM**

Sl. No.	Period	Youths trained (number)				
		SC	ST	Others	Total	Women
1	2	3	4	5	6	7
1	Upto the end of Seventh Plan	22944	17563	52952	93459	26812
2	1990-91	3166	3001	6559	12726	5357
3	1991-92	6517	5824	12853	25194	10213
4	1992-93	4353	3902	8530	16785	7580
5	1993-94	3452	3149	8814	15415	6869
6	1994-95	4382	3767	7507	15656	7311
7	1995-96	4872	4655	7082	16589	7499
8	1996-97	5393	4701	8461	18555	8832
9	1997-98	4322	3637	6992	14951	6407
10	1998-99	3544	3005	5065	11614	5256

(Contd.)

Table 8.3 (Concl'd.)

Sl No.	Period	Youths rehabilitated (number)				
		SC	ST	Others	Total	Women
1	2	8	9	10	11	12
1	Upto the end of Seventh Plan	16946	12425	34310	63681	17389
2	1990-91	4279	4741	9042	18062	7575
3	1991-92	5647	4936	10551	21134	9608
4	1992-93	4232	3668	7172	15072	6904
5	1993-94	3836	3030	6619	13485	5777
6	1994-95	3324	3008	4280	10612	4783
7	1995-96	3992	3136	6054	13182	5643
8	1996-97	3635	3438	6283	13356	5376
9	1997-98	2793	2050	4003	8846	4029
10	1998-99	2114	1807	3395	7316	3281

Source : Panchayati Raj Department.

8.08 Table 8.3 shows that out of a total of 2.41 lakh youths trained since the inception of the scheme, the coverage of SC, ST and Women beneficiaries is 26.12%, 22.08% and 38.24% respectively. Similarly out of 1.85 lakh trained youths rehabilitated the coverage of SC, ST and women beneficiaries comes to 27.50%, 22.86% and 36.65% respectively.

8.09 Supply of improved tool-kits to rural artisans is an important component of TRYSEM. This component was introduced in 1992-93 with a view to upgrading the skills and improving production capabilities of poor rural artisans. During 1992-93, 2,000 rural artisans were assisted under the scheme in Puri district. In 1993-94, the scheme was extended to Cuttack district and a total of 1,381 rural artisans in Puri and Cuttack districts were provided with financial assistance of Rs.27.37 lakh to purchase tool-kits. By the end of 1994-95, 3,443 rural artisans had been assisted with an expenditure of Rs.51.96 lakh. During the year 1995-96, the scheme was extended to the entire State and 8,586 rural artisans were assisted under the programme at a cost of Rs.160.59 lakh. During 1998-99, 8603 rural artisans have been supplied with tool-kits, involving an expenditure of Rs.156.39 lakh, as against the expenditure of Rs.134.77 lakh benefiting 7,067 rural artisans in the previous year.

## JAWAHAR ROZAGAR YOJANA (JRY)

8.10 Two employment generation programmes namely NREP and RLEGP were in operation in the State prior to the year 1989-90. These two schemes were merged into a single employment programme known as JRY and this programme has continued since then as a Centrally Sponsored Plan scheme until the end of 1998-99. The expenditure under the programme is shared between the Centre and State on 80:20 basis. Under JRY, wage employment is provided in rural areas, particularly in public works that directly provide benefit to the village community, to unemployed and underemployed persons who are below the poverty line with special preference being given to SCs and STs. The scheme places emphasis on creation of durable and productive community assets. The scheme stipulates that 30% of the total employment opportunities created should be provided to women. Table 8.4 indicates year-wise expenditure and generation of employment opportunities under JRY in the State. During the year 1998-99, 296.84 lakh mandays of employment were generated with an investment of Rs.152.19 crore as against 299.82 lakh mandays with an expenditure of Rs. 150.74 crore during 1997-98. Thus although the expenditure during 1998-99 increased by 0.96% over 1997-98, generation of employment has decreased by 0.99% over the period. This scheme has been substituted by a new scheme called Jawahar Gram Samridhi Yojana (JGSY) with effect from April, 1999 with a funding pattern of 75 : 25 between the Centre and the State.

Table 8.4

## Employment Generation under JRY.

Sl. No.	Period	Employment generated (in lakh mandays)					Total expenditure (Rs. in crore)
		SC	ST	Others	Total	Women	
1	2	3	4	5	6	7	8
1	1989-90	157.70	205.81	154.12	517.63	107.25	104.45
2	1990-91	102.62	127.42	111.93	341.97	83.19	128.45
3	1991-92	105.39	127.99	115.48	348.86	79.78	140.34
4	1992-93	96.92	119.73	109.74	326.39	88.53	130.67
5	1993-94	139.92	182.13	157.02	479.07	156.18	195.82
6	1994-95	130.78	170.00	142.81	443.59	136.61	187.40
7	1995-96	177.34	218.49	190.21	586.04	187.79	246.84
8	1996-97	96.85	115.09	102.45	314.19	102.77	144.27
9	1997-98	92.47	111.72	95.63	299.82	93.33	150.74
10	1998-99	89.54	107.00	100.30	296.84	91.55	152.19

Source : Panchayati Raj Department, Orissa, Bhubaneswar.

**EMPLOYMENT ASSURANCE SCHEME (EAS)**

8.11 Employment Assurance Scheme was launched as a Centrally Sponsored Plan scheme with the cost sharing pattern of 80:20 between the Centre and the State with effect from October 2, 1993 for generating wage employment opportunities for the rural poor during the lean agricultural season in 143 Revamped Public Distribution System (RPDS) blocks of 16 districts in the State. Subsequently, this scheme was extended to cover 250 blocks of 27 districts and finally to all the 314 blocks in 30 districts. The scheme aims at providing assured employment of about 100 days to persons between 18-60 years of age during the lean agricultural season. During 1998-99, 340.14 lakh man-days were generated with an expenditure of Rs 173.42 crore. Since the inception of the scheme up to 1998-99, 35.78 lakh persons including 12.71 lakh women have been provided with assured employment under the scheme.

**INDIRA AWAS YOJANA**

8.12 Indira Awas Yojana (IAY) was launched in the year 1995 to provide dwelling houses free of cost to families below the poverty line with priority being accorded to SC and ST families. From 1989 up to the end of 1995-96, this scheme was operated as a component of JRY and 10% of the funds under JRY were being earmarked for IAY. From April 1996, this scheme has been treated as a separate scheme. The unit cost under this scheme is Rs. 20,000 for plain areas and Rs.22,000 for hilly and difficult areas. Upto the end of 1997-98 since the inception of the scheme in 1989, 2,38,960 low cost houses have been constructed with an expenditure of Rs.359.95 crore. During the year 1998-99, 50,671 houses have been constructed against the target of 67,682 houses at a cost of Rs.106.08 crore. The target for the Ninth Plan is to construct 1,55,250 houses.

**MILLION WELLS SCHEME (MWS)**

8.13 Originally the Million Wells Scheme was a part of RLEGP and NREP. After discontinuance of NREP and RLEGP, the scheme became a component of JRY and 30% of JRY allocation was required to be provided for this scheme. From April 1996, this scheme is being treated as a separate scheme. The objective of the MWS is to provide open irrigation wells free of cost to small and marginal farmers below the poverty line with preference to SCs and STs. The unit cost of such wells ranges from Rs.12,750 to Rs.18,500



depending upon the type of soil and the size of the well. Up to the end of 1997-98 since the inception of the scheme, 1,68,655 wells had been constructed with an expenditure of Rs 277.39 crore. During 1998-99, it was targetted to sink 18,638 wells against which 11,124 wells were constructed with an expenditure of Rs.29.84 crore. With effect from April, 1999, the scheme has been merged into the new scheme called Swarnajayanti Gram Swarajgar Yojana (SGSY) with a funding ratio of 75 : 25 between the Centre and the State.

### **OPERATION BLACK BOARD (OBB)**

8.14 A large number of primary schools in the State lack adequate buildings. The Government have taken steps for providing basic infrastructure (school buildings) under OBB programme launched in 1990-91. The unit cost of each building under the programme has been fixed at Rs.1.00 lakh of which 60% is met from JRY. By the end of 1997-98, 5,431 primary school buildings had been constructed involving an expenditure of Rs.58.21 crore. During 1998-99, 612 school buildings have been completed against the target of 1,942 with the investment of Rs.8.12 crore.

### **DEVELOPMENT OF WOMEN AND CHILDREN IN RURAL AREAS (DW CRA)**

8.15 DW CRA has been conceived as a scheme of group activity for women with each group consisting of 10 to 15 members. Each group is provided with certain basic skills for undertaking viable income generating activities. A one time grant of Rs.25,000/- is provided to each group towards a revolving fund for development of infrastructure, purchase of raw materials, marketing, childcare etc. Up to the end of 1997-98 since the inception of the scheme, 10,162 groups were formed against a target of 10,935 groups with an investment of Rs.19.80 crore. The total membership of these DW CRA group was 1,50,845. During the year 1998-99, 2,637 DW CRA groups have been formed covering 34,921 women with an expenditure of Rs. 4.08 crore. Out of 2,637 groups formed during 1998-99, 1,926 groups have started income generating activities. The progress under the scheme since the Seventh Plan upto 1998-99 is given in Table 8.5. With effect from April, 1999, this scheme has been merged into the new scheme called Swarnajayanti Gram Swarajgar Yojana (SGSY) with a funding pattern of 75 : 25 between the Centre and the State.

**Table 8.5**  
**Financial and Physical Achievement under DWCRA**

Sl. No.	Year	Target (no. of groups)	Achievement (no. of groups formed)	Groups started income generating activity (I.G.A)	Expenditure (Rs. in crore)	No of women beneficiaries
1	2	3	4	5	6	7
1	Up to the end of Seventh Plan	2789	2765	N.A.	4.39	47982
2	1990-91	200	219	N.A.	0.64	3691
3	1991-92	350	350	N.A.	0.63	5160
4	1992-93	260	208	N.A.	0.39	2994
5	1993-94	525	330	N.A.	0.65	4604
6	1994-95	1192	736	N.A.	1.12	10471
7	1995-96	1924	1730	1345	3.23	23989
8	1996-97	2072	2094	1784	4.28	28452
9	1997-98	1623	1730	1616	4.47	23502
10	1998-99	3949	2637	1926	4.08	34921

*Source : Panchayati Raj Department.*

8.16 To supplement Government efforts for development of women, grants are given to NGOs to implement projects for providing income-generating opportunities to poor rural women. Twenty six voluntary organisations have been entrusted with the task of forming DWCRA groups and monitoring their activities.

### REHABILITATION OF BONDED LABOURERS

8.17 With the enactment of Bonded Labour Abolition Act 1976, all bonded labourers stood free and were discharged from any obligation to render any bonded labour. Their debts got automatically liquidated. A Centrally Sponsored Plan scheme was launched in 1978-79 on a 50:50 cost sharing basis between the State and the Centre to identify, release and rehabilitate bonded labourers. Up to the end of 1997-98 since the inception of the scheme, 49,027 bonded labourers were released and 46,907 rehabilitated with an expenditure of Rs.18.10 crore. During 1997-98, 48 bonded labourers have been rehabilitated with an expenditure of Rs 4.70 lakh.

**AREA DEVELOPMENT PROGRAMME (DROUGHT PRONE AREA PROGRAMME)**

8.18 Drought prone areas are characterised by degraded environment, acute soil erosion, insufficiency of water, and moisture stress. Drought proneness has an adverse effect on productivity. The Drought Prone Area Development Programme (DPAP) is being operated in 47 blocks in eight districts in the State (2 blocks each in Boudh, Sonapur, Dhenkanal, 12 blocks in Phulbani, 10 blocks in Kalahandi, 8 blocks in Bolangir, 6 blocks in Baragarh and 5 blocks in Nuapada districts). Multi-pronged activities are taken up under the programme on watershed basis for restoration of the ecological balance and also for drought proofing through harmonious management of land, water and other natural resources.

8.19 The following activities are being taken up under the programme:

- i) Agriculture : Moisture conservation measures through construction of water harvesting structures, land shaping and bunding etc.
- ii) Horticulture : Development of vegetable and fruit nurseries.
- iii) Water Resources Development : Construction of community irrigation wells for IRDP beneficiaries, percolation tanks and water harvesting structures.
- iv) Animal Husbandry : Fodder production and pasture development.
- v) Forestry : Establishment of nurseries, plantations in degraded forests, social forestry and waste land development.
- vi) Fisheries : Excavation and renovation of fishing ponds, production of fingerlings.
- vii) Sericulture : Development of rainfed mulberry plantations etc.

8.20 Availability of funds and expenditure incurred under DPAP from 1990-91 to 1998-99 is presented in Table 8.6.

Table 8.6

## Financial Performance under DPAP

( Rs. in crore )

Sl. No.	Year	Funds available	Expenditure	Percentage of expenditure over availability
1	2	3	4	5
1	1990-91	8.32	5.45	65
2	1991-92	8.02	7.26	90
3	1992-93	4.80	5.63	117
4	1993-94	7.96	11.26	141
5	1994-95	15.78	8.78	56
6	1995-96	13.47	6.40	47
7	1996-97	14.20	4.79	34
8	1997-98	9.77	4.69	48
9	1998-99	9.33	2.89	31

Source : Agriculture Department.

### URBAN POVERTY

8.21 As per the 1991 Census, the total urban population in Orissa stood at 42.35 lakh of which slum dwellers constituted 20%. The distribution of slum population among Class I, Class II and smaller cities/towns is 43.00%, 15.40% and 41.60% respectively. Orissa had the second highest urban poverty ratio of 41.64 in 1993-94 after Madhya Pradesh (48.36), the all India urban poverty ratio being 32.36.

### SWARNA JAYANTI SAHARI ROZAGAR YOJANA (SJSRY)

8.22 This programme came into operation from 01.12.1997 subsuming the earlier urban alleviation programmes namely Urban Basic Services for the Poor (UBSP), Nehru Rozagar Yojana (NRY) and Prime Minister's Integrated Urban Poverty Eradication Programme (PMIUPEP). SJSRY is a Centrally Sponsored Programme funded on 75:25 basis between the Centre and the State with the objectives of providing gainful employment to urban poor and creating community structures. The target group under the programme comprises of the urban poor, having monthly per capita income below Rs.287/-, with special

focus on women, SC, ST and disabled persons. The main components of SJSRY are Urban Self Employment Programme (USEP), Development of Women and Children in Urban Areas (DWCUA), Urban Wage Employment Programme (UWEP), training, and social sector activities for improving the health, educational and welfare status of urban poor. During 1998-99, 1,102 beneficiaries have been assisted with an investment of Rs 1 66 crore under the programme.

### **NATIONAL SLUM DEVELOPMENT PROGRAMME (NSDP)**

8.23 For the overall improvement of slums, physical amenities (like water supply, drainage, community baths, latrines, sewerage, street lights, community infrastructure etc.) and social amenities ( like pre-school education, non-formal adult education, primary health care etc.) are provided under this programme. NSDP covers all the 102 urban local bodies in the State. A sum of Rs 6 20 crore was spent under the programme in 1998-99.



# CHAPTER 9

## INDUSTRY

9.01 Following the programme of economic reforms launched by Government of India, the State Government reformulated its Industrial Policy in March 1996 with a view to improving the investment climate in the State and promoting opportunities for growth of industries and related sectors. The Policy offers a comprehensive package of incentives to encourage investment in the State. The main objectives of the State Industrial Policy 1996 are as follows :

- i Harnessing Orissa's vast natural resources and the potential for accelerated industrial growth consistent with the protection of environment.
- ii Advancement of agriculture by establishing appropriate linkages between agriculture and agro and food processing industries.
- iii Attracting and facilitating large investment in infrastructure and industries both from within the country and abroad.
- iv Generating employment on a large scale in industrial/commercial activities.
- v Development of backward areas/regions of the State through Industrial/mining ventures.
- vi Strengthening the rural economy through development of agro-based industries, small industries, village and cottage industries, sericulture, handloom and handicraft.
- vii Stimulating and strengthening local entrepreneurial base/talent.
- viii Development of skills/expertise.

9.02 The Industrial Policy 1996 seeks to attract investment in priority industries through a scheme of special incentives. These industries include electronics, telecommunication, agro and food processing, aluminum based industries, garment manufacturing including hosiery and knitwear, synthetic yarn spinning and weaving mills,

gems and jewelry, automobile components, basic drugs and pharmaceuticals, petrochemicals, 100% export oriented industries, ship breaking etc. Higher incentives have been provided to pioneer units (i.e. medium and large scale units in areas where there were no such units earlier), labour intensive industries, industries set up by ST/SC, handicapped and women entrepreneurs, small scale units with fixed capital investment less than Rs.10 lakh and large scale projects with capital investment over Rs.100 crore

9.03 The net value added by manufacture and the share of the manufacturing sector in NSDP have been going up over the years. The net value added by manufacture in the State at constant (1980-81) prices was Rs.358.14 crore in 1980-81 which went up to Rs.486.92 crore in 1990-91 and to Rs.726.99 crore in 1997-98. The share of the manufacturing sector in the NSDP was 10.40% in 1980-81, 11.20% in 1990-91 and 12.09% in 1997-98.

### **LARGE AND MEDIUM SCALE INDUSTRIES**

9.04 Industrial Promotion and Investment Corporation of Orissa Ltd. (IPICOL), Industrial Development Corporation of Orissa Ltd. (IDCOL), and Orissa State Electronics Development Corporation (OSEDIC) are three nodal agencies promoting large and medium scale industries in the State. By the end of 1997-98, Orissa had 319 large and medium industries with an investment of Rs.1784.43 crore and employment potential for 80,362 persons. During 1998-99, 15 large and medium industries have been set up with an investment of Rs.57.56 crore and employment for 826 persons. Table 9.1 indicates the development of large and medium industries in the State. The table shows that 23 large and medium industrial units went into production during 1990-91. The number of units that went into production during a year declined in subsequent years up to 1995-96. The position has improved thereafter and has shown an increasing trend up to 1998-99

Table 9.1

## Large and Medium Industries in Orissa

Sl. No.	Year	No of units gone into production	Investment (Rs. in crore)	Employment generated (number)
1	2	3	4	5
1	By the end of 7th Plan (1989-90)	231	1044.88	69,458
2	1990-91	23	36.15	1751
3	1991-92	12	28.18	1302
4	1992-93	11	137.23	1985
5	1993-94	10	186.49	1881
6	1994-95	9	140.05	1427
7	1995-96	3	14.16	313
8	1996-97	6	29.82	476
9	1997-98	14	167.47	1769
10	1998-99	15	57.56	826
Total		334	1841.99	81188

Source 1. Industrial Promotion and Investment Corporation Ltd., Bhubaneswar.  
 2. Orissa State Electronic Development Corporation, Bhubaneswar.  
 3. Industrial Development Corporation Ltd.

9.05 In addition to the units indicated in Table 9.1, nine large and medium industries namely Hindustan Aeronautics Ltd. unit at Sunabeda, Rourkela Steel Plant at Rourkela, Indian Rare Earth Ltd. at Chhatrapur, Carriage Repair Work Shop at Angul, Fertiliser Corporation of India (FCI) unit at Talcher, Heavy Water Project at Talcher, National Aluminum Company units at Angul and Damanjodi, and Paradeep Phosphate Ltd. at Paradeep have been set up in the State in the Central sector. All these units were established prior to 1990-91.

9.06 After liberalisation of the economy and adoption of the Industrial Policy 1996, there has been a surge in investment proposals for establishment of medium and large scale industries in the State. These include proposals by Utkal Alumina Ltd., Larsen and Toubro Ltd., Sterlite Industries Ltd., Hindalco Industries Ltd., Anaar Pharmaceuticals Pvt. Ltd., Ortel Communication Ltd., Inno Tech Powders Ltd. and International Aluminum Products Ltd. etc.

9.07 For rapid industrialisation in the State, emphasis is being laid on infrastructure development. Till recently, development of infrastructure was perceived to be the responsibility of Government. Owing to constraints of Government resources, there has been a shift in focus and steps have been taken to enable private and foreign investment to flow for infrastructure development. Notable initiatives taken in this regard include proposals for development of Dhamara and Gopalpur ports through private investment, development of an industrial park at Paradeep through foreign investment, and development of major road links through external assistance and private participation.



## INDUSTRIAL PROMOTION AND INVESTMENT CORPORATION OF ORISSA LIMITED (IPICOL)

9.08 IPICOL was incorporated in 1973 as the nodal agency of the State Government for promotion and development of large and medium industries in the State including joint sector/joint venture and assisted projects. Besides promotional activities, IPICOL provides low cost consultancy services for industries and assists entrepreneurs from the time of conceptualisation of industry till final commissioning. IPICOL also disburses subsidy on the basis of feasibility reports. It also provides escort services to major industrial ventures and electricity duty loans and sales tax loans on behalf of the State Government in accordance with the Industrial Policy 1996.

9.09 During the Eighth Plan period (1992-97), 34 units promoted by IPICOL went into production with a total project cost of Rs.427.22 crore and generation of employment for 5514 persons. During 1997-98 and 1998-99, IPICOL has set up 14 large and medium industries in the State with an investment of Rs.91.64 crore and creation of employment for 1870 persons. Achievement of IPICOL from the Seventh Plan period to 1998-99 has been presented in Table 9.2.

**Table 9.2**

### Large and Medium Industries Promoted by IPICOL

Sl. No.	Year	No of units sanctioned	No. of units gone into production	Project cost (Rs. in crore)	Employment generated
1	2	3	4	5	6
1	By the end of the Seventh Plan (1989-90)	203	167	740.85	21978
2	1990-91	8	22	32.56	1679
3	1991-92	12	12	28.18	1302
4	1992-93	4	11	137.23	1985
5	1993-94	6	9	125.99	1657
6	1994-95	5	6	130.02	1333
7	1995-96	7	2	4.16	63
8	1996-97	6	6	29.82	476
9	1997-98	13	6	61.07	1187
10	1998-99	3	8	30.57	683
Total		267	249	1320.45	32,343

Source - Industrial Promotion and Investment Corporation Ltd., Bhubaneswar.

9.10 IPICOL has received Rs.7.20 crore as loan and Rs.1.00 crore as equity from the State Government and Rs.10.77 crore from IDBI and SIDBI as refinance assistance during 1998-99. It has provided term loan assistance of Rs.33.04 crore and invested Rs.2.17 crore as equity in new units during the year. It has also disbursed loans of Rs. 8.47 crore towards expansion, modernisation and diversification of existing units during the period. IPICOL is at present providing escort services for a number of new industrial units being set up in the State.

### **INDUSTRIAL DEVELOPMENT CORPORATION OF ORISSA LIMITED (IDCOL)**

9.11 IDCOL was set up in 1962 to set up and promote industrial units for utilisation of natural resources available in the State. The Corporation, since its inception, has set up 14 industrial units with an investment of Rs.538.58 crore till the end of March 1998 in diverse fields. Of the 14 existing industrial units, 3 are operating under direct management of the Corporation, 7 units are under subsidiary management, and 4 units are being run with the assistance of IDCOL. All these fourteen units have generated employment for about 9000 persons and indirect employment for almost an equal number. The value of output of the Corporation declined from Rs.164.11 crore during 1997-98 to Rs.126.60 crore during 1998-99 due to fall in the prices of finished goods like pig iron and high carbon ferrochrome. Consequently, the Corporation sustained a loss of Rs.32.24 crore during 1998-99. The ferro-chrome and cement plants of IDCOL have obtained ISO-9001 certification during 1998.

9.12 Modernisation and expansion of a furnace of Kalinga Iron Works, a unit of IDCOL, has been taken up with an estimated project cost of Rs.23.00 crore. By the end of 1998-99, Rs.9.00 crore has been spent under the project and it is likely to be completed by 1999-2000. After completion of the project, the annual production capacity of 1,10,000 MT will go up to 1,66,000 MT. During 1998-99, IDCOL has set up IDCOL Soft-ware Ltd., a joint sector company with Orissa State Electronics Development Corporation, at a project cost of Rs.100.00 lakh, for operating in areas like training, software development, internet services, software export etc.

### **ORISSA STATE ELECTRONICS DEVELOPMENT CORPORATION (OSEDIC)**

9.13 Orissa State Electronics Development Corporation Limited was established in 1981 as the nodal organisation in the State for promotion of electronic

industries both in the field of hardware and software. By the end of 1998-99, the Corporation has promoted 27 industrial units with total project cost of Rs.196.57 crore including Rs.12.77 crore as equity of OSEDC. Employment opportunity has been created for 1732 persons in these units. Out of the total of 27 units, seven units have been promoted during 1998-99 with total project cost of Rs.26.99 crore. These seven units have generated employment for 143 persons.

### **ORISSA INDUSTRIAL INFRASTRUCTURE DEVELOPMENT CORPORATION (IIDCO)**

9.14 Orissa Industrial Infrastructure Development Corporation was established in 1981 with the objective of creating infrastructure facilities in industrial estates and areas identified for accelerated growth of industries, trade and commerce. IIDCO has established 66 industrial estates/areas in the State. The total turnover of the Corporation during 1998-99 was Rs.73.44 crore towards infrastructure projects, diversification activities, and land acquisition etc. as compared to Rs.53.77 crore during the previous year. The cumulative profit of the Corporation as on March 31, 1999 was Rs.8.95 crore. IIDCO has received ISO-9001 certification for its services. ISO-14000 certification for its environmental protection and resource conservation has also been received since September, 1999.

9.15 Four Growth Centers, at Kalinganagar, Chhatrapur, Jharsuguda and Kesinga are planned. During 1998-99, land acquisition for the Growth Centre at Kalinganagar has been completed and that for Growth Centers at Chhatrapur and Jharsuguda is in progress. Master plans for these projects are under preparation. Approval for Kesinga Growth Centre has been received from Government of India. Construction of an Export Promotion Industrial Park in Chandaka area is in an advanced stage of completion. Civil work for setting up an Integrated Infrastructure Development Centre at Khurda is under progress. Master plans have also been finalised to establish two Integrated Infrastructure Development Centres at Paradeep and Rayagada. The Corporation has acquired 1898 acres of land for distribution to M/s Utkal Alumina, M/s Oswal Agro Ltd, and M/s Sterlite Industries Ltd. Initiative has been taken to acquire 8635 acres of land at Jharsuguda, Gopalpur, Rayagada and Paradeep for major projects coming up in the State in steel, aluminium, power and petroleum sectors. Land acquisition for setting up a Special Tourism Park at Puri over 3300 acre of land is in progress.

9.16 IIDCO proposes to establish a mega industrial park at Paradeep under a joint venture with Bang Pakong Industrial Park (BPIP), Thailand for the development of ancillaries and down stream industries of oil refinery and petrochemical industries. It

proposes to establish a multistoried building at a cost of Rs.25 crore in Bhubaneswar for use by the software industry. IIDCO has entered into an agreement with Infrastructure Leasing and Financial Services Ltd., Mumbai to develop 90 km of road under Bhubaneswar Integrated Road Project with an estimated cost of Rs.170 crore and a joint venture company namely Bhubaneswar Integrated Road Network Limited (BIRNEL) has already been constituted for this project.

#### **AGRICULTURAL PROMOTION AND INVESTMENT CORPORATION OF ORISSA LTD. (APICOL)**

9.17 In pursuance to the Industrial Policy 1996, Agricultural Promotion and Investment Corporation (APICOL) was established in March 1996 as a wholly owned Government corporation with a view to strengthening the rural economy by providing financial support for promotion and development of agro-based and food processing industries including commercial agriculture and horticulture activities. By the end of 1997-98, APICOL had promoted 27 agro and food processing industries in the State with an investment of Rs.23.72 crore. These units provided employment for 200 persons. During 1998-99, it had promoted 121 agro and food processing units investing Rs.6.65 crore with the potential of generating employment for 1270 persons. APICOL has also so far provided Rs.2.76 crore towards incentives in favour of 147 industrial ventures out of which Rs.2.21 crore was provided during 1998-99.

#### **ORISSA STATE FINANCIAL CORPORATION (OSFC)**

9.18 Orissa State Financial Corporation has been providing term loans for establishment of small and medium scale industries in the State since its inception in 1956. It also provides financial assistance for ventures in areas like transport, hotels, nursing homes and clinics, and for acquisition of mining and road construction equipment etc. The Corporation receives financial assistance from the State Government and Central Government and provides soft loans and margin money for rehabilitation of sick industrial units.

9.19 By the end of 1998-99, the Corporation had disbursed loans amounting to Rs.866.42 crore to 24,783 units. During 1998-99, Rs.46.33 crore was provided to 473 units as compared to Rs.57.41 crore in favour of 528 units in the previous year. During 1998-99, the disbursement of loans to no-industry districts and backward districts was 15.91% and 13.43% respectively of the total investment.

9.20 OSFC acts as an agent of the State Government for disbursement of capital investment subsidy and soft loans to eligible industries. During 1998-99, the Corporation has disbursed an amount of 2.24 crore towards subsidy and soft loans as against Rs.5.75 crore in the previous year.

9.21 The performance of OSFC from 1994-95 to 1998-99 is presented in Tables 9.3 and 9.4

Table 9.3

## Capital Investment of Orissa State Financial Corporation

(Rs in lakh)

Sl No.	Type of Investment	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7
1	State investment subsidy	132.49	303.00	912.77	574.28	218.22
2	Soft loans	0.19		0.15	0.38	6.09
	<b>Total</b>	<b>132.68</b>	<b>303.00</b>	<b>912.92</b>	<b>574.66</b>	<b>224.31</b>

P : Provisional

Source : Orissa State Financial Corporation, Cuttack

Table 9.4

## OSFC Assistance under Special Schemes

(Rs. In lakh)

Sl. No.	Type of assistance	1996-97		1997-98		1998-99 (P)	
		No.	Amt.	No.	Amt.	No.	Amt.
1	2	3	4	5	6	7	8
1	Rehabilitation of sick units	3	2.00	3	23.47	1	6.00
2	Modernisation	11	40.00	4	133.78	11	331.57
3	Single window scheme						
a)	Term loan	-		14	105.98	5	27.83
b)	Working capital	-		3	63.39	-	107.50
4	Women entrepreneurs	22	125.00	23	127.75	5	10.02
5	Hire purchase	14	321.00	4	219.51	76	382.93
6	National Equity Fund	85	95.00	89	152.35	80	114.28
7	Factoring services	58	2860.00	89	3887.00	89	3623.50
8	Others	784	3367.50	405	4696.26	295	3653.27
	<b>Total</b>	<b>977</b>	<b>6710.50</b>	<b>634</b>	<b>9409.49</b>	<b>562</b>	<b>8256.90</b>

P : Provisional

Source : Orissa State Financial Corporation, Cuttack.

**ORISSA MARITIME AND CHILIKA AREA DEVELOPMENT CORPORATION LTD.  
(OMCAD)**

9.22 OMCAD was established in the year 1976. It has launched several projects which include a fish-net manufacturing unit at Mancheswar, supply of fuel to mechanised fishing trawlers from the diesel outlets located at marine fishing bases at Paradeep, Chandipur, Kasafal, Dhamara and Gopalpur, and supply of high speed diesel to deep sea fishing trawlers and vessels from its diesel out-lets at Paradeep.

9.23 During 1998-99, the Corporation produced 36.55 MT of webbings at the fish-net manufacturing unit at Mancheswar and supplied these to fishermen at reasonable price. It also sold 14,289 kltr of high speed diesel and 29,467 ltr of lubricants to fishermen at subsidised rates. A total of 260.34 quintals of coconut fibre and 123.30 quintals of yarn were produced at the Coconut Industrial Complex, Sakhigopal with an investment of Rs.3.95 lakh. Quality coconut saplings and pineapple saplings were raised over an area of 3.20 acre during 1998-99. OMCAD earned a profit of Rs.8.44 lakh during 1998-99. It has proposed to take up brackish water prawn culture on its land at Jagatjore on joint venture basis. The Corporation is in the process of establishing two ice plants and cold storages at the fishing harbours at Gopalpur and Dhamara ports for the benefit of fishermen.

**ORISSA FILM DEVELOPMENT CORPORATION (OFDC)**

9.24 Orissa Film Development Corporation has played a vital role in promotion and development of film related activities along with construction and remodeling of low cost Janata and Rural Cinema Halls in the State. The Corporation extends financial assistance in collaboration with various commercial banks and the National Film Development Corporation. By the end of 1997-98, the Corporation had invested a sum of Rs.87.25 lakh for renovation/remodeling of 79 cinema halls, provided subsidy of Rs.241.85 lakh to 214 Oriya films and extended term/soft loans amounting to Rs.345.43 lakh in favour of film producers for production of 119 Oriya feature films. During 1998-99, it has subsidised 30 Oriya feature films by providing subsidy of Rs.89.88 lakh and provided a loan amounting to Rs.6.00 lakh in favour of producer of one film.

9.25 The Corporation has established a sophisticated studio complex at Bhubaneswar in order to provide infrastructure facilities for production of films. This complex has capacity for production of 16 mm, 35mm, cinema scope and video films.

## SMALL SCALE INDUSTRIES (SSI)

9.26 Development of small scale industries has been emphasised in the Industrial Policy 1996. In the new organisational and structural set up, the District Industries Centres (DICs) will operate as nodal agencies for development of small scale industries and for recommending grant of various incentives. Government have taken steps to establish DICs in all the newly created districts and Collectors have been delegated with the power to allocate land upto five acres and to ensure supply of power, water etc. through coordination with different agencies.

9.27 During the year 1998-99, 3,184 small scale industrial units were set up in the State with an investment of Rs.190.06 crore and employment opportunities for 16,776 persons as against 3,186 small scale units with an investment of Rs.134.09 crore and generation of employment for 16,716 persons during 1997-98. The position in regard to small scale units set up in Orissa is presented in Table 9.5.

**Table 9.5**  
**Small Scale Industries in Orissa**

Sl. No.	Year	No. of small scale units set-up	Investment (Rs. in crore)	Employment generated (number of persons)
1	2	3	4	5
1	By the end of Seventh Plan(1989-90)	35,867	437.26	2,85,332
2	1990-91	2,249	61.00	15,857
3	1991-92	2,233	52.03	15,545
4	1992-93	2,117	55.00	13,344
5	1993-94	2,311	58.21	13,807
6	1994-95	2,327	68.08	13,096
7	1995-96	2,507	74.82	13,019
8	1996-97	3,098	104.53	15,629
9	1997-98	3,186	134.09	16,716
10	1998-99	3,184	190.06	16,776
<b>Total</b>		<b>59,079</b>	<b>1233.08</b>	<b>3,98,921</b>

Source: Directorate of Industries, Orissa, Cuttack.

### PRIME MINISTER'S ROZGAR YOJANA (PMRY)

9.28 The PMRY launched on 2nd October 1993 was originally targeted to provide self-employment opportunities to educated unemployed youths in urban areas only. From 1994-95, the scheme has been extended to rural areas also. Youths in the age group of 18 to 35 years with requisite educational qualifications and having annual family income of Rs.24,000 or less are eligible to avail loan assistance upto Rs.1.00 lakh. The beneficiaries are required to invest 5% of the project cost as margin money and can get subsidy to the tune of 15% of the project cost. During 1997-98, loans amounting to Rs.48.32 crore were disbursed to 7,024 beneficiaries under PMRY. During 1998-99, out of an amount of Rs.65.53 crore sanctioned in favour of 8,353 beneficiaries, loans amounting to Rs.4.24 crore have been disbursed to 766 beneficiaries by 31.03.99

### ANCILLARY AND DOWNSTREAM INDUSTRIES

9.29 The Directorate of Industries co-ordinates with large and medium industrial units like Rourkela Steel Plant, National Aluminium Company, Paradeep Phosphate Limited, Mahanadi Coalfields Limited and Larsen and Toubro etc. to obtain ancillary status or registered manufacturer/supplier status for small and medium scale industries. Rourkela Steel Plant has ancillarised 25 small scale units and National Aluminium Company and Mahanadi Coalfields Limited have given ancillary status to 27 and 55 units respectively. The Directorate also establishes linkages with large and medium scale industries for development of downstream industries by utilising the finished goods and waste products of the mother plants.

9.30 As per provisions of the Industrial Policy 1996, capital investment subsidy to the tune of Rs.821.14 lakh has been sanctioned to 126 units during 1998-99. Sales tax exemption has been granted in favour of 1,297 units, electricity duty exemption has been granted to 120 industrial units engaged in commercial production and octroi tax exemption has been granted to 226 units during 1998-99 by way of incentives.

### TECHNICAL EDUCATION AND TRAINING

9.31 The Industrial Policy 1996 envisages a series of measures to improve the stock of technical manpower and upgrade the skills of local entrepreneurs. It is proposed to establish a Technical University in the State for maintaining and improving the standards of technical education



9.32 Four Government Engineering Colleges, two University Engineering Colleges and fourteen private Engineering Colleges are functioning in the State with a total intake capacity of 4000 students. Diploma courses are being conducted through 13 Government Engineering Schools/ Polytechnics (of which four are exclusively meant for women) and 12 private Engineering Schools/Polytechnics with total intake capacity of 3600 students. Craftsmanship training is being imparted in 38 disciplines through 23 Industrial Training Institutes (ITIs) and 37 Industrial Training Centres (ITCs).

### **EXPORT PROMOTION AND MARKETING**

9.33 Directorate of Export Promotion and Marketing plays a vital role in rendering marketing assistance through quality control, and registration and approval of rate contracts of small scale units for sale of their products to different Government, quasi Government and other agencies. It also provides marketing support to eligible exporting units. By the end of 1998-99, the Directorate has registered 1,865 small scale units and concluded rate contracts in respect of 1,107 store items. During 1998-99, 2,050 technical inspections were conducted and 26,139 samples were tested by the Directorate in its six testing laboratories. An amount of Rs.21.15 lakh was collected towards testing fee. An Export Promotion Industrial Park at Bhubaneswar has been sanctioned by Government of India with a project cost of Rs.15.25 crore for development of export activities.

### **ORISSA SMALL INDUSTRIES CORPORATION (OSIC)**

9.34 Orissa Small Industries Corporation was established in 1972 as a nodal promotional agency for small scale industrial units in the State. The Corporation has been extending marketing support, financial assistance for purchase of raw materials, a sub-contracting exchange, and factoring services to small scale units. The Corporation also administers certain incentives under the Industrial Policy 1996. During 1998-99, the Corporation has supplied 68,164 MT of raw materials to small scale units valued at Rs.120.15 crore through its 12 raw material depots against 45,197 MT raw materials worth Rs.114.52 crore supplied in the previous year. The achievement of the Corporation from 1996-97 to 1998-99 has been presented in Table 9.6.

**Table 9.6**  
**Activities of OSIC from 1996-97 to 1998-99**

(quantity in MT., Rs. in lakh)

Sl. No.	Scheme	Achievement					
		1996-97		1997-98		1998-99	
		Quantity	Value	Quantity	Value	Quantity	Value
1	2	3	4	5	6	7	8
1	Raw materials supplied	39,108	10816.45	45,197	11451.73	68,164	12015.30
2	Marketing assistance						
	a. Factoring services and financial assistance	-	247.43	-	158.77	-	119.17
	a) Product marketing	-	522.25	-	726.96	-	1434.56
3	Photo-identity cards	-	497.70	-	140.07	-	33.07
4	Export activities	-	4.40	-	0.70	-	-
5	Sub-contracting exchange	-	436.73	-	260.73	-	83.40
	<b>Total</b>	<b>39,108</b>	<b>12,524.96</b>	<b>45,197</b>	<b>12738.96</b>	<b>68,164</b>	<b>13685.86</b>

*Source: Orissa Small Industries Corporation, Cuttack.*

9.35 OSIC also acts as the nodal agency for operating various assistance schemes of the State Government to the SSI sector. It provides sales tax loans, subsidy for project feasibility study, technical know how fee, ISI certification subsidy etc. to small scale units. During 1998-99, the Corporation has disbursed assistance to the tune of Rs.1.49 lakh in favour of six SSI units. Under sub-contracting exchange activities, the Corporation secures large construction work orders from the private sector and public sector undertakings like NALCO, RSP and Railways etc. and executes these through small scale units. During 1998-99, It has executed construction work valued at Rs. 83.40 lakh as against Rs.260.73 lakh during the previous year. The Corporation is in the process of getting ISO 9002 certification for quality assurance.

## **HANDICRAFT AND COTTAGE INDUSTRIES**

9.36 Orissa is known for its excellence in silver filigree, applique, stone carving, brass and bell-metal goods, horn carving, terracotta and patta painting etc. The Directorate of Handicrafts and Cottage Industries provides administrative, managerial and

financial support for promotion, revival and diversification of these traditional industries through various schemes. During 1998-99, 50,607 cottage industries have been set up in the State with an investment of Rs.5,869.00 lakh for providing employment to 92,822 persons. Data on the growth of cottage industries in the State over the years is presented in Table 9.7.

**Table 9.7**  
**Growth of Cottage Industries in Orissa**

Sl. No.	Year	No. of units established	Investment (Rs. in lakh)	Employment generated (number of persons)
1	2	3	4	5
1	By the end of seventh Plan	1008716	20995.69	1693205
2	1990-91	68746	2070.15	128218
3	1991-92	64153	2675.67	119788
4	1992-93	54940	2751.72	100506
5	1993-94	59779	3098.31	114627
6	1994-95	50289	2853.66	104185
7	1995-96	48161	3616.86	91484
8	1996-97	41478	3925.68	76516
9	1997-98	45602	4886.16	82941
10	1998-99(P)	50607	5869.00	92822

*P : Provisional*

*Source : Directorate of Handicrafts and Cottage Industries, Bhubaneswar.*

9.37 At present 266 Handicrafts Co-operative Societies with a membership of 17,971 are actively functioning in the State. These societies provided employment to 6,464 artisans and produced handicraft articles worth Rs.636.97 lakh during 1998-99 as against Rs.493.78 lakh in the previous year.

9.38 In order to strengthen the artisan base of enterprises in the handicrafts sector, 30 Handicraft Training Centers are functioning in different districts of the State. During 1998-99, 407 trainees have been trained in these centers. A woolen carpet weaving training programme is being conducted in collaboration with an Export House in 33 centres with facilities to train 1,320 persons per batch. During 1998-99, 590 women have been trained in these training centres.

9.39 The Orissa State Co-operative Handicrafts Corporation is engaged in strengthening the production base, enlarging marketing opportunities, encouraging exporters, and introducing new design and technology in the handicrafts sector. The Corporation provides assistance to Primary Handicrafts Co-operative Societies, voluntary

organisations and individual artisans for improving the marketability of their products. The Corporation procures a wide variety of handicraft products and markets these both inside and outside the country. The Corporation extends benefits to artisans through its Common Facility Service Centre at Mancheswar. A Craft Development Centre at Jeypore is being run by the Corporation for providing a package of services to a cluster of craftsmen under a single umbrella for development of handicrafts. The Corporation is implementing the Woolen Carpet Weaving Training Scheme through its four training centres at Banarpal, Kendrapara, Kakatpur and Gabkund. A total of 248 persons have so far been trained in these institutions. During 1998-99, the total procurement and sale of handicrafts and art-textile products by the Corporation was to the tune of Rs.289.05 and Rs.526.97 lakh respectively. During 1998-99, the Corporation has exported handicraft and art-textile goods worth Rs.28.76 lakh to countries like Germany, Australia and France.

## **TEXTILE AND HANDLOOM INDUSTRIES**

### **a. Handloom**

9.40 A number of State Plan, Central Plan and Centrally Sponsored Plan schemes are being implemented for extending support to this sector. Under the Project Package Scheme an amount of Rs.5.67 crore has been invested during 1998-99 for construction of 1059 worksheds, 5 godowns, modernisation of 256 looms and supply of accessories to 607 weavers. Under Integrated Handloom Village Development Scheme, 336 worksheds and 2 godowns were constructed, 65 looms were electrified and accessories were supplied to 286 weavers during 1998-99 with an expenditure of Rs.2.35 crore. An amount of Rs. 98.92 lakh has been provided towards marketing assurance in 1998-99 under a Centrally Sponsored Plan scheme.

### **b. Power looms**

9.41 Presently, there are 1200 powerlooms in the co-operative sector and 3000 power looms outside the co-operative sector in the State. Due to lack of managerial ability and shortage of working capital, power looms under the cooperative sector have stopped functioning. Government have decided to privatise these power looms.

### **c. Spinning mills**

9.42 There are 12 spinning mills in the State of which 7 mills are operating in the co-operative sector, 3 mills under the Industrial Development Corporation of Orissa Limited (IDCOL) and one each under Orissa State Textile Corporation and National Textile

Corporation. Construction of Konark Cotton Co-operative Spinning Mill, Kesinga, one of the greatest mills in the co-operative sector, has not been completed. A modern ginning and processing unit has been established at Kesinga. The Orissa State Co-operative Spinning Mills Federation has also set up a Central Cotton Yarn Testing Laboratory at Bhubaneswar. During 1998-99, all the mills under the co-operative sector except Jagannath Spinning Mill, Nuapatna were running on conversion basis. The co-operative mills produced 5,778 MT of yarn valued at Rs.1234.40 lakh and sustained cumulative loss amounting to 12.99 crore. Since these mills are not able to meet their operating expenses and the losses are mounting, it has been decided to privatise them.

#### d. Sericulture

9.43 Sericulture industry deals with tassar, mulberry and eri and provides avenues for rural employment and income generation. Orissa State Tassar and Silk Co-operative Society is the apex body for providing financial assistance and working capital to primary societies. It also provides various services to cocoon producers and weavers, and marketing support for tassar, mulberry and eri fabrics.

##### i. Tassar

9.44 For the development of tassar products, 62 Primary Tassar Rearing Co-operative Societies are functioning in the State under their apex society, the Orissa Tassar and Silk Co-operative Society. During 1998-99, 12.78 lakh tassar worms were supplied to rearers and 32.51 MT of tassar yarn has been produced providing employment to 42,227 persons. Rearers from 984 villages in the State are now actively involved in tassar rearing in 3,005 rearing fields.

##### ii. Mulberry

9.45 Mulberry plantation and silkworm rearing have been taken up on a large scale in 30 blocks of the State. A total of 13,469 acre of land has been brought under mulberry culture involving 14,996 farmers in 39 Rearing Co-operative Societies. For development of mulberry sericulture, two pilot projects namely Bivoltine Sericulture Development Project and National Sericulture Project are operating in the State. During 1998-99, 4.97 MT of mulberry yarn was produced with employment of 25,758 persons. A cold storage for preservation of mulberry eggs has been set up at Chandragiri.

## iii. Eri

9.46 Eri-culture has been promoted as a subsidiary occupation in the undivided districts of Cuttack, Sundargarh, Kalahandi, Phulbani, Keonjhar, Sambaipur and Koraput. During 1998-99, 1000 kg of yarn was produced with employment of 7,060 persons. Yarn production in 1998-99 has increased considerably as compared to the production of 400 kg in the previous year.

**KHADI AND VILLAGE INDUSTRIES**

9.47 Khadi and village industries are being promoted in the State by the Orissa Khadi and Village Industries Board with financial support from the Khadi and Village Industries Commission. Assistance is provided in the shape of grants and loans to the beneficiaries through co-operative societies operating at the block level. Out of 95 schemes approved under Khadi and Village Industries Programme for assistance, 51 schemes are being implemented in the State. At present 1724 co-operative societies/institutions are functioning under the fold of khadi and village industries including one block level Artisan Industrial Multipurpose Co-operative Society in each block. These institutions monitor schemes under Khadi and Village Industries Programme such as bee keeping, carpentry, blacksmithy, pottery, manufacture of palm gur, leather goods, cane, bamboo goods, bell metal goods, and polyvastra etc. During 1998-99, goods worth Rs. 5304.69 lakh were produced by these societies with provision of employment to 122878 persons. The value of production was Rs. 5051.18 lakh in the previous year.

**COIR INDUSTRIES**

9.48 Orissa Co-operative Coir Corporation is the apex co-operative organisation in the State dealing with marketing of coir and coir products produced by societies/individuals and its own production units. The production and sale of coir and coir products by the Corporation during 1998-99 was Rs.16.70 lakh and Rs.28.32 lakh respectively. During 1997-98 there were 95 Coir Co-operative Societies functioning in the State. Five Regional Coir Training and Development Centres are functioning in the State with capacity to train 100 artisans annually.

**SALT INDUSTRIES**

9.49 The salt production in the State does not fully meet the requirement of edible salt in the State. The four salt co-operative societies in the State produced 38,350 MT

of salt during 1998-99. Eight iodised salt plants have also been established in the State in which 96,000 MT of salt was iodised during the year.

## TOURISM

9.50 Orissa has vast potential for development of tourism which has remained largely untapped. The State Government have formulated the Orissa Tourism Policy 1997 with the following objectives.

- i) Optimum harnessing of the resources to attract the maximum number of domestic and foreign tourists with increased average duration of their sojourn in Orissa,
- ii) Development of tourism-related industries which would provide increased employment opportunities,
- iii) Promotion of the rich handicrafts and handlooms of Orissa through tourism,
- iv) Promotion of the natural grandeur and cultural heritage of Orissa through tourism,
- v) Promotion of cross-cultural interaction, socio-cultural amity, and economic development through tourism and through involvement of the private sector, autonomous bodies, local authorities, and the people at large in promotion of tourism.

9.51 The growth of tourism is measured in terms of number of tourist arrivals. The arrival of tourists in the State during 1998 was reported to be 14,95,228 of which 33,101 were foreign tourists. The growth of tourist traffic and estimated flow of income from tourism in the State has been presented in Table 9.8. During 1990-98, although the total tourist arrivals in the State have increased by 20.15%, the increase in the number of foreign tourists has been only 2.83%.

9.52 The Tourism Department maintains 15 accommodation units comprising of 10 Panthasalas, 2 Yatri Niwases, 2 Panthikas and one Aranya Niwas. In addition, the Orissa Tourism Development Corporation operates 11 Pantha Niwases and one Aranya Niwas.

9.53 During 1998-99, work in augmenting the tourist infrastructure through activities like construction/improvement of Panthasalas, construction of way-side amenities centres, refurbishment of temples, provision of public conveniences, landscaping at different tourist centres was taken up. The tourism Department organised and celebrated in a number

of festivals such as Konark Festival, Puri Beach Festival, Folk Dance Festival at Sambalpur, and tribal festivals at different districts. The department participated in various tourism fairs at national and international level. The boat race in Chilka lake was revived. Government of India have sanctioned funds for construction of Tourist Reception Centres at Rourkela, Paralakhemundi and Dhenkanal and for development of Chandrabhaga beach on priority basis.

Table 9.8

## Tourist Arrivals and Earnings from Tourism In Orissa

(Rs. in lakh)

Sl	Year No	Tourist arrivals			Estimated inflow of money through tourist expenditure		
		Domestic	Foreign	Total	Domestic	Foreign	Total
1	2	3	4	5	6	7	8
1	1990	1212262	32191	1244453	4982.39	405.60	5387.99
2	1991	1221116	29388	1250504	5531.66	407.91	5939.57
3	1992	1264790	26639	1291429	8843.41	565.01	9408.42
4	1993	1278574	24856	1303430	9822.00	579.39	10401.39
5	1994	1324025	26024	1350049	13182.74	744.92	13927.66
6	1995	1360267	28201	1388468	13976.14	881.83	14857.97
7	1996	1401126	34303	1435429	15113.00	1126.00	16239.00
8	1997	1431334	35,081	1466415	16498.00	1231.00	17729.00
9	1998(P)	1462127	33101	1495228	48964.00	3926.00	52890.00

P : Provisional

Source : Directorate of Tourism, Orissa, Bhubaneswar.

## HOTEL INDUSTRY

9.54 Development of hotel industry is essential for growth of tourism. The hotel industry in Orissa has been making a steady progress in recent years. At the end of 1998, there were 694 hotels with 14,207 rooms and 26,946 beds in comparison to 672 hotels with 13,710 rooms and 25,826 beds at the end of 1997. Of these 694 hotels, 59 were top category with 2123 rooms and 4406 beds, 127 of middle category with 3261 rooms and 6776 beds, and 508 of low category with 8823 rooms and 15764 beds.

## INFORMATION TECHNOLOGY (IT)

9.55 The State Government have recognised IT (both hardware and software) as a priority industry and special incentives have been provided for this sector in the Industrial Policy 1996. The Orissa State Electronics Development Corporation (OSEDIC)



is the nodal agency and single point contact forum for IT industries. Government have recently announced the Information Technology Policy 1998. The main objectives of IT Policy 1998 are to

- i. Accord primacy to the growth of IT industry in the State.
- ii. Accelerate the use of information technology at the Government level to provide better and expeditious service to people.
- iii. Improve productivity and efficiency of Government service by hastening the process of decision making at Government level and providing an efficient and transparent tool for monitoring implementation of various Government support programmes.
- iv. Use IT as an important tool to increase employment potential for the educated unemployed.
- v. Enable the State to emerge as a destination of choice for IT industry.
- vi. Enhance domestic and export earning in the software and hardware areas of IT Industry
- vii. Encourage and accelerate the use of IT in schools, colleges and educational institutions so as to prepare the youth for employment both inside and outside the country.
- viii. Provide an administrative frame work for quick clearance of IT proposals by the Government and regulatory authorities.

9.56 Excellent data communication facilities are in the process of being established for use of IT companies. The Software Technology Park of India (STPI) at Bhubaneswar has set up a 2 mbps satellite earth station to provide high speed data links with foreign countries. Videsh Sanchar Nigam Ltd. will soon provide international gateway services from Bhubaneswar. Dedicated 64 kbps and higher band width connections would be made available to bulk users. Department of Telecommunications has commissioned

Internet Access Services (IAS) at Bhubaneswar recently. Internet services are available to export oriented IT companies and educational and research institutions at competitive rates through STPI, Bhubaneswar. Two private internet service providers have been granted licenses and will soon start operations.

9.57 The State Government have decided to set up an Indian Institute of Information Technology (IIIT) at Bhubaneswar. The institute would conduct research and offer short-term courses in different IT areas. Other initiatives in the field of IT education are also being undertaken.

9.58 Orissa Computer Applications Centre (OCAC) has been set up by the State Government to undertake education-cum-training programmes and to help Government and public sector organisations in the area of computer applications. It renders technical consultancy services in respect of procurement, implementation and commissioning of hardware and software. An MOU has been signed by OCAC with ORACLE India making OCAC an online ORACLE Solution Development Partner.

9.59 OCAC has developed a spell checker for Oriya in collaboration with CDAC, Pune. Systems studies were taken-up during 1998-99 for S.C.B. Medical College, Nilachala Ispat Nigam, Orissa Co-operative Bank Ltd., Bureau of Text Book Publication and Printing, Orissa State Housing Board, Hotel Management Institute etc. Consultancy services for computer infrastructure development and project development were undertaken by OCAC during 1998-99 in respect of a number of organisations such as GRID Corporation of Orissa, Orissa Textile Mills, Institute of Life Sciences, Directorate of Family Welfare, Orissa State Financial Corporation, Board of Secondary Education, Orissa Directorate of Employment, Welfare Department, Parliamentary Affairs Department, College of Accountancy and Management etc. During 1998-99, OCAC also organised a number of training programmes.

9.60 By the end of 1998-99, 30 software exporting units including majors like Infosys and Satyam have started operations and many more such units are expected to come up in the near future. Infosys has achieved an export turn over of one million US dollars per month from Orissa and has generated employment for nearly 500 IT professionals. It has plans to expand operations to provide employment to another 2000 persons over the next three years. Satyam Computers has already recruited 67 persons and has started work for construction of its own building at Bhubaneswar. A US software company is setting up an industrial park namely Bhubaneswar Electronics and Software Technology (BEST) Park over an area of 250 acres at Bhubaneswar for high-tech software and electronics industries.

**PUBLIC SECTOR ENTERPRISES (PSEs)**

9.61 There are 36 Public Sector Enterprises, registered under the Companies Act or created under special Acts of the State Government, in the State. The total investment in these PSEs as on 31.03.98 in the form of share capital and term loan was Rs.1364.61 crore and Rs.3318.06 crore of which the State Government's share capital and loan was Rs.1306.00 crore and Rs.1201.70 crore respectively. During 1998-99, an amount of Rs. 130.00 crore has been realised by the State Government from PSEs towards outstanding loans and advances.

9.62 Government is according top priority to reform public enterprises and to improve their performance in view of the changed economic scenario in the country. The measures being considered by the State Government in this regard include disinvestment, financial restructuring, and implementation of voluntary retirement schemes for the employees of PSEs. Accordingly the State Government have constituted a Public and Co-operative Enterprises Restructuring Committee under the chairmanship of the Chief Secretary to consider the restructuring proposals of PSEs such as disinvestment, closure, privatization, rehabilitation etc. Financial assistance is being sought from international financial institutions for restructuring State PSEs.



# CHAPTER 10

## MINERAL RESOURCES

10.01 Orissa is endowed with rich mineral wealth. According to the all India Mineral Resources Estimates of 1991, the deposits of chromite, bauxite, iron-ore and coal in Orissa were nearly 98.4%, 69.7%, 26.0% and 23.8% respectively of the total deposits in India as indicated in Table 10.1. Other minerals like china clay, fire clay, lime stone, quartz, precious and semi-precious stones, copper, nickel, vanadium etc. are also available in the State.

**Table 10.1**  
**Mineral Reserves in Orissa and India**

(in million tonne)

Sl No	Mineral / ore	ORISSA		INDIA		Reserve in Orissa as percentage to reserve in India
		Reserve as assessed in 1991-92	Exploitation in 1991-92	Reserve as assessed in 1991-92	Exploitation in 1991-92	
1	2	3	4	5	6	7
1	Iron ore	3120	8.84	11977	57.10	26.05
2	Chromite	183	0.98	186	1.06	98.39
3	Coal	44304	20.71	186044	225.91	23.81
4	Bauxite	1626	1.79	2333	4.61	69.70
5	Lime stone	1017	2.11	69351	75.01	1.47
6	Dolomite	563	1.40	4608	2.55	12.22
7	Fire clay	88	0.10	703	0.49	12.52
8	China clay	94	0.09	872	0.65	10.78
9	Nickel ore	220	-	231	-	95.24
10	Lead ore	2.6	0.14	1605	0.05	0.16
11	Copper ore	3	-	325	5.20	0.92
12	Quartz and quartzite	15	0.08	780	0.25	1.92
13	Vanadium	3.4	-	185	-	1.84
14	Mineral sands	82	0.04	286	N.A.	30.83

N.A. : Not Available

Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.

10.02 The total production of minerals and ores in the State during 1998-99 was 634.3 lakh tonnes valued at Rs.2365.56 crore, as against the production of 628.1 lakh tonnes valued at Rs.2148.96 crore in 1997-98, registering an increase of 0.99% in quantity and 10.08% in value. Table 10.2 indicates the trend in total mineral production in the State and its value from 1991-92 to 1998-99.

Table 10.2

## Production and Value of Minerals/Ores in Orissa.

Sl. No.	Year	Production (in lakh tonne)	Percentage increase over previous year	Value (Rs. in crore)	Percentage increase over previous year
1	2	3	4	5	6
1	1991-92	372.0	19.73	812.39	29.15
2	1992-93	398.6	7.15	1033.71	27.24
3	1993-94	405.8	1.81	1166.84	12.88
4	1994-95	438.6	8.08	1300.70	11.47
5	1995-96	511.2	16.55	1634.03	25.63
6	1996-97	569.1	11.33	1791.33	9.63
7	1997-98	628.1	10.37	2148.96	19.96
8	1998-99(P)	634.3	0.99	2365.56	10.08

Source : Directorate of Mining and Geology, Orissa.

10.03 Production figures of some important minerals and ores in the State from 1991-92 to 1998-99 are given in Table 10.3. The table shows that the production of minerals and ores in the State has increased by 70.51% between 1991-92 and 1998-99. The production of coal and metallic minerals has increased by 109.9% and 32.9% respectively while that of non-metallic minerals has decreased by 14.6% over this period.

Table 10.3

## Production of Minerals in Orissa from 1991-92 to 1998-99

(lakh tonne)

Ores/ minerals	Quantity exploited (production) during							
	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7	8	9
<b>A. Fuel</b>								
Coal	207.1	232.3	241.2	276.7	326.6	371.5	423.4	434.7
<b>Total(A)</b>	207.1 (20.95)	232.3 (12.17)	241.2 (3.95)	276.7 (14.30)	326.6 (19.40)	371.5 (13.74)	423.4 (13.97)	434.7 (2.67)
<b>B. Metallic</b>								
i) Bauxite	17.9	22.8	24.5	21.5	24.2	25.7	28.7	28.2
ii) Chromite	9.8	10.6	10.2	11.2	16.8	13.6	14.1	13.2
iii) Iron-ore	68.4	63.9	79.9	80.1	83.3	113.2	123.8	116.7
iv) Manganese	6.2	7.0	6.7	5.8	6.3	6.9	4.9	8.4
v) Lead ore	1.4	1.1	0.9	0.9	0.9	0.8	0.9	0.9
<b>Total (B)</b>	123.7 (4.89)	129.4 (4.37)	132.2 (-2.49)	119.6 (-9.21)	141.2 (16.10)	160.2 (12.40)	170.2 (6.24)	164.4 (-3.41)
<b>C. Non-Metallic</b>								
i) China clay	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
ii) Dolomite	14.0	16.2	16.6	14.2	16.6	11.7	9.5	9.8
iii) Fire clay	1.0	1.1	1.1	1.0	0.9	0.9	0.6	0.6
iv) Graphite	0.7	0.6	0.7	0.6	0.9	1.5	0.6	0.9
v) Mineral sands	0.4	0.3	-	0.8	-	1.9	1.3	2.1
vi) Limestone	21.1	18.8	20.1	22.3	23.6	19.9	18.2	18.2
vii) Pyro phyllite	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.3
viii) Quartz	0.2	0.5	0.6	0.7	0.8	0.9	0.6	0.5
ix) Quartzite	0.6	0.5	0.6	0.7	0.6	0.7	0.6	0.4
X) Silica sand	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2
xi) Soap stone	0.04	0.03	0.03	0.02	0.02	Neg.	Neg.	Neg.
xii) Other minerals	2.8	2.8	2.8	2.4	2.3	1.8	1.6	2.5
<b>Total (C)</b>	41.2 (3.78)	40.8 (-0.73)	42.4 (3.67)	43.4 (2.39)	43.4 (0.00)	27.4 (-13.79)	24.6 (-7.26)	35.2 (2.03)
<b>Grand Total (A+B+C)</b>	278.0 (16.73)	299.8 (7.16)	405.8 (119.1)	439.8 (8.09)	511.2 (16.38)	559.1 (11.33)	608.1 (16.97)	634.3 (8.99)

P: Provisional

N.B.: Figures in brackets indicate percentage increase over previous year.

Source: Directorate of Mining and Geology, Orissa, Bhubaneswar.

## 10.04

Several mineral based industries have been set up in Orissa which include Rourkela Steel Plant (RSP), aluminium plants by INDAL and National Aluminium company (NALCO), three charge chrome plants at Brahmanipal, Bhatrak and Choudwar by Orissa Mining Corporation (OMC), Ferro Alloys Corporation (FACOR) and Indian Charge

Chrome Ltd. (ICCL) respectively. At Theruvalli in Rayagada district, Indian Metal and Ferro-Alloys(IMFA) has set up a plant for production of charge chrome/ferro chrome. The other important mineral based industries established include two sponge iron plants in Keonjhar district, a refractory in Dhenkanal district and mineral sands separation and synthetic rutile plants of Indian Rare Earth Ltd. at Chhatrapur in Ganjam district. Several cement plants have been set up in the State and three coal based thermal power plants have been set up at Talcher, Kanlha and Banharpalli. In addition, NALCO, RSP, ICCL, INDAL etc. have set up their own coal based captive power plants.

### VALUE OF MINERALS PRODUCED

10.08 The value of minerals and ores produced in the State during 1994-95 was Rs.1300.70 crore constituting 4.68% of the total value of production in the country as against 13.42% in Bihar, 9.26% in Gujarat, 12.64% in Madhya Pradesh, 3.33% in West Bengal, 3.83% in Maharashtra, 6.42% in Assam, and 5.44% in Andhra Pradesh (Annexure 10.1). The value of minerals and ores produced in the State has increased from Rs.2148.96 crore during 1997-98 to Rs.2385.56 crore in 1998-99 registering an increase of 10.08%. Out of the total value of production during 1998-99, the share of coal, metallic and non-metallic minerals is 87.27%, 27.19% and 5.53% respectively. Table 10.4 indicates the value of fuel (coal), metallic and non-metallic minerals produced in the State from 1991-92 to 1998-99.

Table 10.4

#### Value of Minerals Produced in Orissa

(Rs. in crore)

Sl. No.	Year	Fuel	Value of minerals produced		
			Metallic	Non-metallic	Total
1	2	3	4	5	6
1	1991-92	421.55	343.28	47.56	812.39
2	1992-93	551.12	417.30	65.29	1033.71
3	1993-94	671.72	431.92	63.20	1168.84
4	1994-95	752.45	480.24	68.01	1300.70
5	1995-96	932.99	635.18	65.86	1634.03
6	1996-97	1072.28	631.68	87.37	1791.33
7	1997-98	1368.47	672.77	107.72	2148.96
8	1998-99(P)	1691.43	643.24	130.89	2385.56

P : Provisional

Source : Directorate of Mining and Geology, Orissa, Bhubaneswar

## MINERAL EXPORTS

10.06 During 1998-99, 11.65 lakh tonne of minerals and ores valued at Rs.258.58 crore were exported from the State as against 14.08 lakh tonne valued at Rs.224.09 crore in 1997-98 registering a decrease of 17.26% in terms of quantity and an increase of 15.39% in terms of value of exports. Mineral wise export figures from 1993-94 to 1998-99 are given in Table 10.5. The table shows that the quantity of chromite exported has increased by 23.95% during 1998-99 over 1997-98. In the case of Ilmenite and Iron-ore, however, the quantity exported decreased by 21.38% and 30.00% respectively over the same period. During this period, iron-ore was exported to countries like Japan, China, Malaysia etc. and chromite to China through Paradeep port. Ilmenite was exported to Canada, South Korea and Malaysia through Gopalpur port. The decrease in the export of iron was due to slump in the international market. Also the international market for iron ore and other minerals has become more competitive in recent years.

Table 10.5

## Export of Minerals/Ores from Orissa

(Quantity - in lakh tonne)  
(Value - Rs. in crore)

Sl. No.	Items	1994-95		1995-96		1996-97		1997-98		1998-99(P)	
		Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Chromite	3.46	78.04	2.98	110.55	3.00	142.88	3.09	128.79	3.83	177.80
2	Iron Ore	18.81	98.52	15.82	90.78	10.91	68.58	9.54	61.38	6.68	45.88
3	Ilmenite	0.36	5.87	0.33	8.15	1.10	22.71	1.45	33.91	1.14	35.40
	<b>Total</b>	<b>22.63</b>	<b>178.43</b>	<b>19.13</b>	<b>209.48</b>	<b>15.01</b>	<b>238.95</b>	<b>14.08</b>	<b>224.09</b>	<b>11.65</b>	<b>258.58</b>

P : Provisional

Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.

10.07 Iron ore is abundantly available in the districts of Mayurbhanj, Sundargarh, Keonjhar and Jajpur. Total reserve of iron ore in these districts is estimated at 3567 million tonne. Similarly, the total reserve of chromite ore is of the order of 183 million tonne and of manganese of the order of 50 million tonne. While chromite is mostly available in Jajpur, Dhenkanal and Keonjhar districts, manganese is mostly available in Sundargarh and Keonjhar districts. Dolomite is available only in the district of Sundargarh with estimated reserve of 434 million tonne.



10.08 There are two major coal bearing areas in the State which are currently being exploited namely Talcher and the Ib Valley. The total reserve of coal in these areas is estimated to be 49406 million tonne. Table 10.6 shows districtwise figures for exploitation and value of major minerals in Orissa for the year 1998-99.

Table 10.6

## District-wise Exploitation and Value of Major Minerals in Orissa, during 1998-99

(Quantity - lakh tonne)  
(Value - Rs. in crore)

Sl. No.	District	Chromite		Coal		Dolomite		Iron-ore		Manganese	
		Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
1	2	3	4	5	6	7	8	9	10	11	12
1	Angul	-	-	269.82	1061.94	-	-	-	-	-	-
2	Dhenkanal	0.35	5.83	-	-	-	-	-	-	-	-
3	Jajpur	11.38	231.83	-	-	-	-	2.06	3.69	-	-
4	Jharsuguda	-	-	138.09	503.05	-	-	-	-	-	-
5	Keonjhar	1.43	28.95	-	-	-	-	83.28	205.28	3.93	3.93
6	Mayurbhanj	-	-	-	-	-	-	1.83	3.89	-	-
7	Sundargarh	-	-	6.82	26.44	9.56	19.28	29.51	63.43	1.43	1.43
<b>Total</b>		<b>13.16</b>	<b>266.61</b>	<b>434.73</b>	<b>1561.43</b>	<b>9.56</b>	<b>19.28</b>	<b>116.65</b>	<b>276.20</b>	<b>5.36</b>	<b>5.36</b>

Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.

10.09 Table 10.6 shows that about 86.5% of chromite is mined from Jajpur district and the balance 13.5% from Keonjhar and Dhenkanal districts. Coal is largely available in Angul district (66.7%) and the balance 33.3% is in Jharsuguda and Sundargarh districts. Similarly, manganese ore is largely available in Keonjhar district (73.3%) followed by Sundargarh (26.7%). Iron ore is largely available in Keonjhar district (71.4%) followed by Sundargarh (25.3%), Jajpur (1.8%) and Mayurbhanj (1.6%).

## REVENUE FROM MINERAL RESOURCES

10.10 Mining revenue and cess collected during the year 1998-99 stood at Rs.315.96 crore as against Rs.320.34 crore in 1997-98 registering a marginal decrease of 1.37%. Table 10.7 shows the trend of revenue receipts from mining sector over the period

from 1991-92 to 1998-99. The table shows that the collection of mining royalty and other revenue from minerals, except for the marginal decline registered from 1997-98 to 1998-99, has been increasing steadily. The mining sector is an important source of revenue for the State and its proportion in the total non-tax revenue of the State has steadily increased over the years except during the years 1994-95 and 1998-99.

Table 10.7

## Revenue Receipt from Mining Sector and Total Non-Tax Revenue of Orissa.

(Rs. in crore)

Year	Revenue receipts			Total non-tax revenue of the State	Percentage of col.4 to col.5
	Gross on mining royalties	Mining royalties and other revenue from minerals	Total		
1	2	3	4	5	6
1991-92	4.90	66.75	71.65	259.80	27.58
1992-93	5.67	118.50	124.17	388.20	31.21
1993-94	4.28	130.71	135.00	415.50	32.49
1994-95	4.95	169.99	174.94	634.30	27.53
1995-96	11.05	241.26	252.31	628.20	40.18
1996-97	4.20	269.39	273.59	481.80	56.78
1997-98	3.19	317.15	320.34	580.60	57.14
1998-99 (RE)	1.91	314.05	315.96	643.70	49.08

Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.

## MINERAL RESERVES IN ORISSA

10.11 As per the estimates made for 1998-99, the reserve of coal was the highest at 49,406 million tonne followed by Iron ore (3587 million tonne), bauxite (1733 million tonne), and limestone (1032 million tonne).

10.12 Though Orissa is rich in mineral resources, exploitation is still not commensurate with the potential. Enhanced rate of exploitation of different mineral reserves will not only improve the financial position of the State but also will be helpful in generating sizeable direct and indirect employment. The rate of exploitation of minerals/ores in the State is less than 1% in all cases except graphite (4.5%), lead ore (3.46%) and manganese (1.1%). Table 10.8 shows the total mineral reserves and the rate of exploitation of different minerals in Orissa during the year 1998-99.

Table 10.8

**Total Mineral Reserves and Rate of Exploitation of  
different Minerals in Orissa during 1998-99.**

(In million tonne)

Sl. No.	Ore/mineral	Total reserves in 1998-99	Exploitation during			Rate of exploitation to total reserves		
			1996-97	1997-98	1998-99	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8	9
1	Iron ore	3587	11.32	12.36	11.67	0.32	0.35	0.33
2	Chromite	183	1.36	1.41	1.32	0.74	0.77	0.72
3	Coal	49406	37.15	42.34	43.47	0.08	0.09	0.09
4	Bauxite	1733	2.57	2.67	2.82	0.15	0.15	0.16
5	Lime stone	1032	1.89	1.92	1.82	0.18	0.19	0.18
6	Dolomite	434	1.17	0.95	0.96	0.27	0.22	0.22
7	Fire clay	108	0.09	0.05	0.06	0.08	0.05	0.06
8	China clay	157	0.01	0.01	0.01	0.01	0.01	0.01
9	Nickel ore	270	-	-	-	-	-	-
10	Lead ore	2.6	0.08	0.09	0.09	3.08	3.46	3.46
11	Copper ore	6.4	-	-	-	-	-	-
12	Quartz, quartzite and silica	15	0.18	0.12	0.07	1.20	0.80	0.47
13	Mineral sands	82	0.10	0.13	0.21	0.12	0.16	0.26
14	Graphite	2	0.10	0.06	0.09	5.00	3.00	4.50
15	Manganese ores	50	0.69	0.49	0.54	1.37	0.98	1.08
16	Vanadium ore	4	-	-	-	-	-	-
17	Pyre phyllite	8.6	0.04	0.04	0.03	0.47	0.47	0.35
18	Talc/soap stone	0.1	-	-	-	-	-	-

*Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.*

10.13 The State Government have been making concerted efforts to attract investment in steel based industries in order to make better use of the mineral wealth of the State. Five projects promoted by Mid-east Integrated Steel Ltd., MESCO Kalinga Steel Ltd, Nilachal Ispat Nigam, Indian Seamless Steel, and Uttam Steel Ltd., are proposed to be set up at the Duburi Integrated Industrial Complex in Jajpur district. Tata Iron and Steel Company and Larson and Toubro Ltd. will locate their units at Gopalpur. National Steel Ltd. and Midwest Iron and Steel Ltd. have proposed to set up projects in Keonjhar district and Bamra Iron and Steel Ltd. and Jindal Strips Ltd. have proposed to set up projects in Sambalpur and Angul districts respectively.

10.14 The State Government have decided to allow leasing of captive mines to the iron and steel projects being set up in the State. Five projects, promoted by Tata Iron and Steel Company, Larson and Toubro Ltd., Mideast Integrated Steel Ltd., Nilachal Ispat Nigam Ltd., and Uttam Steels Ltd., have been recommended for grant of such leases. The Central Government have so far accorded approval for leasing of captive mines to one such project namely Mideast Integrated Steel Ltd.

10.15 During 1998, the State Government have formulated a Gemstone Policy for promoting exploration and exploitation of gemstone resources in a scientific and systematic manner. The Policy, inter alia, envisages steps for prevention of illegal trading and theft of gemstones, opening of the gemstone bearing areas to private sector exploitation, and introduction of a scheme of issuing trading licenses to parties dealing with gemstone resources. Out of 28 gemstone bearing tracts identified in the State, 18 tracts have been developed so far and opened for regrant of mining leases.

### EMPLOYMENT IN MINING AND QUARRYING SECTOR

10.16 According to the 1991 census, the number of persons engaged in mining and quarrying activities in Orissa was 1,01,247 as against 71,842 in 1981 registering a growth of 41%. This includes persons directly or indirectly engaged in both major and minor mineral activities. Table 10.9 shows that the direct employment in major mineral activities has been showing a declining trend. The number of workers engaged directly in major mineral activities has declined from 68,886 in 1991-92 to 58,448 during 1998-99 showing a decrease of 15.15% over the period. The decrease in employment is attributed in part to induction of higher technology and automation in mineral exploitation.

Table 10.9

## Year wise Number of Workers Directly Employed In Major Mineral Activities

Sl. No.	Mineral Ores/ District	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8	9	10
1.	Bauxite (Koraput, Sundergarh)	400	442	428	458	541	438	449	360
2.	Chromite (Dhenkanl, Jajpur, Keonjhar)	9902	9218	9989	9384	8886	8892	6927	7684
3.	Coal (Angul, Jharsuguda, Sundergarh)	18417	18880	19212	19485	19420	18864	20010	20087
4.	Dolomite and lime stone (Bargarh, Bolangir, Keonjhar, Nussera, Koraput, Sundergarh)	11148	10811	9291	7818	8844	6978	5923	6018
5.	Iron ore (Jajpur, Keonjhar, Mayurbhanj, Sundergarh)	15563	15272	14733	14077	14656	15140	15953	16929
6.	Manganese ore (Keonjhar, Sundergarh)	7383	7187	7288	8518	8865	8810	5745	4178
7.	Others	8080	8517	5442	6299	5735	4472	4319	3865
	<b>Total</b>	<b>69398</b>	<b>69997</b>	<b>68981</b>	<b>64037</b>	<b>68147</b>	<b>61192</b>	<b>59326</b>	<b>60448</b>

Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.

## MINING LEASES

10.17 Table 10.10 shows that the total number of mining leases in the State as on 31.03.99 was 569 covering an area of 108631 hectare. Out of these, 317 leases covering an area of 78975 hectare were in operation. Out of the total of 569 leases granted, 38 leases covering an area of 24357 hectare were held by the Orissa Mining Corporation Ltd. out of which 17 leases were in operation covering an area of 13499 hectare.

Table 10.10

## Mineral-wise Leases in the State as on 31.03.99

Sl. No.	Name of the ore/mineral	Total no. of leases	Area leased (In hectare)	No. of leases in operation	Area under operation (In hectare)
1	2	3	4	5	6
1	Iron ore	75 (12)	16909 (6200)	51 (6)	16597 (5849)
2	Iron and manganese	60 (6)	20103 (5553)	47 (4)	16280 (4074)
3	Iron and bauxite	2	480	2	480
4	Bauxite	7 (1)	8963 (1389)	3	4841
5	Bauxite and manganese	1	52	-	-
6	Manganese	34 (9)	7321 (1059)	20	5826
7	Graphite	115	3201	11	1648
8	Chromite	21 (11)	7417 (4958)	14 (5)	3512 (2429)
9	Dolomite	2	746	1	687
10	Dolomite and lime stone	37	6685	21	3837
11	Lime stone	10 (1)	4355 (1301)	7 (1)	2573 (1301)
12	Lime kankar	1	48	-	-
13	Gem stone	1 (1)	36 (36)	1 (1)	36 (36)
14	China clay	13 (1)	1292 (143)	6	966
15	China and fire clay	4	170	1	74
16	Fire clay	36	4166	12	1500
17	Coal	23	14338	23	14338
18	Asbestos	2	167	1	117
19	Galena	1	5	1	5
20	Lead and zinc	1	500	1	500

(Contd.)

Table 10.10 ( Conclid.)

Sl. No.	Name of the ore/mineral	Total no. of leases	Area leased (in hectare)	No. of Leases in operation	Area under operation (in hectare)
1	2	3	4	5	6
21	Pyrophyllite and quartz	10	605	8	552
22	Quartz and quartzite	90	2474	39	1200
23	Mineral sands	1	2878	1	2878
24	Sand (stowing)	5	580	2	96
25	Silica sand	1	70	-	-
26	Soap stone	7	622	4	420
27	Vanadium	1	1347	-	-
		(1)	(1347)		
28	Tin	2	57	-	-
29	Mica	2	30	-	-
30	Red oxide/redoehre	2	197	-	-
31	Talc	1	62	-	-
32	Kyanite	1	55	1	55
	<b>Total</b>	<b>500</b>	<b>108631</b>	<b>317</b>	<b>78978</b>
		<b>(38)</b>	<b>(24387)</b>	<b>(17)</b>	<b>(13499)</b>

*N.B. : Figures in bracket relate to leases held by Orissa Mining Corporation Ltd.*

*Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.*

10.18 Table 10.11 presents data relating to the total quantity and value of different minerals/ores produced by the Orissa Mining Corporation (OMC) Ltd. during 1998-99.

Table 10.11

## Quantity and Value of Minerals Produced by OMC Ltd. during 1998-99

Sl. No.	Ore/ mineral	Quantity produced (thousand tonne)	Value (Rs in thousand)	Despatch for export (thousand tonne)	Average daily employment of labour
1	2	3	4	5	6
1	Chromite	407	739188	94	3092
2	Iron ore	785	130313	50	2445
3	Limestone	24	4167	-	18
4	Manganese ore	135	137097	-	1397
5	Fire clay	31	4935	-	30
	<b>Total</b>	<b>1382</b>	<b>1018700</b>	<b>144</b>	<b>6982</b>

*Source : Directorate of Mining and Geology, Orissa, Bhubaneswar.*



# MINERAL MAP OF ORISSA

2010 0 20 40 60 80 100 k.m.

BIHAR

WEST BENGAL

MADHYA PRADESH

ANDHRA PRADESH

BAY OF BENGAL

## INDEX

Asbestos	A
Bauxite	Bx
Chomite	Ch
China Clay	Cc
Coal	●
Copper ore	Cu
Diamond (Prospects)	◆
Dotomite	D
Fire Clay	Fc
Graphite	Gr
Gatena (lead ore)	Pb
Gold (Prospects)	Au
Iron ore	Fe
Kyanite	K
Limestone	Ls
Manganese ore	Mn
Mineral Sands	☉
Nickel ore	Ni
PGE (Prospects)	(P)
Precious/Semi-precious Stone	*
Pyrophyllite	P
Quartz and Quartzite	Q
Scapstone	S
Tin ore	Sn
Vanadiferous Magnetite	V

State boundary	-----
Road	—————
Railways (Existing)	—————
Railways (Under Construction)	—————
River/Reservoir	~~~~~



# CHAPTER 11

## POWER

11.01 Adequate availability of power is essential for sustained growth of the economy. The primary objectives in this sector are utilisation of the power generated in an optimum manner and plan for adding to generation for meeting the anticipated increase in demand for power over the coming years.

11.02 With the enactment of Orissa Electricity Reform Act, 1995, Orissa became the first State in the country to initiate reform and restructuring of power sector. Reforms in the power sector have been implemented with the restructuring of the erstwhile Orissa State Electricity Board (OSEB) and establishment of an independent Regulatory Commission to improve the overall efficiency of the system. The functions of OSEB were entrusted to two new corporations namely (i) Grid Corporation of Orissa (GRIDCO) (ii) Orissa Hydro Power Corporation (OHPC) on 1st April 1996. The existing transmission and distribution system was transferred to GRIDCO. All hydro power stations including projects under construction were transferred to OHPC. OPGC, which was incorporated in 1984, is looking after the thermal power projects in the State. OHPC is at present wholly owned by the State Government. However in respect of OPGC, 49% of equity was disinvested in 1998-99.

11.03 The distribution function of GRIDCO was separated in November 1997 and four distribution companies namely Central Electricity Supply Company of Orissa Ltd. (CESCO), North-Eastern Electricity Supply Company of Orissa Ltd. (NESCO), Western Electricity Supply Company of Orissa Ltd. (WESCO) and Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO) were incorporated as wholly owned subsidiaries of GRIDCO. GRIDCO disinvested 51% equity each in WESCO, NESCO and SOUTHCO in favour of M/s Bombay Suburban Electricity Supply Ltd. (BSES) and disinvested 51% equity in CESCO in favour of a consortium between M/s AES Ltd. and M/s Jyoti Structure Ltd.. The equity of GRIDCO in each of these companies now is at the level of 39% and the remaining 10% is held by the Employees' Welfare Fund. GRIDCO is the sole transmission licensee for supply of power in Orissa and is at present wholly owned by the Government of Orissa.

11.04 The estimated demand for power in the State for the year 1998-99 was about 1234 MW. The demand for power is increasing and is expected to reach 2180 MW in the year 2001-2002. It is proposed to meet this additional requirement through a series of

measures which include creation of additional generating capacity, demand side management, reduction of transmission and distribution losses, and renovation of old units. Keeping these objectives in view, it has been decided to invest more funds in the power sector. Accordingly, the Ninth Plan outlay has been projected at Rs 4622.79 crore while the Annual Plan for 1999-2000 envisages an outlay of Rs. 1035.40 crore.

11.05 At the end of 1998-1999, the State's share in the total installed capacity of the five hydro power projects in the State sector was 1271.92 MW from which power generation was 402.42 MW. Similarly, the total installed capacity of the existing thermal power projects in the State was 420 MW with power generation of 286.45 MW. Thus the State's share in the total installed capacity in the State sector was 1691.92 MW which generated 688.87 MW of power during 1998-99. In addition, Orissa's share of the installed capacity in Central sector projects was 1187.91 MW. These Central sector projects supplied 401.92 MW of power to the State during 1998-99. Thus, the total installed capacity available for the State was 2879.83 MW, which generated 1090.79 MW of power for the State. During 1998-99, the State also purchased 115.94 MW of power from captive power plants installed in the State by different industries.

Table 11.1

**Year-wise Total Installed Capacity and Availability of Power in Orissa from all Sources from 1990-91 to 1998-99**

(in MW)

Sl. No	Year	Installed capacity *	Availability of power from all sources	Percentage of (4) to (3)
1	2	3	4	5
1	1990-91	1713.00	780.00	45.53
2	1991-92	1713.00	835.00	48.74
3	1992-93	1713.00	857.00	50.03
4	1993-94	1732.00	936.00	54.04
5	1994-95	1942.00	997.00	51.34
6	1995-96	2152.00	1114.00	51.77
7	1996-97	4052.00	1195.00	29.49
8	1997-98	3905.00	1162.00	29.76
9	1998-99	4020.33	1206.73	30.02

\* Includes capacity of captive power plants owned by industrial units in Orissa

Source : GRIDCO, Bhubaneswar.

11.06 Table 11.2 shows the installed capacity and power generation of different power projects in Orissa during the year 1998-99.

Table 11.2

**Installed Capacity and Power Generation of different Power Projects  
in Orissa during 1998-99**

( In MW )

Sl No	Power Projects	Installed capacity	State's share in Installed capacity (%)	State's share in installed capacity	State's share in power generation
1	2	3	4	5	6
<b>A. STATE SECTOR</b>					
<b>a) Hydro Power Projects.</b>					
i)	Hirakud	307.50	100.00	307.50	135.29
ii)	Balimela	360.00	100.00	360.00	88.88
iii)	Machhakunda	114.75	30.00	34.42	27.97
iv)	Rengali	250.00	100.00	250.00	101.57
v)	Upper Kolab	320.00	100.00	320.00	48.71
<b>Total a</b>		<b>1352.25</b>		<b>1271.92</b>	<b>402.42</b>
<b>b) Thermal Power Projects</b>					
	Ib I & II	420.00	100.00	420.00	286.45
<b>Total b</b>		<b>420.00</b>	<b>100.00</b>	<b>420.00</b>	<b>286.45</b>
<b>Total A ( a + b )</b>		<b>1772.25</b>		<b>1691.92</b>	<b>688.87</b>
<b>B. CENTRAL SECTOR</b>					
i)	Farakka	1100.00	20.69	227.59	44.69
ii)	Kahalgaoon	630.00	22.02	138.74	29.33
iii)	Kaniha	1000.00	30.95	309.50	77.72
iv)	Chukha	336.00	15.50	52.08	27.02
v)	TTPS - I & II	460.00	100.00	460.00	131.82
<b>Total B</b>		<b>3526.00</b>		<b>1187.91</b>	<b>401.92</b>
<b>Total (A + B)</b>		<b>5298.25</b>		<b>2879.83</b>	<b>1090.79</b>

Source : GRIDCO, Bhubaneswar.

11.07 Table 11.3 indicates the installed capacity of captive power plants owned by industrial units located in Orissa.

Table 11.3

## Major Industries having Captive Power Plants in Orissa during 1998-99

( in MW )

Sl. No.	Captive power plant	Installed capacity	Power supplied to GRIDCO
1	2	3	4
1.	NALCO, Angul	720.00	105.19
2.	ICCL, Choudwar	108.00	9.60
3.	RSP, Rourkela	245.00	0.18
4.	INDAL, Hirakud	67.50	0.97
<b>Total</b>		<b>1140.50</b>	<b>115.94</b>

Source : GRIDCO, Bhubaneswar.

11.08 The demand for power in the State has been increasing rapidly due to increasing industrialisation, urbanisation, and rural electrification. The estimated demand for power has increased from 917 MW during 1990-91 to 1234 MW during 1998-99, showing an increase of 34.57% over the period. Table 11.4 shows the demand and availability of power from different sources in Orissa from 1990-91 to 1998-99.

Table 11.4

## Year-wise Demand for and Availability of Power in Orissa over the Period from 1990-91 to 1998-99

( in MW )

Sl. No	Year	Demand (estimated)	Availability of power from different sources			Total
			State sector	Central sector	Purchase from captive plants of the State	
1	2	3	4	5	6	7
1	1990-91	917	672	3	105	780
2	1991-92	1200	720	37	78	835
3	1992-93	1139	633	116	108	857
4	1993-94	1209	618	173	145	936
5	1994-95	1121	654	136	207	997
6	1995-96	1114	734	235	145	1114
7	1996-97	1136	811	228	156	1195
8	1997-98	1162	635	467	60	1162
9	1998-99	1234	689	402	116	1207

Source : GRIDCO, Bhubaneswar.

11.09 An assessment made by the Central Electricity Authority (CEA) shows that the requirement of power in the State may go up to 2150 MW by the end of 2001-02. During the year 1998-99 the State sector projects and Central sector projects together generated only about 1091 MW of power for the State. In order to meet effectively the increasing demand, further addition to capacity would be necessary. Accordingly, capacity upgradation for generation of 840 MW has been planned which involves completion of the ongoing projects as well as implementation of new projects as shown in Table 11.5.

Table 11.5

## Additional Availability of Power by 2001-2002

( In MW )

Sl. No.	Power Project	Installed Capacity	Firm Power	Peak Capacity
1	2	3	4	5
<b>A. ON-GOING SCHEMES</b>				
i)	Upper Indrabati	600	225	450
ii)	Potteru	8	5	5
<b>Total - A</b>		<b>608</b>	<b>230</b>	<b>455</b>
<b>B. NEW SCHEMES</b> (Cleared for execution)				
i)	1b Thermal Unit-3 & 4 OPGC	420	251	290
ii)	1b Thermal Unit-6&5 AES	500	342.5	355
iii)	Balimela 7th & 8th Units	150	-	150
iv)	Samal Barrage	16	16	15
<b>Total - B</b>		<b>1086</b>	<b>609.5</b>	<b>810</b>
<b>Total addition by 2001-02 - ( A + B )</b>		<b>1694</b>	<b>839.5</b>	<b>1265</b>

Source : Annual Plan Document, 1997-98.

11.10 Table 11.6 presents year-wise expenditure in the power sector in Orissa since 1990-91. Substantial increase in investment over the years reflects the priority accorded to the power sector by the Government.

Table 11.6

**Year-wise Investment on Power and Renewable Energy in Orissa  
( 1990-91 to 1999-2000 )**

( Rs. in crore )

Sl. No.	Year	Expenditure on power	Total Annual Plan expenditure	Col.(2) as percentage of col.(3)
1	2	3	4	5
1	1990-91	241.8	1340.0	18.0
2	1991-92	252.3	1346.8	18.7
3	1992-93	246.8	1363.0	18.1
4	1993-94	236.7	1506.7	15.7
5	1994-95	297.6	1524.2	19.5
6	1995-96	135.5	1698.1	8.0
7	1996-97	343.1	2288.5	15.0
8	1997-98	154.2(A)	2277.1	6.8
9	1998-99	436.9(A)	3060.8	14.3
10	1999-2000	1035.4(O)	3309.2	31.3

A : Anticipated, O : Outlay.

Source : Budget in Brief, 1999-2000

11.11 The consumption of power in the State has increased steadily over the years except during 1996-97 when it decreased to 5418 million units (MU) from 7532 MU in the previous year. However, it increased to 5431 MU in 1998-99. The energy consumption in the domestic sector has increased from 112 MU during 1980-81 to 1713 MU during 1998-99. The total energy consumption of the industrial sector was 2521 MU during 1998-99 excluding power consumption by industries like NALCO, RSP, HPCL and IOCL etc. which used power from their captive power plants. The percentage of power consumption by different sectors over the years has been presented in Table 11.7.

**Table 11.7**  
**Year-wise Power Consumption by different Sectors in Orissa**  
**from 1990-91 to 1998-99**

Sl. No.	Year	Total consumption (in MU)	Consumption for different purposes								
			Dome- stic	Comm- ercial	Indus- tries	Public lighting	Irrigation and agri.	Rail ways	Public water works	Bulk supply	Others
1	2	3	4	5	6	7	8	9	10	11	12
1	1990-91	4901	825 (16.83)	181 (3.69)	2837 (57.89)	20 (0.41)	229 (4.67)	174 (3.55)	95 (1.93)	540 (11.03)	
2	1991-92	5662	889 (15.98)	202 (3.64)	3341 (60.07)	24 (0.43)	270 (4.85)	204 (3.68)	112 (2.01)	520 (9.34)	
3	1992-93	5431	1317 (24.25)	267 (4.91)	3006 (55.35)	27 (0.50)	305 (5.62)	159 (2.93)	110 (2.02)	240 (4.25)	
4	1993-94	6050	1533 (25.34)	343 (5.67)	3269 (54.03)	34 (0.56)	341 (5.64)	164 (2.71)	113 (1.87)	253 (4.18)	
5	1994-95	6471	2024 (31.28)	306 (4.72)	2940 (45.44)	36 (0.55)	426 (6.59)	167 (2.58)	153 (2.36)	255 (3.95)	164 (2.52)
6	1995-96	7532	2330 (30.94)	352 (4.67)	3333 (44.24)	41 (0.55)	491 (6.52)	182 (2.42)	176 (2.34)	247 (3.29)	380 (5.03)
7	1996-97	5418	1287 (23.76)	282 (5.22)	2863 (49.16)	27 (0.49)	150 (2.77)	173 (3.19)	100 (1.86)	202 (3.72)	534 (9.83)
8	1997-98	5571	1609 (28.88)	328 (5.89)	2829 (50.78)	32 (0.57)	201 (3.62)	180 (3.23)	95 (1.70)	297 (5.33)	-
9	1998-99	5431	1713 (31.54)	348 (6.40)	2521 (46.42)	36 (0.66)	258 (4.75)	166 (3.06)	97 (1.79)	292 (5.38)	-

*Figure in bracket indicate percentage to total consumption*

*Source : GRIDCO, Bhubaneswar.*

## ORISSA POWER GENERATION CORPORATION

11.12 Orissa Power Generation Corporation (OPGC) was incorporated in November 1984 with the objective to establish, operate and maintain coal based thermal power generating stations and tie-up sub-stations. OPGC was also entrusted with the construction of two units of Ib Thermal Project, each of 210 MW capacity. These units were commissioned in Decemeber 1994 and January 1996 at a total cost of Rs.1016 crore. A proposal for construction of Units III and IV (2 X 210 MW) under Phase II of the programme at an estimated cost of Rs.1631 crore, is under consideration. All statutory clearances have been obtained and the commissioning schedule has been worked out.

## ORISSA HYDRO POWER CORPORATION

11.13 Orissa Hydro Power Corporation (OHPC) has been in operation since April 1996. Under the Electricity Reforms Act, Government of Orissa has transferred the existing and ongoing hydropower projects to the control of OHPC. The Corporation is monitoring the execution and completion of two on going projects namely Upper Indravati Hydel Project (4 x 150 MW) and Poteru Small H. E. Project (2 X 3 MW). OHPC has also undertaken the renovation and modernisation of old hydel power stations of Hirakud and Chipilima. An outlay of Rs.132.15 crore has been proposed in the Annual Plan for 1999-2000.

## GRID CORPORATION OF ORISSA

11.14 Improvement of transmission and distribution network has been taken up by GRIDCO to minimise technical and commercial losses. A number of short-term and long-term measures have been contemplated. The short-term measures include augmenting distribution transformer capacity, installation of capacitors, balancing of loading arrangement, and installation of express feeders. The long-term measures include increasing the number of distribution systems and upgrading 33 KV system to 132 KV and 11 KV system to 33 KV. Adoption of a low tension loss distribution system through the use of small capacity single phase distribution transformers is an important activity to be taken up to improve voltage levels at the consumer level and to reduce both technical and non-technical losses substantially.

## DISTRIBUTION COMPANIES

11.15 The distribution functions of GRIDCO have been transferred to four distribution companies namely (i) Central Electricity Supply Company of Orissa Ltd. (CESCO), (ii) North-Eastern Electricity Supply Company of Orissa Ltd (NESCO), (iii) Western Electricity Supply Company of Orissa Ltd (WESCO) and (iv) Southern Electricity Supply Company of Orissa Ltd. (SOUTHCO). The area of operation of the four distribution companies extends to the districts listed against each



- |    |         |   |
|----|---------|---|
| 1. | CESCO   | Puri, Khurda, Nayagarh, Cuttack, Kendrapara, Jagatsinghpur Dhenkanal and Angul.                 |
| 2. | NESCO   | Jajpur, Bhadrak, Balasore, Mayurbhanj and Keonjhar.   |
| 3. | WESCO   | Sambalpur, Sundargarh, Baragarh, Jharsuguda, Bolangir, Sonepur, Kalahandi, Nuapada and Deogarh. |
| 4. | SOUTHCO | Ganjam, Gajapati, Boudh, Kandhamal, Nabarangpur, Koraput, Rayagada and Malkangiri.              |

### PRIVATE SECTOR POWER PROJECTS

11.16 It has been planned to add additional generating capacity by supporting two thermal power projects in the private sector: (i) AES Ib Valley Corporation Units V and VI (500 MW) and (ii) Kalinga Power Corporation Ltd. (KPCL) Units I and II at Duburi (500 MW). It is expected that one unit of each project will be commissioned by March 2002. Two mega projects, one by Consolidated Electric Power Asia (CEPA) at Hirma (4320 MW) and another by NTPC at Talcher (2000 MW) are also on the anvil. When implemented these two projects are likely to generate power during the Tenth Plan period, for supply to neighbouring states.

### RURAL ELECTRIFICATION

#### Village Electrification

11.17 Out of 46,989 inhabited villages in the State, 34,442 villages have been electrified by the end of 1998-99, representing a coverage of 73.30%. It is proposed to electrify 6000 villages by conventional methods and the remaining villages by non-conventional methods during the Ninth Plan period with an investment of about Rs.220 crore. During 1999-2000, it was planned to electrify 2,183 villages in the State. It is expected that once electrification is completed, private distribution companies will lend commercial viability to the rural electrification schemes through cross subsidisation to the extent permitted by the Orissa Electricity Regulatory Commission.

Table 11.8

Number of Villages Electrified in Orissa over the period from 1990-91 to 1998-99

Sl No	Year	Number of Villages Electrified		
		During the year	By the end of the year (Cumulative)	Percentage to total villages
1	2	3	4	5
1	1990-91	1,385	31,471	66.97
2	1991-92	1,011	32,482	69.12
3	1992-93	200	32,682	69.55
4	1993-94	221	32,903	70.02
5	1994-95	228	33,131	70.50
6	1995-96	-	32,088	68.41
7	1996-97	737	32,825	70.00
8	1997-98	800	33,625	71.56
9	1998-99	817	34,442	73.43
10	1999-2000(P)	2,183	36,625	78.08

P : Provisional

Source : GRID Corporation, Orissa, Bhubaneswar

### Tribal Village Electrification

11.18 There are 19,491 tribal villages in the State out of which 10,459 have been electrified by the end of 1998-99 representing a coverage of 53.66%. During the Ninth Plan, all the remaining tribal villages are proposed to be taken up for electrification

### Village Electrification under Special Component Plan (SCP) for Schedule Castes

11.19 There are 4,022 identified scheduled caste villages each having 200 or more SC population. Of these, 3,784 villages have been electrified by the end of 1998-99 representing 94.08% coverage. The remaining SC villages have been programmed to be electrified by the end of the Ninth Plan.

### Street Lights in Harijan Bastees

11.20 Electrification of Harijan bastees is done by providing street lights after getting loan assistance from the Rural Electrification Corporation (REC). By the end of March 1999, 11,679 street lights have been provided in Harijan villages/bastees. During the Ninth Plan, 2,000 Harijan bastees have been programmed for electrification by providing 4,000 street lights.

### Energisation of Lift Irrigation Points

11.21 By the end of 1998-99, 73,359 pump sets have been energised in the State. During the Ninth Plan period, the proposed target for pump sets energisation has been kept at 17,500.

**Table 11.9**

#### Progress of Rural Electrification and Energisation of Pump Sets in the State.

(In number)

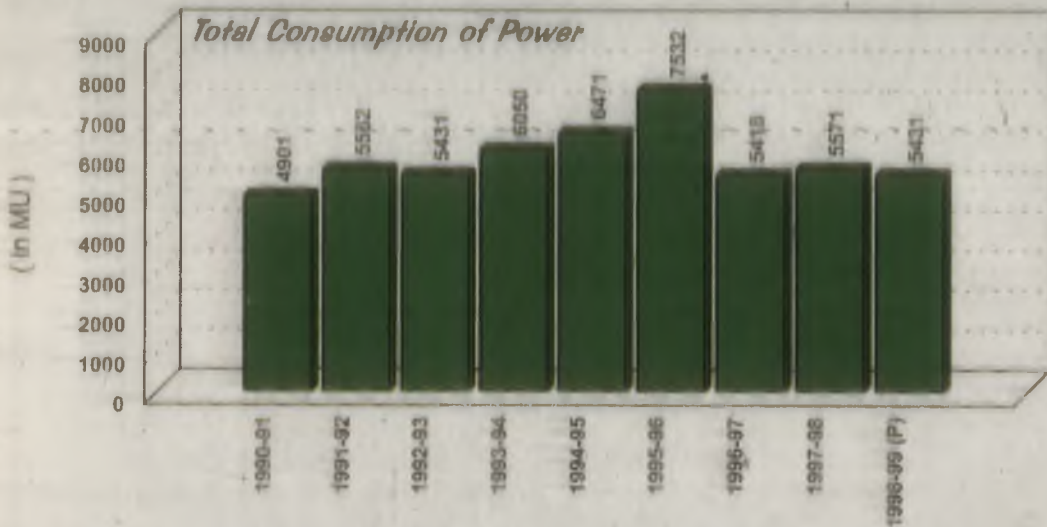
Sl. No.	Item	Total	Electrified by the end of			During 1999-2000 (Proposal)
			8th Plan	1997-98	1998-99	
1	2	3	4	5	6	7
1	inhabited villages	46,989	32,825 (69.86%)	33,625 (71.56%)	34,442 (73.30)	2,183
2	Tribal villages	19,491	10,120 (51.92%)	10,296 (52.82%)	10,459 (53.66)	480
3	SC villages	4,022	3,762 (93.54%)	3,784 (94.08%)	3,784 (94.08%)	20
4	Street lights in ST villages/bastees	-	30,380	30,380	30,380	-
5	Street lights in SC villages/bastees.	55,400	NA	11,575	11,679	200
6	Pump sets energised.	-	70,113	72,047	73,359	2,000

Source : GRIDCO, Bhubaneswar.



## TOTAL AND SECTORAL CONSUMPTION OF POWER IN ORISSA

(From 1980-81 to 1997-98)

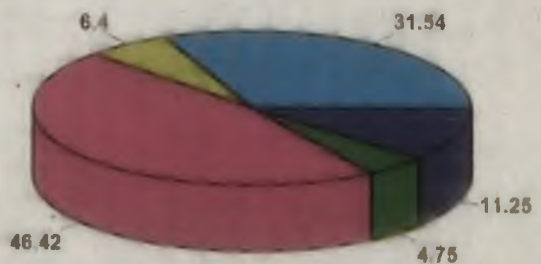


## SECTORAL CONSUMPTION OF POWER

( In Percentage )



1990-91



1998-99 (P)

■ Domestic  
 ■ Commercial  
 ■ Industrial  
 ■ Irrigation & Agriculture  
 ■ Others

# CHAPTER 12

## TRANSPORT AND COMMUNICATION

12.01 A well developed network of transport and communication is a basic infrastructural prerequisite for rapid economic development. Adequacy of infrastructure in the transport and communication sector is crucial for attracting investment. The ongoing economic reforms, therefore, attach high priority to development of transport and communication infrastructure. The Industrial Policy, 1996 accords special priority to infrastructural development which in turn would facilitate flow of funds for large investments in the industrial sector. Development of transportation infrastructure is also essential for marketing of agricultural products and helps the farmers to get a fair price.

### ROADS

12.02 In the absence of adequate internal rail linkages, roads are the major means of transportation in the State. The total road length in the State was 2,22,303 km as on 31.03.99 of which 23.33% are surfaced roads. The surfaced road length per 1000 sq. km of area comes to 333 km as compared to the all India average of 363 km. The roads of different categories in the State include 2,484 km of National Highways, 67 km. of Express Highways, 3,977 km of State Highways, 4,463 km of Major District Roads (MDR), 4,767 km of Other District Roads (ODR), 4,670 km of Classified Village Roads (CVR), 24,552 km of Village Roads, 10,178 km of Panchayat Samiti Roads, 1,39,973 km of GP Roads, 7,030 km of Forest Roads, 13,777 km of Municipal Roads, 6,277 km. of Irrigation Roads and 88 km of GRIDCO Roads.

12.03 All-weather connectivity to every village is necessary for improving the quality of life and economic conditions in rural areas. At the end of 1991-92, 5 sub-divisional headquarters and 9 block headquarters were lacking all weather connectivity to the respective district and sub-divisional headquarters. Out of these, three sub-divisional headquarters and five block headquarters had been connected to the district and sub-divisional headquarters respectively by the end of 1996-97. Construction of bridges to connect the remaining 2 sub-divisions and 4 blocks is under progress. Rural connectivity has been identified as one of the basic minimum services for development of agriculture and the rural economy and the State Government have accorded high priority to this sector. During 1998-99, an amount of Rs.56.03 crore including Rs.16.03 crore as assistance from

the National Bank for Agriculture and Rural Development (NABARD) was provided to the Rural Development Department under State Plan. In addition, a provision of Rs.57.05 crore was made under the non-Plan sector. During the year 1998-99, 95 bridges, 350 km of black-topped roads, 380 km of metalled roads, 320 km of morum roads were constructed and all weather connectivity to 198 villages was provided along with generation of 74 lakh mandays of employment. Out of 46,989 inhabited villages in the State, all weather connectivity to 19,128 villages (40.71%) has been provided by the end of 1998-99. Provision of funds to the tune of Rs.65.52 crore under State Plan and Rs.90.29 crore under the non-Plan sector has been made for the year 1999-2000 and it has been targeted to complete sixty ongoing bridges, 200 km of black-topped roads, 200 km of metalled roads, 250 km of morum roads, and 250 culverts and to provide all weather connectivity to villages not connected with their GP Headquarters.

12.04 The Works Department of Government of Orissa is in charge of construction, improvement and maintenance of State Highways, Major District Roads and Other District Roads. It also maintains 2,484 km of National Highways and 67 km of Express Highways on behalf of Government of India. During the Eighth Plan an amount of Rs.421.48 crore was spent under the Road Development Programme. Works in respect of 152 bridges, 726 km of metalling, 1169 km of black topping, and 306 km of widening and strengthening of roads were completed during the period from 1992-93 to 1996-97. During 1997-98, a sum of Rs.88.10 crore was provided and 28 on-going bridges, black-topping of 130 km, metalling of 130 km, and widening and strengthening of 17 km of roads were completed. During 1998-99, 27 ongoing bridges and improvement of 55 km of roads have been completed with an expenditure of Rs.79.22 crore. In the Annual Plan 1999-2000, an outlay of Rs.195.62 crore has been proposed for road development.

12.05 Under a Centrally Sponsored Plan scheme, construction of three major bridges over the rivers Safai (on Sambalpur-Rourkella road), Madhavi (on Seragada-Medinipur road), and Mahanadi (on Sambalpur-Sonepur road) has been taken up and the projects are under progress. Reconstruction of 6 bridges in Ganjam district (damaged during 1990 floods) was taken up during 1994-95 with World Bank assistance with a project cost of Rs.48.90 crore. All the bridges have been completed in 1998-99 incurring total expenditure of Rs.37.78 crore. Government of India has recently approved construction of bridges over the rivers Luna near Delanga, Budhabalanga near Ballghat, Badagenguti near Salipur, and Mahanadi near Klakata. The total estimated cost of the three projects is Rs.38.65 crore.

12.06 The State Government propose to implement Bhubaneswar Integrated Road Net-work Project (BIRNEP) on Build -Operate-Transfer (BOT) basis with an estimated cost of Rs.170 crore to remove congestion on NH 5 in the vicinity of Bhubaneswar. The project will also provide improved road communication between the State capital and north-western districts of the State. Three roads will be constructed/upgraded under the project. An MOU between Works Department, Industrial Development Corporation of Orissa and Infrastructural Leasing Financial Services Ltd., Mumbai has been signed. The project cost is proposed to be mobilised from different funding agencies.

### NATIONAL HIGHWAYS

12.07 The State had seven National Highways covering 1682 km by the end of 1997-98 which constituted 4.80% of the total NH network of the country and 0.75% of the total road length of the State. After declaration of three more roads, i.e. Chandikhol-Kanaktorra, Borlugguma-Bargarh and Bhubaneswar-Puri, as National Highways during 1998-99, the total number of National Highways in the State has increased to ten covering a length of 2484 km. The Road Development Plan for India envisages that the total length of National Highways in the State of Orissa will be 3,114 km by the year 2001. Accordingly a proposal for declaring Gopalpur-Raipur (438 km), Panikoili-Rajamunda 267 km), Khurda-Bolangir (315 km), Kendrapara-Chandaball (48 km) and Cuttack-Paradeep (82 km) sections of State Highways as National Highways was submitted to the Ministry of Surface Transport (MOST), Government of India, during June 1998. The proposal is under consideration.

12.08 Widening (four laning) of Bhubaneswar-Cuttack-Jagatpur (28 km) section of N.H.-5 has been taken up with World Bank assistance at an estimated cost of Rs.218.41 crore. The work is expected to be completed by the end of 2000. A loan agreement has been signed with Overseas Economic Co-operation Fund, Japan for completion of four laning work of Jagatpur-Chandikhol (33 km) section of N.H.-5 at a cost of Rs.173.70 crore. The Ministry of Surface Transport have sanctioned the project and the work has been entrusted to National Highways Authority of India for execution. Efforts are also being made to invite investment from financial institutions to improve the road net-work on Build-Operate-Transfer (BOT) basis. Information about funds released by Government of India during last six years for N.H. development in the State has been presented in Table 12.1.

Table 12.1

**Amount Released by Government of India for Development of NH in Orissa**

(Rs In lakh)

Year	Requirement of funds furnished to M.O.S.T.*	Allotment released by M.O.S.T.
1	2	3
1992-93	3803.14	1375.00
1993-94	6378.41	1350.00
1994-95	5347.57	1278.55
1995-96	5494.49	1698.00
1996-97	5745.77	1982.20
1997-98	4190.99	2825.20
1998-99 (P)	5141.42	4226.82

*P : Provisional**\* M.O.S.T. : Ministry of Surface Transport**Source : Chief Engineer, National Highways, Bhubaneswar.***ROAD TRANSPORT**

12.09 The availability of motorised transport in Orissa is lower than the all India average. In 1993-94, Orissa had only 3.5 vehicles per square km and 16.4 vehicles per thousand population as against the all India averages of 8.3 and 30.5 respectively. In regard to availability of motor vehicles per thousand population, Punjab occupied the first position with 78.0 followed by Gujrat (63.4), Haryana (48.3), Maharashtra (39.7), Karnataka (38.4), Tamil Nadu (37.2), Rajasthan (30.5), Kerala (29.3), Madhya Pradesh (27.1) and Andhra Pradesh (23.1). The number of motor vehicles on road of all categories in the State increased from 625,747 in 1997-98 to 694,425 in 1998-99 registering a growth of 10.97%. The number of vehicles per square km and per thousand of population increased to 4.5 and 19.5 respectively during 1998-99 from 3.5 and 16.4 respectively during 1993-94. Orissa State Road Transport Corporation and private bus services are catering to the travelling needs of the public with 4229 buses in the State. The number of buses available per lakh population which was 9 in 1992-93 has increased to 12 during 1998-99. The number of goods vehicles per lakh of population was 163 in 1998-99 as compared to 152 in 1997-98. Table 12.2 presents the percentage variation of different types of motor vehicles on road in Orissa during 1997-98 and 1998-99.



**Table 12.2**  
**Motor Vehicles on Road In Orissa**

Sl No.	Type of Vehicles	Number as on		Percentage increase
		31.3.98	31.3.99 (P)	
1	2	3	4	5
1	Goods vehicle	44,736	48,064	7.40
2	Public/private buses	4,226	4,229	0.07
3	Motor car/jeep/taxi	34,800	39,930	14.74
4	Auto rickshaw	3,969	4,820	21.44
5	Motor cycle/scooter	5,20,908	5,78,301	11.02
6	Tractor	8,836	9,935	12.44
7	Others	8,272	9,146	10.57
	<b>Total</b>	<b>6,25,747</b>	<b>6,94,425</b>	<b>10.97</b>

*P : Provisional*

*Source State Transport Authority, Orissa, Cuttack*

12.10 Collection of motor vehicle revenue went up substantially because of introduction of one time tax on two wheelers with effect from 1.6.1989 and its extension to private cars/jeeps etc. from 1.12.1990. During 1998-99, a sum of Rs.143.21 crore (including Rs.39.14 crore at Inter-state border check gates) was collected towards motor vehicle revenue as against the target of Rs.175.00 crore. The collection of motor vehicle revenue for 1997-98 was Rs.141.96 crore. Upto January 1999, 55,587 offences were detected under the Motor Vehicles Act by the enforcement wing and an amount of Rs.7.47 crore was collected towards fine. In order to encourage private operators to run town bus services in cities like Cuttack, Bhubaneswar, Berhampur, Sambalpur and Rourkela, Government have exempted 25% of motor vehicle tax and additional motor vehicle tax in respect of carriages operating as town buses which are not more than five years old.

### **AUTOMOBILE EMISSION**

12.11 Automobile emission is a hazard for the environment of major towns in the State such as Cuttack, Bhubaneswar, Sambalpur, Rourkela and Berhampur. The State Government have made the Issue of Pollution Under Control (PUC) certificate obligatory for all categories of vehicles since 1997. By the end of 1998-99, 35 Pollution Testing Centres in different parts of the State have been set up to check auto emission levels and to issue PUC certificates to different categories of vehicles. Other preventive measures like use of gas analysers and catalytic converters and use of unleaded petrol in two and four wheelers have been initiated by the State Government to minimize the hazards of vehicular pollution.

## ROAD ACCIDENTS

12.12 Table 12.3 shows that number of road accidents in the State and of deaths caused by road accidents are rising. During 1998, there were 6741 road accidents in the State with 1882 reported deaths. Further 3419 persons sustained grievous injuries and 5897 minor injuries.

**Table 12.3**  
**Number of Road Accidents and Deaths in Orissa**  
**( 1994 – 1998 )**

Sl. No	Year	No. of accidents	No. of deaths reported
1	2	3	4
1	1994	5852	1407
2	1995	6228	1621
3	1996	6360	1712
4	1997	6378	1671
5	1998	6741	1882

*Source : State Transport Authority, Orissa, Cuttack*

## ORISSA STATE ROAD TRANSPORT CORPORATION (OSRTC)

12.13 Orissa State Road Transport Corporation has been providing transport services and amenities to passengers, travel concession to certain categories of passengers and has been operating/regulating inter-State routes with reciprocal arrangement with other States since its inception in 1974. OSRTC acquired the Orissa Road Transport (ORT) Company Ltd. with effect from August 1990. The total capital investment of the Corporation as on 31.3.99 was Rs.129 43 crore. The Corporation has been incurring losses over the years owing to reasons like fare structure, need to operate on uneconomic routes, over staffing etc. During 1998-99 the total fleet strength of the Corporation was 748 with 305 buses plying on 48 nationalised routes in the State. The Corporation carried 173.85 lakh passengers during the year. Table 12.4 shows that although the capital investment has increased by 35.54% in 1998-99 over 1993-94, the fleet strength, number of buses on road

and passengers carried during the corresponding period have decreased by 21.59%, 57.93% and 58.19% respectively. In order to revamp OSRTC and to meet the growing need of the travelling public, Government have decided to make 100 'off-road' buses of OSRTC road-worthy after major repairs. During 1998-99, a sum of Rs 30.00 lakh has been provided to OSRTC for the purpose. Steps are being taken to purchase 100 new buses for the Corporation. A Voluntary Retirement Scheme (VRS) has been introduced to downsize the Corporation and a private agency ticketing system has been introduced to enhance the earnings of the Corporation. During 1998-99, Government have provided Rs 3.30 lakh to OSRTC as share capital. An amount of Rs 5.64 crore has been sanctioned in 1998-99 as ways and means advance for payment of arrear dues of the employees of the Corporation.

**Table 12.4**  
**Activities of Orissa State Road Transport Corporation**

Sl No	Year	Fleet strength	No. of buses on road	Cumulative investment (Rs In lakh)	Employment/ staff strength	Number of passenger carried (in lakh)
1	2	3	4	5	6	7
1	1993-94	954	725	9549.24	6628	415.82
2	1994-95	834	589	11192.71	6467	348.39
3	1995-96	836	493	11587.71	6221	224.86
4	1996-97	799	395	11982.71	5906	190.19
5	1997-98	753	324	12582.71	5583	148.94
6	1998-99 (P)	748	305	12942.71	4922	173.85

*P : Provisional*

*Source : Orissa State Road Transport Corporation, Bhubaneswar*

## RAIL TRANSPORT

12.14 Orissa has so far remained backward in the field of development of railways. The existing railway lines pass through the fringes of the State leaving the central areas untouched. This inadequacy is one of the factors which has had an adverse impact on the pace of infrastructural and industrial development in the State. The State had 2,317 km of railway route (broad gauge 2,173 km and narrow gauge 144 km) as on 31.03.99. This represents only 3.5% of the total railway network of the country. The railway route length in the State per thousand sq. km of area comes to 14.9 km as against the all India average of 19.0 km and occupies the 13th position among all the States in the Country. West Bengal occupied the highest position with a railway route length of 43.1 km per 1000 square km

followed by Punjab (42.1 km), Hayrana 33.9 km, Tamilnadu (30.9 km), Bihar (30.4 km), Uttar Pradesh (30.4 km), Assam (29.9 km), Kerala (27.1 km), Gujarat (27.1 km), Andhra Pradesh (18.4 km), Maharashtra (17.7 km), Rajasthan (17.0 km) and Karnataka (16.3 km). Out of a total of 2317 km of railway track in the State, a length of 329 km has been electrified accounting for 14.2% of the total route length. This is much below the all India average of 22.3%.

12.15 The State Government have been pursuing proposals relating to the expansion of the railway network in the State through the Rail Coordination Directorate which is functioning under the administrative control of the Transport Department. The Directorate also functions as a liaisoning agency between the State Government and Railway authorities for development of rail communication and movement of freight and essential commodities. Of the six railway divisions of South Eastern Railways, two are located in Orissa with headquarters at Khurda Road and Sambalpur and a new railway zone namely East Coast Zone has been functioning at Bhubaneswar since 1996. In order to oversee the ongoing railway projects in the State, the office of Chief Administrative Officer, South Eastern Railways has been shifted from Calcutta to Bhubaneswar and offices of Senior Project Manager(Construction) have been opened at Bhubaneswar, Cuttack, Angul, Sambalpur, Keonjhar and Bhawanipatna to monitor the ongoing projects. Besides, a diesel locoshed at Angul, Box-N repair depot at Paradeep and wagon repair depot at Khurda Road have been set up in the State. A Railway Claims Tribunal is also functioning at Bhubaneswar. Other railway facilities in the State include induction of superfast train services (DMUs) and computerisation of reservations.

12.16 The important railway projects currently under way in the State are listed below.

- i. Talcher- Sambalpur (174 km) rail link sanctioned in 1984-85 with an estimated cost of Rs.410 crore was completed and opened to traffic in 1998-99. A daily passenger train service from Puri to Sambalpur and an express train service from Bhubaneswar to Rourkela have been introduced through this route.
- ii. Lanjigarh Road- Junagarh (54 km) project was sanctioned in 1992-93. Nearly 80% of land acquisition work has been completed and land has been handed over to railway authorities.

- iii. Khurda Road – Bolangir (289 km) railway project was sanctioned in 1994-95 with an estimated cost of Rs.353 crore. Land acquisition work for the project is under progress
- iv. Daitari – Banspani (155 km) rail link has been taken up at an estimated cost of Rs.320 crore. Construction work is in progress
- v. Haridaspur- Paradeep (78 km) railway project was sanctioned in 1996-97 with an estimated cost of Rs.341 crore. This will connect the three coastal districts of Jajpur, Kendrapara and Jagatsinghpur. Land acquisition work for the project is under progress
- vi. Cuttack-Paradeep (74 km) double-lining project has been sanctioned in three phases. Land acquisition for the first phase from Raghunathpur to Rahama (28 km) has been completed. Land acquisition for the second phase from Rahama to Paradeep (23 km) is in progress.
- vii. Conversion of Rupsa-Bangiriposi (89 km) narrow gauge line to broad gauge is in progress.
- viii. Conversion of Nuapada-Gunupur (90 km) narrow gauge line to broad gauge has been sanctioned.
- ix. Electrification of railway track from Kharagpur to Visakhapatnam was sanctioned in 1995-96. The project is to be taken up in two phases. In the first phase electrification work from Kharagpur to Bhubaneswar has been taken up. The second phase will cover electrification of Bhubaneswar- Visakhapatnam track.

## PORTS

12.17 Among the 11 major ports of the country, Paradeep is the only port located in the State. Mainly minerals and metallurgical products are exported through this port. During 1998-99, 86.00 lakh MT of goods were exported and 45.07 lakh MT of goods were imported through the port as against export of 88.14 lakh MT and import of 44.88 lakh MT during 1997-98. There has been a marginal decline in export over the previous year. An amount of Rs.813.95 crore was invested and 4,477 persons were employed in the port during 1998-99. The port has earned Rs.59.37 crore as operating surplus in 1998-99 as

compared to Rs 73 41 crore in the previous year. The export, import, investment and employment position of Paradeep port from 1990-91 to 1998-99 has been presented in Table 12.5.

Table 12.5

**Export and Import through Paradeep Port with Investment and Employment**

Sl No	Year	Export (lakh MT)	Import (lakh MT)	Investment (Rs. In crore)	Persons Employed
1	2	3	4	5	6
1	1990-91	40.45	28.38	8.45	4,843
2	1991-92	44.17	28.56	33.08	4,858
3	1992-93	51.78	22.34	28.35	4,889
4	1993-94	57.46	22.42	85.47	4,478
5	1994-95	66.30	32.73	276.16	5,047
6	1995-96	70.59	41.96	551.00	4,391
7	1996-97	77.21	38.47	652.82	4,541
8	1997-98	88.14	44.88	612.96	4,492
9	1998-99 (P)	86.00	45.07	813.95	4,477

*P. Provisional*

*Source : Paradeep Port Trust, Paradeep*

12.18 The State Government have developed a fair weather port at Gopalpur with an investment of Rs.35.95 crore which has been opened to traffic from 1987. Mainly, illmenite, fertiliser and wheat move through the port. The total traffic handled by the port during 1998-99 was of the order of 1,19,570 MT as against 2,01,129 MT during 1997-98. Considering the requirement of port based steel Plants (TISCO and L&T) and other industries which are coming up near the Gopalpur port, the State Government have decided to develop it into an all weather port through private investment. In the mean time, 90% of the construction work of the deep water berth at Gopalpur port and construction of storage facilities near the railway siding of Indian Rare Earth Ltd. have been completed. The State Government have also decided to develop a mega port at Dhamara in Bhadrak district through private investment. An MOU has been entered into with M/s International Sea Ports Ltd. of Singapore on 31.03.97. Keeping in view the overall economic development of the State, development of the other nine minor ports along the coastline in a phased manner is also being planned. During 1998-99, a sum of Rs. 754.56 lakh was provided under State Plan for development of Gopalpur and other minor ports as against Rs.656.84 lakh provided during 1997-98. A sum of Rs.547.14 lakh was proposed to be provided during 1999-2000.

**INLAND WATER TRANSPORT**

12.19 The State Government is providing inland water transport services through motorised launches in different inaccessible areas. Ministry of Surface Transport, Government of India extends support and assistance for improvement of inland waterways, navigation control etc.

12.20 The Directorate of Inland Water Transport, Orissa is the nodal agency for the operation of motor launch services. At present, 20 mechanised launches and 2 country boats are running on 8 different water routes namely Chandabali to Aradi, Rajanagar and Talchuan, Balugaon to Krishnaprasad, Kalijai, Nuapada and Satapada, and Nuagarh to Sribantapur. The Directorate of Inland Water Transport (DIWT) is also entrusted with the work of registration of inland vessels, investigation of new water routes for navigation and imparting crew training to fresh in-service personnel at the Crew Training Institute, Chandabali. During 1998-99, it has invested Rs.30.41 lakh and provided carriage to 245307 passengers with a revenue collection of Rs.15.89 lakh as against investment of Rs.30.41 lakh, carriage of 243667 passengers and revenue collection of Rs.17.49 lakh during 1997-98. A provision of Rs.65.85 lakh was available during 1998-99 to execute different developmental works.

**CIVIL AVIATION**

12.21 The Directorate of Civil Aviation looks after the use and maintenance of the State's passenger aircrafts and trainer aircrafts, training of student pilots and construction and development of air strips in the State. At present there are 17 airstrips and 17 helipads in the State for landing of State Government aircrafts and helicopters and efforts are being made for black topping all the air strips to make them fit for all weather operation. During 1999-2000, a sum of Rs.16.00 lakh was proposed to be provided for extension of the existing run-way of Jeypore airstrip and Rs.2.61 lakh for the improvement of Rangeilunda airstrip.

12.22 In view of its geographical, tourist and commercial importance, Government of India in the Ministry of Civil Aviation have taken up expansion and modernization of Bhubaneswar Airport. The project includes construction of a sophisticated

terminal house, extension of run-way up to 2743.2 mtrs. for accommodation of large jet aircrafts, a new apron, establishment of a new fire service centre, installation of an instrument landing system, and development of ground security system. The State Government have provided 68.3 acre of land free of cost and the development work of the airport is in progress. Direct flights from Bhubaneswar to cities like Delhi, Calcutta, Chennai, Hyderabad and Mumbai are available.

12.23 Consequent upon declaration of Bhubaneswar Airport as Customs Airport, an air cargo complex started functioning at the airport in August 1995 under the Air Customs Division, Bhubaneswar to facilitate export and import by air. Commodities like handicrafts, applique items, and mineral samples are exported through air. Similarly hospital equipment, scientific equipment, machinery and spares etc. are imported.

### **POSTAL AND TELECOM SERVICES**

12.24 There were 8,120 post offices in the State in 1998-99 out of which 7,519 post offices were located in rural areas and the remaining 601 in urban areas. The number of post offices per 100 sq km in Orissa is 5.2 as against the all India average of 4.7. The average number of post offices available in the State per 10,000 population comes to 2.6. On an average in urban areas one post office in Orissa serves a population of 7,046 and an area of 4.07 sq km and in rural areas a population of 3,647 and an area of 20.38 sq km. There are 68 speed post centres in the State. Other premium services such as Express Parcel Post, Mass Mailing Service, Corporate Money Order Service and Satellite Mail Service are also available in the State.

12.25 The telecommunication service network has undergone a major expansion in the State in the nineties. In 1994-95, there were 656 telephone exchanges, 26 Departmental Telegraph Offices and 1,15,520 telephone connections in operation, while the number of telephone connections per 1000 persons was 3.5 as against the all India average of 9.0. By 1998-99, the number of telephone exchanges, telegraph offices and telephone connections in the State increased to 794, 30 and 3,34,273 respectively. All the telephone exchanges are electronic. The Subscriber Trunk Dialing (STD) service is now available at 766 stations spread over all the 30 districts. A 1000 line internet node is available at Bhubaneswar which caters to the internet subscribers of Orissa on local call basis. The following box shows the profile of postal and telecom services in Orissa as on 31.03.99.



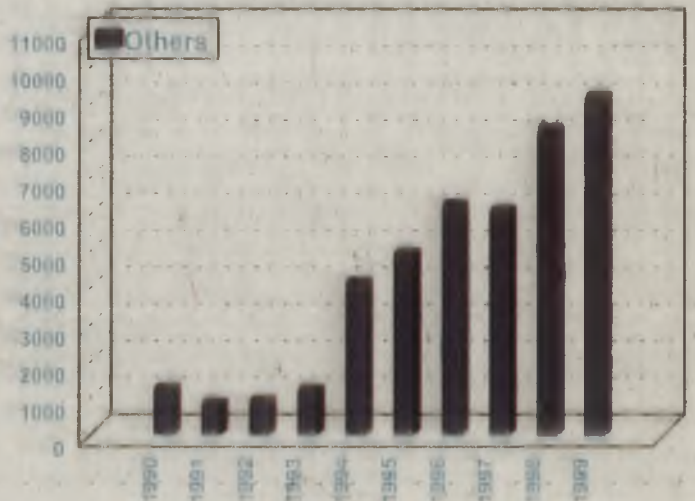
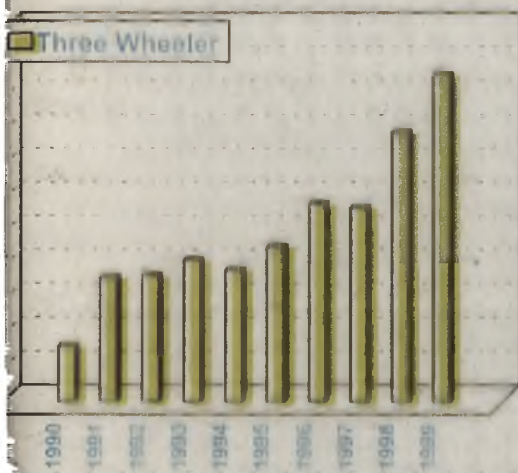
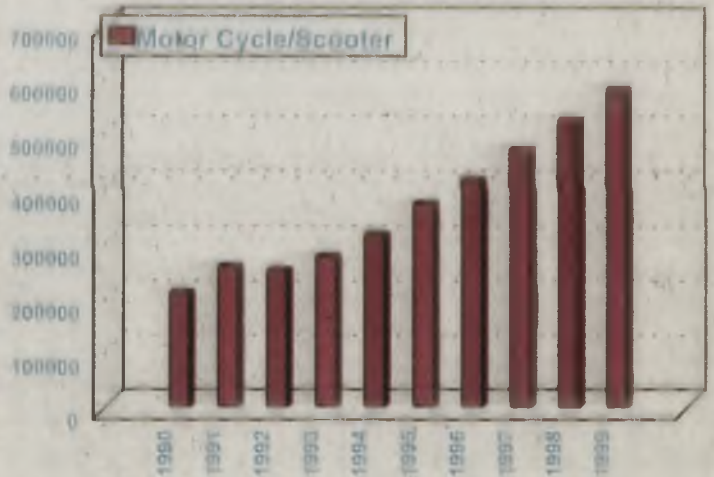
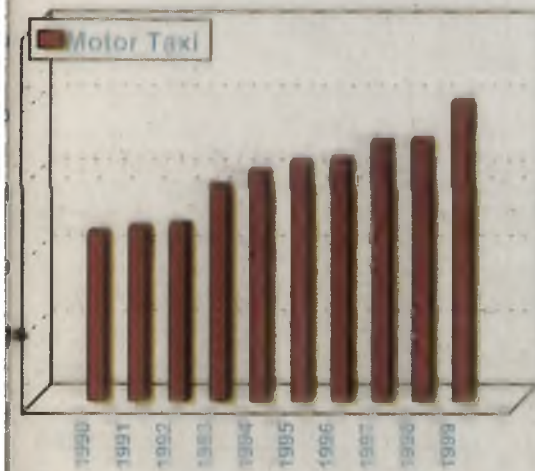
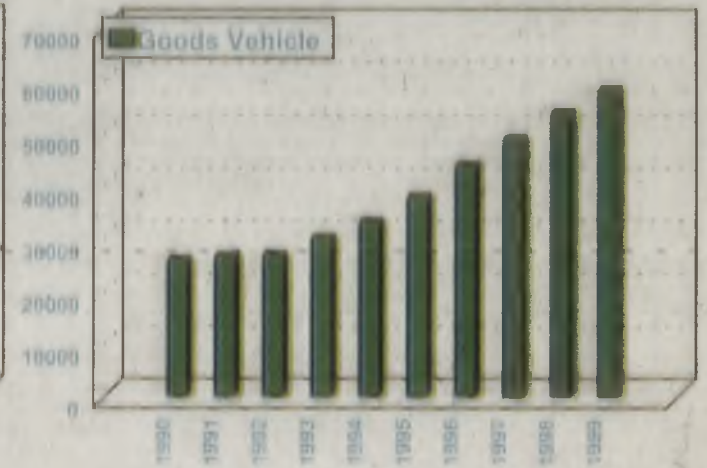
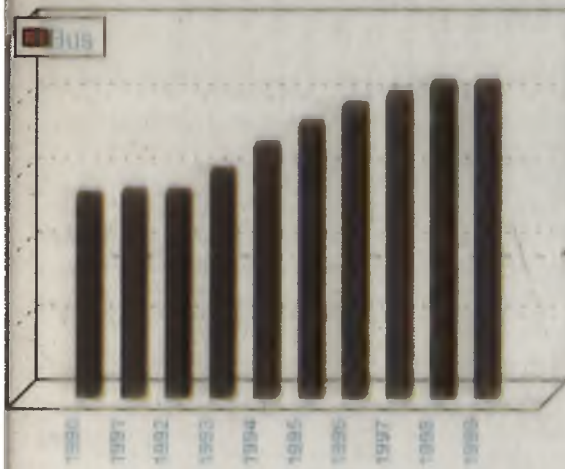
<p><b>1. Number of Post Offices :</b></p> <p>Rural : 7519</p> <p>Urban : 601</p> <p>Total : 8120</p> <p>Number per 100 sq. km : 5.2</p> <p>Number per lakh population : 26</p>	<p><b>6. Total Number of STD Stations : 766</b></p> <p><b>7. Public Telephones :</b></p> <p>Urban STD : 4224</p> <p>Local PTS : 8542</p> <p><b>8. Electronic Telex Exchanges :</b></p> <p>Total number : 7</p> <p>Number of operating connections : 297</p>
<p><b>2. Premium Postal Services Available</b></p> <p>Speed Post, Express Parcel Post, Mass Mailing Service, Corporate Money Order Service and Satellite Mail Service</p>	<p><b>9. Transmission Systems</b></p> <p>Co-axial, OFC, Microwave, Satellite Earth Station, UHF, Interstice, MCPC, VSAT, PCM</p>
<p><b>3. Number of Telephone Exchanges :</b></p> <p>Electronic : 794</p> <p>Manual : Nil</p>	<p><b>10. Telegraph facilities :</b></p> <p>No. of DTOs/CTOs/TOs : 30</p> <p>No. of Telecom Centres : 6</p> <p>No. of Combined Offices : 3555</p> <p>No. of FAX Services : 29</p> <p>No. of Telex PCOs : 8</p> <p>No. of Internet PCOs : 5</p>
<p><b>4. Number of Telephone Connections</b></p> <p>Total direct exchange lines 3,34,273</p> <p>Number per 1000 population : 10.2</p> <p><b>5. Number of villages covered with telephones</b></p> <p>Total number of villages covered : 20826</p> <p>Percentage of villages covered : 44</p>	

*Source : Office of the Chief Post Master General Orissa and the Chief General Manager Telecom, Orissa.*



# NUMBER OF MOTOR VEHICLES ON ROAD IN ORISSA

( March 1990 - March 1999 )



## **CHAPTER 13**

### **FINANCIAL INSTITUTIONS**

13.01 The role of a well developed financial infrastructure in stimulating and sustaining economic growth is well recognised. A network of financial institutions helps the economy to deploy its savings more efficiently. Banking Institutions, Non-Banking Financial Companies, All India Financial Institutions and the Bhubaneswar Stock Exchange have been dealt with in separate sections below.

#### **BANKING INSTITUTIONS**

##### **SCHEDULED COMMERCIAL BANKS**

13.02 There are 25 Commercial Banks with 1371 branches and 9 Regional Rural Banks (RRBs) with 838 branches in the State. Table 13.1 shows that the number of bank branches increased from 2170 in 1997-98 to 2209 during 1998-99. There is one branch for around 16.2 thousand persons. While the aggregate deposits have increased by 288% between 1990-91 to 1998-99, the gross bank credit has increased by only 105%. The credit deposit ratio has steadily declined from 80.59 in 1990-91 to 42.51 in 1998-99 and was well below the all India average of 55.49 in 1998-99. In 1998-99, the States with a better credit deposit ratio than Orissa included Tamil Nadu (92.97), Maharashtra (72.82), Andhra Pradesh (68.48), Karnataka (64.53), Gujarat (48.92), Madhya Pradesh (48.40), Rajasthan (45.10), and West Bengal (43.82). The decline in credit deposit ratio is a cause for concern. Steps need to be undertaken to improve the volume of advances.

**Table 13.1**  
**Performance of Scheduled Commercial Banks in Orissa**

Sl No	Year	No. of branches	Aggregate deposit (Rs. In crore)	Gross bank credits (Rs. In crore)	Credit deposit ratio	Population per branch (In thousand)
1	2	3	4	5	6	7
1	1990-91	2084	2637.85	2125.74	80.59	15.2
2	1991-92	2105	3020.20	2173.72	71.97	15.3
3	1992-93	2129	3575.07	2325.92	65.06	15.4
4	1993-94	2147	4438.01	2462.15	55.48	15.5
5	1994-95	2150	5077.04	2822.17	55.59	15.7
6	1995-96	2154	6005.96	3291.82	54.81	15.9
7	1996-97	2160	7152.72	3504.49	48.99	16.1
8	1997-98	2170	8817.54	3984.40	45.19	16.2
9	1998-99	2209	10239.54	4352.59	42.51	16.2

*Source: Banking Statistics, Quarterly Handout,  
Reserve Bank of India, March 1999.*

### CO-OPERATIVE BANKS

13.03 Orissa has a three tier co-operative credit structure in the rural areas for extending short and medium term loans with Orissa State Co-operative Bank (OSCB) at the apex level, Central Co-operative Banks (CCB) at the district level and Primary Agricultural Co-operative Societies (PACS) at the base level. There are 2561 PACS including 219 Largesize Agricultural and Multi Purpose Societies (LAMPS), and 6 Farmers' Service Societies (FSSs) extending short and medium term agricultural loans to cultivators. To provide long term loans, there is a two tier structure in the State with Orissa State Co-operative Agricultural Rural Development Bank (OSCARD) at the apex level and Co-operative Agricultural Rural Development (CARD) Banks at the base level. At present there are 57 CARD Banks functioning mostly at the sub-divisional level to advance long term agricultural credit for purposes like land shaping, purchase of tractors, power tillers, pump sets etc. In the urban areas, Urban Co-operative Banks, Employees Credit Co-operative Societies etc. are functioning which provide loans to traders, and salary and wage earners. Details of co-operative societies, their membership, working capital, and loans advanced during 1997-98 have been indicated in Annexure 13.1

### ANNUAL CREDIT PLAN (ACP)

13.04 Banks extend loan facilities to priority sectors in accordance with the Annual Credit Plan formulated for each district by the District Level Co-ordination Committee (DLCC) for the district. Sector-wise target and achievement for all banks in

Orissa in priority sectors under the Annual Credit Plan for 1998-99 is presented in Table 13.2. During 1998-99, against the target of Rs.1330.86 crore, loan assistance of Rs 1392.58 crore was provided by banks under agriculture, industry and services sectors. The achievement comes to 104.63% of the target fixed. Out of the total investment of Rs 1392.58 crore, agriculture sector received the lion's share of 44.81% , followed by services sector (42.73%), and industry sector (12.46%). The achievement for agriculture, industry and services sectors was 92.12%, 83.91% and 133.21% respectively against the respective targets fixed in the Credit Plan. The achievement for term loans under the agricultural sector was particularly low at 43.68%. The reasons attributed by the banks for the short fall of targets under agriculture and industry sectors are : insufficient number of viable proposals, poor recovery of bank loans, inadequate infrastructural support, low credit absorption capacity, and inadequate manpower in the banks. The loan assistance provided by the banks during 1998-99 increased by 30.30% in comparison to 1997-98.

13.05 In order to improve credit flow, particularly for agriculture and allied activities, a State level credit seminar was held on 11.5.99. Further deliberations were held after the seminar. The following suggestions emerged for improving credit flow in the State : (i) Rural infrastructure needs to be strengthened, (ii) Financial health of credit institutions needs to be improved, (iii) Regional disparities in disbursement of credit have to be removed, (iv) Credit planning, monitoring and collection of information on credit flow have to be improved, and (v) Linkage of Self Help Groups (SHGs) with formal credit delivery system has to be accelerated.

**Table 13.2**  
**Sector wise Target and Achievement of Banks in Priority Sectors under the**  
**Annual Credit Plan for 1998-99**

(Rs. in crore)

Sl No	Sector	Target	Achievement	Achievement as percentage of target
1	2	3	4	5
<b>1. Agriculture</b>				
	a. Crop Loan	397.41	463.01	116.50
	b. Term Loan	210.34	91.89	43.68
	c. Allied Sector	69.87	69.15	99.25
	<b>Total Agriculture</b>	<b>677.42</b>	<b>624.05</b>	<b>92.12</b>
	<b>2. Industries</b>	<b>206.78</b>	<b>173.52</b>	<b>83.91</b>
	<b>3. Services</b>	<b>446.66</b>	<b>595.01</b>	<b>133.21</b>
	<b>Total Loans (1+2+3)</b>	<b>1330.86</b>	<b>1392.58</b>	<b>104.63</b>

Source : State Level Bankers Committee, Bhubaneswar.

**BANK ASSISTANCE UNDER DIFFERENT PROGRAMMES****Assistance under Anti-poverty Programmes**

13.06 Coverage of beneficiaries by Commercial Banks, RRBs and Co-operative Banks under antipoverty programmes for the period from 1998-99 is presented in Table 13.3. During 1998-99, the banks have provided loan assistance of Rs.161.75 crore to 94671 beneficiary families as against Rs.124.51 crore to 85344 families in the previous year. The achievement was 81.28% against the target of Rs.199.00 crore. Per family investment has increased from Rs.14589 in 1997-98 to Rs.17085 during 1998-99. Government of India have fixed a credit mobilisation target of Rs.207 crore for the State under anti-poverty programmes for the year 1999-2000.

**Table 13.3**

**Assistance by Commercial Banks, RRBs and Co-operative Banks  
In Orissa under Anti-poverty Programme**

(Rs. In lakh)

Sl No	Year	Commercial Banks	RRBS	Coop. Banks	Total	Number of families covered
1	2	3	4	5	6	7
1	By the end of Seventh Plan	20907.84	997.25	7277.20	29182.29	2019712
2	1990-91	2277.91	871.19	104.09	3253.19	149612
3	1991-92	2603.57	1093.93	171.62	3869.12	111712
4	1992-93	2289.24	893.76	296.03	3479.03	93226
5	1993-94	3900.09	1702.03	618.23	6220.35	160000
6	1994-95	4278.15	1972.56	663.04	6913.75	139837
7	1995-96	5881.72	2829.57	603.86	9315.15	120669
8	1996-97	7277.74	4038.34	793.07	12109.15	94636
9	1997-98	7545.28	4095.49	810.72	12451.49	85344
10	1998-99	9464.36	5701.79	1008.69	16174.84	94671

Source : State Level Bankers Committee, Bhubaneswar

### Assistance under Other Programmes

13.07 Banks are providing credit facilities under housing schemes, for rehabilitation of sick industrial units, under Prime Minister's Rozgar Yojana, under National Project of Bio-gas Development etc. Under housing schemes 353 persons have been provided with loan assistance of Rs.4.17 crore during 1998-99 which includes Rs.3.99 crore to 300 persons under the National Housing Scheme. As on 31.03.99, 1150 industrial units have been identified as sick and out of these viability studies have been conducted in respect of 779 units. A total of 116 units have been found viable out of which 90 units have been rehabilitated through bank credit. Under PMRY during 1998-99, against the target to cover 10,100 beneficiaries, loans amounting to Rs.65.53 crore have been sanctioned in favour of 8353 beneficiaries and an amount of Rs.4.24 crore has been disbursed to 766 beneficiaries as against the target of 9250 beneficiaries, sanction of Rs.65.55 crore to 8224 beneficiaries and disbursement of Rs.48.32 crore to 7024 beneficiaries during 1997-98.

### RECOVERY POSITION OF BANKS

13.08 Despite several initiatives taken, the position of recovery of loans has not been satisfactory which is one of the major constraints to the growth of the banking business, as it increases non-performing assets and affects the resource position and profitability of banks. In a less developed State like Orissa where public sector investment is inadequate to meet the requirement, the recovery position of the banks needs to be improved for expanding credit facilities for developmental investment. Government have instructed Collectors, Tahasildars and BDOs to take active interest in recovery camps organised by the banks.

13.09 The proportion of overdue to the total demand in respect of Commercial Banks, RRBs and Co-operative Banks was 62.57%, 41.21% and 56.02% respectively as on 31.03.99 in comparison to 61.04%, 42.44% and 62.73% at the end of 1997-98. Sector-wise and bank-wise recovery and overdue position is presented in Table 13.4.

Table 13.4

## Sector-wise and Bank-wise Loan Recovery Position in Orissa

(Rs. in lakh)

Sl. No.	Sector / Items	Commercial Banks		RRBs	
		As on 31.3.98	As on 31.3.99	As on 31.3.98	As on 31.3.99
1	2	3	4	5	6
<b>A.</b>	<b>Agri. Short Term Loan</b>				
1.	Total demand for recovery.	14308.36	12238.00	5912.05	7254.00
2.	Amount collected	7429.25	6682.00	3809.71	4806.00
3.	Overdue amount	6879.11	5556.00	2102.34	2448.00
4.	% of overdue to demand	48.07	45.40	35.56	33.75
<b>B.</b>	<b>Agricultural Term Loan</b>				
1.	Total demand for recovery	17504.25	17498.00	3897.09	5126.00
2.	Amount collected	6728.03	6197.00	1343.26	2109.00
3.	Overdue amount	10776.22	11301.00	2553.83	3017.00
4.	% of overdue to demand	61.56	64.58	65.53	58.85
<b>C.</b>	<b>Other Priority Sector</b>				
1.	Total demand for recovery.	36666.66	38795.00	12260.81	15246.00
2.	Amount collected	12522.40	12775.00	7550.94	9325.00
3.	Overdue amount	24144.26	26020.00	4709.87	5921.00
4.	% of overdue to demand	65.84	67.07	38.41	38.83
	<b>TOTAL (A+B+C)</b>				
1.	Total demand for recovery.	68479.27	68831.00	22069.98	27626.00
2.	Amount collected	28679.68	28654.00	12703.91	16240.00
3.	Overdue amount	41799.59	42877.00	9366.04	11386.00
4.	% of overdue to demand	61.04	62.57	42.44	41.21

(Contd.)

Table 13.4 (Contd.)

Sl. No.	Sector / Items	Co-operative Banks		Grand Total	
		As on 31.3.98	As on 31.3.99	As on 31.3.98	As on 31.3.99
1	2	7	8	9	10
<b>A.</b>	<b>Agri. Short Term Loan</b>				
1.	Total demand for recovery.	31412.20	44849.00	51632.61	64341.00
2.	Amount collected	8881.55	17984.00	20120.51	29472.00
3.	Overdue amount	22530.65	26865.00	31512.10	34869.00
4.	% of overdue to demand	71.72	59.90	61.03	54.19
<b>B.</b>	<b>Agricultural Term Loan</b>				
1.	Total demand for recovery	8372.52	11385.00	29773.86	34009.00
2.	Amount collected	2992.96	4702.00	11064.25	13008.00
3.	Overdue amount	5379.56	6683.00	18709.61	21001.00
4.	% of overdue to demand	64.25	58.70	62.83	61.75
<b>C.</b>	<b>Other Priority Sector</b>				
1.	Total demand for recovery.	6582.08	6150.00	55509.55	60191.00
2.	Amount collected	5407.18	4748.00	25480.52	26848.00
3.	Overdue amount	1174.90	1402.00	30029.03	33343.00
4.	% of overdue to demand	17.84	22.80	54.10	55.40
	<b>TOTAL A+B+C</b>				
1.	Total demand for recovery.	46366.80	62384.00	136916.02	158541.00
2.	Amount collected	17281.69	27434.00	56668.28	69328.00
3.	Overdue amount	29085.11	34950.00	80250.74	89213.00
4.	% of overdue to demand	62.73	56.02	58.61	56.27

Source : State Level Bankers' Committee, Bhubaneswar



## NON BANKING FINANCIAL COMPANIES (NBFCs)

## ORISSA STATE FINANCIAL CORPORATION (OSFC)

13.10 The Orissa State Financial Corporation (OSFC) was set-up in March 1956 and it started commercial operations from 1957-58. The Corporation provides financial assistance for setting up of small and medium scale industries, construction of hotels and nursing homes, acquisition of transport vehicles etc. It also provides financial support for modernisation, expansion and rehabilitation of sick industrial units. Since inception of operations up to 31.03.99, the Corporation has disbursed Rs 866.42 crore to 24783 units. During 1998-99, the Corporation disbursed an amount of Rs.46.33 crore to 473 units as against Rs 57.41 crore covering 528 units in the previous year. Out of the total investment of Rs.46.33 crore during 1998-99, the flow of assistance to backward districts constituted 15.91%, 13.42% to 'no industry' districts, and 70.67% to other districts. The total flow of assistance to 'no industry' districts and backward districts decreased from Rs 19.01 crore during 1997-98 to Rs.13.59 crore in 1998-99. During 1998-99 the Corporation recovered Rs.75.53 crore as against the total demand of Rs.608.50 crore. Details of loans disbursed by OSFC during 1997-98 and 1998-99 are presented in Table 13.5.

**Table 13.5**  
**Disbursement of Loans by OSFC**

(Rs. in crore)

Sl. No.	Category of district	1998-99 (P)		1997-98		Cumulative disbursement	
		No. of loans	Amount	No. of loans	Amount	No. of loans	Amount
1	2	3	4	5	6	7	8
1	No industry districts	61	6.22	73	8.15	3348	138.05
2	Backward districts	100	7.37	131	10.86	5379	133.65
3	Other districts	312	32.74	324	38.40	16056	594.72
<b>Total</b>		<b>473</b>	<b>46.33</b>	<b>528</b>	<b>57.41</b>	<b>24783</b>	<b>866.42</b>

P : Provisional

Source : Orissa State Financial Corporation, Cuttack.

**PRIVATE NBFCS**

13.11 Private Non-Banking Financial Companies (NBFCs) play an important role in facilitating higher resource flow into the economy by mobilising household savings. At present a total of 13 NBFCs are functioning in the State. These NBFCs have accepted public deposits of Rs.9.50 crore during 1997-98 and invested Rs.3.86 crore out of which Rs.1.15 crore is in Government securities.

**ALL INDIA FINANCIAL INSTITUTION****INVESTMENT INSTITUTIONS****LIFE INSURANCE CORPORATION OF INDIA (LIC)**

13.12 Life Insurance Corporation of India provides life insurance cover under a number of schemes. The Corporation deploys its funds keeping in view the best interests of policy holders and the community. It invests its funds in Government and other approved securities, and extends development loan assistance in socially oriented sectors like power, drinking water supply, housing and sewerage, road transport and cooperative industrial units. It also provides term loans to industrial units and gives share/debenture and other resource support to term lending institutions.

13.13 LIC business in the State went up to 4,36,646 policies with an assured sum of Rs.1816.73 crore during 1998-99 as against 3,88,962 policies and assured sum of Rs.1550.64 crore in the preceeding year. It has invested Rs.1345.83 crore in Orissa as on 31.03.99 (as against Rs.1061.07 crore as on 31.03.98) in Government securities and other developmental activities of which 56.28% is in Government securities, 13.42% in State Electricity Board, 20.48% in shares/debentures, 7.37% for housing loans (Government and co-operative) and 1.63% in the State Financial Corporation. Table 13.6 presents sector wise investment of LIC in Orissa from 1996-97 to 1998-99.

Table 13.6

## Sector-wise Investment of LIC In Orissa

(Rs in crore)

Sl. No	Heads of Investment	As on 31.3.97		As on 31.3.98		As on 31.3.99	
		Book value	Percentage	Book value	Percentage	Book value	Percentage
1	2	3	4	5	6	7	8
1	State Government securities	510.21	49.09	580.53	54.71	757.43	56.28
2	Land Development Bank	0.47	0.05	0.47	0.05	0.32	0.02
3.	State Electricity Board	192.23	18.83	186.91	17.52	180.59	13.42
4.	State Financial Corporation	22.99	2.25	21.97	2.07	21.97	1.63
5	Loan to Government for housing	58.71	5.75	54.77	5.16	50.97	3.79
6	Loan to cooperative housing societies	44.12	4.32	47.06	4.44	48.16	3.58
7	Loan to Municipalities	7.71	0.76	7.37	0.69	7.05	0.52
8.	Loan to sugar corporations	0.04	0.00	0.04	Neg.	0.04	Neg.
9.	State Road Transport Corporation	3.74	0.37	3.74	0.35	3.74	0.28
10.	Shares/debentures and loans to companies.	180.42	17.68	159.21	15.01	275.56	20.48
<b>TOTAL</b>		<b>1020.64</b>	<b>100.00</b>	<b>1061.07</b>	<b>100.00</b>	<b>1345.83</b>	<b>100.00</b>

*Neg : Negligible**Source : LIC Central Office, Mumbai.***UNIT TRUST OF INDIA (UTI)**

13.14 The Unit Trust of India (UTI) was established in 1964 with three main objectives namely (i) to contribute to India's industrial development by transforming household savings into corporate investment, (ii) to enable common investors to participate in the prosperity of the capital market through portfolio management aimed at reasonable return, liquidity, and safety, and (iii) to facilitate orderly development of the capital market. UTI offers a variety of saving and investment instruments in the form of units which are sold primarily to the household savers, assuring them of safety, liquidity, regular return and capital appreciation. During 1998-99, UTI has sold 546.60 lakh units with cash value of Rs.7682.60 lakh to 57685 applicants within the State in comparison to sale of 481.95 units to 54971 applicants with cash value of Rs.6506.40 lakh in the previous year.

**DEVELOPMENT FINANCIAL INSTITUTION****INDUSTRIAL DEVELOPMENT BANK OF INDIA (IDBI)**

13.15 The Industrial Development Bank of India is an apex financial institution in the field of industrial financing. It extends financial support both directly and indirectly for the promotion and development of medium and large scale industries in the country. Its wholly owned subsidiary Small Industry Development Bank of India (SIDBI) provides assistance to the small scale sector. IDBI has diversified its activities in different areas of credit, merchant banking, stock exchange, capital market, corporate services and research. The promotional activities of IDBI include setting up of Technological Consultancy Organisations, sponsoring of Quality Testing Centres, Science and Technology Parks, Industrial Potential Survey, Entrepreneurship Development Programmes, and training programme for the employees of other development banks.

13.16 IDBI has played an effective role in setting up of Orissa Industrial and Technological Consultancy Organisation (ORITCO), Institute of Entrepreneurship Development, and Orissa Quality Testing Centres. During 1998-99, it has disbursed Rs.234.28 crore for promotion of industrial projects in the State as against Rs.140.00 crore in the previous year registering an increase of 67.34%. The cumulative sanction and disbursement of IDBI for the State as on 31.03.99 stood at Rs.3940.20 crore and Rs.2002.48 crore respectively.

**SMALL INDUSTRIES DEVELOPMENT BANK OF INDIA (SIDBI)**

13.17 Small Industries Development Bank of India was set up in 1990 as a wholly owned subsidiary of Industrial Development Bank of India with the objective to serve as the principal institution for financing and promoting employment oriented small scale industries (SSIs) especially in rural and semi urban areas, expanding the channels for marketing the products of SSI sector in domestic and overseas markets, and coordinating the function of other financial Institutions engaged in similar activities. SIDBI also provides refinance assistance for expansion, upgradation, modernisation and diversification of existing SSI units and rehabilitation of sick units through primary lending institutions such as State Financial Corporations. It also extends financial support to small road transport operators, qualified professionals for self employment, small hospitals and nursing homes, and to promote hotel and tourism related activities. Up to the end of 1998-99, since its inception, SIDBI has sanctioned a sum of Rs. 510.32 crore in favour of SSI units in the State and disbursed a sum of Rs.363.32 crore. It has disbursed a sum of Rs.117.70 crore to 2991 SSI units during 1998-99 as against disbursement of Rs.124.37 crore to 3256 SSI units in the previous year.

## NATIONAL BANK FOR AGRICULTURE AND RURAL DEVELOPMENT (NABARD)

13.18 NABARD has been functioning as the apex development bank to provide credit for promotion of agriculture, small scale Industries, cottage and village industries, handicrafts, development of rural infrastructure, and other allied activities in rural areas. Its basic thrust has been to provide refinance support to banks to channelize loans to priority sectors in the rural area.

13.19 During 1998-99, NABARD has provided refinance assistance of Rs.15599.01 lakh in Orissa for agriculture and other rural development activities as compared to Rs.12831.91 lakh in the previous year, registering an increase of 21.56% over the year. Table 13.7 presents category-wise refinance assistance provided by NABARD from 1993-94 to 1998-99

Table 13.7

## Refinance Assistance Provided by NABARD in Orissa.

(Rs. In lakh)

Sl. No.	Item	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	Percentage change in 1998-99 over 1997-98
1	2	3	4	5	6	7	8	9
1.	Minor irrigation	624.00	852.20	466.26	881.91	506.84	272.77	(-) 46.18
2.	Loan to OSCB /REC	80.00	146.00	150.67	-	-	-	-
3.	Land development	8.00	0.12	1.20	0.79	3.71	7.58	104.31
4.	Farm mechanisation	846.00	827.61	928.72	1674.47	1620.89	1298.73	(-) 19.88
5.	Plantation and horticulture	166.00	145.39	163.24	134.24	113.29	205.89	81.74
6.	Fishery(in land and marine)	263.00	327.71	390.64	220.03	85.82	142.68	66.25
7.	Forestry	4.00	9.79	0.15	141.92	76.00	118.50	55.92
8.	Dairy development	51.00	48.46	59.45	96.65	36.92	64.44	74.54
9.	Bio-gas	12.00	5.10	2.79	1.42	1.55	3.83	147.10
10.	Poultry	60.00	33.58	63.06	206.48	121.09	184.13	35.54
11.	IRDP/ITDP/SC and ST Action Plan/PMRY	4328.00	4256.14	4969.98	6160.99	7395.04	9937.50	34.38
12.	Non-farm sector	800.00	1368.69	1302.99	2103.34	2859.72	3351.82	17.21
13.	Sheep/goats/ piggery	16.00	14.35	10.58	8.12	11.04	4.35	(-) 60.60
14.	Other farm sector	-	-	-	-	-	26.79	-
	<b>Total</b>	<b>7258.00</b>	<b>8036.03</b>	<b>8509.73</b>	<b>11611.36</b>	<b>12831.91</b>	<b>15599.01</b>	<b>21.56</b>

Source : NABARD, Bhubaneswar.

**BHUBANESWAR STOCK EXCHANGE**

13.20 The Bhubaneswar Stock Exchange was established in April 1989 as a public company limited by guarantee in order primarily to mobilise local savings for investment in local enterprises. The Exchange started trading operations in January 1991 after being recognised by the Ministry of Finance, Government of India under the provisions of the Security Contracts (Regulation) Act 1956. At present there are 225 members including 10 corporate members. Currently, 72 companies including 46 regional companies i.e. companies with head offices registered in Orissa and 26 non-regional companies i.e. companies with head offices registered outside Orissa are listed on the Bhubaneswar Stock Exchange. The non-regional companies listed on the Exchange are mostly those that carry out a significant level of manufacturing or other business activity in Orissa. The listed companies include NALCO, J. K. Corporation Ltd., Orient Paper and Industries Ltd., Orissa Cement Ltd., Orissa Sponge Iron Ltd., Indo Flogates Ltd., NICCO Corporation Ltd., Orissa Industries Ltd., Ispat Alloys Ltd., Mid-east Integrated Steels Ltd. etc. In addition, trading in the securities of a number of unlisted companies, called permitted companies, is also allowed to take place in the Exchange.

13.21 The annual trading volume for listed companies has been less than one crore during the past four years and was only Rs.0.006 crore and Rs.0.015 crore respectively during 1998-99 and 1997-98. The annual trading volume for both listed and permitted companies was Rs.185.686 and Rs.405.05 crore during 1998-99 and 1997-98 respectively. Since the inception of operations, 29 regional and 11 non-regional companies have issued shares worth Rs.258.24 crore and Rs.142.50 crore respectively in initial public offerings. There have been no initial public offerings during the past two years either by regional or by non-regional companies and none by regional companies during the past three years. Since the inception of operations, 11 regional and 6 non-regional companies have issued shares worth Rs.34.67 crore and Rs.737.54 crore respectively on rights basis. One regional company issued shares worth Rs.1.31 crore on rights basis during 1998-99 and two non-regional companies issued shares worth Rs.457.54 crore on rights basis during 1997-98. Except for some activity in the issue of rights shares in 1997-98, the Exchange has not, by and large, been very successful in mobilising funds for investment in the region.



# CHAPTER 14

## EDUCATION

14.01 The Constitution of India casts an obligation on the State to provide free and compulsory education to all children up to the age of 14 years. The literacy rate in Orissa during 1951 was 15.8% against the all India average of 18.3% which increased to 49.1% in 1991 against the all India average of 52.1%. While the male literacy rate of 63.1% in the State in 1991 was nearer to the national average of 64.1%, the female literacy stood at 34.7% in 1991 which was 4.6% lower than the national average of 39.3%. The literacy rates of scheduled caste and scheduled tribe population were also comparatively low at 36.8% and 22.3% respectively as per 1991 census as compared to 37.4% for scheduled caste and 29.6% for scheduled tribe population at the all India level.

### EARLY CHILDHOOD EDUCATION (ECE)

14.02 The population of children in the age group of 3-6 years as per 1991 census was 34.29 lakh which was 10.8% of the State's total population. This group of children is being motivated towards primary education under the UNICEF assisted Early Childhood Education (ECE) Programme to help achieve the aim of Universalisation of Elementary Education (UEE). This programme is being implemented in the State since 1982. Under the programme, an early childhood education unit at the State level and a training institute to train up early childhood educators have been set up. These units develop basic learning and play materials for pre-school children. ICDS projects and agencies like State Council of Child Welfare and State Social Welfare Advisory Board are administering the pre-primary stage education through anganwadis, balwadis and creche centres. Since 1985 ECE programme has been extended to cover pre-school component of anganwadis functioning under ICDS projects in the State.

### ELEMENTARY EDUCATION

14.03 The population of children in the age group of 6-14 years as per 1991 census was 61.10 lakh which was 19.3% of the State's total population. The strategy of Universalisation of Elementary Education (UEE) covers three aspects of elementary education i.e. i) Universal access and enrolment, ii) Universal retention of children up to 14 years of age, and iii) Substantial improvement in the quality of education to enable all children to achieve essential levels of learning. Universalisation of primary education has

been included as a component of the Basic Minimum Service Programme under which certain thrust areas of development have been identified by Government of India for priority implementation.

14.04 As per guidelines adopted at the national level, the State aims at providing access to primary schools within one km and to upper primary schools within three km from habitations having a population of 300 or more and 500 or more respectively. It is envisaged to enroll 54.47 lakh children in the age group of 6-11 years and 27.80 lakh children in the age group of 11-14 years by the end of the Ninth Plan period.

14.05 The number of primary schools has increased from 54,595 at the end of 1991-92 to 65,552 by the end of 1998-99. Out of this, the number of non-formal schools is 23,448 and the others are formal primary schools. Thus, basing on the projected population of 356.90 lakh in 1999, there is one primary school for 544 population on an average in Orissa during 1998-99. The enrolment in both formal and non-formal streams has increased from 39.89 lakh in 1991-92 to 46.86 lakh by the end of 1998-99. Similarly the total strength of teachers in the two streams has gone up to from 1.11 lakh in 1991-92 to 1.34 lakh by the end of 1998-99. The increase in the number of primary schools, enrolment and number of teachers over the period 1991-92 to 1998-99 amounts to 20%, 17% and 21% respectively. The teacher pupil ratio which was 1 : 36 in 1991-92 changed marginally to 1:35 by the end of 1998-99. Table 14.1 shows the number of primary schools, students and teachers in the State, both in formal and non-formal streams, from 1991-92 to 1998-99.

14.06 Gross enrolment ratio in the primary, upper primary and elementary stages is defined as the percentage of the enrolment in Classes I to V, Classes VI to VIII and Classes I to VIII to the estimated child population in the age groups of 6-11 years, 11-14 years, and 6-14 years respectively. Enrolment in these stages includes under-age and over-age children. Hence the enrolment ratio may be more than 100 in some cases. In case of Orissa the enrolment ratio was 90.5 in the age group of 6-11 years in September 1997. The enrolment ratio for girls in this age group, at 76:1, was below the State average and much below the corresponding enrolment ratio for boys at 104.4.

14.07 With a view to increasing retention of children and to reduce the drop out rates in primary schools, Government introduced a Mid-Day-Meal programme from July 1995. During 1998-99, the over all dropout rate at the primary stage was 43.6%, the dropout rate for girls was 42.4% and for boys 44.0%. The overall drop out rate at the primary stage declined from 47.0% in 1997-98 to 43.6% in 1998-99.



Table 14.1

## Number of Primary Schools, Students and Teachers in Orissa

Sl. No.	Item	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7	8	9	10
1	Primary schools	54595	54652	55052	56158	56896	65552	65552	65552
	i) Formal	41204	41204	41604	41604	42104	42104	42104	42104
	ii) Non-formal	13391	13448	13448	14552	14552	23448	23448	23448
2	Enrolment (in thousand)	3989	4042	4097	4179	4265	4531	4591	4666
	i) Formal	3654	3706	3761	3815	3887	3945	4005	4080
	ii) Non-formal	335	336	336	364	378	386	586	586
3	Teachers	111499	115460	118788	120392	125092	134488	134488	134488
	i) Formal	98108	102012	105340	105840	110540	111040	111040	111040
	ii) Non-formal	13391	13448	13448	14552	14552	23448	23448	23448

P: Provisional

Source: Director, Elementary Education, Orissa, Bhubaneswar

14.08 A number of primary schools are functioning in the State without proper buildings and other infrastructure. Government have taken steps for providing basic infrastructure (including school buildings) under the Operation Black Board programme in rural areas since 1990-91. During the period from 1991-92 to 1997-98, 5,431 primary school buildings were constructed involving an expenditure of Rs. 58.21 crore. During 1998-99, 612 school buildings have been completed with an expenditure of Rs.8.12 crore.

14.09 The District Primary Education Programme (DPEP), a Centrally Sponsored Plan scheme with a fund sharing pattern of 85:15 between the Centre and the State, was launched in Orissa in the year 1996-97 for development of primary education. DPEP adopts a holistic approach to universalise access and retention, to improve learning achievements, and to reduce disparities among social groups. The programme is being implemented in Orissa by the Orissa Primary Education Programme Authority (OPEPA) in eight low literacy and backward districts namely Bolangir, Dhenkanal, Gajapati, Kalahandi, Rayagada, Bargarh, Keonjhar and Sambalpur with the objective of extending primary education facilities to all children with special emphasis on SC and ST children and girls and for reducing dropout rates. A proposal to extend of DPEP to eight more districts namely Nuapada, Koraput, Nowrangpur, Malkangiri, Boudh, Kandhamal, Sonepur, and Mayurbhanj with funding from the Department for International Development (DFID), UK is under consideration of Government of India.

14.10 The number of upper primary schools has increased from 10,941 at the end of 1991-92 to 12,406 by the end of 1998-99. Out of this, the number of non-formal schools is 896 and the others are formal schools. Thus, basing on the projected population of 356.90 lakh in 1999, there is one upper primary school for 2,877 population on an average in Orissa during 1998-99. The ratio of upper primary schools to primary schools stood at 1:3.7 during 1998-99 in the formal stream. For achieving the ratio of 1:2.5 there is need for opening of 5,331 new upper primary schools. The enrolment in both formal and non-formal streams has increased from 10.76 lakh in 1991-92 to 13.90 lakh by the end of 1998-99. Similarly the total strength of teachers in both the streams has gone up from 39,955 in 1991-92 to 40,706 by the end of 1998-99. The increase in the number of upper primary schools, enrolment and number of teachers over the period from 1991-92 to 1998-99 amounts to 13%, 29% and 2% respectively. The teacher-pupil ratio which was 1:34 during 1997-98 has remained at the same level during 1998-99. Table 14.2 shows the number of upper primary schools, enrolment and number of teachers for the period from 1991-92 to 1998-99.

Table 14.2

## Number of UP Schools (Middle Schools), Students and Teachers in Orissa

Sl. No.	Item	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7	8	9	10
1	Number of UP schools (middle schools)	10941	11308	11816	12256	12406	12406	12406	12406
2	Enrolment (in thousand)	1076	1113	1166	1207	1292	1318	1384	1390
3	Number of teachers	39955	39751	39951	39993	40206	40706	40706	40706

P : Provisional

Source : Director, Elementary Education, Orissa, Bhubaneswar.

14.11 Gross enrolment ratio in the age group of 11-14 years was 53.4 in respect of Orissa in September 1997. The enrolment ratio for boys in this age group was 67.6 and for girls 38.8. The dropout rate at upper primary stage during the year 1998-99 declined to 58.0% as compared to the drop out rate of 59.1% during 1997-98. The dropout rate during the year 1998-99 was higher in respect of girls (64.0%), scheduled castes (59.4%) and scheduled tribes (74.5%).

14.12 The Education for All project, being funded with assistance from UNICEF, aims at enhancing retention levels by making teaching and learning joyful (Anandmay Shikshya), child-centred, and activity and competency based. The project was implemented in six districts namely Balangir, Keonjhar, Dhenkanal, Phulbani, Angul and Ganjam in 1995. From 1997 onwards, the project has been discontinued in Balangir, Keonjhar and Dhenkanal due to the coverage of these districts under DPEP. Activities undertaken by this programme for development of primary and upper primary education include teachers' training, inspecting officers' training, preparation of teachers' guides, learning milestones, classroom beautification, and awareness building.

### NON-FORMAL EDUCATION

14.13 Non-Formal Education, a Centrally Sponsored Plan scheme, is in operation in the State to supplement the formal stream of primary and upper primary education. The objective of the scheme is to impart minimum levels of learning and to create awareness among children in the age group of 6-14 years (specially girl children and children of backward areas) so as to enable them to join the main stream of education. This programme also covers working children and habitations having no primary schools. During 1998-99, 23,448 non-formal education centres at the primary level were functioning out of which 8,830 centres were meant for boys and 14,618 for girls. At upper primary level, there were 662 centres for boys and 234 for girls. Apart from this, 198 voluntary organisations are also managing 11,863 non-formal education centres with full Central Government assistance. The enrolment in the primary level centres was 5.86 lakh and in the upper primary level centres 0.22 lakh during the year 1998-99.

### MASS EDUCATION

14.14 The Mass Education Programme, as a part of National Literacy Mission, was introduced in the State in the year 1990-91 with the objective of covering all adult illiterates up to the age of 45 years. The programme comprises of two phases, i) Total Literacy Campaign (TLC) and ii) Post Literacy Campaign (PLC). Up to the end of 1998-99, since the inception of the programme, 28 districts and one special project area in Rourkela have been covered under TLC. The target of enrolment under TLC is 63.83 lakh illiterates (25.83 lakh males and 38.00 lakh females) out of which achievement as on 31.03.99 was 22.67 lakh (10.07 lakh males and 12.60 lakh females). The achievement in respect of SC was 4.29 lakh and in respect of ST was 6.69 lakh. The Post Literacy Campaign (PLC) is being implemented in eleven districts and the special project area in Rourkela. Against the

target of 25.29 lakh neo-literates, 12.04 lakh were covered (5.36 lakh male and 6.68 lakh females) under PLC up to 31.03.99. The total expenditure incurred as on 31.03.99 under TLC is Rs.2607.86 lakh and under PLC Rs.846.76 lakh.

### STATE INSTITUTE OF EDUCATION AND TECHNOLOGY (SIET)

14.15 SIET produces educational programmes, meant mostly for school children, on subjects such as environmental science, social studies, mathematics, health and hygiene, physical education, work experience, language, and art. These programmes are broadcast through radio and television stations.

### SECONDARY EDUCATION

14.16 The secondary stage of education, which comprises of Classes VIII to X in Orissa, is under the academic control of the Board of Secondary Education. Table 14.3 shows the number of high schools, enrolment of students and strength of teachers from 1991-92 to 1998-99. The number of high schools, students and teachers has gone up from 4,495, 7.79 lakh and 40,020 in 1991-92 to 6,872, 10.31 lakh and 51,436 by 1998-99, showing an increase of 35%, 32% and 29% respectively. The teacher-pupil ratio which was 1:19.46 in 1991-92 has risen to 1:20.04 during 1998-99. The dropout rate in high school stage which was 72.5% in 1997-98 has remained at the same level in 1998-99. Eligible non-Government high schools are provided grant-in-aid by the Government subject to availability of funds. Table 14.3 shows the number of high schools, students and teachers in the State for the period from 1991-92 to 1998-99. Apart from high schools, there are 20 madrasas and 85 Sanskrit tols which also provide secondary education in the State. Also, 56 Kendriya Vidyalayas and independent schools and 13 Navodaya Vidyalayas are providing secondary education in the State.

Table 14.3

#### Number of High Schools, Students and Teachers in Orissa

Sl No.	Item	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99(P)
1	2	3	4	5	6	7	8	9	10
1	Number of high schools	4495	4921	4921	5231	5808	5967	6072	6072
2	Number of students (in thousand)	779	793	798	815	822	866	881	1031
3	Number of teachers	40020	44289	44425	45785	47096	50218	51436	51436

P Provisional

Source : Director, Elementary Education, Orissa, Bhubaneswar

14.17 The Board of Secondary Education, Orissa conducts the High School Certificate Examination and looks after the academic standard of the high schools. Table 14.4 shows the results of the High School Certificate Examination in the State from 1991-92 to 1998-99.

Table 14.4

## Results of HSC Examination in Orissa

Sl No	Year	Appeared (number)	Passed (number)	Percentage of success
1	2	3	4	5
1	1991-92	3,84,657	1,73,130	45.01
2	1992-93	3,99,037	1,73,570	43.50
3	1993-94	3,89,932	1,68,691	43.26
4	1994-95	4,07,426	1,77,578	43.59
5	1995-96	4,19,202	1,84,921	44.11
6	1996-97	4,11,595	2,04,064	49.58
7	1997-98	4,50,108	2,06,594	45.90
8	1998-99 *	3,57,394	1,72,250	48.20

\* Figures for supplementary examination not included.

Source : Board of Secondary Education, Orissa.

## PROMOTION OF SPORTS

14.18 The sports policy of the State envisages spotting and nurturing of talent among students from the age of nine years upwards. In order to provide intensive coaching to students reading in Classes VII to X and to enable them to participate in national level sports competitions, 13 sports hostels have been established in the State. During 1998-99, 548 students were imparted coaching in these 13 sports hostels. The trainees were given stipend at the rate of Rs.1200 per head per month. There is a programme to train up 620 students during 1999-2000.

## HIGHER EDUCATION

14.19 The Council of Higher Secondary Education regulates higher secondary education (i.e. education for two years following secondary education) in the State. It conducts the Higher Secondary Examination and co-ordinates higher secondary education with university education on the one side and secondary education on the other.

There are facilities for higher secondary education in 1,034 general colleges in the State including 59 Government colleges. Altogether, the total number of sanctioned seats in Government and non-Government colleges at the higher secondary level is 2,25,990. Table 14.5 shows the enrollment at the higher secondary level and the result of the Higher Secondary Examination for the years 1998 and 1999 for arts, science and commerce streams.

**Table 14.5**  
**Enrollment in Higher Secondary Level and Results of**  
**Higher Secondary Examination**

Sl No	Year /Stream	No. of students			Percentage of pass
		Enrolled	Appeared	Passed	
	1	2	3	4	5
1.	1998				
a	Arts	152479	148271	83512	56.32
b	Science	43289	42248	27602	65.33
c	Commerce	13189	12887	7809	60.59
	<b>Total 1998</b> <b>(a+b+c)</b>	<b>208957</b>	<b>203406</b>	<b>118923</b>	<b>58.46</b>
2.	1999				
a	Arts	164175	160326	61697	38.48
b	Science	43691	42873	23548	54.92
c	Commerce	15128	14817	7197	48.57
	<b>Total 1999</b> <b>(a+b+c)</b>	<b>222994</b>	<b>218016</b>	<b>92442</b>	<b>42.40</b>

*Source : Council of Higher Secondary Education, Orissa.*

14.20 In the year 1998-99, there were 1,034 general colleges in the State. Out of these, 59 were Government colleges and 443 were aided colleges. All the 1,034 colleges had teaching facilities for higher secondary courses. Out of the 1,034 colleges, 498 colleges had facilities for teaching of degree courses as well. Facilities for post-graduate courses were available in 24 degree colleges. Out of the 1,034 colleges, 175 colleges were meant exclusively for women. Table 14.6 shows the number of general colleges, the number of students enrolled, and number of teachers from 1991-92 to 1998-99. The table shows an increasing trend in the number of colleges, student enrolment, as well as in the number of teachers.

**Table 14.6**  
**Number of General Colleges, Students and Teachers in Orissa**

Sl No	Item	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8	9	10
1	Number of colleges	542	615	677	735	893	967	1031	1034
2	Number of students (In thousand)	275	291	319	345	440	474	505	515
3	Number of teachers	11669	13129	13749	14329	15909	16610	17332	17400

*Source : Directorate of Higher Education, Orissa.*

14.21 A Central Plan scheme, Computer Literacy And Studies in Schools (CLASS) has been implemented in the State with effect from December 1, 1996. A total of 102 institutions at the higher secondary level and 13 institutions at the secondary level have so far been covered.

14.22 The National Policy on Education 1986, as modified in 1992, emphasises consolidation rather than increase in the number of colleges. There was a considerable increase in the number of non-Government colleges in the State during the Eighth Plan period. However consistent with the guidelines contained in the National Policy on Education, establishment of new Government colleges has been restricted. Government have transferred resources towards expansion and upgradation of facilities in the existing educational institutions. Professional and specialised courses like honours in Computer Science, MBA, MCA etc. have been introduced in a number of educational institutions.

14.23 National Service Scheme (NSS) is being implemented in the State with financial assistance from Government of India and the State Government in the ratio of 7 : 5. NSS covers 82,500 student volunteers. The combined cadet strength under junior and senior divisions of NOC in the State is 44,000. The State Government also provide financial assistance to support the Youth Red Cross Programme and for development of Senior Scouts and Senior Guides.

14.24 In addition to ongoing scholarship schemes, the State Government have introduced a scheme for award of scholarships at the rate of Rs.1000 per month to meritorious girl students who have secured admission in selected professional, technical and management institutions of excellence at the national level and selected institutions within the State. The State Government have also decided to provide scholarships to meritorious students the income of whose parents is Rs.24,000 or less per annum. Under the scheme, 1,050 students at higher secondary stage, 250 students at the under graduate stage, and 125 students at the post graduate stage would be benefited every year.

14.25 The State has seven universities namely Utkal University, Sambalpur University, Berhampur University, North Orissa University, Fakir Mohan University, Sri Jagannath Sanskrit University and Orissa University of Agriculture and Technology. Apart from these Universities, it is proposed to open an Adivasi University at Koraput to expand higher education in tribal districts of southern Orissa. In addition to the existing three autonomous colleges namely Ravenshaw College at Cuttack, Khalikote College at Berhampur, and Gangadhar Meher College at Sambalpur, Government had recommended to the University Grants Commission to confer autonomous status on 12 more colleges in the State. Out of the 12 colleges recommended to UGC, three colleges namely Buxi Jagabandhu Bidyadhar College at Bhubaneswar, Rama Devi Womens' College at Bhubaneswar and Samanta Chandra Sekhar College at Puri have been granted autonomous status during 1998-99.

14.26 The State Government provides development grants and special development grants to Utkal University, Berhampur University, Sambalpur University, and Shree Jagannath Sanskrit University. During 1998-99 a sum of Rs.181.63 lakh was provided to these universities. Orissa University of Agriculture and Technology (OUAT), which is assisted under the agriculture budget, is also provided grants in the education budget to fund under-graduate and higher secondary courses in science and a post graduate course in micro-biology. For this purpose, a sum of Rs.66.50 lakh was provided during 1998-99. OUAT also received an amount of Rs.3.50 lakh as block grant during 1998-99.

14.27 To provide educational facilities to large number of semi-urban and rural youth and part time students, an open university on the pattern of Indira Gandhi National Open University is proposed to be opened during the Ninth Plan period.



**VOCATIONAL EDUCATION**

14.28 A Centrally Sponsored Plan scheme for vocational education at the higher secondary stage was introduced in the State from 1988-89. Subsequently, the scheme was transferred to State Plan. During 1998, 1,454 students were enrolled under the vocational stream in 231 higher secondary schools. Government have constituted a State Council of Vocational Education and District Vocational Education Committees to advise on matters relating to vocational education.

**TEACHERS EDUCATION AND TRAINING**

14.29 During the year 1998-99, there were four Government Training Colleges, six Colleges of Teachers' Education (CTEs) and three Institutes of Advanced Study in Education (IASEs) in the State. The total intake capacity for B.Ed., M.Ed. and M.Phil. courses in these institutions is 1516 with 36 seats for M.Phil., 96 seats for M.Ed., and 1,384 seats for B.Ed. courses. There is a proposal for opening of two new training colleges, one each at Kendrapara and Phulbani, during the Ninth Plan period. There are thirteen District Institutes of Education and Training (DIETs) with intake capacity of 650 trainees which provide training to mass education instructors and supervisors. There are also 52 Secondary Training Schools with intake capacity of 2,000 trainees. The State Council of Educational Research and Training (SCERT) oversees activities relating to qualitative improvement in school education through projects and studies that receive assistance from UNICEF, NCERT and Government of India.

14.30 In order to ensure planned and co-ordinated development of teachers' education and for determination and maintenance of standards for teachers' education, a Regional Office of the National Council for Teachers' Education (NCTE) has been established at Bhubaneswar during 1995-96 with the assistance of Government of India.

14.31 During the Ninth Plan period, an inservice training programme has been taken up to clear the backlog of untrained primary school teachers. Inservice training is to be provided to 1,11,040 primary school teachers working in the State. Admission in DIETs has been stopped for fresh candidates from the year 1997-98. Instead, these institutes are exclusively utilised for imparting training to inservice teachers. With the aim of providing training to handle teaching aids under Operation Black Board, a special orientation course for primary teachers is being conducted since 1994-95 with Government of India assistance.

Around 35,000 teachers had been trained under the scheme by the end of 1998-99. For improvement of quality of education at the secondary stage, Government have also decided to focus on the training of untrained high school teachers.

### **TECHNICAL EDUCATION**

14.32 Technical education in the State is imparted at various levels through Engineering Colleges, Engineering Schools, Polytechnics, Industrial Training Institutes (ITIs), and Industrial Training Centres (ITCs). The Directorate of Technical Education and Training (DTET) functions as the nodal agency to plan and implement technical education programmes in the State and to maintain liaison with the State Council of Technical Education, Universities in the State, and national level technical institutions.

14.33 By the end of 1998-99, there were twenty Engineering Colleges including four Government Engineering Colleges, two University Engineering Colleges and fourteen private Engineering Colleges with a total intake capacity of more than 4,000 students in different faculties.

14.34 In the Government sector, there are 13 Engineering Schools/Polytechnics with an intake capacity of 1,500 students. These institutions offer diploma courses in both engineering and non-engineering disciplines as per the guidelines, norms and standards prescribed by the All India Council for Technical Education (AICTE), New-Delhi. Out of the above institutions, four polytechnics, at Rourkela, Dhenkanal, Bhubaneswar and Berhampur with an intake capacity of 220, are meant exclusively for women. In addition to the above institutions, 12 private Polytechnics/Engineering schools were engaged in imparting technical education during 1998-99 with an intake capacity of 2,100 students.

14.35 It has been proposed to establish a University of Technology to maintain and improve standard of education in Engineering Colleges and to upgrade the infrastructural and other facilities in the State for technical education during 1999-2000. The scope of the proposed Technological University will include institutions imparting education in engineering and technology, industry, management and applied sciences. Computer and Business Management Programmes are proposed to be included in the curriculum of the proposed university.

14.36 The Craftsman Training Scheme has been introduced in the State since 1959 to ensure a steady flow of skilled workers in different trades to meet the requirement of industries and to promote self-employment among the educated youth. There are 23 Industrial Training Institutes (ITIs) and Industrial Training Centres (ITCs) with a total intake capacity of 6,140 students in Government sector in the State. These ITIs and ITCs impart training in 38 designated trades in one year and two-year courses. Out of the 23 Government ITIs / ITCs, 10 are exclusively meant for women trainees and cover trades like stenography, tailoring, dress making, weaving, bleaching and dyeing.

14.37 In the field of medical sciences, the State has three Medical Colleges, one Dental College, one Pharmacy College, three Ayurvedic Colleges, four Homoeopathic Colleges and one Nursing College in the Government sector. There are also two Ayurvedic Colleges and two Homoeopathic Colleges in the private sector. The intake capacity of the 3 Medical Colleges is 321, of the Dental College 20, and of the Pharmacy College 100.

14.38 There are nine constituent colleges under the Orissa University of Agriculture and Technology (OUAT) namely a Veterinary College, a College of Agricultural Engineering and Technology, a College of Engineering and Technology, a College of Fishery, a College of Home Science, a College of Basic Science, two Agriculture Colleges and a College of Computer Studies. The total intake capacity of all these constituent colleges under OUAT is 992.

#### **EXPENDITURE ON GENERAL EDUCATION**

14.39 Table 14.7 shows the revenue expenditure on general education (i.e. education up to post graduate level in non-technical institutions) in the State from the year 1991-92 to 1999-2000. The budget provision on general education is increasing over the years. The major part of the resources available is being spent on salary of teaching and non-teaching staff.

**Table 14.7**  
**Revenue Expenditure on General Education in Orissa**

Sl. No.	Year	Expenditure (Rs. in crore)	Per capita expenditure (In Rs.)
1	2	3	4
1	1991-92	518.80	161.19
2	1992-93	588.30	179.86
3	1993-94	659.90	198.60
4	1994-95	774.40	229.50
5	1995-96	907.61	265.00
6	1996-97	1024.26	294.80
7	1997-98	1166.77	331.22
8	1998-99 (RE)	1558.25	436.60
9	1999-2000 (BE)	1528.94	423.14

*RE : Revised Estimates. BE : Budget Estimates.*

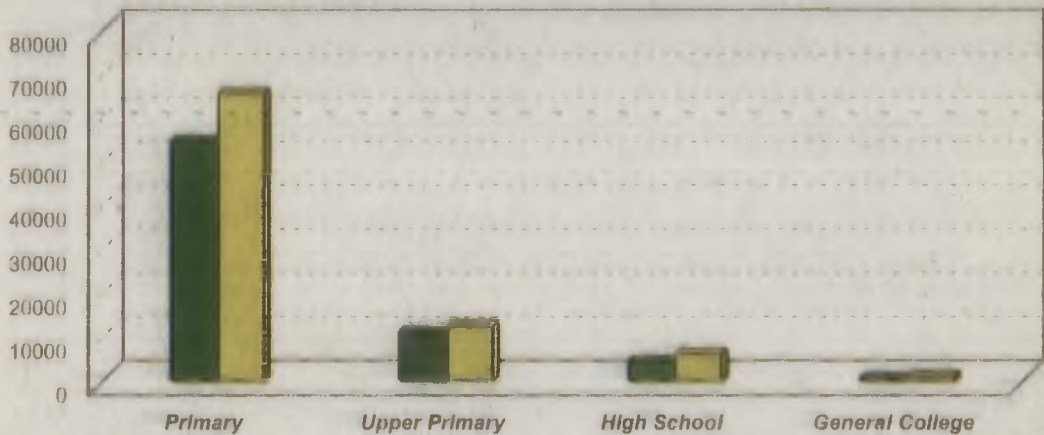
*Source : (a) Explanatory memorandum M.H. No. 2202.*

*(b) Population projected in CMIE Report, September, 1994.*

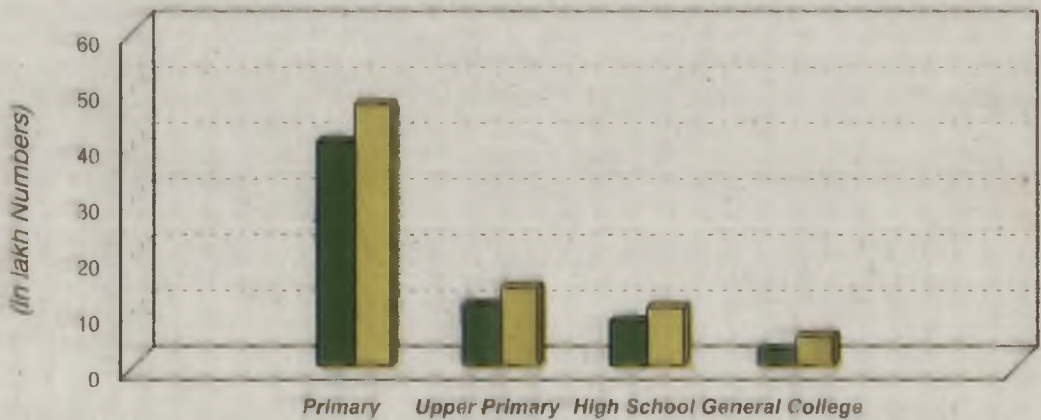


# NUMBER OF EDUCATIONAL INSTITUTIONS, NUMBER OF STUDENTS ENROLLED AND NUMBER OF TEACHERS

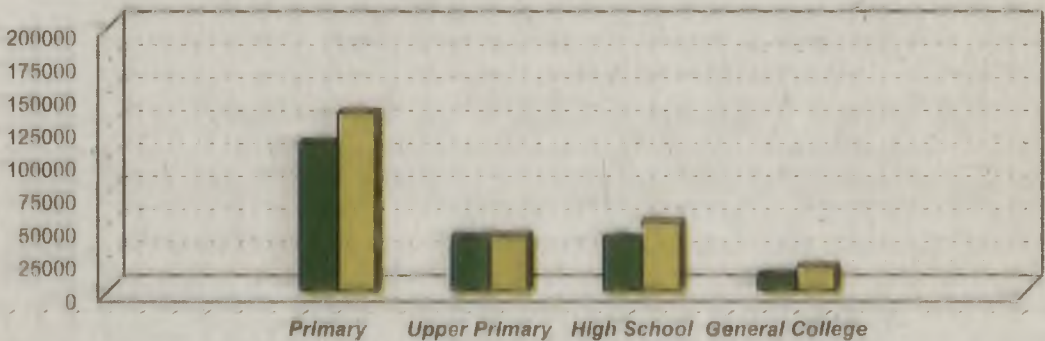
*Number of Educational Institutions*



*Number of Students Enrolled*



*Number of Teachers*



■ 1991   ■ 1998

## CHAPTER 15

### HEALTH, FAMILY WELFARE, SANITATION AND SOCIAL WELFARE

#### HEALTH

15.01 The focus in the health sector has been to improve access to health-care for the underserved segments of the population. This is being achieved through consolidation and operationalisation of the primary, secondary and tertiary health-care infrastructure and effective implementation of National programmes for combating major public health problems. Communicable and nutrition related diseases continued to be the major problems.

15.02 The main objectives for the health sector are as follows :

- i. to provide adequate and qualitative preventive and curative health care to the people of the State.
- ii. to improve maternal and child health and in particular to reduce maternal and infant mortality.
- iii. to ensure equity in health care to all, particularly to disadvantaged groups like scheduled tribes, scheduled castes, backward classes and women.
- iv. to provide affordable quality health care to the people of the State through allopathic, homoeopathic and ayurvedic systems of medicine etc.
- v. to give training to doctors, nurses and other paramedical staff to meet the need of health care in the State.
- vi. to ensure greater access to primary health care by providing medical institutions as close to the people as possible or through mobile health units, particularly in the underserved and undeveloped districts.
- vii. to improve hospital services at secondary and tertiary level both in terms of infrastructure and personnel.
- viii. to improve the maintenance of buildings by introducing reforms in the system.
- ix. to improve health care in vulnerable districts of the State.

15.03 The average annual growth rate of population of the State during the 1981-91 decade was 2.01% as compared to 2.38% at the all India level. The crude birth rate in Orissa during 1997 was 26.5 which has declined to 25.7 in 1998 while the crude death rate has increased marginally from 10.9 to 11.1 during the same period. Infant mortality rate determined on the basis of sample surveys has decreased from 135 in 1981 to 98 in 1998 for the State. Over the same period, the infant mortality rate has gone down from 110 to 72 for the country as a whole. Though the crude birth rate for the State in 1998 is lower than the all India rate of 26.4, the crude death rate and infant mortality rate were higher than the all India levels of 9.0 and 72 respectively during 1998. The percapita expenditure on health in the State was Rs.90.98 during 1997-98 as against Rs.77.91 during the previous year.

### ALLOPATHIC MEDICAL INSTITUTIONS

15.04 During the year 1951, medical and health care facilities were available to the people of the State through a network of 365 Government medical institutions with 3,112 hospital beds and 1,083 doctors with a doctor-population ratio of 1:13,500. During 1998-99, there were 1,702 Government medical institutions in the State with 13,786 hospital beds and 4,888 doctors with population served per medical institution being 21,600 and area served per medical institution being 92 sq km. During 1998-99, the doctor-population ratio was 1 : 7,440 and bed-population ratio was 1 : 2,637. During 1998-99, there were 567 medical institutions functioning in 118 blocks of 12 tribal districts in the State with 1,759 beds with population served per medical institution being 17,963 and area served per medical institution being 123 sq km.

Table 15.1

#### Allopathic Medical Institutions run by the State Health Department (As on March 31)

Sl. No.	Year	Hospitals	Community Health Centres	Dispensaries	PHCs	Addl. PHCs	Subsidiary Health Centres*/ PHCs (New)	Medical Aid Centres	Mobile Health Units	Total Medical Institutions
1	2	3	4	5	6	7	8	9	10	11
1	1990	181	78	140	219	612	171	38	12	1448
2	1996	183	113	144	231	679	172	39	27	1588
3	1996	180	157	150	186	700	171	42	32	1617
4	1997	180	167	-	185	-	1094	-	13	1629
5	1998	181	167	-	184	-	1111	-	14	1647
6	1999	180	167	-	184	-	1167	-	14	1702

Source : Directorate of Health Services, Orissa, Bhubaneswar

(\* Dispensaries, Additional PHCs, Subsidiary Health Centres and Medical Aid Centres were amalgamated and redesignated as PHC (New) in 1996-97. The number of these PHCs (New) is shown in column 8.)

15.05 During 1996-97, Dispensaries, Additional PHCs, Subsidiary Health Centres and Medical Aid Centres were amalgamated and re-designated as PHC (New) so as to ensure at least one doctor per PHC. Table 15.1 shows the number of allopathic medical institutions functioning in Orissa under the Health Department.

15.06 Rural health care services have been further strengthened through establishment of sub-centres for providing anti-natal check-ups to pregnant mothers and immunisation facilities to infants. According to Government of India criteria, there should be one sub-centre per 3,000 population in tribal areas and one sub-centre per 5,000 population in other areas. Orissa required 6,568 sub-centres by 1991. As against this, the total number of sub-centres existing at present is 5,927. The gap is proposed to be filled up during the Ninth Plan period.

### **AYURVEDIC AND HOMOEOPATHIC INSTITUTIONS**

15.07 The popularity of the non-allopathic systems of medicines (ayurvedic, homoeopathic and unani) has grown over the years due to their low cost and fewer side effects. At present there are three Government Ayurvedic colleges and four Government Homoeopathic colleges imparting graduate and post-graduate education.

15.08 During 1998-99, 5 Government ayurvedic hospitals (including three attached to colleges) and 519 ayurvedic dispensaries were rendering services in the State with 203 hospital beds and 579 doctors. Apart from the three Government ayurvedic hospitals, two private ayurvedic hospitals were also functioning in the State. It has been targeted to increase the number of ayurvedic dispensaries from 519 to 637 by the end of the Ninth Plan. There is a proposal to establish 18 ayurvedic dispensaries during 1999-2000. Nine unani dispensaries are functioning in the State.

15.09 During 1998-99, four Government homoeopathic hospitals and 460 homoeopathic dispensaries were rendering services in the State with 125 hospital beds and 497 doctors. Two private homoeopathic hospitals are also functioning in the State. It has been targeted to increase the number of homoeopathic dispensaries from 460 to 578 by the end of the Ninth Plan. It is proposed to establish 18 new homoeopathic dispensaries during 1999-2000. Details of ayurvedic and homoeopathic medical institutions in the State and their growth over the years is shown in Table 15.2



Table 15.2

## Government Ayurvedic and Homoeopathic Medical Institutions and Services in Orissa

Sl. No.	Year	Hospitals		Dispensaries		Doctors	
		Ayurvedic	Homoeopathic	Ayurvedic	Homoeopathic	Ayurvedic	Homoeopathic
1	2	3	4	5	6	7	8
1	1991-92	2	2	507	442	581	478
2	1992-93	5	2	507	442	581	478
3	1993-94	5	2	507	442	581	474
4	1994-95	5	2	519	460	552	469
5	1995-96	5	4	519	460	549	473
6	1996-97	5	4	519	460	560	473
7	1997-98	5	4	519	460	576	486
8	1998-99	5	4	519	460	579	497

Contd

Table 15.2 (Concl.)

Sl. No.	Year	Beds		Patients treated (in lakh)	
		Ayurvedic	Homoeopathic	Ayurvedic	Homoeopathic
1	2	9	10	11	12
1	1991-92	203	75	50.8	68.0
2	1992-93	203	75	54.3	77.6
3	1993-94	203	75	53.4	69.0
4	1994-95	203	125	51.4	70.5
5	1995-96	203	125	49.7	72.6
6	1996-97	203	125	53.4	78.0
7	1997-98	203	125	48.5	71.7
8	1998-99	203	125	50.7	73.5

Source : Directorate of Indian Systems of Medicine and Homoeopathy, Orissa.

## STATE HEALTH PROGRAMMES / PROJECTS

15.10 As per the National Health Policy, a number of Central Plan schemes and Centrally Sponsored Plan schemes are being implemented in the State to ensure better health care services at the primary and secondary level.

15.11 The National T.B. Control Programme is a Centrally Sponsored Plan scheme with fund sharing pattern of 50:50 between the Central and State Governments. The number of T.B. patients per thousand population in the State has ranged between 2.15 and 2.52 and during the last decade. During 1998-99, 24,390 new T.B. cases were detected and 1,16,546 samples of sputum were examined.

15.12 The National Filaria Eradication Programme (NFEP) is a Centrally Sponsored Plan scheme being implemented through a Filariasis Bureau, a Research Unit at Puri, 15 Filaria Control Units, 15 Filaria Clinics, and 2 Filaria Survey Units. During 1998, blood slides of 49,550 persons were examined and 1,252 cases were found positive. The micro filaria rate (the number of persons found positive for micro filaria as a proportion of number of person tested during the year) has ranged between 4.34% and 2.04% during the last decade.

15.13 The National Programme for Control of Blindness (NPCB) aims at bringing down the ratio of blindness from 1.4% to 0.3% by the end of the year 2000. A Cataract Blindness Control Project has been undertaken with World Bank assistance with the aim of eradicating cataract blindness in the State. During 1998-99, 79,271 cataract operations were performed against a target of 1,23,200 operations. The target for 1999-2000 is 1,25,000 cataract operations.

15.14 The National Iodine Deficiency Disorders Control Programme is being implemented in the State as a Central Plan scheme to control goitre and other iodine deficiency disorders. A survey was conducted in the districts of Cuttack, Puri, Sundargarh and Keonjhar during 1998-99 and the incidence of goitre among the surveyed population in these four districts was found to be 20.5%, 19.3%, 33.5% and 14.9% respectively. The sale and manufacture of non-iodised salt has been banned in the State with effect from 01.06.95. At present two iodination plants, one at Humma in Ganjam district and the other at Bolong in Balasore district, are under operation. A laboratory for monitoring iodine deficiency disorders is proposed to be established.

15.15 The National Leprosy Eradication Programme (NLEP) is being implemented in the State through 54 Leprosy Eradication Units (LEUs), 6 Modified Leprosy Control Units (MLCUs), 78 Survey Eradication and Treatment Rural Leprosy Centres (SET / RLCs), 10 Urban Leprosy Centres, and two upgraded UICs with the objective to eradicate leprosy by the year 2000. For treatment of critical leprosy patients, 13 temporary hospitalisation wards with twenty beds each and a hundred bedded leprosy hospital at Cuttack are functioning. Due to effective measures taken by the State Government, the leprosy prevalence rate per thousand population has decreased from 5.4 during 1990-91 to 0.7 during 1998-99. This is still higher than the all India prevalence rate of 0.5 per thousand population. During 1998-99, 44,464 new leprosy patients were identified for treatment against the target of 10,000 and 93,678 leprosy patients were discharged as cured against the target of 70,000. There is a target to detect and treat 25,000 new cases and discharge 45,000 cases during 1999-2000.

15.16 The National Malaria Eradication Programme (NMEP) is a Centrally Sponsored Plan scheme with the funding pattern of 50:50 between the Central and State Governments. The main programmes under the scheme are to maintain cleanliness of inhabited areas, to destroy mosquitoes through spraying of DDT, and to make people conscious of the disease through information, education and communication activities. During 1998-99, 39.37 lakh blood slides were examined of which 4.78 lakh were found positive and radical treatment were given to 4.61 lakh patients.

15.17 A scheme for control of AIDS is being implemented through a State level registered society with assistance from the World Bank. The objective of the scheme is to increase popular awareness about AIDS. Blood tests are also carried out under the scheme and detected patients are provided with treatment.

15.18 The State Government have introduced a new scheme named Panch Byadhi Chikitsa to provide free treatment to people suffering from the five common diseases of diarrhoea, malaria, leprosy, respiratory infections and scabies. The scheme is being operated in all Government medical institutions in the State experimentally for a period of 6 months from 01.06.99. The scheme envisages that the entire cost of treatment of these five diseases will be borne by the State Government.

15.19 The Orissa Health Systems Development Project commenced from 18.09.98 for a period of five years with assistance from the World Bank with the objectives to improve the health care delivery in selected primary and secondary hospitals in the State and to increase efficiency in the allocation and use of health resources. The cost of the project is Rs.415.60 crore, out of which Rs.348.80 crore constitutes loan assistance from the World Bank, while the balance Rs.66.80 crore is to be met by the State Government. During 1998-99, an amount of Rs. 7.60 crore was utilised for activities such as construction of buildings for 22 institutions, purchase of drugs etc. An outlay of Rs.81.80 crore has been proposed for the Annual Plan 1999-2000 including Rs.26.68 crore for building programmes

15.20 The Orissa Health and Family Welfare Reform Project is under implementation in the State with financial assistance of Department for International Development (DFID), UK. After completion of the first two phases, currently the third phase is being implemented in stages. In the first stage of this third phase, 20 blocks of Keonjhar and Bhadrak districts have been covered with estimated project cost of Rs. 14.55 crore. Under the

project, medical institutions are to be strengthened by providing medical equipment and medicines and construction of new buildings. The first stage is likely to be completed by October 2000.

### **MEDICAL EDUCATION AND TRAINING**

15.21 There are three Medical Colleges with attached hospitals in the State. These colleges offer courses leading to MBBS and BDS degrees. Post-graduate and post-doctoral courses are also offered. There is one Nursing College, one Dental College, one Pharmacy College, three Government Ayurvedic colleges and four Government Homoeopathic colleges in the State. The State Institute of Health and Family Welfare functions as the apex in service training institute with three functional units at the State level and cells / wings at district / block levels for imparting training support under various programmes.

15.22 Facilities for super specialised treatment are being provided in three Medical College Hospitals through ultra modern diagnostic and therapeutic equipment. A cardiac catheterisation laboratory has been set up at S.C.B. Medical College Hospital, Cuttack. The S.C.B. Medical College Hospital has 1208 beds and is equipped with modern instruments like heart-lung machine, equipment for open heart surgery, auto analyser, C.T. scan etc. The other two medical colleges namely MKCG Medical College Hospital at Berhampur and V.S.S. Medical College Hospital at Burla have 881 and 772 hospital beds respectively.

### **FAMILY WELFARE**

15.23 The Family Welfare Programme is being implemented as a part of the National Population Control Programme in the State. The programme is implemented with full Central assistance to check the rapid growth of population and to bring down the high infant mortality rate in the State by promoting universal immunisation.

15.24 Under the Family Welfare Programme, the strategy is to motivate eligible couples to limit family size by adopting methods like use of intra uterine devices (IUDs), oral contraceptive pills (OCPs), conventional contraceptives (CCs), sterilisation etc.

The programme seeks to promote responsible parenthood with focus on the one child norm. The achievement under the programme during 1998-99 in respect of sterilisations was 1.2 lakh, insertion of IUDs 2.2 lakh, number of conventional contraceptive users 3.1 lakh, and number of oral pill users 1.1 lakh. The number of green card holders (persons who have undergone sterilisation after two children) in the State as on March 31, 1999 was 3.20 lakh. An outlay of Rs.99.45 crore has been proposed in the Annual Plan 1999-2000 under the Family Welfare Programme and it has been targeted to perform 1.61 lakh sterilisations, 2.58 lakh insertions of IUDs, extend the use of conventional contraceptives to 3.83 lakh users, and use of oral pills to 1.51 lakh users during 1999-2000. Table 15.3 shows the progress of the Family Welfare Programme in the State.

**Table 15.3**  
**Progress of Family Welfare Programme in Orissa.**

(Figures in lakh)

Sl No	Year	Sterili-sations	IUD insertions	Conventional contraceptive users	Oral pill users	Medical termination of pregnancy
1	2	3	4	5	6	7
1	Upto the end of 1994-95	36.80	20.38	38.01	5.93	3.72
2	1995-96	1.49	2.09	4.43	1.02	0.22
3	1996-97	1.35	1.93	3.80	1.08	0.24
4	1997-98	1.27	2.46	2.65	1.10	0.25
5	1998-99	1.23	2.15	3.05	1.08	0.22

Source : Directorate of Family Welfare, Orissa, Bhubaneswar.

## IMMUNISATION

15.25 The Universal Immunisation Programme is being implemented in the State with the objective of reducing infant mortality and maternal mortality rates. Under the programme, children below 6 years of age are inoculated for prevention of contagious diseases like T.B., diphtheria, whooping cough, tetanus, polio, measles etc. The immunisation programme has been further strengthened through ICDS projects in the State. The Anganwadi workers posted in ICDS blocks and Auxillary Nurse and Midwives posted in sub centres play an active role in this programme. The progress of the immunisation programme in the State is presented in Table 15.4

Table 15.4

## Progress of Immunisation Programme in Orissa.

(Figures in lakh)

Sl No	Activity	1994-95	1995-96	1996-97	1997-98	1998-99 (P)	1999-2000 (T)
1	2	3	4	5	6	7	8
1	Tetanus toxoid	8.23	8.23	8.44	8.61	8.18	9.85
2	Diphtheria, pertussis, tetanus	8.76	8.44	8.80	8.81	8.77	8.90
3	Polio	8.74	8.44	8.80	8.77	8.77	8.90
4	BCG	9.67	8.76	9.19	9.52	8.29	8.90
5	Measles	8.27	7.18	8.13	8.11	7.65	8.90
6	Diphtheria and tetanus	7.63	4.42	5.33	7.85	6.03	8.86
7	Tetanus toxoid (10 years)	6.28	5.42	5.84	6.80	7.43	8.03
8	Tetanus toxoid (16 years)	5.38	4.56	4.66	5.95	6.41	7.27

*P* Provisional, *T* : Target

Source : Directorate of Family Welfare, Orissa.

**WATER SUPPLY AND SANITATION****RURAL WATER SUPPLY**

15.26 Out of a total of 1,14,099 identified habitations in the State, 1,07,461

habitations (94.2%) have been fully covered under drinking water supply programme by the end of March 1999. These covered habitations have been provided with 1,67,701 tube wells and 4,376 sanitary wells. During 1998-99, a total of 7,178 tube wells and 605 sanitary wells were installed in 5,158 not covered habitations and 1,700 in partially covered habitations under the Centrally Sponsored Accelerated Rural Water Supply Programme (ARWSP). Out of the remaining 6,638 identified habitations, 4,660 were partially covered and 1,978 not covered by the end of March 1999. To cover these 6,638 habitations, it is proposed to install 7125 tube-wells and 800 sanitary wells during 1999-2000. Areas facing problems like excess iron, fluoride, chloride and arsenic are being identified to explore the possibility of providing safe alternative sources of drinking water in a phased manner.

15.27 As on 01.04.1999, there were 6,053 defunct tube wells in the 1,07,461 habitations already covered. It has been targeted to replace 1,902 defunct tube wells during 1999-2000. A programme has also been drawn-up to install 2,085 new tube wells in unidentified drought affected villages.

15.28 Considering the scarcity of water in KBK districts, Government of India have approved a relaxed norm of one spot source for every 150 population where the existing norm of one spot source for 250 population has already been achieved. A total of 13,757 sites to provide spot sources have been identified in the KBK districts, out of which 732 spot sources have been provided up to the end of March 1999. It is proposed to install 2,500 new tube wells in KBK districts during 1999-2000 with a special outlay of Rs.1000.00 lakh.

15.29 By the end of March 1999, 376 rural piped water supply schemes had been commissioned in the State. Out of these, 55 schemes were completed and commissioned during 1998-99. It has been targeted to complete 60 ongoing piped water schemes during 1999-2000.

15.30 During 1997-98 and 1998-99, tube wells were installed in 6,752 primary schools and 863 upper primary schools with grants made available under the award of the Tenth Finance Commission. During the same period, 3,455 spot sources were provided in anganwadis with funding from the World Bank.

15.31 To ensure community participation and more effective maintenance of hand pumps, Self-Employed Mechanic (SEM) system of hand pump maintenance has been introduced in 38 of the 314 blocks in the State. By the end of 1998-99, 863 persons had been trained and deployed for hand pump maintenance in rural areas.

## **RURAL SANITATION**

15.32 Sulabha International Social Service Organisation (SISSO), a non-profit voluntary social organisation has been associated with implementation of sanitation programme in the State. This organisation has constructed 48 Sulabha Complexes (community toilets) in rural areas. These complexes are also maintained by the Sulabha Organisation. A total of 4,124 household latrines have also been completed by this organisation from funding from the Rural Development Department.

15.33 In order to check water borne and related diseases in districts like Phulbani, Gajapati and Ganjam, a UNICEF assisted project named Control of Diarrhoea Diseases through Water Sanitation (CDD WATSAN) is under implementation. Under the project, medicines are distributed and tube wells are installed to control diseases like cholera and diarrhoea.

### **URBAN WATER SUPPLY**

15.34 There are 102 Urban Local Bodies (ULBs) in the State comprising of two Municipal Corporations, 30 Municipalities and 70 Notified Area Councils (NACs). Paradeep Port Trust maintains the water supply in the Paradeep NAC area. Potable drinking water facilities have been provided in all the 102 Urban Local Bodies through piped water distribution systems, house connections, and tube-wells. Out of the urban population of 42.35 lakh as per the 1991 census, 30.6 lakh persons (72.26%) had been covered through piped water supply schemes by the year 1998-99. In pockets of scarcity, 11,109 hand pump tube wells have been sunk by the end of March 1999. About 570 million litres of potable drinking water per day is being supplied in urban areas through 1,42,827 house connections and 14,248 public stand posts.

15.35 The Orissa Water Supply and Sewerage Board is executing six water supply projects in the State with an estimated cost of Rs.131.00 crore. The Jajpur Road water supply project has already been commissioned and the project for Cuttack city has been partly commissioned. Out of the remaining four water supply projects, Kendrapara and Jeypore projects are scheduled to be completed by June 2000. Water Supply to Rourkela (city township) and Greater Sambalpur are scheduled for completion by the end of 2000 and June 2001 respectively.

15.36 Four new water supply projects, at Angul, Dhenkanal, Barbil and Bargarh, have been approved by HUDCO with an estimated cost of Rs.5000.00 lakh. Two more water supply projects, for Bhawanipatna and Rayagada, estimated to cost Rs.2950.00 lakh are on the anvil.

15.37 Naraj water supply project, taken up for supplying water to newly developed areas of Bhubaneswar, was commissioned in 1998.



15.38 Accelerated Urban Water Supply Programme (AUWSP) is being implemented in the State under the Centrally Sponsored Plan. Under this programme, water supply projects at Balimela, Kamakhyānagar, Nayagarh, Chandbali, Panposh, Polsara, Malkangiri, Junagarh, Boudh, Balugan and Deogarh are under implementation. A proposal for a water supply project for Kantabanjhi has been sent to Government of India for approval.

### **URBAN SANITATION**

15.39 Growing urbanisation and growth of slums have given rise to problems such as water logging, congestion in discharge of drainage water, accumulation of garbage etc. Underground sewerage clearance facilities have been provided in the developed areas of 5 towns namely Bhubaneswar, Puri, Cuttack, Sunabeda and Rourkela (steel township) and cover 4.22 lakh people in these urban centres. The sewerage facilities in Sunabeda and Rourkela steel township are being maintained by Hindustan Aeronautics Limited and Rourkela Steel Plant respectively. The State has become a pioneer in treating waste water through evapo-transpiration at Puri.

15.40 Sulabha International Social Services Organisation (SISSO) has been associated with implementation of sanitation programme in both urban and rural areas in the State. Since inception of its operation in Orissa in 1981-82, the organisation has constructed 125 public toilets in 95 towns. The organisation has also completed conversion of 30,000 low cost dry latrines into water sealed latrines apart from constructing 5,900 new water sealed latrines. Sanitation activities in two medical colleges and a number of hospitals and public office buildings have been entrusted to Sulabh International.

## **SOCIAL WELFARE**

### **CHILD WELFARE**

15.41 The Integrated Child Development Scheme (ICDS) is being implemented in the State through 279 ICDS projects in 261 blocks. The scheme offers a package of health care services covering supplementary nutrition, immunisation, pre-school education, health check up, referral services, and health education to children within the age group of 0-6 years. There are 28,351 anganwadi centres under these ICDS projects. The number of beneficiaries covered under ICDS during 1997-98 and 1998-99 is indicated in Table 15.5.

Table 15.5

## Beneficiaries covered under ICDS during 1997-98 and 1998-99

(In thousand)

Sl No.	Name of the scheme	Beneficiaries covered during	
		1997-98	1998-99
1	2	3	4
1	Supplementary nutrition	1671.20	2001.57
2	Immunisation-refer to Table 15.4		
3	Health check-up (per month)	258.79	265.64
4	Nutrition and health education	286.72	300.68
5	Referral services	69.14	-
6	Pre-school education	705.32	721.20

Source : Women and Child Development Department, Orissa

15.42 Balwadis and creches are being maintained in non-ICDS blocks and urban areas of the State by NGOs, where children within the age group of 0-6 years are provided nutritional support, health care and education. Under the scheme, 121 balwadis and 2 creche centres are functioning. The Government provide maintenance grants to the concerned NGOs.

15.43 Orphanages for orphans and destitute children between the age group of 5-18 years are being managed by NGOs with 90% financial assistance from the Government. Children in these orphanages are provided with food, clothing, general education, medical check-up and vocational training to bring them up as good citizens. During 1998-99, 87 balashrams (orphanages) were being managed by NGOs. Three of these institutions have been recognised by the State Government for sponsoring adoption of destitute and orphan children by host families within India and abroad.

15.44 The Orissa State Council for Child Welfare is implementing a scheme called Care and Protection of Street Children since 1990-91 through NGOs to provide integrated community based non-institutional basic services for the development of street children.

15.45 Delinquent juveniles are placed in Observation Homes, Special Homes and Juvenile Homes in order to bring them to the mainstream of society. Two Observation Homes, one at Rourkela and the other at Berhampur, and a Central Home at Berhampur are maintained by the Government. 12 Observation Homes are being managed by NGOs.

15.46 In order to increase enrolment and reduce the number of drop-outs in primary schools, and to improve the nutritional status of children, Government have introduced a Mid-day Meal programme since July 1, 1995. During 1998-99, 45,06,299 primary students have been benefited with an expenditure of Rs.3,773.33 lakh. Under Special Nutrition Programme (SNP), nutritious food is supplied to children in the age group of 0-6 years and expectant mothers in ICDS blocks. During 1998-99, 11,60,782 beneficiaries have been covered under SNP with an expenditure of Rs.29.69 crore.

**WELFARE OF THE HANDICAPPED**

15.47 Under the scheme Welfare of Handicapped, the State Government, with the financial support of Government of India, implements welfare schemes for blind, deaf and mentally retarded children to bring these children into the mainstream of society. The handicapped children are imparted special training in special schools through trained teachers. There are at present 50 special schools for handicapped children with 2,786 students. Out of 50 schools, 18 are for the blind, 21 for the deaf and 11 for the mentally retarded children. These schools are managed by NGOs with financial support from Government.

15.48 Under the scheme Special Appliances for the Handicapped, disabled persons are supplied with modern aids and appliances like wheel chairs, motorised bicycles, tri-cycles, crutches, hearing aids, and other devices. A total of 2,226 disabled persons have been provided with special appliances under the scheme during 1998-99.

15.49 To encourage disabled students to pursue education, scholarships are being awarded from Class I to the university level. During 1998-99, scholarships were provided to 3,629 disabled students. Disabled persons need specialised training so that they can find suitable employment. Accordingly, it has been decided to set up a special ITI for disabled persons. There are 7 training centres for training disabled persons. The disabled and blind are awarded pension at the rate of Rs.100 per month.

15.50 For imparting training to the teachers of the handicapped, three training centres have been established in the State. One of these, for teachers of the visually impaired persons has been established in collaboration with the National Institute for Visually Handicapped (NIVH), Dehradun. Another training centre, for the teachers of the hearing impaired, has been established in collaboration with the National Institute for Hearing Handicapped (NIHH), Bombay. One training centre for the teachers of the mentally handicapped is being run by an NGO.

**SOCIAL SECURITY MEASURES**

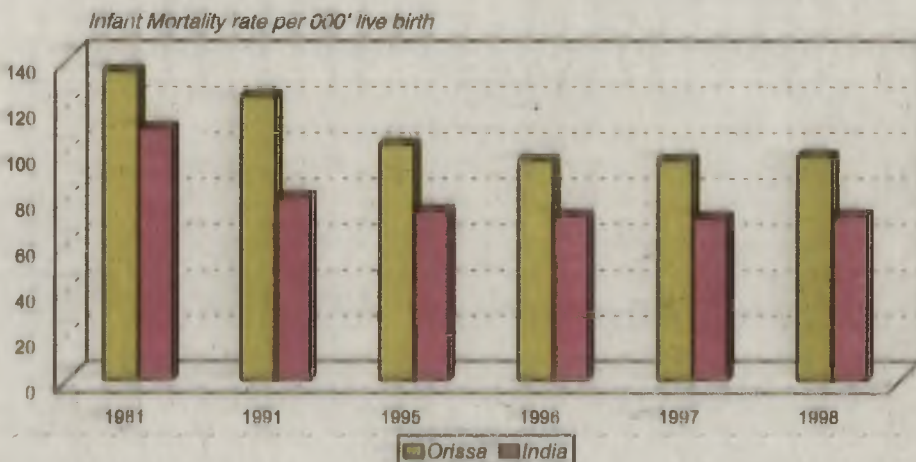
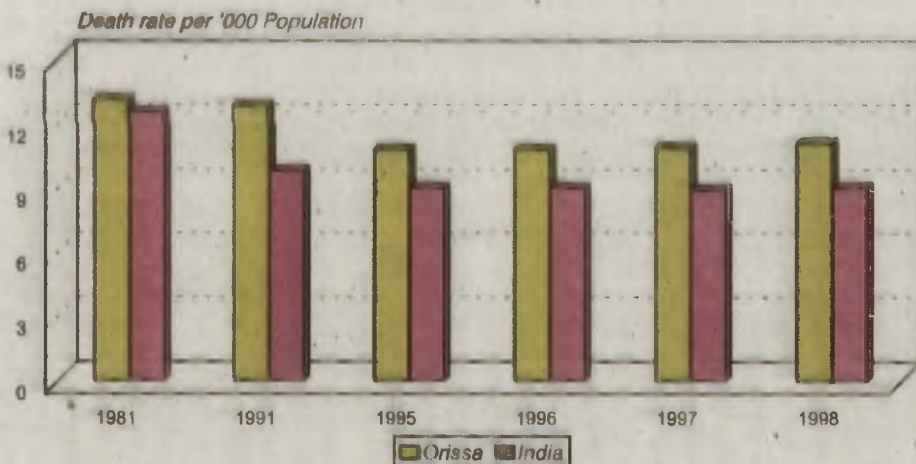
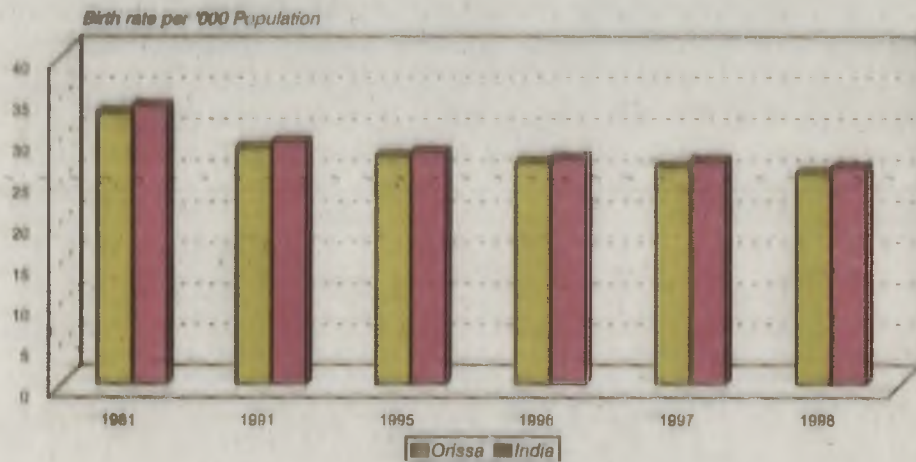
15.51 The National Old Age Pension (NOAP) scheme has been introduced by Government of India with effect from August 15, 1995 for providing relief to old persons above 65 years of age. Government of India provide Rs.75 per month and the State Government provide Rs.25 per month to each beneficiary under the above scheme. During 1998-99 as against the target of 3,33,400 beneficiaries, 3,32,286 beneficiaries including 1,47,184 women, have been covered under the scheme with an expenditure of Rs.3779.96 lakh. Under the State's Old Age Pension Scheme, 5,24,980 beneficiaries including 2,96,600 women have been covered during 1998-99 with an annual expenditure of Rs.6478.86 lakh.

15.52 The State Government also undertaken measures to rehabilitate destitute old men and women by establishing Old-Age Homes, Short Stay Homes and Day Care Centres through NGOs. During 1998-99, there were 31 Old-Age Homes, 29 Short Stay Homes, and 69 Day Care Centres in the State. The capacity of each Old Age Home, Short Stay Home and Day Care Centre was 25, 30 and 50 persons respectively.



*Birth rate, Death rate, Infant Mortality rate  
in Orissa and at the All India level*

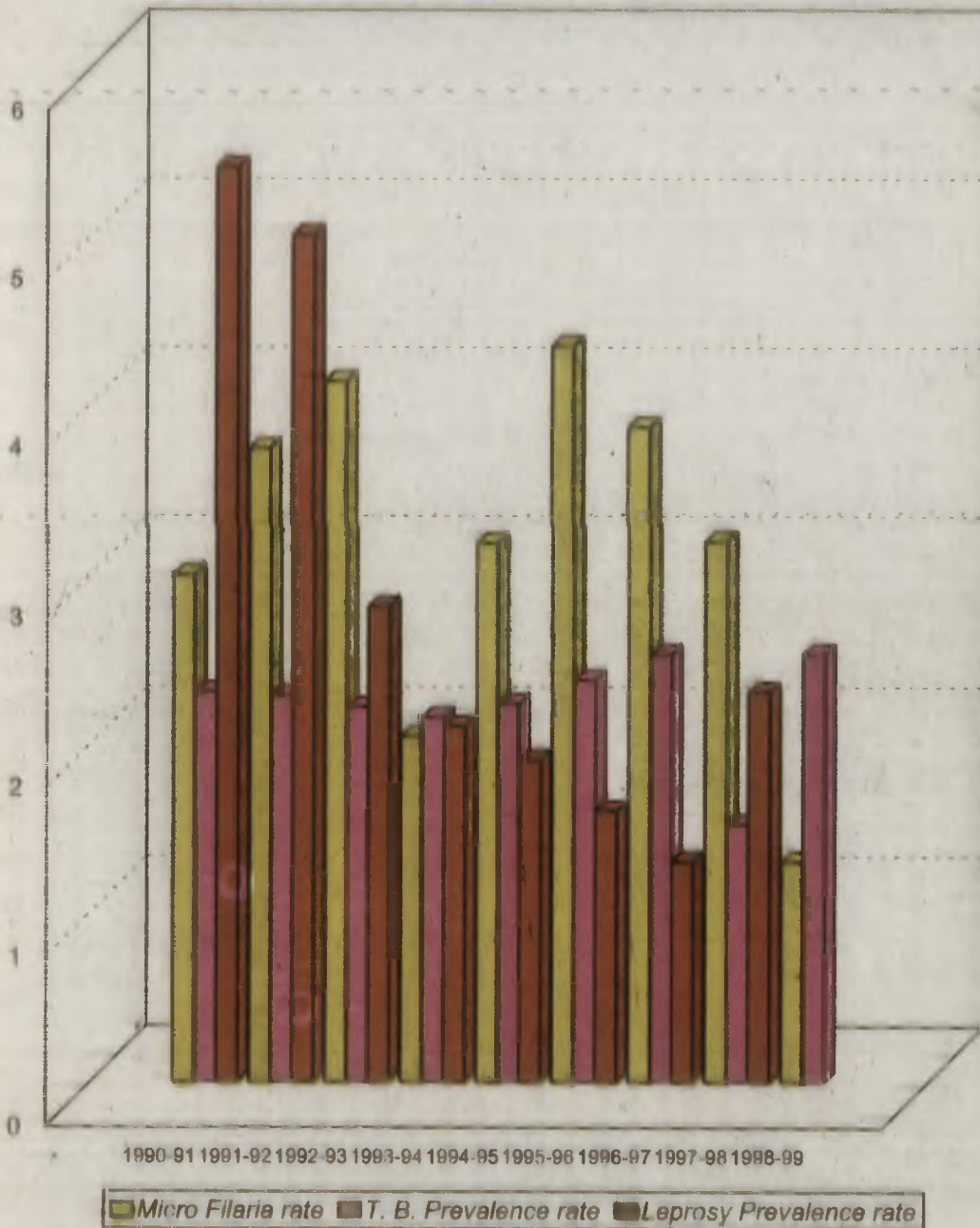
*( 1981 - 1998 )*



*Figure - 1*

*T. B. Prevalence Rate, Leprosy Prevalence Rate and  
Micro Filaria Rate in Orissa*

*( 1990-91 to 1998-99 )*



*Figure - 2*

## CHAPTER 16

### PRICES AND PUBLIC DISTRIBUTION

16.01 A stable price regime with mild inflationary pressure is said to stimulate economic development, particularly in economies where resources are substantially under-employed. But persistent and unchecked rise in prices engenders economic uncertainty and social instability and adversely affects the prospects of economic growth. A Public Distribution System ensures availability of essential commodities to the weaker sections of the society at reasonable prices and provides insurance against instability when inflationary pressures can not be controlled. The inflation rate in the country has remained at single digit level since 1995-96

#### WHOLESALE PRICE INDEX (WPI)

16.02 The Wholesale Price Index at the all India level is constructed by the Central Statistical Organisation of the Government of India. The annual rate of inflation based on Wholesale Price Index was 2.1% in September 1999 against 8.4% recorded during September 1998. The wholesale Price Index increased by 1.2% during September 1999 over August 1999. Table 16.1 shows the trend of Wholesale Price Index (base year 1981-82=100) from 1990-91 to 1998-99. The Wholesale Price Index for all commodities reached a level of 352.4 during 1998-99 as against 329.8 during 1997-98 registering an increase of 6.9%. The annual rise in WPI during 1990-91, 1991-92, 1992-93 and 1994-95 was double digits. However, during the years 1993-94, 1995-96, 1996-97, 1997-98 and 1998-99 it was maintained at single digit level

16.03 Table 16.1 shows that the WPI for primary articles has reached the level of 379 during the year 1998-99 recording an increase of 11.7% over the previous year. Fuel, power, light and lubricants reached a level of 381.2 in the year 1998-99 registering an increase of 4.2% over the previous year. Similarly in case of manufactured products, the WPI moved up to 331.9 showing a rise of 4.5% during the year 1998-99 over the previous year.

**Table 16.1**  
**Index Number of Wholesale Prices in India by Major Groups**

(Base 1981-82=100)

Sl No	Year	Primary articles				Fuel, power, light, lubricants	Manufactured products	All commodities	
		Food	Non-food	Minerals	Total			Index	% rise over previous year
1	2	3	4	5	6	7	8	9	10
1	1990-91	200.6	194.2	109.0	184.9	175.8	182.8	182.7	10.3
2	1991-92	241.1	229.2	113.5	218.3	199.0	203.4	207.8	13.7
3	1992-93	271.0	228.7	116.1	234.6	227.1	225.6	228.7	10.1
4	1993-94	284.4	248.9	233.9	250.9	262.4	243.2	247.8	8.4
5	1994-95	312.7	299.0	143.6	283.2	280.4	268.8	274.7	10.9
6	1995-96	335.7	321.9	153.5	304.1	285.4	293.1	295.8	7.7
7	1996-97	371.8	328.7	157.3	328.4	320.1	303.8	312.8	5.7
8	1997-98	388.0	340.5	162.9	339.5	365.7	317.5	329.8	5.4
9	1998-9(P)	440.8	376.4	162.0	379.1	381.2	331.9	352.4	6.9

*P - Provisional*

Source : Office of Economic Advisor, Ministry of Industries, Government of India.

16.04 The point to point Wholesale Price Index for all commodities with 1981-82 base from April to September 1999 has been presented in Table 16.2.

**Table 16.2**  
**Point to Point Wholesale Price Index for All Commodities**

(Base 1981-82=100)

Sl. No.	Month	1998	1999	Percentage rise over previous year during the month
1	2	3	4	5
1.	April	340.5	355.2	4.3
2.	May	343.8	356.8	3.8
3.	June	347.5	358.3	3.1
4.	July	351.4	359.3	2.2
5.	August	353.2	359.4	1.8
6.	September	356.1	363.7	2.1

Source : Monthly Review of the Indian Economy August & October 1999 (CMIE)



16.05 The monthly average of the rise in WPI computed on a point to point basis from the month of April 1999 to September 1999 has by and large shown a decreasing trend. While the variation in WPI was 4.3% in April 1999 over April 1998, it was 2.1% in September 1999 over September 1998. The rate of inflation remained at single digit level from April to September 1999.

### CONSUMER PRICE INDEX (CPI)

16.06 The Consumer Price Index (CPI) measures the overall price movement of goods and services at the ultimate consumption stage. It reflects the price at which the commodities are available to the consumers. Consumer Price Index numbers are constructed for specified regions or sections of the people.

16.07 The All India Consumer Price Index for industrial workers and the same for two selected centres of Orissa, namely Barbil and Rourkela, from 1991-92 to 1998-99 and from April 1999 to August 1999 are presented in Table 16.3.

**Table 16.3**  
**Consumer Price Index for Industrial Workers at All India level and for Selected Centres in Orissa**

(Base 1981-82 = 100)

Sl. No	Year/ Month	All India (General)	Orissa	
			Barbil (General)	Rourkela (General)
1	2	3	4	5
1.	1991-92	219	215	198
2.	1992-93	240	236	220
3.	1993-94	258	253	236
4.	1994-95	284	275	258
5.	1995-96	313	302	284
6.	1996-97	342	326	311
7.	1997-98	366	341	347
8.	1998-99 (P)	414	380	396
i)	April 1999	415	378	387
ii)	May 1999	419	384	390
iii)	June 1999	420	383	390
iv)	July 1999	424	394	395
v)	August 1999	426	383	396

Source : i. Labour Bureau, Ministry of Labour, Simla, Govt. of India.

ii. Monthly Review of the Indian Economy, October 1998 (CMIE).

16.08 Table 16.03 reveals that the All India Consumer Price Index for industrial workers has increased from 219 in 1991-92 to 414 in 1998-99, recording a rise of 89.0% over the period. During the same period, the general index for Barbil and Rourkela has shown a rise of 76.7% and 100.0% respectively. However indices for both Barbil and Rourkela have remained well below the All India index throughout this period.

16.09 A comparative picture of CPI for industrial workers in respect of groups of items at the all India level and in respect of two centres of Orissa during July 1998 and July 1999 has been presented in Table 16.4.

**Table 16.4**  
**Consumer Price Index for Industrial Workers**

(Base 1981-82 = 100)

Sl. No	Group of Items	All India			Orissa					
					Barbil			Rourkela		
		July 1998	July 1999	Variation(%)	July 1998	July 1999	Variation(%)	July 1998	July 1999	Variation(%)
1	2	3	4	5	6	7	8	9	10	11
1.	Food	444	443	(-) 0.2	389	408	4.9	394	391	(-) 0.8
2.	Pan, supari, tobacco, intoxicants	509	561	10.2	520	525	1.0	604	609	0.8
3.	Fuel and light	348	371	6.6	406	473	16.5	627	610	(-) 2.7
4.	Housing	398	436	9.5	239	344	43.9	433	439	1.4
5.	Clothing, bedding, footwear	287	299	4.2	283	291	2.8	267	288	7.9
6.	Miscellaneous	382	410	7.3	345	366	6.1	355	375	5.6
7.	General	411	424	3.2	368	394	7.1	390	395	1.3

Source : Labour Bureau, Ministry of Labour, Simla, Govt. of India

16.10 Table 16.4 shows that the point to point variation in Consumer Price Index for industrial workers for Barbil and Rourkela in respect of food items in July 1999 over July 1998 is 4.9% and (-) 0.8% respectively as compared to the all India variation of (-)0.2%. In case of clothing, bedding and foot-wear, the all India index registered an increase of 4.2% whereas in case of Barbil and Rourkela it increased by 2.8% and 7.9% respectively during the same period.

16 11 Table 16.5 depicts the trend of CPI for agricultural labourers for Orissa and at the all India level. Figures for the food and general indices for agricultural labourers reached the level of 283 and 284 for Orissa during 1998-99 registering a rise of 10.5% and 9.2% respectively over the previous year. The all India figures for the food and general indices for agricultural labourers during the same period registered a larger increase than for Orissa at 11.0% and 10.6% respectively.

Table 16 5

## Consumer Price Index for Agricultural Labourers of Orissa and All India

(Base 1986-87 = 100)

Sl. No.	Year	Orissa		India	
		Food	General	Food	General
1	2	3	4	5	6
1	1991-92	163	165	164	163
2	1992-93	172	175	185	183
3	1993-94	181	185	190	189
4	1994-95	204	208	213	212
5	1995-96	235	234	236	234
6	1996-97	247	249	260	256
7	1997-98	256	260	264	264
8	1998-99	283 (10.5)	284 (9.2)	293 (11.0)	292 (10.6)

Figures in brackets indicate percentage change in 1998-99

Source : Labour Bureau, Ministry of Labour, Simla, Govt. of India

16 12 The Consumer Price Index for urban non-manual employees in Orissa is being estimated at two selected centres, namely Cuttack and Sambalpur. In 1998-99, the Consumer Price Index numbers for urban non-manual employees in Cuttack and Sambalpur centres were 331 and 301 respectively which were lower than Consumer Price Index of 337 for urban non-manual employees at the all India level.

## PUBLIC DISTRIBUTION SYSTEM (PDS)

16.15 The public distribution policy of the State Government follows a three pronged strategy of ensuring price stability, ensuring availability of food grains, sugar and kerosine oil to consumers, and implementing a special programme for drought prone and tribal areas. During the year 1998 (as on 31.12.98), essential commodities were distributed to 82,44,924 ration card holders (69,107,01 in rural areas and 13,34,223 in urban areas) through 24,517 fair price shops (20,875 in rural areas and 3,642 in urban areas). The Revamped Public Distribution System (RPDS) was implemented in 143 ITDP and DPAP blocks till 31st May 1997 and thereafter w.e.f. 01.06.97 it was redesignated as Targeted PDS with focus on the poor. According to this new system adopted by the State Government, all the rural families below the poverty line enlisted in the BPL list in all the 143 ITDP and DPAP blocks are supplied with 10 kg of common rice per family per month at the specially subsidised price of Rs.2.00 per kg. Until 28.01.99, all families above the poverty line in these blocks were also supplied with 10 kg rice per family per month at subsidised price though at a slightly higher rate of Rs.4.00 per kg. In the remaining 171 blocks, all rural families below the poverty line having annual income not exceeding Rs.6000 and enlisted in the BPL list are supplied with 10 kg of common rice per family per month at the rate of Rs.4.00 per kg. Besides, all the families (ration card holders) below the poverty line in urban areas are supplied with 10 kg of common rice per family per month at the subsidised rate of Rs.4.00 per kg.

16.16 Government of India have allotted the following quantities of essential commodities to Orissa for distribution through PDS during 1996-97, 1997-98 and 1998-99

Table 16.8

## Allotment of Essential Commodities received from Government of India.

Sl. No.	Commodities	Unit	Receipt during		
			1996-97	1997-98	1998-99
1	2	3	4	5	6
1	Sugar	Lakh MT	1.79	1.68	1.64
2	Wheat	Lakh MT	4.51	2.19	4.35
3	Rice	Lakh MT	10.02	5.95	6.57
4	Imported Edible Oil	Lakh MT	0.07	0.08	0.11
5	Kerosine Oil	Lakh KL	3.00	3.11	4.07

Source: Food Supplies and Consumer Welfare Department, Govt. of Orissa.

16.17 The average wholesale price for the State of some essential agricultural commodities for the period 1991-92 to 1997-98 is presented in Table 16.9. The table shows that the wholesale prices of all commodities have risen gradually over the period. The prices of mung, biri, groundnut, til and jute have fallen in 1997-98 when compared to prices in 1996-97 while those of other commodities have risen over the year.

16.18 In case of paddy (common) and wheat, the wholesale price was Rs 229.68 and Rs 359.19 per quintal in the year 1991-92 which increased to Rs 418.03 and Rs 634.37 per quintal in 1997-98. The percentage increase was 82.0 and 76.6 respectively during the period. It would be of interest to note that support prices for paddy (common) and wheat were Rs 230 per quintal and Rs 225 per quintal in the year 1991-92 which increased to Rs 415 per quintal and Rs 455 per quintal in 1997-98 showing an increase of 80% and 102% respectively during the period.

**Table 16.9**  
**Average Wholesale Prices for the State of some Essential Agricultural Commodities in Orissa from 1991-92 to 1997-98.**

Name of the commodity	(Rupees/quintal)						
	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
1	2	3	4	5	6	7	8
Paddy (Common)	229.68	238.69	264.28	308.44	362.00	403.45	418.03
Wheat	359.19	385.71	485.59	524.94	540.84	623.83	634.37
Ragi	197.43	238.48	239.66	342.00	350.04	407.21	413.31
Maize	135.18	169.53	219.72	328.52	359.23	409.96	426.53
Mung	813.47	847.52	894.85	1126.21	1424.19	1521.00	1494.76
Biri	615.82	576.10	661.35	1134.03	1423.42	1310.64	1191.70
Gram	652.68	759.96	919.54	1051.60	1163.39	1208.12	1309.44
Kulthy	319.43	337.77	403.72	468.87	580.56	623.59	642.75
Til	885.62	925.38	1009.89	1280.33	1370.32	1408.00	1397.26
Mustard seeds	853.87	861.08	954.49	1081.75	1242.98	1264.01	1496.59
Groundnut	833.88	689.25	748.15	1012.81	1136.28	1252.27	1181.65
Potato	165.63	155.15	187.01	216.40	326.73	323.73	369.84
Jute	310.39	337.45	417.72	471.07	920.25	938.51	886.80
Gur	443.60	471.93	602.56	803.35	815.40	919.68	1058.53
Dry chillies	2771.64	2030.01	1959.25	3136.34	3885.04	3405.58	3758.36

*Note : Weighted average price.*

*Source : Directorate of Economics and Statistics, Orissa.*

16.19 The average retail prices for the State of selected essential commodities for the period from 1994 to 1999 are presented in Table 16.10. The table shows that the retail prices of all commodities have risen over the period. The average retail prices for arhar dal, mustard oil, vanaspati, sugar, gur, potato and onion decreased in 1999 as compared to retail prices in 1998. Retail price of other commodities have risen over the year.

**Table 16.10**  
**Average Retail Prices for the State of some Essential Commodities**  
**in Orissa from 1993 to 1998**

(Rs./Kg., Rs./Litre)

Name of the Commodities	1994	1995	1996	1997	1998	1999 (P)
1	2	3	4	5	6	7
Rice (common)	6.37	7.14	7.63	8.22	8.67	9.97
Wheat	5.02	5.15	5.52	6.81	7.10	8.37
Mung Dal	17.60	20.02	22.50	23.45	26.07	26.79
Arhar Dal	18.09	24.53	27.20	22.06	34.57	31.71
Mustard Oil	37.38	40.09	39.24	40.37	68.50	46.86
Ground nut Oil	48.25	48.81	48.86	39.86	66.75	57.20
Vanaspati	41.92	44.28	41.86	39.86	53.29	37.71
Sugar (free sale)	14.04	13.48	14.26	15.21	16.00	15.75
Gur (local)	11.99	10.41	10.77	11.60	14.57	14.21
Salt	1.45	2.02	2.14	1.78	1.91	2.19
Potato	3.67	4.29	5.05	3.84	9.07	5.79
Onion (ulli)	4.60	5.28	5.26	5.47	32.34	10.00
Atta	6.17	6.43	7.33	8.36	8.74	10.74
Maida	6.76	6.97	8.27	9.36	9.74	10.93
Suji	6.92	7.20	8.33	9.72	10.71	11.79

*P : Provisional*

*Source : Food Supplies and Consumer Welfare Department, Orissa.*



# CHAPTER 17

## SCIENCE AND TECHNOLOGY

17.01 Science and technology play a vital role in the process of development and transformation of a traditional agrarian economy into a modern economy. Development of science and technology in the State has the following primary objectives.

- i) To keep abreast of the latest developments in the field of science and technology and to take steps for dissemination of these among institutions like industries, research laboratories, universities and among scientists and technologists.
- ii) To co-ordinate the research and development programmes of different departments, industrial and research institutions, and to promote scientific and technical co-operation among these institutions and agencies.
- iii) To formulate and assist research and application programmes in the field of science and technology.
- iv) To encourage, develop and promote the use of renewable sources of energy including energy plantations.
- v) To popularise Remote Sensing Technology (RSI) and to make effective use of it.
- vi) To popularise science and technology among the people in general and students in particular so as to inculcate in them a scientific temper and attitude.
- vii) To promote scientific and technological education in selected institutions of higher specialisation.
- viii) To promote and popularise appropriate rural technologies.
- ix) To develop library and documentation centres for development of science and technology.
- x) Science and technology communication through awareness promotion, support to institutions for seminars and workshops etc., development of Science Centres and administration of Pathani-Samani Planetarium (PSP).
- xi) To conduct Science and Technology Entrepreneurship Development Programmes (STEDP).
- xii) To take up Energy Audit and Energy Conservation Programmes (EA/EC).
- xiii) To implement Integrated Rural Energy Programmes (IREP) and Uragram Programmes (UP) in the State.

**STATE COUNCIL ON SCIENCE AND TECHNOLOGY (SCST)**

17.02 The State Council on Science and Technology is the apex organisation which has been constituted to advise Government on appropriate policies for development of science and technology in the State. It identifies key areas, reviews implementation of programmes, and provides financial support for application oriented research projects and for transfer of appropriate technology. Financial support amounting to Rs.5.93 lakh for five research projects was provided during 1998-99.

17.03 The Department has provided financial support amounting to Rs.31.47 lakh to 80 research projects so far in order to encourage application oriented research and for transfer of appropriate technology. By the end of 1998-99, 132 scientists had availed financial assistance to the tune of Rs.16.20 lakh to participate in national and international workshops and seminars.

**POPULARISATION OF SCIENCE PROGRAMME**

17.04 The basic objective of the Popularisation of Science Programme is inculcation among the people in general and student community in particular of a scientific attitude towards life, development of a scientific temper in the society, and eradication of superstition. This programme is organised by the Orissa Vigyan Academy (OVA). Financial support is provided under the programme for organisation of symposia, workshops, science exhibitions, competitions and fairs. During 1998-99 five eminent scientists of the State have been conferred with the Samanta Chandra Sekhar Award for their contribution to research. Besides, six issues of the science magazine, "Bigyan Diganta" were published during the year.

17.05 Financial assistance is also being provided for organising Entrepreneurship Awareness Camps and Training under Entrepreneurship Development Programme for persons with scientific and technical background to enable them to set up their own enterprise. During the year 1998-99, financial assistance of Rs.1.00 lakh has been provided to the College of Engineering and Technology, Bhubaneswar under this programme.

17.06 The State Government in collaboration with the National Council of Science Museums (NCSM) has established a Regional Science Centre (RSC) at Bhubaneswar in order to provide activity based learning facilities to inculcate the spirit of enquiry and scientific temper among the students and people in general. After commissioning of the first Sub-Regional Science Centre (SRSC) at Dhenkanal in 1995, action has been initiated for establishment of a second SRSC at Baripada.



**PATHANI SAMANT PLANETARIUM (PSP)**

17.07 The planetarium, named after Pathani Samanta, a great luminary in astro-science, was established at Bhubaneswar in 1990 with the aim of creating awareness in astronomy, astrophysics and space science among the people. During 1998-99, the planetarium conducted 1,272 shows which were witnessed by 95,856 viewers as against 1,412 shows witnessed by 1,27,336 viewers during 1997-98. A popular science magazine in Oriya named "Chhayapath" is also being published by the planetarium.

**INSTITUTE OF LIFE SCIENCES**

17.08 Institute of Life Sciences undertakes fundamental, applied and interdisciplinary research in frontier areas of Life Sciences and provides guidance to scholars pursuing Ph.D. and M. Phil. degrees. The thrust areas of the research conducted by the Institute are genetic engineering, bio-technology, cancer and ageing, medical genetics, plant and animal tissue culture in the field of Molecular Biology and dynamics of plants and animals in Chilika Lake, mechanism of adaptation by plants and animals to environmental stress, and brackish water aquaculture in the field of Environmental Biology. During the year 1998-99, the Institute organised a National Symposium on "Cellular Responses to Stress and Defence Mechanisms" at Bhubaneswar.

**ORISSA REMOTE SENSING APPLICATION CENTRE (ORSAC)**

17.09 Orissa Remote Sensing Application Centre (ORSAC) has, since its inception, collected valuable information on natural resources and environment through satellite imagery. The Centre undertook a number of projects during 1998-99 including 1) Integrated Mission for Sustainable Development, 2) Watershed Development in KBK Districts, 3) Ground Water Targetting, 4) Crop Acreage and Production Estimation (CAPE) and Forecasting Agricultural Output using Space Agro-meteorology and Land-based Observations (FASAL); 5) Site Selections for Tea/ Coffee Plantations. 6) Sericulture Projects 7) Land Transformation Studies in Catchment Areas of Chilika Lagoon, 8) International Geosphere Biosphere Programme (IGBP) of Chilika Project, 9) Elephant Habitat Mapping, 10) National (Natural) Resources Information System (NRIS), 11) Preparation of Digital Watershed Atlas, 12) Marine Data Centre (MDC) and 13) Potential Fishing Zone Forecast.

**ORISSA RENEWABLE ENERGY DEVELOPMENT AGENCY (OREDA)**

17.10 Orissa Renewable Energy Development Agency (OREDA) functions as the State nodal agency for promotion of various renewable energy systems and energy saving devices. The State Government provides financial support in the form of grants-in-aid to various programmes of the Agency.

17.11 The National Project on Biogas Development (NPBD) is a high priority Central Sector Scheme. This programme is being implemented through District Rural Development Agencies (DRDAs) and some selected voluntary organisations. During 1998-99, 6064 biogas plants were constructed in the State against the target of 8000. In addition, four high capacity biogas plants were constructed during 1998-99 for community institutional use.

17.12 National Programme on Improved Chullah is being executed in the State since 1983-84 under the 20 Point Programme and Minimum Needs Programme with the financial assistance of both Central and State Governments to provide smokeless improved chullahs. During 1998-99, 1,01,565 improved chullahs were installed/sold in the State against the target of 1,00,000 chullahs.

17.13 Under Solar Photo-Voltaic Programme (SPVP) lighting of rural roads and households with solar light, operation of TV sets and radios through solar energy, and use of solar photo voltaic lanterns are taken up in areas which do not have ready access to electricity. Government of India as well as State Government provide subsidy for this programme. During 1998-99, 3,000 street lighting systems, 193 home lighting systems and 870 solar lanterns were installed / sold in the State.

17.14 The Solar Thermal Extension Programme (STEP) popularises energy saving devices like Solar Water Heating Systems, Solar Distillation Systems and Solar Cookers etc, by providing these at subsidised rates. During 1998-99, Solar Water Heating Systems of 5,200 litres per day capacity, Solar Distillation Systems of 10 litres per day capacity and 300 Solar Cookers were installed/sold in the State.

17.15 Integrated Rural Energy Planning Programme (IREP) is in operation in selected blocks of the State since 1986-87 with the objective of developing institutional capability for planning and implementing area based Integrated Rural Energy Programmes through optimum use of different types of energy sources. Till 1997-98, 16 blocks have been taken up under this programme. Government of India have accorded sanction to bring 45 additional blocks under the purview of IREP during 1998-99 covering 29 districts of the State.

17.16 OREDA has taken steps for utilising fly ash from thermal power plants for construction activities. It is also proposed to set up plants/projects for treatment/management of urban solid and organic wastes. Furthermore, in view of the vast potential of utilising biomass as fuel, OREDA has initiated a programme for undertaking survey of biomass potential in different areas of the State. During 1998-99, three blocks were surveyed. One village (Similiguda) in Kashipur Block of Rayagada district has been electrified through a biomass gassifier during 1998-99. OREDA has executed an agreement with India Renewable Energy Development Agency (IREDA) to act as Business Development Associate in this activity.

### **INSTITUTE OF MATERIAL SCIENCES**

17.17 Institute of Material Sciences came into being in 1996-97. The basic objective of the Institute is to provide facilities in the State for research in the frontier areas of material science and to conduct inter-disciplinary research on special materials. During 1998-99, the Institute published seven research papers in international and national journals. The Institute also organised talks by scientists of other research and development institutions at Bhubaneswar.



## CHAPTER 18

### EXPORT PROMOTION

18.01 Orissa has a rich export potential in mineral, marine and agro-forestry products and in handloom products and handicrafts. The Industrial Policy, 1996 formulated by the Government of Orissa accords high priority to export promotion.

18.02 There has been a noticeable increase in exports from the State during the last five years as can be seen from Table 18.1

**Table 18.1**  
**Value of Goods Exported from Orissa to Foreign Countries**

		(Rs. in lakh)				
Sl No.	Items	1994-95	1995-96	1996-97	1997-98	1998-99(P)
1	2	3	4	5	6	7
1	Metallurgical products	75220.49 (56.35)	99307.58 (56.01)	92722.35 (52.67)	109506.82 (58.08)	102000.74 (53.98)
2	Engineering, chemical and allied products	13980.38 (10.47)	18169.26 (10.25)	20816.78 (11.82)	22614.38 (11.99)	18910.88 (10.00)
3	Mineral products	22686.31 (16.99)	29202.04 (16.47)	33690.06 (19.14)	28089.50 (14.90)	30977.16 (16.39)
4	Agriculture and forest products	220.56 (0.17)	4904.48 (2.77)	2758.75 (1.57)	739.55 (0.39)	1692.06 (0.89)
5	Marine products	16375.38 (12.27)	18962.07 (10.70)	24393.41 (13.86)	25527.09 (13.54)	28578.17 (15.12)
6	Handloom and textile products	4794.99 (3.59)	5760.84 (3.25)	1463.68 (0.83)	1953.23 (1.04)	1478.38 (0.78)
7	Handicraft products	13.56 (0.01)	27.10 (0.02)	36.08 (0.02)	49.69 (0.03)	61.83 (0.03)
8	Computer software, computer hardware and other electronic goods	142.32 (0.11)	103.33 (0.06)	152.40 (0.09)	42.26 (0.02)	5363.78 (2.84)
9	Others	57.70 (0.04)	852.13 (0.48)	11.47 (0.01)	5.90 (0.01)	0.31 (negligible)
<b>Total</b>		<b>133491.69</b> <b>(160.00)</b>	<b>177269.83</b> <b>(160.00)</b>	<b>178044.98</b> <b>(100.00)</b>	<b>188528.42</b> <b>(100.00)</b>	<b>189061.09</b> <b>(100.00)</b>

*P : Provisional*

*Source : Directorate of Export Promotion & Marketing, Bhubaneswar*

18.03 The data presented in the above table shows that the total value of goods exported from Orissa increased every year during the period from 1994-95 to 1998-99 with the exception of 1996-97 when there was a marginal decline. During the year 1998-99, the value of goods exported to foreign countries was Rs 1890.61 crore which is 0.3% more than the value of goods exported during the previous year.

18.04 During 1994-95, the value of goods exported from the country was Rs 82673.40 crore out of which the contribution of Orissa was Rs.1334.92 crore amounting to 1.6%. During 1998-99, the value of goods exported from the country was Rs.141603.53 crore including Rs.1890.61 crore from Orissa. The proportion of the value of goods exported from Orissa to the value of exports from India declined to 1.3% during 1998-99.

18.05 Item wise analysis of the value of goods exported from Orissa shows that during 1998-99 except for metallurgical products, engineering and chemical and allied products, and handloom and textile products, the value of exports under all other categories has increased over the previous year. However the above three categories constitute about 65% of the total exports from the State. Slump in demand and prices in the international market is one of the major factors responsible for fall in the value of metallurgical and mineral products exported. The value of computer software exported during 1998-99 rose to Rs.53.43 crore from a negligible level during the previous year. This industry has enormous potential and its contribution to exports from the State is expected to rise at a rapid rate.

### **EXPORT AND IMPORT THROUGH PARADEEP PORT**

18.06 Among the major ports in India, Paradeep is the only cargo handling port in the State through which minerals, metallurgical products and fertilisers are being imported and exported. The quantum of export and import through Paradeep port from 1994-95 to 1998-99 is presented in Table 18.2. During 1998-99, 86.01 lakh MT of goods were exported through the port as against 88.14 lakh MT during 1997-98 registering a decline of 2.42% over 1997-98. On the other hand, 45.07 lakh MT of goods were imported through Paradeep port during 1998-99 as against 44.88 lakh MT during 1997-98 registering an increase of 0.42% over the previous year.

**Table 18.2**  
**Quantum of Export and Import through Paradeep Port**

(in lakh MT)

Sl. No.	Year	Quantity Exported	Quantity Imported	Percentage of Import to Export
1	2	3	4	5
1	1994-95	66.30	32.73	49.37
2	1995-96	70.59	41.96	52.44
3	1996-97	77.21	38.47	49.83
4	1997-98	88.14	44.88	50.92
5	1998-99	86.01	45.07	52.40

Source : Paradeep Port Trust, Paradeep.

18.07 Table 18.3 presents commodity-wise export through Paradeep port from 1994-95 to 1998-99. The table shows that the export of thermal coal and iron ore constituted a major share of total commodity exports. Out of the total export of 86.01 lakh MT, thermal coal and iron ore constituted 74.06% and 9.27% respectively during 1998-99. While the export of thermal coal increased by 5.05% the export of iron ore has decreased by 44.46% over the previous year.

**Table 18.3**  
**Commodity wise Export through Paradeep Port**

(in lakh MT)

Sl No	Name of the commodity	1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7
1	Iron ore	18.80 (28.36)	16.91 (23.96)	13.82 (17.90)	14.35 (16.28)	7.97 (9.27)
2	Thermal coal	41.18 (62.10)	42.32 (59.95)	50.06 (64.84)	60.64 (68.80)	63.70 (74.06)
3	Chrome ore	3.73 (5.63)	3.97 (5.62)	3.20 (4.14)	3.02 (3.43)	1.56 (1.81)
4	Charge chrome	1.04 (1.57)	0.76 (1.08)	1.17 (1.52)	1.00 (1.13)	0.87 (1.01)
5	Others	1.55 (2.34)	6.63 (9.39)	8.96 (11.60)	9.13 (10.36)	11.91 (13.85)
<b>TOTAL</b>		<b>86.30</b> <b>(100.00)</b>	<b>70.89</b> <b>(100.00)</b>	<b>77.21</b> <b>(100.00)</b>	<b>88.14</b> <b>(100.00)</b>	<b>86.01</b> <b>(100.00)</b>

Source : Paradeep Port Trust, Paradeep.

18.08 The fair-weather port at Gopalpur in Ganjam district was opened to traffic with effect from 27.02.1987. During 1998-99, 1.20 lakh MT ilmenite was exported through the port as against 1.45 lakh MT during 1997-98. The total cargo handled by the port also decreased from 2.01 lakh MT during 1997-98 to 1.20 lakh MT during 1998-99. An amount of Rs.2.00 crore was collected as revenue during the year and employment for about 1000 persons round the year and for about 3000 persons for six months in the year was created.

18.09 Considering the requirements of port-based steel plants and other industries which are coming up near the port, it has been decided to develop Gopalpur port into an all-weather port through private investment.

18.10 The State Government have decided to develop a mega port at Dhamara in Bhadrak district through private investment. An MOU has been signed with M/s International Sea Port Ltd. of Singapore in March 1997. It is expected that the port will become operational by the year 2003.

### **EXPORT PROMOTION INDUSTRIAL PARK (EPIP)**

18.11 Government of India in the Ministry of Commerce have sanctioned the establishment of an Export Promotion Industrial Park (EPIP) at Chandaka, Bhubaneswar with a project cost of Rs.25.50 crore. Central Government will provide Rs.10.00 crore towards the cost of the project and the balance (Rs.5.25 crore in cash and Rs.10.25 crore towards the cost of land) will be provided by the State Government. Industrial Infrastructure Development Corporation (IDCO) is the implementing agency for the project. It is proposed to establish 155 export oriented industrial units in the proposed EPIP. These units are required to export atleast 33% of their production. Two hundred and five acre of land has been acquired for the project and Rs.7.55 crore and Rs.5.25 crore have been released by the Central Government and the State Government respectively during 1998-99.

**EXPORT PROMOTION AND MARKETING**

18.12 The Directorate of Export Promotion and Marketing, Orissa is the nodal agency for providing marketing support to registered Industrial units and rate contract holding Industrial units and for rendering technical assistance for promoting export activities in the State. The Directorate provides overseas marketing information and maintains co-ordination with the Central Government, State Government and Export Promotion Agencies. It provides incentives in the form of export awards to the best exporters. It organises workshops and seminars, conducts training programmes, and organises publicity drives etc. every year. The Directorate also assists potential exporters by providing know-how. It also helps exporters by taking up their problems with EPCs, Commodity Boards and other organisations of the Government of India.

18.13 The Directorate registers reliable local Industrial units manufacturing store items of standard specifications. The Directorate has registered a total of 1865 industrial units comprising of 1859 small scale units and 6 medium scale units. It has concluded rate contracts in respect of 1107 items including sub items with 745 Industrial units upto the end of 1998-99. It has also undertaken 1076 technical inspections besides testing 14248 samples in its six laboratories during 1998-99 to ensure quality and has received a sum of Rs.12.91 lakh towards testing fees. It is obligatory on the part of State Government departments and their agencies to purchase their requirements of store items from the rate contract holders of the State. A separate wing in the Directorate assists in obtaining business orders from major procuring organisations like the Railways, Steel Authority of India Ltd., Hindustan Aeronautics Ltd. etc.

18.14 Orissa Small Industries Corporation has been accorded the status of an Export House by Government of India from 1994. Under its export activities, the Corporation is exporting products of small scale units such as readymade garments and handicrafts to U.S.A. and European countries. The achievement of the Corporation under the above export activities during 1992-93 to 1998-99 is valued at Rs.273.34 lakh.

**AGENCY-WISE EXPORT OF DIFFERENT ITEMS FROM ORISSA**

18.15 Item-wise and agency-wise export of different goods from Orissa during 1998-99 is presented in Table 18.4.



Table 18.4

## Item-wise Export of Goods form Orissa during 1998-99

Sl No.	Name of the Item	Quantity exported	Value of export (Rs. in crore)	Major exporters	Countries to which exported
1	2	3	4	5	6
1	Metallurgical Products	875732.07 MT	1020.01		
i)	Charge Chrome/ Ferro Chrome	169025.36 MT	329.17	Ferro Alloys Corporation, BBSR. Indian Metal and Ferro Alloys Ltd. BBSR. Indian Charge Chrome Ltd, BBSR. TISCO, Keonjhar Ispat Alloys Ltd. Balasore	France, Japan, Korea, Netherland, UK, USA, etc.
ii)	Aluminium/ Alumina	650807.00 MT	632.19	National Aluminium Co. Ltd. BBSR.	USA, Korea, Russia, China, Japan, Singapore, Indonesia, Bangladesh, Taiwan, Italy etc.
iii)	Silica (Ferro Manganese)	52810.18 MT	56.55	TISCO, Keonjhar Ispat Alloys Ltd. Balasore	Bangladesh, Japan, USA, Korea, Indonesia, etc.
iv)	Others (Sponge Iron, Pig Iron, M.S. Billet etc.)	3089.53 MT	2.10	Orissa Sponge Iron Ltd BBSR. Kalinga Iron Works. Keonjhar.	Nepal, Bangladesh and Bahrain.
2.	Engineering/ Chemical and Allied Products		189.11		
i)	Refractories and Products	19330.041 MT	31.21	Indo-Flogates Ltd., OCL Ltd., Sundargarh, TATA Refractories, Jharsuguda, Orissa Industries Ltd. Rourkela etc.	Dubai, Sweden, Japa Bangladesh, Brazil, Korea, Canada, UK, USA, Iran, Italy
ii)	Paper and Paper Products	13369.037 MT	32.92	J.K. Paper Mills Ltd. Rayagada, Emami Paper Mills Ltd. Balasore, Ballarpur Industries Ltd. Choudwar. OrientPaper Mill Ltd Jharsuguda, Mangalam Timber Product Ltd., Nawarangpur	Bangladesh, Kenya, UAE, Sudan, Pakista Singapore, Malaysia, Srilanka, Nepal etc.
iii)	Cement/ Clinker and Products	55465.000 MT	9.80	IICOL Cement Ltd OCL India Ltd. Sundargarh	Bangladesh, USA, U Sweden, Japan, Braz and Korea.

( Con

Table 18.4 ( Contd.)

Sl No.	Name of the Item	Quantity exported	Value of export (Rs. in crore)	Major exporters	Countries to which exported
1	2	3	4	5	6
	Others	*	115.18	Krishna Ferro Products Ltd., Hindustan Aeronautics Ltd., Oriplast Ltd. Balasore	Japan, Korea, China, Nepal, Bangladesh, etc.
	Mineral Products	1537986.407MT	309.77	MMTC, BBSR, International Mineral, Jajpur, Durga Exports, BBSR,	
	Charge chrome/ Chrome concentrate	696586.000 MT	225.38	Kalinga Minerals, Dhenkanal, OMC, BBSR, Ferro-Chrome Plant, Jajpur, TISCO etc.	China, Japan, South Africa, Hong Kong, Switzerland, Europe
	Others	841400.407 MT	84.39	Indian Rare Earth Ltd, Ganjam OMC Ltd, MMTC Ltd. etc	Norway, Korea, China, Japan, Germany etc.
	Agriculture and Forest Products	28878.604 MT	16.92		
	Niger Seeds	3557.750 MT	6.14	National Agrl. Co op Marketing Federation of India Ltd., Orissa State Co. Op. Oil Seeds Growers Federation Ltd.	USA and Other European countries.
	Rice, Non-Basumati boiled Rice and other Products	25320.854 MT	10.78	Charampa Rice Mill, Charampa R.P. Mill, Charampa, MMTC Ltd., BBSR and Panesh Cashew, BBSR, Srihanuman Rice Mill, Cahndabali, Ganesh Rice Mill, Bargarh, Unifood (India) Pvt. Ltd, Sambalpur.	Canada, Japan, China, Bangladesh.
	Marine Products	8506.598 MT	285.76		
	Frozen Fish/ Shrimps	8506.598 MT	282.64	Surya Food India Ltd. BBSR, Surya Udyog Ltd., BBSR, Triveni Fisheries, Puri, SB International Ltd. Bhubaneswar Integrated Rubbian Exports etc.	Japan, UK, USA, Korea, Belgium, Thailand, Hongkong, Canada, UAE, China etc.

\* Since production is reflected in different units the total quantity is not mentioned.

( Contd )

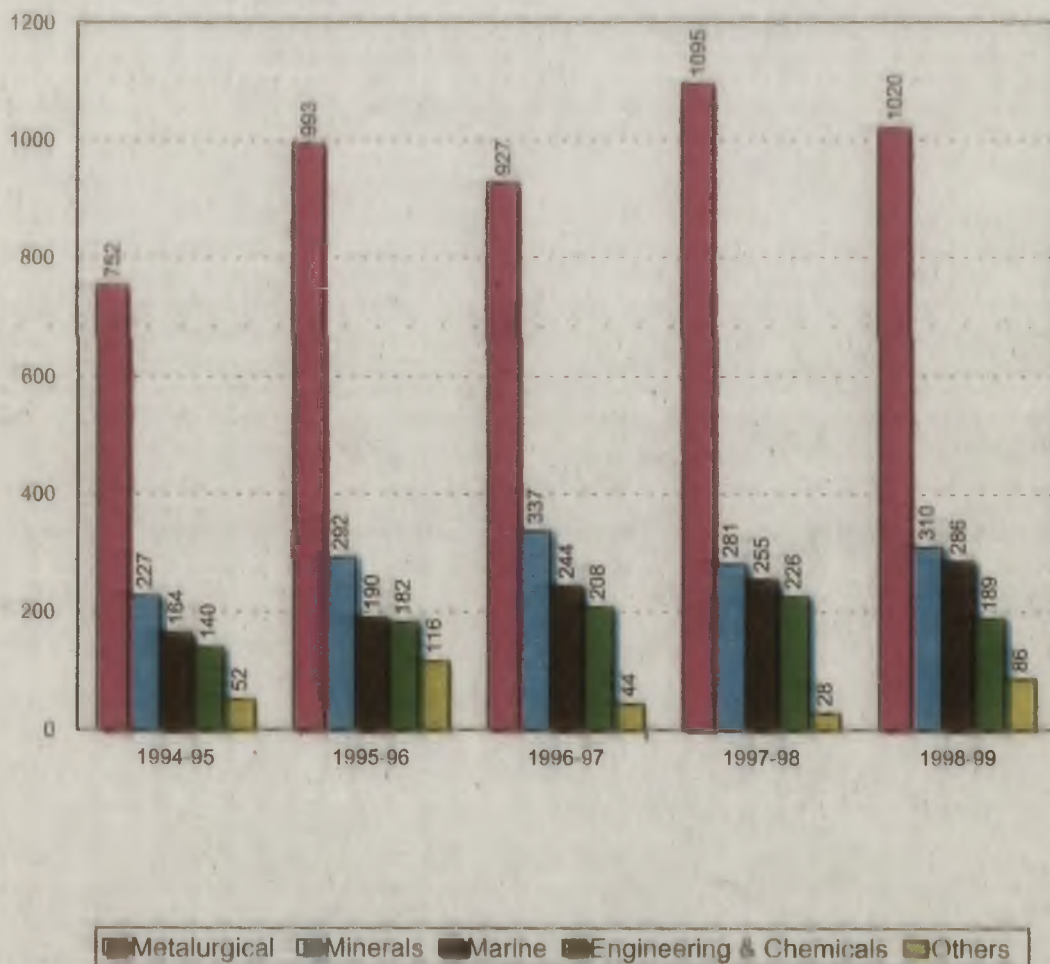
Table 18.4 ( Concl'd.)

Sl No.	Name of the Item	Quantity exported	Value of export (Rs. in crore)	Major exporters	Countries to which exported
1	2	3	4	5	6
ii)	Sea Foods and Other Marine Products		3.12	Oriqua Ltd. Bhadrak Patra Exports Puri, Sea Land Fisheries Pvt. Ltd. BBSR	Bangladesh
6.	Handloom, Textile and Handicrafts Products		15.40		
i)	Handloom Products		1.31	Gemini Overseas Ltd, Calcutta, Eastern Silk Industries Ltd., Calcutta,	USA, France, UK, Italy, Australia, South Africa, Germany etc.
ii)	Handicraft Products		0.62	Tassar Fabrics, Sundargarh, Orissa Rural & Urban Producers Association, BBSR, Orissa, State Handicraft Corporation, BBSR, OSIC, BBSR, Sudarsan Sahu, Puri, Welfin International, Rourkela.	USA, England UK, Australia, Canada, France, Italy, etc.
iii)	Textile Products		13.47	Konark Jute Ltd, Champadany Industries Cte. Magnum Apparel Pvt. Ltd. BBSR, Jaikisan Das Mall Jute Products, Calcutta,	UK, Saudi Arabia, Sri Lanka, Belgium and USA.
7.	Other Products		53.64		
i)	Homoeopathic Medicine	2033 Phs	0.01	Everest Homoeo Lab., Balasore	Nepal
ii)	Electronics goods (Computer Software)		53.63	Magneti(India) Ltd, BBSR. Infosys Technologies Ltd BBSR. Satyam Computer Services Ltd. BBSR, Lec & Nec Software Export Ltd, BBSR.	England, Denmark, UK, USA, Japan, Germany, China, Hongkong, etc.
<b>Grand Total</b>			<b>1890.61</b>		



## Value of Goods exported from Orissa

( Rs. in crore )



# CHAPTER 19

## DEVELOPMENT OF WOMEN

19.01 Despite various measures taken, the status of women continues to remain relatively backward. With gradual spread of education and empowerment, the position of women has begun to change. It is the policy of Government to bring them fully into the mainstream.

### FEMALE LITERACY

19.02 Female literacy rate in the State has consistently been lower than the literacy rate among males. Though the female literacy rate in the State increased from 4.5% in 1951 to 34.7% in 1991, it was lower than the national average of 39.31%. In rural areas, the female literacy rate is only 30.79%. For development of female education, educational institutions have been established exclusively for girls including Kanyashrams in low literacy tribal areas for SC / ST girls. Education for girls, from primary to post graduate level, has been made free. ITIs for women have been opened to provide professional training to them.

### WOMEN IN WORK FORCE

19.03 According to 1991 census, only 27.28% of the total workers in Orissa are women. The main workers and marginal workers among females constitute 58.2% and 41.8% of the total female workers respectively. The un-organised primary sector, which includes agriculture, animal husbandry, fishery, forestry, mining and quarrying, plantations and allied activities absorbs as much as 82.7% of the total female main workers. Nearly 5.2% of the female main workers are engaged in household industries, and other sectors of the economy provide employment to 12.1% of female main workers. Women constitute an important segment of the labour force. The unpaid economic activities of women and their contribution in the domestic sector remain un-reported and go largely un-recognised.

### EMPLOYMENT OF WOMEN IN AGRICULTURE AND ALLIED SECTORS

19.04 Women play an important role in agriculture, animal husbandry and other related activities, which include marketing of produce, food processing and the like. According to 1991 census, 80.9% of the female work force was engaged in agriculture, 25.8% as cultivators and 55.1% as agricultural labourers. Women as agricultural workers generally participate in all operations except ploughing. They are engaged in transplanting,

weeding, applying fertilisers, and also in harvesting the produce. A large number of female workers are also engaged in marginal occupations such as collection of fish, firewood, cowdung, fetching of drinking water, maintenance of kitchen gardens, tailoring, weaving etc., in order to supplement the family income.

### EMPLOYMENT IN ORGANISED SECTOR

19.05 Table 19.1 presents the employment position of women in the organised sector of the State. The proportion of women employees in the organised sector shows an increasing trend except during 1996. Out of 7.12 lakh employees in the public sector during 1998, women employees accounted for 11.5% as against 11.1% during 1997. However in the private sector, though the number of women employees has increased from 10934 in 1997 to 11039 in 1998, the percentage of women employees to total employees has decreased marginally from 11.3% to 11.1%. To increase the number of women in public services, 30% of the vacancies in the State Government departments arising in a year in Group B, Group C and Group D services/posts to be filled up by direct recruitment have been reserved for women candidates. Accordingly, the Orissa Civil Services (Reservations of Vacancies for Women in Public Services) Rules, 1993 have been framed and are now in force. It has been decided by the Government that all posts of Anganwadi workers, Supervisors and CDPOs will only be filled up by women. This has opened new job opportunities for women even at the village level.

Table 19.1

#### Employment of Women in the Organised Sector in Orissa

Sl No	Year	Central Government		State Government		Quasi Government		Local bodies	
		Total	Women	Total	Women	Total	Women	Total	Women
1	2	3	4	5	6	7	8	9	10
1	1990	72530	2523	381594	39495	188059	7964	18304	4408
2	1991	92432	4054	376155	42718	198528	8584	18264	4403
3	1992	93690	4475	375993	43827	211111	8943	18305	4395
4	1993	75999	2813	401830	50995	203103	9691	18483	4455
5	1994	75880	2631	393135	52503	217287	10938	18789	4501
6	1995	80830	3273	393714	54615	218227	12032	18459	3746
7	1996	81873	3311	482198	53038	212695	12189	18882	4611
8	1997	81728	3413	394480	58988	218528	12411	18235	4145
9	1998	81853	3538	399648	62154	212336	12548	18448	4000

(Contd.)

Table 19.1 (Concl.)

Sl No	Year	Total public sector		Private sector		Total employment		Proportion of women as percentage of total employment
		Total	Women	Total	Women	Total	Women	
1	2	11	12	13	14	15	16	17
1	1990	660487	54390	109569	13195	770056	67585	8.77
2	1991	683379	59759	102400	12542	785779	72301	9.20
3	1992	699099	61440	103734	13212	802883	74652	9.30
4	1993	699215	67954	80216	8809	779431	76763	9.85
5	1994	705071	70773	94220	11708	799291	82481	10.32
6	1995	709830	73666	95994	11559	805824	85225	10.67
7	1996	775628	73149	96097	12879	871725	86028	9.87
8	1997	712971	78954	96607	10934	809578	89908	11.11
9	1998	712285	82237	99221	11039	811506	93276	11.49

Source: Directorate of Employment, Orissa.

## DEVELOPMENT OF WOMEN UNDER FIVE YEAR PLANS

19.06 Programmes in this sector during the First Plan period were mainly

welfare oriented. The Central Social Welfare Board was established by the Government of India in 1953 to take up nation-wide welfare measures for the development of women and children. The Central Social Welfare Board had counterpart state level bodies through which assistance to voluntary organisations was provided for undertaking welfare programmes. During the Second Plan period, women were organised into Mahila Mandals in rural areas for facilitating convergence of health, nutrition and welfare measures. The Third and Fourth Plans accorded high priority to women's education, immunisation of pre-school children and supplementary diet for children and expectant and nursing mothers.

19.07 In the Fifth Plan, there was a shift in emphasis from welfare orientation

to a developmental approach with the objective of removal of poverty and attainment of self reliance. The Sixth Plan took cognizance of the deprivations suffered by and discrimination, overt or covert, practised against women. A multi-disciplinary approach was adopted with thrust on health, education and development. During this Plan, a variety of programmes and schemes were taken up for improving working conditions of women and to raise their socio-economic status. Vocational training centres were set up for developing their skills. Non-normal education centres were set up exclusively for girls. Women were assisted through RDP, TRYSEM and DW CRA. Nutritional interventions for the benefit of pregnant and

nursing mothers belonging to the weaker sections were accorded high priority under the ICDS programme. In sum, concerted efforts were made to develop and operate programmes to meet the felt needs of women for better conditions of work, health and social security.

19.08 During the Seventh Plan period, apart from continuing the previous schemes and programmes, several beneficiary oriented programmes were launched for providing direct benefit with the objective of raising the economic and social status of the target group of women. In the Eighth Plan a shift was made from development to empowerment of women and a number of measures were undertaken for their social and economic emancipation. The empowerment measures for women included the Constitutional amendment for atleast 30% representation in all elected local self government bodies such as Panchayati Raj Institutions and Municipalities, establishment of a National Commission for Women at the Centre and State Commissions for Women at the State level, and launching of Mahila Samrudhi Yojana (MSY) for sensitising women at grass root level in the rural areas. Important components of the strategy proposed to be adopted during the Ninth Plan period for development of Women are as follows.

- i. Political and administrative measures will be taken to minimise gender bias in recruitment and to improve working conditions.
- ii. Women's education and eradication of illiteracy among girls will be given high priority.
- iii. A life cycle approach to women's health with focus on reproductive health will be adopted.
- iv. Efforts will be made to improve their skills and capacity to earn by way of providing vocational training in various fields.
- v. Women's associations and societies will be organised to enable women to get part-time employment in productive activities.
- vi. Steps will be taken for projecting a positive image of girls and women.
- vii. With a view to ensuring flow of adequate resources and benefits for women from all developmental programmes, funds will be earmarked for the women's component.



## PREVENTION OF DOWRY

19.09 The Dowry Prohibition Act 1991 has been enacted by the State Government. NGOs are being given financial assistance by the State Government to propagate and organise dowry-less marriages, anti-dowry campaigns, seminars, workshops and street theatres to create mass awareness. The State Government have issued special instructions for initiation of disciplinary action against its employees involved in dowry offences.

## STATE COMMISSION FOR WOMEN

19.10 The State Commission for Women has been constituted by the State Government with effect from 30.11.92. The Commission is empowered to act as a civil court and to recommend criminal prosecution against persons accused of offences against women. The Commission makes in-depth studies on the economic, educational and health situation of women in the State with particular emphasis on tribal districts and areas which are underdeveloped in respect to women's literacy, mortality and economic development. It looks into working conditions of women in factories, construction sites and other establishments, and submits reports to the State Government containing recommendations for improving the status of women. It compiles information from time to time on instances of offences against women in the State including cases related to marriage and dowry, rape, kidnapping, criminal abduction, eve teasing, immoral trafficking of women, and cases of medical negligence. It co-ordinates with the State cell and district cells established to look into cases of atrocities against women, mobilises public opinion against such atrocities in the State, and interacts with the police for systematic follow up of pending cases. During 1998, 30 awareness camps, 16 legal awareness camps, 12 workshops and seminars, and 5 anti-dowry and anti-drug seminars were conducted by the Commission.

## STATE SOCIAL WELFARE ADVISORY BOARD

19.11 The State Social Welfare Advisory Board promotes social welfare activities intended for the general welfare of the public, such as welfare of the family, women, children and the handicapped and for providing employment to the unemployed, under-employed, and weaker sections of the community. It has been funding various welfare schemes under specified programmes implemented by voluntary organisations and for this purpose grants are being provided by the Central Social Welfare Board. The Board has been conducting seminars, workshops, debates etc. through voluntary organisations for highlighting women's issues.

**REHABILITATION OF DISTRESSED WOMEN**

19.12 The objective of the scheme is to identify women in distress and to provide them vocational training in different trades for their economic rehabilitation. Young widows, un-married mothers, victims of kidnapping, women driven to destitution because of prolonged illness are the categories of women considered to be in distress who are trained and financially assisted. During the Eighth Plan period a total of 800 women in distress have been rehabilitated with an expenditure of Rs.13.29 lakh. During 1998-99, a sum of Rs.6.00 lakh has been spent for the benefit of 275 women in distress as against Rs.5.36 lakh spent for the same number of women in the previous year.

**MAHILA SAMITIS / MAHILA MANDALS**

19.13 Women in rural areas are organised into Mahila Samitis / Mahila Mandals for carrying out activities relating to nutrition, balwadis, adult education, and dowry prohibition. These Samitis / Mandals also promote economic activities like sericulture, bee-keeping, tailoring, knitting, and weaving etc.

**SHORT STAY HOMES**

19.14 For the purpose of rehabilitation of women and girls in difficulty, short stay homes have been established through voluntary organisations, where counseling and treatment is provided to them. During 1998-99, 29 short stay homes with accommodation facilities for 30 women/ girls in each were functioning in the State and 891 women and girls were benefited. During the preceding year, 27 such homes were functioning which accommodated a total of 450 women and girls. Grant-in-aid from Government of India amounting to Rs.18.52 lakh and Rs.19.54 lakh was received by these short stay homes during 1998-99 and 1997-98 respectively.

**WORKING WOMEN'S HOSTELS**

19.15 To provide secure accommodation to working women, the State Government have established working women's hostels for women whose monthly income is below Rs.5000. Eleven such working women's hostels are functioning in the State with 711 beds. In addition, 15 more working women's hostels with capacity to accommodate 901 boarders are under construction.

**CONDENSED COURSES OF EDUCATION FOR ADULT WOMEN**

19.16 The scheme of Condensed Courses of Education for Adult Women was started by the State Social Welfare Advisory Board with the objective of extending education and training to needy widows and destitute, deserted and economically backward women so as to enable them to acquire eligibility for suitable employment. During 1998-99, an amount of Rs.6.03 lakh has been sanctioned in favour of 7 NGOs (4 in rural area and 3 in urban areas) for the purpose out of which a sum of Rs.1.74 lakh has been spent and 175 women have been benefited against an expenditure of Rs.9.27 lakh for 350 women beneficiaries during the previous year.

**VOCATIONAL TRAINING PROGRAMME**

19.17 Vocational training courses are conducted for women in type writing, stenography, tailoring, TV and radio repairing etc. on a yearly basis. During 1998-99, 10 Vocational Training Institutions (9 in rural areas) provided training to 250 women of lower income groups so as to enable them to equip themselves for employment. An amount of Rs.8.20 lakh was sanctioned to 10 training institutions as against Rs.37.14 lakh sanctioned to 42 such institutions during the previous year.

**VOLUNTARY ACTION BUREAUS AND FAMILY COUNSELLING CENTRES**

19.18 Voluntary Action Bureaus and Family Counseling Centres started functioning in 1983 with the objective of providing preventive, curative and rehabilitative services to women who are victims of atrocities, exploitation, and maladjustment. These centres also create awareness in the community about social problems affecting harmony in the family and about laws pertaining to the welfare of women. Financial assistance is given to NGOs through the State Social Welfare Advisory Board for setting up Family Counseling Centres for resolving family discord and maladjustment so as to prevent break up of homes. During 1998-99, financial assistance amounting to Rs.11.84 lakh was provided to 13 NGOs to assist 698 beneficiaries. In the preceding year 566 beneficiaries were assisted with an expenditure of Rs.10.09 lakh.

**AWARENESS GENERATION PROJECTS FOR RURAL AND POOR WOMEN**

19.19 The Awareness Generation Project for Rural and Poor Women was started with the objective of providing a common platform to women to exchange their

experience and ideas for understanding their local problems and gain knowledge and make analysis of the socio-economic conditions based on the local situation. The scheme helps in identifying the needs of rural and poor women and enables them to involve themselves and others in the process of decision making in the family as well as in the society and prepares them to deal with social issues like alcoholism and atrocities on women and children. During 1998-99, 50 institutions including 36 in rural areas took advantage of this programme. An amount of Rs.5.00 lakh was sanctioned to these institutions for the purpose and 1250 women were assisted as against sanction of Rs.4.97 lakh for assisting 1775 beneficiaries during 1997-98.

### **STATE OLD AGE PENSION SCHEME AND NATIONAL OLD AGE PENSION SCHEME**

19.20 Pension is provided to widows under the State Old Age Pension Scheme and National Old Age Pension Scheme. During 1998-99, 5,24,980 persons including 2,96,600 (56.50%) women were benefited under the State Old Age Pension Scheme and 3,32,286 persons including 1,47,184 women (44.29%) were benefited under the National Old Age Pension Scheme. An amount of Rs.64.79 crore under State Old Age Pension Scheme and an amount of Rs.37.80 crore under National Old Age Pension Scheme were spent in 1998-99 as against expenditure of Rs.62.31 crore and Rs.39.90 crore respectively during the previous year.

### **MAHILA VIKAS SAMABAYA NIGAM**

19.21 The Orissa Mahila Vikas Samabaya Nigam (MVSN) is the State nodal agency for empowerment of women. It has 127 affiliated societies out of which 33 are co-operative societies and the remaining 94 are registered under the Societies Registration Act, 1860. As a State nodal agency, the Nigam undertakes activities in three categories namely economic programmes, social sensitisation programme and allied infrastructural activities.

#### **Economic Programmes**

19.22 Under the Entrepreneurship Development Programme (EDP), Management Training Programme (MTP), Leadership Development Programme (LDP) and Trade Based Technical Training Programme (TBTTP) MVSN has conducted 8 training programmes and has trained 221 women with an expenditure of Rs 3.46 lakh

19.23 Under Financial Assistance Scheme, MVSN has lent out funds as margin money and working capital assistance to the tune of Rs.5.19 lakh for applique work and production of low cost ready-made garments during 1998-99

19.24 Under Support to Training and Employment of Women Programme (STEP), the Nigam has identified 5 proposals from NGOs of Puri, Dhenkanal, Sundergarh and Cuttack during 1998-99 which are under different stage of processing.

19.25 The Rastriya Mahila Kosh (RMK) has sanctioned a short term loan credit limit of Rs.20.00 lakh for the MVSN for lending to poor women

19.26 Indira Mahila Yojana (IMY) was launched by Government of India in August 1995 and MVSN was entrusted with the responsibility of conducting State level and district level workshops. One district level workshop has been conducted during 1998-99.

19.27 The Norwegian Agency for International Development (NORAD) offers assistance for setting up employment generation projects on a sustained basis for poor and needy women both in urban slums and rural areas. During 1998-99 an amount of Rs.53.74 lakh has been sanctioned to 25 implementing agencies to assist 1130 beneficiaries.

19.28 MVSN has identified 14 women's groups and 4 training institutions under District Rural Industrialisation Programme (DRIP) The training programme would start after approval of training budget by NABARD

19.29 MVSN has been declared as the channelising agency for extending assistance/loans to disabled persons under the schemes of the National Handicapped Finance and Development Corporation (NHFDC) MVSN has recommended 182 loan applications both for male and female handicapped persons for loans up to Rs.50,000.

**Social Sensitisation Programme**

19.30 As the State nodal agency for empowerment of women, MVSN undertakes the task of sensitising and educating the women elected into Panchayati Raj Institutions through a gender sensitive module. Training for women Chairpersons/Vice-Chairpersons from 14 districts has been conducted at an expenditure of Rs.10.25 lakh by the end of March 1999.

**Allied Infrastructural Activities**

19.31 MVSN proposes to set up a 20 MT ready-to-eat food plant at Bhubaneswar as a joint venture with Modern Food Industries Ltd., a Government of India undertaking, for processing and supplying food to children under Special Nutrition Programme at an initial investment of Rs.1.31 crore.

19.32 MVSN has also initiated the process for setting up of a State Resource Centre for Women with funding from the Danish International Development Agency (DANIDA). Orissa is one of the four States to have set up a SRCW. This SRCW would function as a registered society for providing support for women's development and empowerment.

**INTEGRATED CHILD DEVELOPMENT SCHEME (ICDS)**

19.33 279 ICDS projects are being implemented in 261 blocks of the State. Out of the 279 projects, 118 projects are in blocks with a high concentration of scheduled tribes, 149 projects are in other rural areas, and 12 projects are in urban areas. The target group under the programme consists of children in the age group of 0-6 years and expectant and nursing mothers in the age group of 15-45 years belonging to families below the poverty line. The scheme provides a package of services covering supplementary nutrition, immunisation, pre-school education, health check-up, referral services, and nutrition and health education for women. The details of achievement under the ICDS programme in Orissa during the years 1994-95 to 1998-99 are presented in Table 19.2. There has been a steady improvement in coverage under ICDS. The number of projects and Anganwadi Workers increased from 218 and 20,828 in 1994-95 to 279 and 28,382 respectively during 1998-99. The gross number of beneficiaries under the package of services increased from 27.9 lakh in 1994-95 to 32.9 lakh in 1998-99. Coverage under the immunisation programme in ICDS blocks also shows a gradually increasing trend as would be seen from Table 19.3.

Table 19.2

## Coverage under Integrated Child Development Scheme in Orissa.

Sl. No	Item	Y E A R				
		1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7
1	No. of ICDS projects	218	229	229	279	279
	a) No. of blocks covered	214	223	223	261	261
	b) No. of urban units covered	4	6	6	6	6
2	No. of Anganwadi Workers under ICDS project	20828	21865	22423	28382	28382
3	Beneficiaries under :					
	a) Supplementary nutrition	1685911	1599534	2082862	1671198	2001567
	b) Health check-up	153227	151444	242466	258791	265642
	c) Nutrition and health education	192449	214821	174423	286723	300681
	d) Referral services	61377	72367	76844	69135	-
	e) Non-formal pre-school education	2790555	680312	698502	705319	3289089
4	Amount available including balance of previous year (Rs. in lakh)	5720.55	4275.89	8307.71	5942.98	7435.71
5	Total expenditure under ICDS projects (Rs. in lakh)	3511.23	4512.31	6034.82	5164.16	4689.07

Source : Women and Child Development Department, Bhubaneswar.

Table 19.3

## Achievement under Immunisation Programme in ICDS Blocks.

Sl No	Year	D.P.T.	D.T.	B.C.G.	Polio	Measles	T.T.
1	2	3	4	5	6	7	8
1	1994-95	458422	360784	500675	453595	432978	435563
2	1995-96	427821	185288	430728	425823	366142	401016
3	1996-97	448711	144666	470884	448382	429399	402133
4	1997-98	448402	206586	474813	445647	419773	404514
5	1998-99	598086	197502	606385	594029	541238	476089

Source : Women and Child Development Department, Bhubaneswar.

**DEVELOPMENT OF WOMEN AND CHILDREN IN RURAL AREAS (DWCRA)**

19.34 DWCRA was introduced in 1983-84 as a sub scheme of IRDP. The primary objective of the scheme is to provide opportunities for gainful self employment to women from rural families below the poverty line in order to improve their economic status and promote their empowerment.

19.35 Benefits under the scheme are extended to women belonging to identified rural families, who form DWCRA groups consisting of 10 – 15 members each for taking up economic activities according to their skills, aptitude and local conditions. A revolving fund of Rs.25,000/- which is shared on 50:50 basis between the State and the Central Government is given to each DWCRA group to take up income generating activities. Additional credit is made available by banks. Marketing of products is organised through District Supply and Marketing Societies at the district level and Multipurpose Co-operative Centres at the block level. During the Eighth Plan period, 5098 DWCRA groups were formed and a sum of Rs.967.06 lakh was spent for assisting 70,510 women beneficiaries. During 1998-99, expenditure amounting to Rs.407.94 lakh has been incurred for formation of 2637 DWCRA groups for assisting 34921 women beneficiaries as against expenditure amounting to Rs.447.18 lakh for 23,502 beneficiaries in 1997-98.





## CHAPTER 20

### WELFARE OF SCHEDULED CASTES, SCHEDULED TRIBES, SOCIALY AND EDUCATIONALLY BACKWARD CLASSES AND MINORITIES

20.01 As per the 1991 Census the scheduled tribe and scheduled caste population account for 22.21% and 16.20% of the total population of the State respectively. Development and welfare of the scheduled tribes and scheduled castes, promotion of their educational and economic interests and their protection from social injustice and exploitation are matters of special concern for the State Government. The State Government is committed to ensuring speedy development of these communities through effective implementation of anti-exploitative, protective, economic, social, cultural and welfare measures in the State. The State Government has also taken steps for the advancement of socially and economically backward classes and minorities. The erstwhile Welfare Department has been bifurcated into Scheduled Tribes and Scheduled Castes Development Department and Minorities and Backward Classes Welfare Department since May 1999.

20.02 For better administration and more effective implementation of developmental programmes for the benefit of persons belonging to scheduled tribes, scheduled areas have been demarcated taking into consideration the concentration of tribal population in different parts of the State. The details of the scheduled areas of Orissa as per 1991 Census are given below.

<b>Scheduled Area of Orissa (1991 Census)</b>						
Sl. No.	District	Tracts included in Scheduled Area	Area of the tracts (sq km)	Population within the Sch. Area		
				Total	ST	SC
1	2	3	4	5	6	7
1	Mayurbhanj	Whole district	10416.60	1884580	1090626	131765
2	Balasore	Nilagiri block	223.60	106468	53080	10780
3	Keonjhar	Keonjhar tahasil	5350.20	646557	354605	52498
		Champua tahasil	1885.40	328437	182956	32487
4	Sambalpur	Kuchinda tahasil	2367.30	225086	125741	27263
5	Sundargarh	Whole district	9921.40	1573617	798481	138157
6	Gajapati	R. Udayagiri	2498.80	287612	198310	12525
7	Ganjam	Sorada tahasil	912.00	142649	12862	29076
8	Kalahandi	Th. Rampur block	323.80	65777	31042	14170
		Lanjigarh block	999.70	60947	29832	14189
9	Koraput	Whole district	8594.00	1026458	519006	138107
10	Rayagada	Whole district	7664.70	713984	406097	101956
11	Nabarangpur	Whole district	5135.30	848659	467919	127600
12	Maikangiri	Whole district	6115.30	425446	248057	84270
13	Phulbani	Kandhamal tahasil	2117.80	180205	76567	36180
		Baliguda tahasil	5628.10	386076	204799	63319
		<b>Total</b>	<b>69613.80</b>	<b>8570884</b>	<b>4762020</b>	<b>1014542</b>
		<b>(% to State total)</b>	<b>(44.70)</b>	<b>(28.02)</b>	<b>(67.72)</b>	<b>(19.78)</b>
		<b>State Total</b>	<b>156707.00</b>	<b>31669736</b>	<b>7032214</b>	<b>5129314</b>

**TRIBAL SUB-PLAN APPROACH**

20.03 Since the Fifth Plan period, a Tribal Sub-Plan has been formulated with the objectives of (i) improving the socio-economic conditions of the tribal population, (ii) strengthening of infrastructure in the tribal areas, (iii) protecting the tribals from exploitation, and (iv) promoting tribal interests through legal and administrative support. About 44.70% of the geographical area of the State has been declared as scheduled areas which is inhabited by 62 tribal communities including 12 primitive tribal groups. In tribal areas, developmental programmes are being implemented through 21 Integrated Tribal Development Agencies (ITDAs) and 17 micro projects. During the year 1998-99, the flow of funds to ITDA areas was Rs.643.85 crore from the State Plan, Rs.218.46 crore from Central Plan and Centrally Sponsored Plan and Rs.54.29 crore from Special Central Assistance. During 1998-99, 20,699 ST families were assisted under different income generating schemes. During 1998-99, by the end of December 1998, 145 educational buildings, 138 irrigation projects, 156 C.D. works and 33 drinking water wells had been completed and 20 tribal villages had been electrified.

**MICRO PROJECTS FOR PRIMITIVE TRIBAL COMMUNITIES**

20.04 There are 17 micro projects covering parts of 20 blocks of 12 districts for the development of 12 primitive tribal groups with a total population of about 68 thousand. The primitive tribals covered under these projects are given full subsidy for individual and family oriented income generating schemes. Particular attention is given for the development of agriculture, horticulture, soil conservation, animal husbandry, health, drinking water facilities, communication and education. During 1998-99 an amount of Rs.1.65 crore has been spent for 8,998 ST beneficiaries under these micro-projects and a sum of Rs.1.65 crore has been provided for the year 1999-2000.

**MODIFIED AREA DEVELOPMENT APPROACH (MADA)**

20.05 Modified Area Development Approach (MADA) aims at development of tribals staying outside the ITDA areas. About 5.67 lakh tribals (as per 1991 Census) in 46 pockets with population of 10,000 or more where more than 50% inhabitants are tribals, spread over 47 blocks in 17 districts, are covered under the above programme. Both individual beneficiary oriented schemes and community oriented schemes are under implementation in these pockets. During the year 1998-99 an amount of Rs.2.66 crore has been spent covering 2,173 tribal beneficiaries.

**CLUSTER APPROACH**

20.06 Since the Seventh Plan period, the cluster approach has been adopted for the development of contiguous areas having 5,000 population where 50% or more of the inhabitants are tribals. By the end of 1998-99, 14 cluster pockets comprising of parts of 13 blocks in 10 districts with 52,793 tribals have been covered under the cluster approach. Under this programme various community oriented schemes and individual beneficiary oriented schemes are being implemented. During 1998-99 an amount of Rs.20.45 lakh has been spent and 276 tribals have been assisted.

**DISPERSED TRIBAL DEVELOPMENT PROGRAMME (DTDP)**

20.07 Dispersed Tribal Development Programme is being implemented by the Orissa Scheduled Caste and Scheduled Tribe Development Finance Co-operative Corporation for the benefit of tribal families living outside the special project areas like ITDA, MADA, Clusters and micro projects. During 1998-99, an amount of Rs.190.74 lakh has been spent under different anti-poverty programmes under DTDP. The proposed outlay for 1999-2000 is Rs.190.79 lakh.

**ORISSA TRIBAL DEVELOPMENT PROJECT, KASIPUR (OTDP)**

20.08 In order to adopt an area specific approach for development, OTDP was launched in 1988-89 in Kasipur block of Rayagada district jointly by the International Fund for Agricultural Development, Government of India, and the State Government for all round development of the tribals of the area. The implementation phase of the project was over on 31.12.97 and its maintenance phase began from 01.01.1998.

**ACADEMY OF TRIBAL DIALECTS AND CULTURE (ATDC)**

20.09 An Academy of Tribal Dialects and Culture has been functioning at Bhubaneswar since 1979 with the objective of preserving and promoting tribal art and culture through establishment of Tribal Dialect Training Centres, publication of books in different tribal languages, preparation of multilingual dictionaries, conducting tribal exhibitions, and other related activities. During 1998-99, primers for Ashram Schools in Santali and Kondha languages were published and 71 persons were given training in Koya, Bonda, Lanjia Soura and Didayi languages.

**SCHEDULED CASTE SCHEDULED TRIBE RESEARCH AND TRAINING INSTITUTE (SCSTRTI)**

20.10 The Scheduled Caste, Scheduled Tribe Research and Training Institute is functioning since 1952 at Bhubaneswar. It is known for the following activities in the field of planning, research, training and evaluation.

- (i) Planning – Action Plans are formulated for the socio-economic development of primitive tribal groups.
- (ii) Research - Research on various tribal communities, illegal land transfer, tribal herbal medicines, preparation of monographs on health and nutritional status of tribal children, ethnic status determination etc. are taken up.
- (iii) Training - Various training programmes are conducted for officers and personnel working in tribal areas on tribal culture and development and on evaluation and monitoring. Orientation training on constitutional safeguards and protective legislations is also conducted.
- (iv) Evaluation - Steps have been taken for evaluation of different programmes/ schemes implemented for the development of schedule tribes. So far, two MADA projects, two cluster approach pockets and four micro projects have been evaluated.

**TRIBAL DEVELOPMENT CO-OPERATIVE CORPORATION OF ORISSA LTD (TDCCOL)**

20.11 TDCCOL has been functioning since 1967 as the apex organisation for purchase and sale of minor forest produce and surplus agricultural produce of the tribals to protect them from exploitation by unscrupulous middlemen. The Corporation also sells essential commodities in selected areas of tribal concentration through retail outlets and fair price shops. The Corporation has its head office at Bhubaneswar. It has 3 divisional offices, 15 branch offices, 130 procurement-cum-collection centres and 360 seasonal procurement centres in the Tribal Sub-Plan area of the State. It has 202 Large Area Multipurpose Co-operative Societies and operates 70 fair price shops. Till 1996-97, the corporation has sustained a cumulative loss of Rs 41.64 crore. TDCC has a business programme of Rs.45 crore for 1999-2000 out of which the target for procurement of surplus agricultural produce is Rs 10 crore and for procurement of minor forest produce is Rs.25 crore.

**LAND ALIENATION**

20.12 The Orissa Schedule Area Transfer of Immovable Property Regulation, 1956 prohibits alienation of land belonging to ST persons to non-ST persons without prior permission of competent authority. Land alienated without permission is liable to be restored to the original land holder. Up to the end of 1998-99, 86,095 land alienation cases were initiated and 83,636 cases were disposed of and about 38,811 acre of land were restored to 45,804 persons.

**DRINKING WATER FACILITIES**

20.13 Nearly, 17,150 villages out of 19,204 villages in the T S P area were identified as having inadequate drinking water facilities. After providing safe drinking water facilities to all of the above identified villages by the end of 1993-94, the focus of coverage of rural water supply has changed from "village " to "habitation" in order to cover the hamlets which have been left out. Out of the total ST population in the State, 90% has so far been covered under safe drinking water supply.

**WELFARE OF SCHEDULED CASTES**

20.14 There are 93 scheduled caste communities in the State with 51.29 lakh population as per 1991 census constituting 16.20% of the total population of the State and 3.7% of the total SC population in the country. The rural and urban components of the SC population in the State are 89.26% and 10.74% respectively. These communities are scattered all over the State with relatively higher concentration in the coastal areas. The growth rate of population among the SCs during 1981-91 was 32.69% as against 31.95% at the all India level. There are 15 communities in the category of sweepers/scavengers and nomadic/semi-nomadic and other denotified communities identified as specially vulnerable groups among SCs.

20.15 The Special Component Plan (SCP) for development of scheduled castes is being implemented in the State from the Sixth Plan period. Need based composite programmes have been taken up for the main occupational groups among the scheduled castes like weavers, cobblers, fishermen, sericulturists and cultivators with emphasis on increased production, marketing of products, and development of human resources. Special attention has been given for economic development of specially vulnerable groups among the SCs.

20.16 During 1998-99 the flow of funds to the Special Component Plan was of the order of Rs.379.46 crore which included Rs.304.31 crore from the State Plan, Rs.52.19 crore from Central Plan and Centrally Sponsored Plan and Rs.22.96 crore from Special Central Assistance. A total of 57,171 scheduled caste families were covered under different antipoverty programmes. During 1999-2000, the flow of funds to SCP is proposed to be of the order of Rs.446.27 crore to assist 66,000 scheduled caste families under different anti-poverty programmes.

### **ORISSA SCHEDULED CASTE AND SCHEDULED TRIBE DEVELOPMENT FINANCE CO-OPERATIVE CORPORATION (OSFDC)**

20.17 The Corporation was established in 1979-80 for providing economic assistance to SC families below the poverty line and to ST families below the poverty line and residing outside TSP, MADA, Cluster and micro project areas, by way of arranging institutional credit under the Margin Money Loan Programme for various income generating schemes. OSFDC also assists in setting up self-employment units like taxi services, xerox units and rice hullers for the benefit of unemployed SC and ST beneficiaries. During 1998-99, 27,577 scheduled caste beneficiaries have been assisted under different income generating schemes, which includes 3,830 liberated scavengers. Thirty seven SC and ST beneficiaries have been granted term loans under high cost schemes.

### **ENFORCEMENT OF THE ORISSA RESERVATION OF VACANCIES IN POSTS AND SERVICES (FOR SC AND ST) ACT AND LEGAL AID.**

20.18 Under ORV Act, 1975 there is provision for reservation of 16.25% and 22.50% of posts for SC and ST persons respectively in recruitment and promotion. During 1998-99 legal aid assistance amounting to Rs.0.90 lakh has been provided to 10 SC and 6 ST persons for enforcing their rights and title/possession of landed property in the civil and revenue courts. Financial assistance amounting to Rs. 3.89 lakh has been provided to 98 SC and ST victims of atrocities during 1998-99. Inter-caste marriage between SC persons and persons of other castes is being encouraged by providing financial incentive at the rate of Rs.3000 to each couple. During 1998-99 a sum of Rs. 4.02 lakh has been given as incentive for the purpose.

## POVERTY ALLEVIATION PROGRAMME FOR SCs AND STs

20.19 As per an estimate published by the Centre for Monitoring Indian Economy for the year 1983-84, the proportion of SC and ST population below poverty line in rural areas of the State stood at 68.9% and 54.9%, and in urban areas at 52.8% and 40.3% respectively. A number of poverty alleviation and wage employment programmes are being operated in the State which include IRDP, TRYSEM, JRY, IAY, EAS, Million Wells Programme, SFDP, DPAP etc. These programmes are designed to improve the standard of living and quality of life of the poor people by providing self-employment and wage employment opportunities. As per the prescribed norms, 50% of the total beneficiaries under these antipoverty programmes are required to be from the SC and ST families. The number of SC and ST families covered under different antipoverty programmes is given in Table 20.1.

Table 20.1

**Coverage of SC and ST Beneficiaries under different Poverty Alleviation Programmes during 1998-99**

Sl. No	Name of the programme	No. of beneficiaries			Percentage of SC and ST to total beneficiaries
		Total	SC	ST	
1	2	3	4	5	6
1	IRDP	94,671	22,136	24,795	49.57
2	TRYSEM	11,614	3,544	3,005	58.39
3	DWCRA	34,921	9,822	10,455	58.06
4	JRY (In lakh mandays)	296.84	89.54	107.00	66.21

*Source : Panchayati Raj Department.*

## DISTRIBUTION OF WASTE LAND TO LANDLESS FAMILIES

20.20 Efforts have been made by the State Government to provide land to the landless SC and ST families for agricultural purposes as well as for construction of dwelling houses. By the end of 1998-99, 365,379 acre of waste land has been distributed among 2.13 lakh ST beneficiaries and 167,631 acre of land among 0.95 lakh SC beneficiaries for agricultural purposes. Similarly 14,577 acre of waste land among 3.17 lakh ST beneficiaries and 12,430 acre of waste land among 2.51 lakh SC beneficiaries has been distributed for construction of dwelling houses by the end of 1998-99.

**MEDICAL AND PUBLIC HEALTH CARE**

20.21 Emphasis has been given for providing health care services in remote tribal areas. Accordingly, a three tier health services system comprising of one Sub-Centre for every 3000 population, one PHC/AHC for every 20,000 population, and one Community Health Centre for every 80,000 to 1,20,000 population is being established. Nearly 2,300 Sub-Centres, 302 Primary Health Centres/Additional Health Centres, 58 Community Health Centres/Upgraded Primary Health Centres, 64 Subsidiary Health Centres, 6 Mobile Health Units, 166 Ayurvedic Dispensaries, 139 Homoeopathic Dispensaries and 148 Allopathic Dispensaries have been established to provide health facilities in tribal areas.

**RURAL ELECTRIFICATION**

20.22 Out of 19,491 tribal villages in the State, 10,296 villages were electrified by the end of 1997-98. During 1998-99, 163 tribal villages have been electrified. Similarly, out of 4,022 SC villages, 3784 villages were electrified by the end of 1997-98. It has been decided to provide power to 480 tribal villages and 20 SC villages during 1999-2000.

**EDUCATIONAL DEVELOPMENT FOR SCs AND STs**

20.23 The overall literacy rate (1991) in Orissa was 49.1% with 36.78% for SC and 22.31% for ST as against 21.7%, 11.6% and 7.4% in 1961 and 26.2%, 15.6% and 9.5% in 1971 respectively. Education is the most important thrust area for the socio-economic development of SCs and STs. The State Government have undertaken various measures to improve the educational status of these communities through steps like provision of scholarships, boarding facilities, free distribution of nationalised text books, garments, and imparting special coaching facilities for appearing at various competitive examinations. For encouraging enrollment and reducing drop-out rates in primary schools, Mid-day Meal scheme has been introduced for all primary schools.

20.24 Table 20.2 shows that while in 21 districts of the State literacy rate for SC population was more than 30% , in respect of ST population literacy rate was higher than 30% only in six districts namely Baragarh, Jharsuguda, Nayagarh, Puri, Sambalpur and Sundargarh. The ST literacy rate was less than 15% in Bhadrak and in four southern tribal districts namely Koraput, Malkangiri, Nawarangpur and Rayagada. The female SC literacy rate was higher than 30% only in the three coastal districts namely Cuttack, Jagatsinghpur and Khurda. The female ST literacy rate was lower than 25% in all districts while in Bhadrak, Koraput, Malkangiri, Nawarangpur and Rayagada it was below 5%.



Table 20.2

**Gender wise Literacy Rate of Scheduled Castes and Scheduled Tribes in  
different Districts of Orissa, 1991 Census.**

Sl. No	District	Literacy rate (SC)			Literacy rate (ST)		
		Person	Male	Female	Person	Male	Female
1	2	3	4	5	6	7	8
1	Angul	35.88	53.07	18.02	25.77	40.01	11.13
2	Balasore	40.47	56.45	23.84	18.91	30.08	7.37
3	Baragarh	35.68	52.19	18.97	30.85	47.08	14.61
4	Bhadrak	39.19	54.26	23.73	12.87	20.25	4.91
5	Balangir	33.23	49.58	16.33	24.86	41.17	8.65
6	Boudh	29.74	48.13	10.94	28.88	48.41	9.30
7	Cuttack	45.39	59.75	30.22	21.03	32.83	8.24
8	Deogarh	34.06	50.39	17.61	27.47	41.25	13.73
9	Dhenkanal	34.98	51.08	18.13	22.40	35.01	9.28
10	Gajapati	21.74	33.44	10.14	15.88	25.66	6.75
11	Ganjam	28.01	44.88	11.49	19.98	32.69	7.02
12	Jagatsinghpur	47.87	62.81	32.56	24.87	35.35	13.33
13	Jajpur	35.53	50.12	20.19	16.04	26.05	5.60
14	Jharsuguda	42.16	58.64	26.21	34.87	50.95	18.37
15	Kalahandi	28.28	44.47	12.00	18.54	32.00	5.48
16	Kandhamal	34.51	52.93	16.08	27.49	43.93	11.56
17	Kendrapara	41.77	57.82	25.33	16.86	26.02	6.25
18	Keonjhar	43.67	61.29	26.65	24.89	38.01	11.74
19	Khurda	47.46	62.73	31.29	28.11	41.66	13.41
20	Koraput	20.18	30.93	9.25	8.34	14.61	2.14
21	Malkangiri	33.76	46.09	21.15	6.77	11.21	2.32
22	Mayurbhanj	37.79	52.85	22.12	24.10	37.74	10.50
23	Nawarangpur	23.38	34.08	12.48	9.66	17.50	1.80
24	Nayagarh	40.17	57.52	22.51	32.05	50.14	13.88
25	Nuapada	25.44	40.74	10.09	18.49	32.00	5.18
26	Puri	42.51	58.61	26.00	38.94	52.45	22.77
27	Rayagada	21.46	33.63	9.49	10.39	17.73	3.40
28	Sambalpur	21.44	58.46	23.91	32.06	47.10	16.83
29	Sonepur	32.70	51.12	14.12	27.44	43.42	11.38
30	Sundargarh	43.86	58.72	28.15	37.34	50.13	24.52
	ORISSA	36.78	52.42	20.74	22.31	34.44	10.21

Source : Census of India.

20.25 Sevashrams and Residential Sevashrams are co-educational schools in TSP area imparting education upto Class V. Ashram Schools and Kanyashrams are residential schools imparting education to boys and girls respectively upto Class VII. By the end of 1998-99, 218 High Schools including 55 for girls, 149 Ashram Schools including 37 for girls (Kanyashrams), 143 Residential Sevashrams and 919 Sevashrams were functioning in the State in TSP area. Besides, 1,548 Primary School Hostels and 7 special Adivasi Hostels including 3 for girls were functioning in the State. During 1998-99, 10 Sevashrams have been converted into Residential Sevashrams. Also two Ashram Schools have been up-graded to High Schools, one Kanyashram has been upgraded to a girls' High School and two Residential Sevashrams and one Sevashram have been up-graded to Ashram Schools. During 1999-2000 it is proposed to open 4 educational institutions (comprising of one boys' High School, one girls' High School, one Ashram school and one Kanyashram), upgrade 3 Ashram Schools to High Schools, 3 Sevashrams to Ashram Schools and 10 Sevashrams to Residential Sevashrams. Besides, there is a proposal to open new High Schools in TSP blocks having no High Schools.

20.26 During the year 1998-99, pre-matric scholarship was awarded to 6,22,265 ST and SC students and post-matric scholarship to 71,627 ST and SC students with an expenditure of Rs.42.46 crore and Rs.12.86 crore respectively. An amount of Rs.39.78 crore for pre-matric and Rs.13.19 crore for post-matric scholarship has been proposed for the year 1999-2000.

20.27 A Cash Reward Scheme is being implemented with a view to providing incentive to teachers for improving performance of their students in High School Certificate Examination and in sectional trades in residential High Schools and Ashram Schools. For the Ninth Plan an outlay of Rs.2.50 lakh has been proposed. During 1998-99 a sum of Rs.1.04 lakh has been spent under the scheme.

20.28 Several other facilities like financial aid for sharing rented accommodation, book banks in Medical and Engineering Colleges, supply of books and writing materials, stipend for studying in Industrial Training Institutes etc. are being provided for educational development of the SC and ST students.

20.29 The number of Ashrams, Sevashrams and High Schools functioning in the State, along with the number of students on roll during the years 1990-91 to 1998-99 are given in the following tables.

Table 20.3

## Number of Sevashrams and Residential Sevashrams and Students on Roll.

(Figures in numbers)

Sl No	Year	No of institutions	Sevashrams			Residential Sevashrams			
			Number of students on roll			No of institutions	No. of students on roll		
			SC	ST	Total		SC	ST	Total
1	2	3	4	5	6	7	8	9	10
1	1990-91	1,048	21,292	51,742	1,03,65,0	79	1,546	5,558	8,450
2	1991-92	1,030	22,662	53,649	1,053,55	94	1,690	6,660	9,844
3	1992-93	1,015	20,415	54,681	1,056,64	105	1,940	7,136	10,707
4	1993-94	1,004	22,655	55,281	1,103,34	113	1,959	8,473	12,077
5	1994-95	983	21,495	56,363	1,071,80	112	2,065	9,711	13,529
6	1995-96	951	23,192	58,031	1,110,28	121	2,678	11,762	16,640
7	1996-97	940	21,795	62,980	1,145,64	129	2,743	12,339	17,362
8	1997-98	929	23,404	61,337	1,143,88	135	3,227	14,623	20,687
9	1998-99(P)	919	25,785	61,406	1,162,55.	143	3,364	14,971	21,536

*P - Provisional*

Source : Welfare Department, Orissa.

Table 20.4

## Number of Ashrams and Kanyashrams and Students on Roll

(Figures in numbers)

Sl. No.	Year	No. of schools			No. of students on roll			
		Ashrams	Kanyashrams	Total	SC	ST	Others	Total
1	1990-91	68	30	98	2,593	6,942	1,450	10,985
2	1991-92	71	29	100	2,594	7,544	1,520	11,658
3	1992-93	73	29	102	2,584	7,630	1,513	11,727
4	1993-94	73	31	104	2,433	8,300	1,617	12,350
5	1994-95	89	33	122	2,713	10,867	2,265	15,845
6	1995-96	109	34	143	2,766	11,334	2,575	16,675
7	1996-97	110	35	145	3,269	14,700	3,419	21,388
8	1997-98	110	37	147	3,587	17,167	3,221	23,975
9	1998-99(P)	112	37	149	3,704	17,635	3,548	24,387

*P - Provisional*

Source : Welfare Department, Orissa.

**Table 20.5**  
**Number of High Schools and Students on Roll**

(Figures in numbers)

Sl. No.	Year	No. of High Schools			No. of students on roll			
		Boys	Girls	Total	SC	ST	Others	Total
1	2	3	4	5	6	7	8	9
1	1990-91	128	35	163	7,175	21,116	6,803	35,094
2	1991-92	130	38	168	7,169	21,154	6,761	35,084
3	1992-93	134	40	174	7,524	22,456	6,759	36,739
4	1993-94	138	42	180	7,375	24,388	6,995	38,758
5	1994-95	143	46	189	7,489	26,513	7,481	41,483
6	1995-96	151	51	202	8,026	28,112	7,745	43,883
7	1996-97	155	52	207	8,468	29,713	8,378	46,559
8	1997-98	160	53	213	8,930	30,378	8,609	47,917
9	1998-99(P)	163	55	218	9,199	32,994	9,217	51,410

*P Provisional**Source : Welfare Department, Orissa.*

### WELFARE OF SOCIALLY AND EDUCATIONALLY BACKWARD CLASSES (SEBCs)

20.30 Apart from SCs and STs there are several communities which are socially and educationally backward. Government of Orissa have notified the list of such communities in order to provide opportunities for their development and for ensuring social justice to them. Merit scholarship is being awarded to one student each of Class IX and X in all Government and recognised High Schools and pre-examination coaching facilities are being provided to SEBC candidate to appear at the Civil Services Examination. During 1998-99, 3,127 SEBC students have been awarded merit-cum-poverty scholarships and 706 SEBC persons have been assisted with loan under self employment schemes. Target has been fixed for awarding scholarship to 9,842 students and to assist 546 persons under self-employment schemes during 1999-2000.

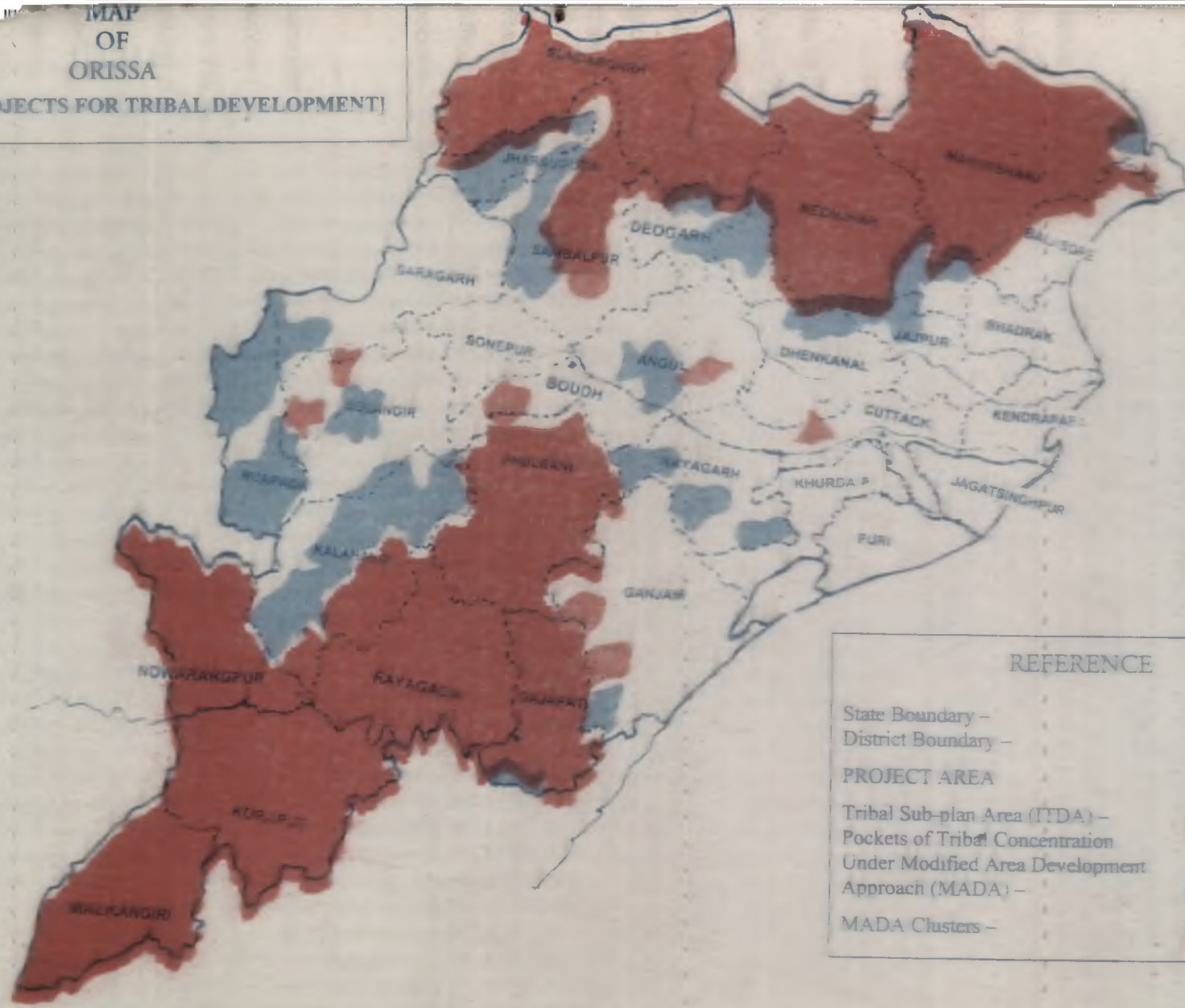
**WELFARE OF MINORITIES**

20.31 According to 1991 Census, the population of minorities in the State is 12.77 lakh, which is 4.03 percent of the State population. Prime Minister's 15-point programme is being implemented for the welfare of minorities. For the economic development of weaker sections among the minorities, the Orissa Scheduled Castes and Scheduled Tribes Development Finance Co-operative Corporation (OSFDC) has been nominated as State Channelising Agency to implement economic development programmes as per the guidelines of the National Minorities Development and Finance Corporation (NMDFC). During 1998-99, term loans amounting to Rs.55.73 lakh have been disbursed to 275 minority beneficiaries in eight districts of the State.



MAP  
OF  
ORISSA

(SHOWING PROJECTS FOR TRIBAL DEVELOPMENT)



REFERENCE	
State Boundary -	—————
District Boundary -	-----
PROJECT AREA	
Tribal Sub-plan Area (TDA) -	■
Pockets of Tribal Concentration Under Modified Area Development Approach (MADA) -	■
MADA Clusters -	▨

## CHAPTER 21

### PROBLEMS AND PROSPECTS

21.01 Despite vast natural and human resources and substantial progress achieved during the past 49 years of planned development, Orissa continues to be one of the less developed States with a high incidence of poverty. High dependence on and low productivity of the primary sector have resulted in significant fluctuations in the growth rate from year to year with a bad crop year pushing the growth rate down.

21.02 While the Gross State Domestic Product (GSDP) increased from Rs.18,612.73 crore in 1993-94 to Rs.22,229.66 crore in 1997-98 at 1993-94 prices registering a compound annual growth rate of 4.54%, the NSDP (GSDP minus consumption of fixed capital) commonly known as the State Income, increased from Rs.16,128.19 crore in 1993-94 to Rs.18,823.32 crore in 1997-98 at 1993-94 prices with a compound annual growth rate of 3.94% over the period. The per capita income at 1993-94 prices increased from Rs.4,877 to Rs.5,372 during this period. The difference between the per capita income at State and National levels for 1997-98 stood at Rs.4288 at 1993-94 prices. The devastation caused by the severe cyclones that hit Orissa in October 1999 will make it difficult to bridge this gap in the near future unless substantial resources from outside become available.

21.03 The State has been under fiscal stress for several years and is currently facing a fiscal crisis. The fiscal position worsened sharply in 1998-99 largely on account of a sudden increase in liabilities for salary payments when the fiscal deficit rose from 7% to 10% of the estimated GSDP. The increase in Non-Plan revenue expenditure arising out of substantial increase in salaries and pensions and increasing gap between Non-Plan revenue expenditure and receipt have necessitated higher borrowing and higher debt servicing liabilities. The fiscal situation in the State led the Ninth Finance Commission to observe that "the vicious circle of excessive growth of revenue expenditure, meagre or negative return from public enterprises, growing revenue deficit and large scale public borrowing resulting massive rise in interest burden and which in turn accentuates revenue

deficit leading to higher borrowing must be broken. If the increasing dis-equilibrium between the revenue expenditure is not effectively remitted, it may be increasingly difficult to discharge the social and economic responsibilities of the Government.

21.04 The share of primary sector in Net State Domestic Product continues to be the highest even though it has declined from 44.71% in 1993-94 to 40.41% during 1997-98 at 1993-94 prices. On the other hand, the contribution of secondary and tertiary sectors to NSDP has increased from 17.16% to 17.23% and 38.13% to 42.36% respectively during the same period. Sectoral analysis thus reveals that there has been a marginal shift from primary to secondary sector and a substantial shift to tertiary sector, which generally happens in a developing economy.

21.05 Though the share of the agricultural sector in NSDP has declined from 34.24% in 1993-94 to 28.68% in 1997-98 at 1993-94 prices, the State's economy continues to be dominated by this sector. Agriculture provides employment to 65.75% of the workforce directly or indirectly. In the absence of adequate irrigation facilities, agriculture is largely dependent on the monsoon. As a result, agricultural production fluctuates. Owing to the large contribution of the agricultural sector to NSDP and owing to large linkages between this and other sectors of the economy, these fluctuations influence the overall growth rate of the State's economy to an appreciable degree.

21.06 The productivity of foodgrains in Orissa during 1996-97 was 900 kg per hectare which is much lower compared to some of the more developed States like Andhra Pradesh, Gujarat, Haryana, Karnataka and Maharashtra and also below the national average of 1600 kg per hectare. The consumption of fertilisers, at 30.52 kg per hectare, was also much below the national average of 77.5 kg per hectare during 1996-97. Hence, there is substantial scope for raising agricultural productivity, particularly that of food grains, through extension of the area under assured irrigation, application of recommended dose of fertilisers, use of HYV seeds, and adoption of modern technology. The varied agro-climatic conditions of the State provide good scope for horticulture, cultivation of vegetables, plantation crops, spices, flowers and medicinal herbs. Suitable cropping patterns have to be designed taking into account the agro-climatic conditions of different zones in the State, both for agricultural and horticultural crops. Agro-based industries have to be set up to absorb the unutilised manpower from the agricultural sector, generate income through value addition and to reduce unemployment, underemployment and disguised unemployment in the rural areas. These issues have been addressed in the Agricultural Policy 1996.



21.07 The main objectives of the Agricultural Policy 1996 are to double the production of food grains and oilseeds by the end of the Ninth Plan, make agriculture profitable and commercially viable, carry modern farming technology to the farms, encourage entrepreneurship and establish agro-based and food processing industries, achieve self sufficiency in fruits, flowers, vegetables, poultry and dairy products, provide irrigation to 50% of the cultivated area, and orient agriculture towards export.

21.08 The strategies proposed to be adopted to achieve the objectives of the new Agricultural Policy include, production and supply of quality seeds, efficient distribution of fertilisers, production of bio-fertilisers through women's societies and NGOs, supply of soil health cards to each farmer, involvement of private sector for production of agricultural implements, giving more attention to commercial crops, reclamation of problematic soils, provision of adequate agricultural extension services, coverage of more crops under crop insurance, and taking up several programmes for fisheries and animal resources development. Government have established Agricultural Promotion and Investment Corporation Orissa Ltd. (APICOL) on the pattern of Industrial Promotion and Investment Corporation Limited (IPICOL) for promoting investment in agriculture and agri-businesses. This new policy visualises revamping of the existing administrative structure and establishment of Agricultural Aid Centres at the block level. Agriculture has been given the status of an industry under the new Agricultural Policy.

21.09 The proportion of net area irrigated to net area sown in the State was 32.8% during 1992-93 as against 35.2% at the all India level, and was much below the corresponding proportion in agriculturally advanced States like Punjab (93.3%), Haryana (75.6%), Uttar Pradesh (65.6%), Bihar (46.7%), Tamil Nadu (46.4%), Andhra Pradesh (38.5%) and West Bengal (35.8%). In view of favourable ground water potential and existence of a number of rivers and rivulets, there is ample scope for enhancing the area under irrigation in the State. Long term measures have also to be taken for drought proofing. Optimum and conjunctive use of surface water as well as ground water based on scientific data has to be assigned high priority. Treatment of watersheds for prevention of water and soil loss also needs emphasis. The percentage of net irrigated area to net area sown in the State increased from 30.5% in 1991-92 to 40.13% in 1998-99. The State Government have an ambitious target to bring 50% of the cultivable land under irrigation by the end of the Ninth Plan.

21.10 The annual per capita availability of milk and eggs was 23.36 kg and 26 respectively in the State during 1998-99 which was much below the national average of 71.9 kg and 30 respectively in 1997-98. There is ample prospect for increasing production of these items in the State.

21.11 While Orissa occupied sixth position at all India level in the production of inland fish during the year 1995-96, it ranked eighth in terms of marine fish production. In view of long coastline of 480 km, there is considerable potential for both inland and marine fish production. Higher production will help boost exports and earn more foreign exchange. With a view to increasing fish production in the State, a comprehensive policy has been formulated which emphasises adoption of scientific methods of pisciculture, provision of assistance to fishermen, intensive fishing operations in deep sea, imparting training to fishermen both for culture and capture fish, and establishment of fish feed mills.

21.12 The rate of exploitation, when compared to total reserves, is quite low for most minerals. During the year 1998-99, except for lead ore, manganese ore and graphite, the rate of exploitation of minerals remained below 0.72%. In case of some important minerals such as chromite, iron ore, bauxite and coal, the rate of exploitation was only 0.72%, 0.33%, 0.16% and 0.09% respectively of the total reserves. The mining sector contributes substantial income to the State exchequer. During the year 1998-99, the sector contributed Rs.316 crore to the State revenue which is about 49% of the State's own non-tax revenue. Mineral exploitation also generates large employment. There is need to attract greater investment in this sector so as to increase the rate of exploitation and generate further employment.

21.13 The new Industrial Policy 1996, formulated in the context of the ongoing economic liberalisation, reflects the State Government's commitment to growth and development of industries. The objectives of the new Industrial Policy are to exploit available natural resources to accelerate industrial growth with protection of environment, provide linkages between agriculture and agro and food processing industries, attract investment from outside, generate employment opportunities through industries like small scale industries, village and cotton industries, sericulture, handloom and handicrafts, and strengthen and upgrade entrepreneurial skills.

21.14 In order to achieve these objectives, the strategies to be adopted by the State Government include measures to develop infrastructural facilities like power, railways, telecommunication, road network, ports, airport and banking facilities, improve industrial climate, provide support to export oriented units, provide incentives to industries generating large employment opportunities, rehabilitate sick industries, lay emphasis on quality, productivity and skill development, and mobilise additional resources from outside the State and private sector in view of constraints to generation of internal resources. With the introduction of the new Industrial Policy, there has been a surge in investment proposals particularly in the areas of steel, power generation, aluminium, sugar and oil refining.

21.15 Power is a basic requirement for development. The availability of power in the State was 1,207 MW during 1998-99. The State Government have undertaken pioneering steps for reforming the power sector by enacting the Orissa Electricity Reform Act, 1995. Private investment in power sector is being encouraged. Consequently, a number of private investment proposals for setting up power projects in Orissa have been received. In addition, the Central Government and the State Government have proposals for installation of power projects of 1,314 MW capacity. After completion of these projects the State will be in a better position in respect of power generation.

21.16 Environmental conservation and protection have to form important components of all the development programmes. Rise in population, urbanisation, vehicular traffic, industrial and mining activities etc. tends to create pollution. Deforestation also contributes to pollution. 19,401.86 hectare of forest land have been lost during the last 15 years for a variety of reasons. Hence environmental planning, joint forest management (that is management of forests by involving people as well as Government agencies), and wildlife conservation need to form an integral part of development strategies in the State.

21.17 The credit deposit ratio in the State was 42.5 during 1998-99 as against the all India average of 55.5. The ratio is low when compared with States like Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Madhya Pradesh, Gujarat, Rajasthan and West Bengal. Further, the population covered per bank is 16.2 thousand as compared to 14.9 thousand at the all India level. Hence, the banking facilities in the State have to be extended for mopping up and stimulating domestic savings. Private investment in manufacturing, mining and infrastructure sectors has been stimulated by the emergence of a free and liberalised policy regime offered by the State Government. Organisations such as

Industrial Promotion and Investment Corporation Limited (IPICOL), Industrial Development Corporation Limited (IDCOL), Industrial Infrastructure Development Corporation (IIDCO), Orissa State Financial Corporation (OSFC) and Orissa Small Industries Corporation (OSIC) are playing an important role in promoting new projects.

21.18            Expectancy of life (at birth) in Orissa was 60.13 years in case of males and 58.4 years in case of females during 1991-96 while the expectancy was 60.6 years and 61.7 years for males and females respectively at the all India level during the same period. The infant mortality rate in Orissa is estimated at 96 per thousand during 1997 as compared to the all India average of 71 and 12 in Kerala. The percapita expenditure on health including family welfare, water supply and sanitation has to be stepped up for intensifying health facilities and services in the State. The Ninth Plan emphasises on improved access to health care facilities in the rural and tribal areas.

21.19            Though the decennial growth rate of population in the State was 20.06% during the period 1981-91, which is lower than the national average of 23.5% and marginally lower than the growth rate of 20.17% observed during the previous decade, it is still on the higher side as compared to the growth rate of some other States like Kerala, Tamil Nadu and Assam. Family Welfare measures have to be intensified with more emphasis in rural areas.

21.20            As per the latest estimates of Planning Commission available for the State the percentage of population below the poverty line was 49.72 in rural areas and 41.64 in urban areas in 1993-94 as against the all India averages of 37.27 and 32.36 respectively. As such, there is need for continuance of poverty amelioration and employment generation programme during the Ninth Plan period.

21.21            Education is a key input in breaking the vicious circle of poverty and low productivity. The literacy rate in the State as per the 1991 Census was a meagre 49.1%. The literacy rates of scheduled caste and scheduled tribe populations were even lower at 36.8% and 22.3% respectively. Universalisation of primary education has been included as a component of the basic minimum services programme. Several schemes aiming at reducing the drop-out rate and providing incentives to scheduled caste and scheduled tribe students have been launched in the State. Greater attention needs to be paid to this sector.

21.22 The problem of unemployment and under employment deserves special attention. The dependency ratio in Orissa is higher than most other States. The estimated quantum of unemployment at the end of 1998-99 stands at 8.36 lakh. During the Ninth Plan, it is proposed to continue all the wage employment and self employment programmes of the Eighth Plan. Efforts will be made to generate additional employment in the secondary sector.

21.23 The problem of unemployment among educated persons is often a consequence of mismatch between the demand for and supply of skills. The number of educated unemployed has increased from 5.99 lakh in 1994 to 7.60 lakh in 1998. The education system in the State needs to be re-oriented so as to supply trained manpower in vocational, professional and technical fields relevant to the emerging needs.

21.24 Although the availability of percapita own resources has improved from Rs 274.76 in 1990-91 to Rs 730.20 in 1998-99, the relative position of Orissa among different States is low as shown in Annexure 21.2. Resources transferred from the Centre to the State through shared taxes, Plan and non-Plan grants etc. have not been able to correct this imbalance. The proportion of revenue deficit to Gross Domestic Product has increased from 1.0 percent in 1989-90 to 3.3 percent in 1997-98. The fiscal deficit has however declined from 7.5 percent to 6.5 percent during the period. Hence, there is need for better resource planning to improve the resource position of the State. Considering the economic scenario and resource position of the State, an outlay of Rs.15000 crore has been approved for the State's Ninth Plan with emphasis on irrigation, energy, basic minimum services, rural infrastructure etc.

21.25 Sustaining high growth of output and employment in an environment of macro-stability requires high rate of domestic savings, supplemented by adequate mobilisation of resources from outside the State. This requires a significant and sustained reduction in revenue and fiscal deficit of Government. To reduce the debt burden, selective disinvestment in public enterprises may have to be pursued. Public savings have to be increased and deficit reduced through measures to raise the States own tax and non-tax revenues. Steps have to be initiated to curb low priority expenditure and to enhance the financial efficiency of public enterprises. The Ninth Plan assigns a significant role to the private sector. Economic liberalisation has led to progressive dilution of the regulatory regime of the pre-liberalisation era thereby creating an opportunity for large private sector participation in the process of development. This will greatly help in accelerating growth of the economy and in reducing poverty.

21.26 Frequent occurrences of natural calamities like drought, flood and cyclone stand as a barrier to economic progress of the State. The recent cyclones in the coastal districts of the State have pushed the economy of the State back by many years. These cyclones have taken more than 10,000 human lives, around 6.4 lakh animal lives and have caused heavy loss to dwelling houses, crops and Government and private property. In order to take up immediate relief measures Government of India, the State Government, some other State Governments and others have provided funds and materials. But huge financial resources are required to take up rehabilitation, restoration and reconstruction work with a view to put the State's economy back on a path of growth. Considering the weak financial position of the State, substantial resources from outside will be required.



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# ***ANNEXURE***

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**ANNEXURE 1.1**

***Sectorwise Plan Outlay and Expenditure in Orissa***

(Rs. in crore)

Sl No.	Sectors	Eighth Plan outlay (1992-97)	Ninth Plan outlay (1997-2002)	Expenditure			Outlay 1999-2000
				Eighth Plan	1997-98	1998-99	
1	2	3	4	5	6	7	8
1	Agriculture and allied activities	749.20	562.88	581.81	124.11	120.67	132.65
2	Rural development	405.15	945.52	732.69	187.63	216.92	273.66
3	Irrigation and flood control	3079.10	3388.58	1451.97	623.69	617.43	652.52
4	Energy	2644.70	4627.64	1259.75	154.42	617.43	1035.35
5	Industry and mineral	785.70	123.49	350.79	58.03	47.27	39.17
6	Transport	592.30	1278.73	711.93	158.22	146.01	275.13
7	Science, technology and environment	52.22	75.76	27.09	7.97	26.35	14.80
8	General economic services	73.94	551.30	76.50	23.38	28.76	50.16
9	Social services	1543.16	3364.83	1759.69	688.36	856.38	814.84
10	General services	73.05	81.27	52.30	11.33	18.78	20.89
<b>Total</b>		<b>10,000.00</b>	<b>15,000.00</b>	<b>7,004.52</b>	<b>2,037.14</b>	<b>2,515.42</b>	<b>3,309.17</b>

Source : Planning and Co-ordination Department, Government of Orissa.





**ANNEXURE 1.2**

**State's Own Revenue, Interest Paid and Capital Repayment of  
14 Major States (1995-96)**

(Rs. In crore)

Sl. No.	Name of the State	Revenue account						
		States own revenue	States own tax revenue	Interest paid to Central Govt.	Debt servicing (appropriation for reduction or avoidance of debt)	Total col. 5+6	Interest paid to others (other than Central Govt.)	Total interest paid + debt servicing
1	2	3	4	5	6	7	8	9
1	Andhra Pradesh	5725.9	1120.4	925.9	-	925.9	603.2	1529.1
2	Bihar	2087.8	1973.3	829.3	-	829.3	838.3	1667.6
3	Gujarat	6924.0	5322.9	900.2	-	900.2	427.9	1328.1
4	Haryana	4355.8	1169.0	293.4	-	293.4	262.3	555.7
5	Karnatak	6509.4	5273.9	635.6	103.1	738.7	411.9	1150.6
6	Kerala	3918.2	3382.7	418.1	-	418.1	506.1	924.2
7	Madhya Pradesh	5296.3	3518.2	557.7	-	557.7	600.6	1158.3
8	Maharashtra	13709.8	10934.5	1401.5	461.9	1863.4	653.9	2517.3
9	Orissa	1755.4	1127.2	407.2	0.1	407.3	522.0	929.3
10	Punjab	4428.4	2651.0	1108.8	-	1108.8	380.8	1489.6
11	Rajasthan	4987.4	2730.6	589.1	-	589.1	644.7	1233.8
12	Tamil Nadu	6009.7	7151.2	787.5	86.8	874.3	505.7	1380.0
13	Uttar Pradesh	7868.3	5168.9	1955.7	414.3	2370.0	1369.2	3739.2
14	West Bengal	4460.4	4132.9	1136.7	-	1136.7	479.5	1616.2
<b>All States</b>		<b>86759.9</b>	<b>63865.2</b>	<b>13056.6</b>	<b>1066.2</b>	<b>14122.8</b>	<b>8875.5</b>	<b>22998.3</b>

(Contd.)

*ANNEXURE - 1.2 (Concltd.)*

Sl. No	Name of the State	Capital account			Total Interest payment and capital repayment (cols. 5+8+12)	Percentage of col. 13 to col. 3
		Repayment of Central Govt. loans	Repayment of loans to other (other than Central Govt.)	Total repayment of loans (cols. 10+11)		
1	2	10	11	12	13	14
1	Andhra Pradesh	294.0	108.9	402.9	1932.0	33.7
2	Bihar	350.3	109.7	460.5	2128.1	73.7
3	Gujarat	261.0	36.2	318.1	1646.2	23.8
4	Haryana	9.5	9.4	101.9	657.6	15.1
5	Karnatak	193.7	45.1	238.8	1286.3	19.8
6	Kerala	143.2	20.7	163.9	1088.1	27.8
7	Madhya Pradesh	237.1	20.2	257.3	1415.6	26.7
8	Maharashtra	461.2	43.7	504.9	2560.3	18.7
9	Orissa	158.2	66.9	225.1	1154.3	65.8
10	Punjab	391.2	9.3	400.5	1890.1	42.7
11	Rajasthan	284.1	17.2	301.3	1535.1	30.8
12	Tamil Nadu	249.5	20.3	269.8	1583.0	19.5
13	Uttar Pradesh	643.2	396.3	1039.5	4364.4	55.5
14	West Bengal	320.0	15.6	335.8	1952.0	43.7
<b>All States</b>		<b>4798.6</b>	<b>1055.2</b>	<b>5853.8</b>	<b>27785.9</b>	<b>32.0</b>

Source : Reserve Bank of India, Bulletin, February 1998



**ANNEXURE 1.3 (A)**

**Net State Domestic Product (NSDP - State Income)  
of Orissa at Factor Cost  
(As per old methodology with base 1980-81)**

Sl. No.	Year	NSDP at factor cost (Rs. in lakh)		Per capita NSDP (in Rs.)	
		At current prices	At 1980-81 prices	At current prices	At 1980-81 prices
		3	4	5	6
1	1990-91	966428	434470	3077	1383
2	1991-92	1250530	489701	3907	1530
3	1992-93	1341553	481371	4114	1476
4	1993-94	1548051	512393	4662	1543
5	1994-95	1815595	534288	5369	1580
6	1995-96(R)	2146279	562308	6236	1634
7	1996-97(P)	2063589	514359	5893	1469
8	1997-98(Q)	2410498	601259	6767	1688

(Contd.)

**ANNEXURE 1.3 (A) (Concl.)**

Sl. No.	Year	Annual increase (%) of			
		NSDP		Per capita NSDP	
		At current prices	At 1980-81 prices	At current prices	At 1980-81 prices
1	2	7	8	9	10
1	1990-91	-	-	-	-
2	1991-92	29.4	12.7	27.0	10.6
3	1992-93	7.3	(-) 1.7	5.3	(-) 3.5
4	1993-94	15.4	6.4	13.3	4.5
5	1994-95	17.3	4.3	15.2	2.4
6	1995-96(R)	18.2	5.2	16.2	3.4
7	1996-97(P)	(-) 3.9	(-) 8.5	(-) 5.5	(-) 10.1
8	1997-98(Q)	16.8	16.9	14.8	14.9

*R : Revised Estimates, P : Provisional Estimates, Q : Quick Estimates.*

*Source : Directorate of Economics and Statistics, Orissa Bhubaneswar*



**ANNEXURE 1.3 (B)**

**Net State Domestic Product (NSDP - State Income)  
of Orissa at Factor Cost  
(As per new methodology with base 1993-94)**

Sl No	Year	NSDP at factor cost (Rs. In lakh)		Per capita NSDP (In Rs.)	
		At current prices	At 1993-94 prices	At current prices	At 1993-94 prices
		3	4	5	6
1	1993-94 (P)	1612819	1612819	4877	4877
2	1994-95 (P)	1950359	1716066	5800	5103
3	1995-96 (P)	2386247	1809542	6978	5291
4	1996-97 (P)	2317418	1708908	6685	4930
5	1997-98 (P)	2839251	1918395	8103	5475
6	1998-99(Q)	3085715	1998912	8719	5648

(Contd.)

**ANNEXURE 1.3 (B) (Concl.)**

Sl No.	Year	Annual increase (%) of			
		NSDP		Per capita NSDP	
		At current prices	At 1993-94 prices	At current prices	At 1993-94 prices
1	2	7	8	9	10
1	1993-94(P)	-	-	-	-
2	1994-95 (P)	20.93	6.40	18.93	4.63
3	1995-96 (P)	22.35	5.45	20.31	3.68
4	1996-97 (P)	(-)2.88	(-)5.56	(-)4.20	(-)6.82
5	1997-98 (P)	22.52	12.26	21.21	11.05
6	1998-99(Q)	8.68	4.20	7.60	3.16

P : Provisional Estimates, Q : Quick Estimates.

Source : Directorate of Economics and Statistics, Orissa Bhubaneswar



## ANNEXURE 1.4 (A)

### *Broad Sectorwise Net State Domestic Product of Orissa at Factor Cost at Current Prices (As per the old methodology with base 1980-81)*

		(Rs. in crore)					
Sl. No.	Sector	1992-93	1993-94	1994-95	1995-96 (R)	1996-97 (P)	1997-98 (Q)
1	2	3	4	5	6	7	8
1	PRIMARY SECTOR (agriculture, animal husbandry, forestry, fishing, mining and Quarrying etc.)	5735.44 (42.8)	7048.46 (45.5)	7905.08 (43.5)	9407.44 (45.8)	7921.71 (38.4)	9679.74 (40.1)
2	SECONDARY SECTOR (manufacturing, construction, electricity, gas and water supply)	2684.34 (20.0)	2746.05 (17.7)	3622.22 (20.0)	4305.39 (20.1)	4515.78 (21.9)	5202.42 (21.6)
3	TERTIARY SECTOR (transport, communication, trade, storage etc.)	2764.38 (20.6)	3213.2 (20.8)	3750.03 (20.7)	4339.97 (20.2)	4282.77 (20.7)	4841.92 (20.1)
4	SERVICES SECTOR (banking and insurance, real estate, public administration, other services).	2231.37 (16.6)	2472.80 (16.0)	2878.62 (15.8)	3409.99 (15.9)	3915.63 (19.0)	4380.90 (18.2)
	Net State Domestic Product at factor cost.	13416.53 (100.00)	15480.51 (100.00)	18155.95 (100.00)	21462.79 (100.00)	20635.89 (100.00)	24104.98 (100.00)
	Per Capita Income (Rs.)	4114	4662	5369	6236	5893	6707

*R : Revised Estimates, P : Provisional Estimates, Q : Quick Estimates*

*N.B. : Figures in brackets indicate percentage contribution to NSDP.*

*Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar*



**ANNEXURE 1.4 (B)**

**Broad Sectorwise Net State Domestic Product of Orissa at Factor  
Cost at Current Prices  
(As per the new methodology with base 1993-94)**

		(Rs. in crore)				
Sl No	Sector	1994-95 (P)	1995-96 (P)	1996-97 (P)	1997-98 (P)	1998-99 (Q)
1	2	3	4	5	6	7
1	PRIMARY SECTOR (agriculture, animal husbandry, forestry, fishing, mining and quarrying etc.)	8605.12 (44.12)	10903.35 (45.69)	9677.94 (41.77)	12977.15 (45.71)	13069.30 (42.35)
2	SECONDARY SECTOR (manufacturing, construction, electricity, gas and water supply)	3600.01 (18.46)	4208.37 (17.64)	4055.88 (17.49)	4650.19 (16.38)	4867.32 (15.78)
3	TERTIARY SECTOR (transport, communication, trade, storage etc.)	4145.32 (21.25)	5088.62 (21.33)	5160.02 (22.27)	5842.15 (20.57)	6535.73 (21.18)
4	SERVICES SECTOR (banking and insurance, real estate, public administration, other services)	3153.14 (16.17)	3662.13 (15.34)	4280.34 (18.47)	4923.02 (17.34)	6384.80 (20.69)
	Net State Domestic Product at factor cost.	19603.59 (100.00)	23862.47 (100.00)	23174.18 (100.00)	28392.51 (100.00)	30857.15 (100.00)
	Per Capita Income (Rs.)	5103	5291	4930	8103	8719

*P : Provisional Estimates, Q : Quick Estimates*

*N.B. : Figures in brackets indicate percentage contribution to NSDP.*

*Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar.*



**ANNEXURE 1.5 (A)**

**Broad Sectorwise Net State Domestic Product of Orissa at Factor  
Cost at 1980-81 Prices  
(As per old methodology with base 1980-81)**

		(Rs. in crore)					
Sl. No.	Sector	1992-93	1993-94	1994-95	1995-96 (R)	1996-97 (P)	1997-98 (Q)
1	2	3	4	5	6	7	8
1	PRIMARY SECTOR (agriculture, animal husbandry, forestry, fishing, mining & quarrying etc.)	2006.19 (41.7)	2322.15 (45.3)	2302.01 (43.1)	2357.97 (41.9)	1895.43 (36.9)	2406.38 (40.0)
2	SECONDARY SECTOR (Industry, construction, electricity, etc.)	893.34 (18.6)	819.46 (16.0)	942.55 (17.6)	1018.09 (18.1)	986.15 (19.1)	1123.56 (18.7)
3	TERTIARY SECTOR (transport, communication, trade, storage etc.)	953.95 (19.8)	1003.76 (19.8)	1063.53 (19.9)	1118.63 (19.9)	1064.58 (20.7)	1208.55 (20.1)
4	SERVICES SECTOR (banking and insurance, real estate, public administration, other services).	960.23 (19.9)	978.56 (19.1)	1034.79 (19.4)	1128.45 (20.1)	1198.43 (23.3)	1274.10 (21.2)
	Net State Domestic Product at factor cost.	4813.71 (100.00)	5123.93 (100.00)	5342.88 (100.00)	5623.08 (100.00)	5143.59 (100.00)	6012.59 (100.0)
	Per Capita Income (Rs.)	1476	1543	1580	1634	1469	1688

*R : Revised Estimates, P : Provisional Estimates, Q : Quick Estimates*

*N.B : Figures in brackets indicate percentage contribution to NSDP.*

*Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar.*



**ANNEXURE 1.5 (B)**

**Broad Sectorwise Net State Domestic Product of Orissa at Factor  
Cost at 1993-94 Prices  
(As per new methodology with base 1993-94)**

		(Rs. in crore)				
Sl. No.	Sector	1994-95 (P)	1995-96 (P)	1996-97 (P)	1997-98 (P)	1998-99 (Q)
1	2	3	4	5	6	7
1	PRIMARY SECTOR (agriculture, animal husbandry, forestry, fishing, mining & quarrying etc.)	7482.28 (43.60)	7689.09 (42.49)	6836.12 (40.01)	8345.54 (43.50)	8207.82 (41.06)
2	SECONDARY SECTOR (industry, construction, electricity, etc.)	3110.99 (18.13)	3245.35 (17.93)	2877.19 (16.84)	2902.72 (15.13)	3009.35 (15.05)
3	TERTIARY SECTOR (transport, communication, trade, storage etc.)	3685.52 (21.48)	4080.28 (22.55)	4053.34 (23.71)	4339.18 (22.62)	4541.39 (22.72)
4	SERVICES SECTOR (banking and insurance, real estate, public administration, other services).	2881.87 (16.79)	3080.70 (17.03)	3322.43 (19.44)	3596.51 (18.75)	4230.56 (21.17)
	Net State Domestic Product at factor cost.	17160.66 (100.00)	18095.42 (100.00)	17069.08 (100.00)	19183.95 (100.00)	19089.12 (100.00)
	Per Capita Income (Rs.)	5103	5291	4930	5475	5648

*P : Provisional Estimates, Q : Quick Estimates*

*N.B. : Figures in brackets indicate percentage contribution to NSDP.*

*Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar.*





**ANNEXURE 1.6 (A)**

**Gross State Domestic Product at Factor Cost  
by Kind of Economic Activity  
(As per old methodology with base 1980-81)  
(Percentage change over the previous year)**

AT CURRENT PRICES			Activity	AT 1993-94 PRICES		
1995-96 (R)	1996-97 (P)	1997-98 (Q)		1995-96 (R)	1996-97 (P)	1997-98 (Q)
1	2	3	4	5	6	7
15.08	(-) 18.34	24.43	1. Agriculture, animal husbandry, forestry and fishing.	(-) 3.04	(-) 24.03	31.31
17.63	(-) 24.37	29.6	1.1 Agriculture and animal husbandry	(-) 3.13	(-) 28.56	35.85
0.03	13.82	0.19	1.2 Forestry and logging	(-) 10.39	(-) 1.08	2.81
2.79	27.22	7.92	1.3 Fishing	2.70	10.51	14.95
25.67	4.48	8.86	2. Mining and quarrying	22.55	6.07	9.06
31.57	(-) 5.23	14.88	3. Manufacturing	21.06	(-) 8.23	12.49
24.29	(-) 16.05	15.47	3.1 Registered manufacturing	14.27	(-) 19.00	12.72
49.25	16.65	14.02	3.2 Un-registered manufacturing	35.94	11.84	12.17
(-) 4.27	2.62	9.75	4. Electricity, gas and water supply	(-) 16.37	(-) 3.77	13.26
18.43	16.91	17.52	5. Construction	(-) 0.08	1.54	18.00
15.12	(-) 3.76	14.40	6. Trade, hotel and restaurants	3.46	(-) 6.78	14.54
18.40	8.96	10.84	7. Transport, storage and communication	13.98	5.29	7.29
23.11	4.82	4.82	7.1 Railways	23.65	3.03	3.03
14.40	12.01	16.59	7.2 Transport by other means	8.85	3.35	6.82
34.50	22.85	21.04	7.3 Storage	33.74	17.55	6.53
10.51	16.60	16.60	7.4 Communication	16.74	17.44	17.45
22.51	14.74	13.46	8. Financing, insurance, real estate and business services	12.48	7.34	7.53
32.86	15.20	15.20	8.1 Banking and insurance	24.53	11.85	11.86
7.80	13.94	10.39	8.2 Real estate, ownership of dwellings and business services	3.00	3.04	3.07
16.60	14.88	11.36	9. Community, social and personal services	5.76	5.29	5.55
19.30	12.41	14.30	9.1 Public administration	8.25	2.86	8.30
14.41	16.98	8.97	9.2 Other services	3.76	7.32	3.34
17.74	(-) 3.41	16.57	TOTAL G.S.D.P.	5.23	(-) 8.30	16.29

*R : Revised Estimates, P : Provisional Estimates, Q : Quick Estimates,  
Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar.*



**ANNEXURE 1.6 (B)**

**Gross State Domestic Product at Factor Cost  
by Kind of Economic Activity  
(As per new methodology with base 1993-94)  
(Percentage change over the previous year)**

AI CURRENT PRICES		Activity	AT 1993-94 PRICES	
1997-98 (P)	1998-99 (Q)		1997-98 (P)	1998-99 (Q)
1	2	3	4	5
31.48	2.35	1. Agriculture, animal husbandry, forestry and fishing.	20.70	(-) 0.79
35.61	1.42	1.1 Agriculture and animal husbandry	22.32	(-) 1.66
10.99	15.37	1.2 Forestry and logging	13.90	9.94
8.15	(-) 0.82	1.3 Fishing	12.70	(-) 4.29
22.80	1.01	2. Mining and quarrying	8.48	0.42
11.38	12.41	3. Manufacturing	7.19	9.51
1.58	8.74	3.1 Registered manufacturing	(-) 1.58	6.08
30.85	18.08	3.2 Un-registered manufacturing	24.79	14.96
80.43	(-) 5.48	4. Electricity, gas and water supply	10.09	(-) 1.59
(-) 5.32	10.35	5. Construction	(-) 5.29	(-) 1.75
13.20	10.83	6. Trade, hotel and restaurants	1.53	4.47
13.20	15.19	7. Transport, storage and communication	4.01	6.28
11.27	11.27	7.1 Railways	2.97	2.97
12.19	16.78	7.2 Transport by other means	0.90	5.86
56.39	31.15	7.3 Storage	35.09	13.41
18.84	18.84	7.4 Communication	15.50	15.50
14.20	13.40	8. Financing, insurance, real estate and business services	8.37	8.66
13.99	13.99	8.1 Banking and insurance	13.29	13.29
14.44	12.70	8.2 Real estate, ownership of dwellings and business services	2.74	2.82
15.22	36.42	9. Community, social and personal services	7.53	21.18
14.65	44.81	9.1 Public administration	7.14	29.11
15.66	29.89	9.2 Other services	7.85	14.97
20.76	9.89	TOTAL G.S.D.P.	10.80	4.74

P : Provisional , Q : Quick Estimates

Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar.



**ANNEXURE 1.7 (A)**

**Net National Product (National Income) at Factor Cost  
1990-91 to 1996-97  
(As per old methodology with base 1980-81)**

Sl. No	Year	NNP at factor cost (Rs. in crore)		Per capita NNP (in Rs.)	
		Current prices	Constant prices (1980-81 prices)	Current prices	Constant prices (1980-81 prices)
1	2	3	4	5	6
1	1990-91	418057	186489	4983	2223
2	1991-92	479001	186418	5598	2178
3	1992-93	543566	194093	6234	2226
4	1993-94	626957	203486	7060	2292
5	1994-95(R)	748652	221406	8282	2449
6	1995-96(P)	881216	239957	9578	2608
7	1996-97(Q)	1008188	258465	10771	2761

P : Provisional , Q : Quick Estimates

Source : 1) National Accounts Statistics 1995, C.S.O. Publication  
2) Press Information Bureau, Government of India.

**ANNEXURE 1.7 (B)**

**Net National Product (National Income) at Factor Cost  
1993-94 to 1998-99  
(As per new methodology with base 1993-94)**

Sl. No	Year	NNP at factor cost (Rs. in crore)		Per capita NNP (in Rs.)	
		Current prices	Constant prices (1993-94 prices)	Current prices	Constant prices (1993-94 prices)
1	2	3	4	5	6
1	1993-94	704038	704038	7902	7902
2	1994-95	833325	758781	9178	8357
3	1995-96	975645	817489	10525	8819
4	1996-97	1140895	884237	12099	9377
5	1997-98(P)	1220716	889102	12729	9271
6	1998-99(Q)	1431527	949525	14682	9739

P : Provisional , Q : Quick Estimates

Source : National Accounts Statistics 1999, C.S.O. Publication



**ANNEXURE 1.8**

**Per Capita Net State Domestic Product At Constant (1980-81) Prices  
(1992-93 to 1997-98)**

**As on 10.03.98 (State Series)**

		(In Rs.)					
Sl. No.	Name of the State and Union Territory	1992-93	1993-94	1994-95	1995-96 (R)	1996-97 (P)	1997-98 (Q)
1	2	3	4	5	6	7	8
1	Andhra Pradesh	1736	1871	1973	2407	2500	2413
2	Arunachal Pradesh	3013	3369	3265	3667	3444	3727
3	Assam	1557	1583	1585	1637	1661	1673
4	Bihar	1017	1019	1037	983	1065	1073
5	Goa	5381	5497	5743	6121	6227	*
6	Gujarat	3060	2960	3531	3517	3799	3976
7	Haryana	3421	3498	3686	3679	4029	3997
8	Himachal Pradesh	2267	2315	2395	2518	*	*
9	Jammu and Kashmir	1804	1832	1905	1955	2009	*
10	Karnataka	2272	2407	2454	2551	2641	*
11	Kerala	1932	2114	2169	2200	2325	2444
12	Madhya Pradesh	1618	1747	1792	1854	1938	1981
13	Maharashtra	3736	4057	4299	4635	4866	4791
14	Manipur	1884	1896	1986	1993	2075	*
15	Meghalaya	1617	1681	1673	1808	1837	*
16	Mizoram	*	*	*	*	*	*
17	Nagaland	2239	2170	*	*	*	*
18	Orissa	1476	1543	1580	1634	1469	1688
19	Punjab	3931	4022	4121	4176	4412	4416
20	Rajasthan	1993	1790	2053	1996	2247	2215
21	Sikkim	*	*	*	*	*	*
22	TamilNadu	2355	2551	2796	2820	2918	3057
23	Tripura	1709	1856	1912	2111	2197	*
24	Uttar Pradesh	1615	1626	1641	1654	1748	1757
25	West Bengal	2295	2437	2601	2704	2866	3002
26	A & N Island	2884	3079	3404	3286	3456	*
27	Delhi	5453	5630	6609	6629	6612	*
28	Pondichery	2571	2770	2793	2957	3149	*

R : Revised estimates      P : Provisional estimates      Q : Quick estimates

\* Not made available by the concerned State Government.

Source : Statewise Net State Domestic Product, C.S.O., 1997-98

Note 1 : Owing to differences in methodology, source material used the figures for different State / UTs are not strictly comparable.

Note 2 : The State of Mizoram prepares these estimates at current prices only.

Note 3 : The Union Territories of Chandigarh, Dadra and Nagar Haveli, Daman and Diu and Lakshadweep do not prepare these estimates.



**ANNEXURE I.9**

**Per Capita Net State Domestic Product At Current Prices**

*(1992-93 to 1997-98)*

As on 10.03.98 (State Series)

Sl. No.	Name of the State and Union Territory	(in Rs.)					
		1992-93	1993-94	1994-95	1995-96 (R)	1996-97 (P)	1997-98 (Q)
1	2	3	4	5	6	7	8
1	Andhra Pradesh	5718	6900	7884	9274	10306	10590
2	Arunachal Pradesh	7518	8852	9413	11303	12032	13424
3	Assam	4973	5520	6017	6624	6928	7335
4	Bihar	2998	3417	3737	3533	4231	4654
5	Goa	12800	15332	16703	18984	19719	*
6	Gujarat	8164	9063	11810	12914	14675	16251
7	Haryana	9037	10526	12283	13573	16392	17626
8	Himachal Pradesh	6390	6896	7846	8747	*	*
9	Jammu and Kashmir	4024	4244	5860	6231	6658	*
10	Karnataka	6315	7214	8317	9384	10279	*
11	Kerala	5768	6524	7597	9004	10309	11936
12	Madhya Pradesh	4544	5508	6034	6775	7571	8114
13	Maharashtra	9806	11662	13368	15770	17666	18365
14	Manipur	5026	5930	6543	6914	7510	*
15	Meghalaya	5272	5934	6402	7862	8474	*
16	Mizoram	6599	7517	7743	9570	*	*
17	Nagaland	6652	6638	8550	9758	11174	*
18	Orissa	4114	4662	5369	6236	5893	6767
19	Punjab	11140	12936	14534	16053	18006	19500
20	Rajasthan	5257	5287	6406	6959	8481	9215
21	Sikkim	5722	7679	8869	9472	*	*
22	TamilNadu	6670	8041	9353	10222	11708	12989
23	Tripura	3773	4252	4366	5083	5432	*
24	Uttar Pradesh	4335	4794	5339	5872	6713	7263
25	West Bengal	5541	6257	7436	8491	9579	10636
26	A & N Island	6277	8720	10476	10911	12653	*
27	Delhi	14567	16354	19954	21830	22687	*
28	Pondichery	6631	8545	10489	11512	11677	*

R : Revised estimates      P : Provisional estimates      Q : Quick estimates

\*Not made available by the concerned State Governments

Source : Statewise Net State Domestic Product, C.S.O., 1997-98

Note 1 : Owing to differences in methodology, source material used the figures for different State / UTs are not strictly comparable.

Note 2 : The Union Territories of Chandigarh, Dadra and Nagar Haveli, Daman and Diu and Lakshadweep do not prepare these estimates.



**ANNEXURE - 2.1**

***Growth of Population in Orissa and India since 1901***

Sl No.	Census Year	Orissa			India	
		Population (in crore)	Decennial growth (in %)	Population as % to that of India	Population (in crore)	Decennial growth (in %)
1	2	3	4	5	6	7
1	1901	1.03	-	4.32	23.84	-
2	1911	1.14	10.44	4.51	25.21	5.75
3	1921	1.12	(-) 1.94	4.44	25.13	( ) 0.31
4	1931	1.25	11.94	4.48	27.90	11.00
5	1941	1.38	10.22	4.32	31.87	14.22
6	1951	1.46	6.38	4.05	36.11	13.31
7	1961	1.75	19.82	4.00	43.92	21.51
8	1971	2.19	25.05	4.00	54.82	24.80
9	1981*	2.64	20.17	3.86	68.33	24.64
10	1991**	3.17	20.06	3.74	84.63	23.85

\* In 1981, census was not conducted in Assam. Based on 1971 census population figures and the 1991 census provisional result, the population of Assam for 1981 has been interpolated and incorporated

\*\* The 1991 census was not held in Jammu and Kashmir. The population for Jammu and Kashmir as projected (as on 01.03.1991) by the Standing Committee of Experts on Population Projections (October, 1989) has been incorporated.

Source : Census of India



**ANNEXURE - 2.2**

***District-wise Population of Orissa with Male and Female, Rural and Urban, Scheduled Caste and Scheduled Tribe Break-up as per 1991 Census.***

Sl. No.	District	Total	Male	Female	Rural	Urban	SC	ST
1	2	3	4	5	6	7	8	9
1	Angul	961,037	494,901	466,136	850,914	110,123	161,660	112,293
2	Balasore	1,696,583	867,641	828,942	1,542,431	154,152	315,042	179,289
3	Bargarh	1,207,172	609,916	597,256	1,126,625	80,547	222,562	236,072
4	Bhadrak	1,105,834	557,017	548,817	995,993	109,841	240,027	18,703
5	Bolangir	1,230,938	621,486	609,452	1,101,518	129,420	189,471	271,511
6	Boudh	317,622	159,660	157,762	302,164	15,458	62,377	41,022
7	Cuttack	1,972,739	1,027,747	944,992	1,486,878	485,861	358,877	68,858
8	Deogarh	234,238	118,172	116,066	216,963	17,275	34,210	78,032
9	Dhenkanal	947,870	485,176	462,694	869,758	78,112	151,914	120,226
10	Gajapati	454,708	224,329	230,379	407,939	46,769	39,898	217,725
11	Ganjam	2,704,056	1,348,042	1,356,014	2,280,303	423,753	484,187	79,120
12	Jagatsinghpur	1,014,242	513,134	501,108	938,150	76,092	220,315	6,232
13	Jajpur	1,386,177	701,005	685,172	1,332,746	53,431	317,025	102,546
14	Jharsuguda	446,726	230,511	216,215	287,398	159,328	76,592	142,418
15	Kalahandi	1,130,903	565,595	565,308	1,052,740	78,163	192,366	326,648
16	Kendrapara	1,149,501	572,703	576,798	1,086,266	63,235	227,943	4,552
17	Keonjhar	1,337,026	677,480	659,546	1,170,152	166,874	153,639	595,184
18	Khurda	1,502,014	789,334	712,680	985,733	516,281	204,564	77,242
19	Koraput	1,029,986	517,274	512,712	858,281	171,705	138,169	521,849
20	Malkangiri	421,917	212,576	209,341	387,489	34,428	84,208	246,214
21	Mayurbhanj	1,884,580	952,183	932,397	1,768,331	116,249	131,765	1,090,626
22	Nawapara	469,482	234,462	235,020	443,717	25,765	61,466	168,777
23	Nayagarh	782,647	399,701	382,946	756,403	26,244	107,836	46,624
24	Nowarangpur	846,659	425,759	420,900	804,542	42,117	127,800	467,919
25	Phulbani	546,281	273,234	273,047	510,619	35,662	99,499	281,386
26	Puri	1,305,365	662,764	642,601	1,141,686	163,479	242,289	3,481
27	Rayagada	713,984	354,911	359,073	624,658	89,326	101,956	400,097
28	Sambalpur	809,017	413,541	395,476	603,659	205,458	138,096	283,801
29	Sonepur	476,815	240,985	235,830	441,985	34,830	105,404	45,286
30	Sundergarh	1,573,617	812,707	760,910	1,048,612	525,005	138,157	798,481
<b>ORISSA</b>		<b>31,689,736</b>	<b>16,064,146</b>	<b>15,595,590</b>	<b>27,424,753</b>	<b>4,234,983</b>	<b>5,129,314</b>	<b>7,032,214</b>

Source: Census of India



**ANNEXURE - 2.3**

**Occupational Classification of Main Workers, Marginal Workers and Total Workers in Orissa according to 1991 Census.**

Sl No	District	Culti- vatos	Agricul- tural labourers	House hold Industry	Other workers	Total main workers	Marginal workers	Total workers
1	2	3	4	5	6	7	8	9
1	Angul	130,233	130,233	15,009	81,255	315,601	52,506	368,107
2	Balasore	229,904	229,904	8,669	107,959	473,255	27,503	500,758
3	Bargarh	205,332	205,332	30,914	65,157	446,935	87,834	534,769
4	Bhadrak	163,799	163,799	3,478	62,972	284,167	10,468	294,635
5	Bolangir	208,673	208,673	15,150	70,237	425,507	76,009	501,516
6	Boudh	62,628	62,628	5,565	13,277	120,675	27,181	147,856
7	Cuttack	172,333	172,333	19,999	245,860	563,792	21,723	585,515
8	Deogarh	44,402	44,402	3,385	11,169	85,696	19,400	105,096
9	Dhenkanal	112,830	112,830	8,910	68,760	284,289	27,582	311,871
10	Gajapati	95,731	95,731	2,399	25,093	190,707	33,432	224,136
11	Ganjam	368,938	368,938	28,653	237,468	947,048	136,855	1,083,903
12	Jagatsinghpur	124,830	124,830	7,903	79,430	269,022	10,228	279,250
13	Jajpur	147,625	147,625	8,926	96,372	353,280	13,173	366,453
14	Jharsuguda	48,986	48,986	5,234	59,730	149,756	24,713	174,469
15	Kalahandi	182,628	182,628	11,538	57,103	426,175	83,555	509,730
16	Kendrapara	156,222	156,222	5,648	60,661	279,392	8,892	288,284
17	Keonjhar	209,789	209,789	10,208	112,077	439,953	79,073	519,026
18	Khurda	113,219	113,219	9,546	229,707	436,036	13,640	449,676
19	Koraput	203,728	203,728	5,522	81,617	423,115	90,886	514,001
20	Malkangiri	117,633	117,633	974	14,633	157,765	39,944	197,709
21	Mayurbhanj	340,619	340,619	36,923	101,368	702,511	160,986	863,477
22	Nawapara	96,068	96,068	4,790	19,668	173,459	40,855	214,314
23	Nayagarh	116,041	116,041	11,311	42,870	236,575	16,087	252,662
24	Nowrangpur	171,428	171,428	7,046	32,696	328,200	86,701	414,901
25	Phulbani	102,929	102,929	4,731	31,559	212,946	47,930	260,876
26	Puri	168,738	168,738	8,794	105,409	368,044	15,205	383,249
27	Rayagada	118,395	118,395	3,636	51,344	294,522	54,557	349,079
28	Sambalpur	104,490	104,490	18,195	83,143	308,397	48,233	356,630
29	Sonepur	83,310	83,310	9,791	20,812	172,599	37,463	210,062
30	Sundergarh	197,019	197,019	11,556	208,496	508,139	112,633	620,672
	<b>ORISSA</b>	<b>4,598,500</b>	<b>2,976,750</b>	<b>324,403</b>	<b>2,477,982</b>	<b>10,377,835</b>	<b>1,895,127</b>	<b>11,882,762</b>

Source : Census of India





## ANNEXURE - 2A

### *State-wise Population with Rural and Urban break up according to 1991 Census*

Sl. No.	State	Total population	Rural population	Urban population
1	2	3	4	5
1	Andhra Pradesh	66,508,008	48,620,882	17,887,126
2	Arunachala Pradesh	864,558	753,930	110,628
3	Assam	22,414,322	19,926,527	2,487,795
4	Bihar	86,374,465	75,021,453	11,353,012
5	Goa	1,169,793	690,041	479,752
6	Gujarat	41,309,582	27,063,521	14,246,061
7	Haryana	16,463,648	12,408,904	4,054,744
8	Himachal Pradesh	5,170,877	4,721,681	449,196
9	Jammu & Kashmir *	7,718,700	5,879,300	1,839,400
10	Karnataka	44,977,201	31,069,413	13,907,788
11	Kerala	29,098,518	21,418,224	7,680,294
12	Madhya Pradesh	66,181,170	50,842,333	15,338,837
13	Maharashtra	78,937,187	48,395,601	30,541,586
14	Manipur	1,837,149	1,331,504	505,645
15	Meghalaya	1,774,778	1,444,731	330,047
16	Mizoram	689,756	371,810	317,946
17	Nagaland	1,209,546	1,001,323	208,223
18	Orissa	31,659,736	27,424,753	4,234,983
19	Punjab	20,281,969	14,288,744	5,993,225
20	Rajasthan	44,005,990	33,938,877	10,067,113
21	Sikkim	406,457	369,451	37,006
22	Tamil Nadu	55,858,946	36,781,354	19,077,592
23	Tripura	2,757,205	2,335,484	421,721
24	Uttar Pradesh	139,112,287	111,506,372	27,605,915
25	West Bengal	68,077,965	493,703,646	18,707,601
<b>INDIA</b>		<b>846,302,888</b>	<b>628,691,676</b>	<b>217,611,012</b>

\* Projected population as on 01.03.1991

Source: Census of India, 1991 Orissa, Final Population Table



*ANNEXURE - 2.5*

*Number of Employment Exchanges and Employment Seekers  
in the Live Register according to Academic Qualification*

Sl No.	Year	No. of Employment Exchanges	No. of persons in Live- Register	Matriculates	Under graduates
1	2	3	4	5	6
1	1985	81	721,154	192,592	39,683
2	1986	81	900,498	272,582	53,759
3	1987	80	814,887	268,650	53,774
4	1988	80	771,089	274,206	488,666
5	1989	80	848,761	306,679	56,720
6	1990	80	869,825	324,463	63,020
7	1991	79	899,854	327,423	62,221
8	1992	79	891,251	344,531	63,838
9	1993	79	863,764	351,244	67,517
10	1994	79	877,679	367,298	74,558
11	1995	80	920,767	409,859	97,512
12	1996	80	975,833	447,392	115,944
13	1997	80	1,006,401	453,553	120,615
14	1998(P)	80	1,000,105	436,700	128,060

(Contd.)

*ANNEXURE - 2.5 (Concl'd.)*

Year	Graduates				Post graduates	Others (un-educated, diploma holders etc.	No of placements
	Engineering	Medical	Others	Total			
1	7	8	9	10	11	12	13
1985	570	689	81,394	82,653	6,486	399,840	13,685
1986	974	684	102,118	103,776	6,758	463,923	15,584
1987	1,431	1,035	92,135	94,601	7,873	389,989	11,642
1988	1,964	1,144	111,190	114,298	8,831	325,088	4,074
1989	2,555	1,401	101,707	105,663	9,823	370,176	8,954
1990	3,430	1,362	111,211	116,003	9,826	356,513	12,491
1991	3,534	1,360	108,677	113,571	9,817	386,422	7,675
1992	3,863	1,578	119,571	125,012	8,018	350,002	7,839
1993	3,686	1,549	129,016	134,251	8,416	288,377	4,896
1994	3,860	1,794	133,084	138,738	8,708	256,092	4,015
1995	3,775	1,841	142,894	148,510	8,794	243,237	1,020
1996	3,452	1,804	157,578	162,834	6,426	261,057	4,577
1997	3,432	1,742	160,606	165,780	8,396	262,579	10,033
1998(P)	2,587	1,848	162,151	166,586	6,180	262,579	4,369

Source : Directorate of Employment, Orissa.



## ANNEXURE - 4.1

### Land Utilisation Pattern in Orissa

[ Area in thousand hectare ]

Sl No	Year	Geographical area	Forest area	Misc. tree	Permanent pastures	Culturable waste	Land put to non agri. use	Barren & unculturable land	Current fallow	Other fallow	Net area sown
1	2	3	4	5	6	7	8	9	10	11	12
1	1989-90	15,540	5,476	859	726	514	742	499	146	254	6,321
2	1990-91	15,540	5,476	859	726	597	746	499	119	214	6,304
3	1991-92	15,540	5,482	855	726	572	748	499	137	184	6,337
4	1992-93	15,540	5,478	857	663	538	781	532	184	203	6,304
5	1993-94	15,540	5,534	867	635	487	781	541	149	243	6,303
6	1994-95	15,540	5,722	715	514	435	858	553	166	298	6,279
7	1995-96	15,540	5,722	715	514	435	858	553	210	323	6,210
8	1996-97	15,540	5,606	764	534	445	858	570	452	343	5,968
9	1997-98	15,540	5,606	774	534	445	866	590	267	336	6,122

Source : Directorate of Agriculture and Food Production, Orissa, Bhubaneswar



*ANNEXURE - 4.2*

*Cropping Pattern of Principal Crops in Orissa*

		(Area in hundred hectare)					
Sl No	Crops	1991-92		1992-93		1993-94	
		Area	% to total	Area	% to total	Area	% to total
1	2	3	4	5	6	7	8
<b>(A) Cereals</b>							
1	Rice	45,474	70.24	44,432	70.90	45,553	71.32
2	Wheat	96	0.15	60	0.10	39	0.06
3	Maize	479	0.74	669	1.07	609	0.95
4	Ragi	766	1.18	799	1.27	852	1.33
5	Others	1067	1.65	971	1.55	975	1.53
	<b>Total (A)</b>	<b>47,882</b>	<b>73.96</b>	<b>46,931</b>	<b>74.89</b>	<b>48,028</b>	<b>75.20</b>
<b>(B) Pulses</b>							
6	Gram	354	0.55	311	0.50	308	0.48
7	Arhar	1,682	2.60	1,653	2.64	1,667	2.61
8	Other pulses	7,694	11.88	7,026	11.21	7,095	11.10
	<b>Total (B)</b>	<b>9,730</b>	<b>15.03</b>	<b>8,990</b>	<b>14.35</b>	<b>9,070</b>	<b>14.20</b>
<b>Total Foodgrains (A+B)</b>		<b>57,612</b>	<b>88.99</b>	<b>55,921</b>	<b>89.24</b>	<b>87,098</b>	<b>89.40</b>
<b>(C) Oil Seeds</b>							
9	Groundnut	1,043	1.61	1,120	1.79	1,001	1.57
10	Sesamum	911	1.41	841	1.34	-	-
11	Rape seed and mustard	357	0.55	259	0.41	337	0.53
12	Caster seeds	292	0.45	252	0.40	256	0.40
13	Others	2,481	3.83	2,341	3.74	3,301	5.17
	<b>Total (C)</b>	<b>5,084</b>	<b>7.85</b>	<b>4,813</b>	<b>7.68</b>	<b>4,895</b>	<b>7.66</b>
<b>(D) Fibres</b>							
14	Cotton	62	0.10	53	0.08	35	0.55
15	Jute	169	0.26	89	0.14	38	0.06
16	Other fibres	332	0.51	331	0.53	404	0.63
	<b>Total (D)</b>	<b>562</b>	<b>0.87</b>	<b>473</b>	<b>0.75</b>	<b>477</b>	<b>0.75</b>
<b>(E) Other Crops</b>							
17	Sugarcane	191	0.29	160	0.26	134	0.21
18	Tobacco	149	0.23	149	0.24	100	0.16
19	Patato	103	0.16	109	0.17	104	0.16
20	Chillies	945	1.46	945	1.51	963	1.51
21	Ginger	97	0.15	97	0.15	96	0.15
	<b>Total (E)</b>	<b>1,485</b>	<b>2.29</b>	<b>1,460</b>	<b>2.33</b>	<b>1,397</b>	<b>2.19</b>
<b>Grand Total (A+B+C+D+E)</b>		<b>64,743</b>	<b>100.00</b>	<b>62,667</b>	<b>100.00</b>	<b>63,867</b>	<b>100.00</b>

*Contd.*

**ANNEXURE - 4.2 (Concl'd.)**

*(Area in hundred hectre)*

Sl No	Crops	1994-95		1995-96		1996-97		1997-98		1998-99(P)	
		Area	% to total	Area	% to total	Area	% to total	Area	% to total	Area	% to total
1	2	9	10	11	12	13	14	15	16	17	18
<b>(A) Cereals</b>											
1	Rice	44,557	70.77	45,290	71.79	44,672	75.76	44,973	74.88	44,467	74.89
2	Wheat	49	0.08	49	0.08	50	0.08	61	0.10	39	0.06
3	Maize	468	0.74	441	0.70	583	0.99	528	0.88	509	0.86
4	Ragi	809	1.29	715	1.13	814	1.38	798	1.32	810	1.36
5	Others	932	1.48	832	1.32	784	1.33	615	1.02	580	0.78
	<b>Total (A)</b>	<b>46,815</b>	<b>74.36</b>	<b>47,327</b>	<b>75.02</b>	<b>46,903</b>	<b>79.54</b>	<b>46,975</b>	<b>78.00</b>	<b>46,405</b>	<b>78.15</b>
<b>(B) Pulses</b>											
6	Gram	348	0.55	382	0.61	291	0.49	326	0.54	320	0.54
7	Arhar	1,661	2.64	1,665	2.64	1,233	2.09	1,466	2.44	1,390	2.34
8	Other pulses	7,330	11.64	6,923	10.97	4,739	8.34	5,523	9.17	5,340	8.99
	<b>Total (B)</b>	<b>9,339</b>	<b>14.63</b>	<b>8,970</b>	<b>14.22</b>	<b>5,263</b>	<b>10.62</b>	<b>7,315</b>	<b>12.15</b>	<b>7,050</b>	<b>11.87</b>
<b>Total Foodgrains (A + B)</b>		<b>56,154</b>	<b>89.19</b>	<b>56,297</b>	<b>89.24</b>	<b>53,166</b>	<b>90.16</b>	<b>54,290</b>	<b>90.15</b>	<b>53,455</b>	<b>90.02</b>
<b>(C) Oil Seeds</b>											
9	Groundnut	873	1.39	911	1.45	966	1.64	854	1.42	836	1.40
10	Sesamum	720	1.14	634	1.00	776	1.31	720	1.19	536	0.90
11	Rape seed and mustard	298	0.47	230	0.36	194	0.33	199	0.33	190	0.31
12	Caster seeds	264	0.42	289	0.46	194	0.33	N.A.	-	200	0.33
13	Others	2,519	4.00	2,514	3.98	1,932	3.27	2,452	4.07	2,079	3.50
	<b>Total (C)</b>	<b>4,674</b>	<b>7.42</b>	<b>4,578</b>	<b>7.25</b>	<b>4,062</b>	<b>6.88</b>	<b>4,225</b>	<b>7.01</b>	<b>3,881</b>	<b>6.54</b>
<b>(D) Fibres</b>											
14	Cotton	66	0.10	109	0.17	157	0.27	218	0.36	290	0.49
15	Jute	74	0.12	84	0.14	120	0.20	92	0.15	53	0.09
16	Other fibres	472	0.75	454	0.72	452	0.77	436	0.72	360	0.60
	<b>Total (D)</b>	<b>612</b>	<b>0.97</b>	<b>647</b>	<b>1.03</b>	<b>729</b>	<b>1.24</b>	<b>746</b>	<b>1.24</b>	<b>703</b>	<b>1.18</b>
<b>(E) Other Crops</b>											
17	Sugarcane	203	0.33	273	0.43	235	0.40	187	0.31	224	0.38
18	Tobacco	103	0.16	91	0.14	93	0.16	86	0.14	-	-
19	Patato	97	0.15	89	0.14	101	0.17	89	0.15	80	0.13
20	Chillies	1,000	1.59	995	1.58	490	0.83	498	0.83	901	1.52
21	Ginger	114	0.18	117	0.19	93	0.16	102	0.17	135	0.23
	<b>Total (E)</b>	<b>1,517</b>	<b>2.42</b>	<b>1,565</b>	<b>2.48</b>	<b>1,012</b>	<b>1.72</b>	<b>962</b>	<b>1.60</b>	<b>1,340</b>	<b>2.26</b>
<b>Grand Total (A+B+C+D+E)</b>		<b>62,957</b>	<b>100.00</b>	<b>63,087</b>	<b>100.00</b>	<b>58,989</b>	<b>100.00</b>	<b>60,223</b>	<b>100.00</b>	<b>59,379</b>	<b>100.00</b>

P : Provisional

Source : Directorate of Agriculture and Food Production, Orissa, Bhubaneswar,  
Directorate of Economics and Statistics, Orissa, Bhubaneswar



**ANNEXURE - 4.3**

**Production of different Crops in Orissa from 1992-93 to 1998-99.**

		( In thousand MT)						
Sl. No.	Crops	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99
1	2	3	4	5	6	7	8	9
<b>(A) Cereals</b>								
1	Rice	5,388	6,616	5,353	6,226	4,438	6,205	5,391
2	Jowar	19	15	15	14	12	8	7
3	Bajra	6	4	2	4	3	2	2
4	Maize	63	62	35	46	72	64	66
5	Ragi	42	55	48	44	48	47	52
6	Wheat	7	50	7	6	7	6	5
7	Other cereals	35	36	32	31	25	19	20
	<b>Total (A)</b>	<b>5,560</b>	<b>6,838</b>	<b>6,492</b>	<b>6,371</b>	<b>4,605</b>	<b>6,351</b>	<b>5,543</b>
<b>(B) Pulses</b>								
8	Gram	20	18	20	25	19	18	19
9	Tur.	131	127	127	126	69	87	85
10	Other pulses	248	239	265	260	117	155	141
	<b>Total (B)</b>	<b>399</b>	<b>384</b>	<b>412</b>	<b>411</b>	<b>205</b>	<b>260</b>	<b>245</b>
<b>Total Foodgrains (A+B)</b>		<b>5,959</b>	<b>7,222</b>	<b>6,904</b>	<b>6,782</b>	<b>4,810</b>	<b>6,612</b>	<b>5,788</b>
<b>(C) Oil Seeds</b>								
11	Groundnut	108	114	98	92	79	92	72
12	Sesamum	17	27	16	14	14	14	10
13	Rape seed and mustard	4	6	6	4	3	3	2
14	Linseed	12	15	14	15	7	13	12
15	Caster seeds	14	13	14	16	-	-	8
16	Other oil seeds	98	98	97	102	64	74	73
	<b>Total (C)</b>	<b>253</b>	<b>273</b>	<b>245</b>	<b>243</b>	<b>167</b>	<b>196</b>	<b>177</b>
<b>(D) Fibres</b>								
17	Cotton	6	3	9	22	5	6	9
18	Jute	117	271	227	13	19	13	7
19	Mesta	218	174	161	163	23	24	23
20	Other fibres	113	61	55	38	7	6	6
	<b>Total (D)</b>	<b>454</b>	<b>509</b>	<b>452</b>	<b>276</b>	<b>54</b>	<b>49</b>	<b>45</b>
<b>(E) Other Crops</b>								
21	Sugarcane	754	781	1,199	1,594	1,332	1,145	1,469
22	Tobacco	11	6	6	7	5	4	
23	Patalo	107	117	108	87	117	87	93
24	Chillies	75	76	77	79	41	42	77
25	Ginger	15	15	18	18	1	1	27
	<b>Total (E)</b>	<b>962</b>	<b>995</b>	<b>1,408</b>	<b>1,785</b>	<b>1,505</b>	<b>1,279</b>	<b>1,666</b>
<b>Grand Total (A+B+C+D+E)</b>		<b>7,628</b>	<b>8,999</b>	<b>9,009</b>	<b>9,086</b>	<b>6,536</b>	<b>8,136</b>	<b>7,676</b>

P - Provisional

Source : Directorate of Agriculture and Food Production, Orissa, Bhubaneswar.  
Directorate of Economics and Statistics, Orissa, Bhubaneswar



## ANNEXURE 4.4

### *Yield rate of Principal Crops in Orissa*

Sl No.	Crops	(qtl. / hectare)						
		1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7	8	9
1	Rice (total)	12.13	14.53	14.26	13.75	9.93	13.79	12.12
	(i) Autumn rice	7.91	9.00	9.86	9.51	5.46	9.83	6.12
	(ii) Winter rice	12.76	15.48	14.94	14.22	10.01	14.38	13.05
	(iii) Summer rice	19.39	21.09	19.41	31.88	22.67	19.24	18.89
2	Ragi	5.23	6.12	5.90	6.42	6.02	5.89	6.40
3	Gram	6.45	5.82	5.71	6.68	6.37	5.45	5.94
4	Mung	2.60	2.44	2.58	2.88	2.00	2.02	2.02
5	Biri	3.23	3.65	3.54	3.61	2.64	3.12	2.75
6	Sugarcane	471.25	582.84	589.87	583.60	566.41	612.14	656.62
7	Mustard	1.72	1.88	1.95	1.69	1.47	1.61	1.25
8	Jute	13.11	12.69	11.33	15.49	16.02	13.37	14.10
9	Cotton	2.04	1.54	2.45	2.00	3.27	2.84	2.93
10	Potato	98.24	112.51	111.74	96.95	115.75	98.20	116.50

*P : Provisional*

*Source : Directorate of Agriculture and Food Production, Orissa, Bhubaneswar,  
Directorate of Economics and Statistics, Orissa, Bhubaneswar*





**ANNEXURE - 4.5**  
**Districtwise Area and Production of Autumn, Winter and Summer Paddy during 1998-99(P)**

(Area in thousand hectare)

(Production in thousand M1)

Sl. No.	Name of the District	Autumn		Winter		Summer	
		Area	Production	Area	Production	Area	Production
1	2	3	4	5	6	7	8
1	Angul	22.4	13.7	77.6	96.7	1.9	3.1
2	Balasore	1.6	2.3	209.9	199.0	27.6	85.9
3	Bargarh	56.7	66.0	183.9	456.6	59.1	214.3
4	Bhadrak	0.4	0.5	169.7	363.3	10.9	28.4
5	Balangir	78.8	48.3	128.6	195.9	3.5	4.9
6	Boudh	9.6	5.4	48.5	76.5	1.3	2.1
7	Cuttack	14.7	29.0	127.5	340.9	8.1	20.4
8	Deogarh	15.6	13.4	30.5	43.6	5.0	8.8
9	Dhenkanal	18.2	27.0	101.4	246.7	2.9	4.2
10	Gajapati	1.7	2.8	39.6	109.4	0.5	0.9
11	Ganjam	2.7	7.0	265.9	703.3	1.5	3.9
12	Jagatsinghpur	5.3	10.1	96.5	218.0	6.6	20.6
13	Jajpur	21.8	32.4	126.7	253.0	9.0	27.4
14	Jharsuguda	27.0	23.7	28.5	62.4	0.9	2.0
15	Kalahandi	83.5	51.1	139.7	188.8	3.4	4.6
16	Kendrapara	5.7	10.1	133.3	239.8	13.0	40.0
17	Keonjhar	57.9	33.7	156.3	200.8	2.8	5.9
18	Khurda	2.3	4.4	114.3	285.2	9.9	32.0
19	Koraput	33.2	40.5	82.5	227.4	13.1	31.2
20	Malkangiri	9.4	12.5	71.9	164.2	0.2	0.4
21	Mayurbhanj	65.8	41.9	264.1	383.1	9.2	16.3
22	Nawapara	40.6	33.7	62.2	98.0	2.2	4.1
23	Nayagarh	3.2	6.2	98.8	258.6	0.5	1.2
24	Nowarangpur	49.4	59.0	102.7	250.9	1.2	4.1
25	Phulbani	11.8	15.8	35.1	74.6	0.8	1.8
26	Puri	1.1	2.4	136.7	224.4	38.4	95.4
27	Rayagada	8.8	13.3	53.9	149.7	2.6	5.4
28	Sambalpur	52.4	58.9	83.2	203.0	8.9	33.9
29	Sonepur	15.6	8.0	74.4	167.1	19.9	58.6
30	Sundargarh	102.5	86.5	115.0	160.8	3.2	5.6
<b>Orissa</b>		<b>819.7</b>	<b>759.6</b>	<b>3358.9</b>	<b>6641.7</b>	<b>268.1</b>	<b>767.4</b>

P : Provisional

Source: Directorate of Economics and Statistics, Orissa, Bhubaneswar.



**ANNEXURE - 4.6**

**Districtwise Consumption of Fertilizer for the year 1998-99 (P)**

*(In thousand MT)*

Sl No	Name of the District	Fertilizer Consumption (in thousand MT)				Rate of fertilizer consumption (Kg./hect.)
		Nitro-genous (N)	Phsop-hatic (P)	Potassic (K)	Total (N+P+K)	
1	2	3	4	5	6	7
1	Angul	3.87	1.42	0.91	6.20	22.32
2	Balasore	16.65	7.23	5.65	29.53	74.17
3	Bargarh	18.78	7.49	4.92	31.19	85.24
4	Bhadrak	12.32	4.97	2.20	19.49	84.21
5	Balangir	4.91	1.82	1.22	7.95	18.97
6	Boudh	1.11	0.36	0.33	2.10	16.75
7	Cuttack	7.14	1.78	2.51	11.43	39.42
8	Deogarh	1.74	0.58	0.24	2.56	26.88
9	Dhenkanal	2.97	0.98	0.70	4.65	16.39
10	Gajapati	2.76	0.35	0.19	3.30	39.12
11	Ganjam	22.33	3.10	3.38	28.81	48.56
12	Jagatsinghpur	7.08	1.34	1.29	9.71	44.97
13	Jajpur	8.30	2.75	2.63	13.68	45.13
14	Jharsuguda	3.39	1.24	0.57	5.20	57.25
15	Kalahandi	7.06	2.97	0.67	10.70	19.04
16	Kendrapara	5.52	1.80	1.73	9.05	37.98
17	Keonjhar	4.82	2.27	1.05	8.14	20.53
18	Khurda	6.11	0.82	1.54	8.47	38.11
19	Koraput	2.48	0.91	0.91	4.30	13.86
20	Malkangiri	1.80	1.13	0.52	3.45	14.92
21	Mayurbhanj	7.51	3.22	1.45	12.18	23.56
22	Nawapara	2.65	0.59	0.47	3.71	10.38
23	Nayagarh	5.33	0.35	0.33	6.01	24.16
24	Nowarangpur	6.86	1.02	0.82	8.70	30.82
25	Phulbani	0.54	0.09	0.11	0.74	6.63
26	Puri	8.04	1.74	3.19	12.97	46.39
27	Rayagada	3.63	0.44	0.34	4.41	23.12
28	Sambalpur	12.03	4.81	2.70	19.54	80.43
29	Sonepur	2.75	1.17	0.55	4.47	37.58
30	Sundargarh	3.75	1.66	1.09	6.50	20.81
<b>Orissa</b>		<b>194.53</b>	<b>60.40</b>	<b>44.21</b>	<b>299.14</b>	<b>36.18</b>

*P : Provisional*

*Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar.*



*ANNEXURE - 1*

*Districtwise Estimates of Area, Yieldrate and Production of HYV Paddy for 1998-99 (P)*

Sl. No.	Name of the District	Area (in thousand hect)	Production of HYV paddy (in thousand MT)	Yieldrate (qtl/hect)
1	2	3	4	5
1	Angul	51.2	63.13	12.33
2	Balasore	92.72	183.37	19.78
3	Bargarh	274.55	708.21	25.80
4	Bhadrak	97.61	283.03	28.99
5	Balangir	101.17	141.98	14.03
6	Boudh	23.43	39.91	17.03
7	Cuttack	61.64	185.56	30.10
8	Deogarh	24.33	37.05	15.23
9	Dhenkanal	48.25	131.27	27.20
10	Gajapati	38.84	106.67	27.47
11	Ganjam	261.31	691.21	26.45
12	Jagatsinghpur	49.71	143.95	28.96
13	Jajpur	53.10	145.36	27.37
14	Jharsuguda	41.37	63.95	15.46
15	Kalahandi	136.86	175.87	12.85
16	Kendrapara	51.74	144.28	27.88
17	Keonjhar	62.24	104.87	16.85
18	Khurda	60.80	183.95	30.25
19	Koraput	60.58	184.28	30.42
20	Malkangiri	22.24	62.58	28.14
21	Mayurbhanj	56.77	98.2	17.30
22	Nawapara	27.74	49.34	17.79
23	Nayagarh	41.92	129.61	30.92
24	Nowarangpur	45.51	130.79	28.74
25	Phulbani	6.23	17.66	28.37
26	Puri	94.57	227.94	24.10
27	Rayagada	52.32	146.92	28.08
28	Sambalpur	100.73	236.32	23.46
29	Sonepur	87.97	208.87	23.74
30	Sundargarh	33.19	55.30	16.66
	<b>Orissa</b>	<b>2160.64</b>	<b>5081.43</b>	<b>23.52</b>

*P. Provisional*

*Source : Directorate of Economics and Statistics, Orissa, Bhubaneswar*



**ANNEXURE - 4.8**

***Districtwise Estimates of Area under different Categories of Operational Holdings in Orissa during 1990-91***

Sl. No.	Name of the district	Area under different operational holdings		
		Marginal (below 1.0 hect)	Small (1.0 to 2.0 hect)	Semi-medium (2.0 to 4.0 hect)
1	2	3	4	5
1	Angul	33003	59387	52395
2	Balasore	51123	57608	38330
3	Bargarh	39795	66714	88417
4	Bhadrak	33045	51142	97025
5	Balangir	40903	61729	88715
6	Cuttack	52784	52677	40167
7	Dhenkanal	30483	59734	41445
8	Ganjam	99720	89143	82959
9	Gajapati	21292	18029	14138
10	Jagatsinghpur	38698	34281	28386
11	Jajpur	41318	50728	45034
12	Kalahandi	36879	58839	95082
13	Kendrapara	42523	49682	43355
14	Keonjhar	49399	76659	74548
15	Khurda	32674	33420	26219
16	Koraput	31726	45521	81393
17	Malkangiri	10774	30567	45872
18	Mayurbhanj	85279	117030	96177
19	Nawapara	16807	32164	44211
20	Nayagarh	32172	32919	25899
21	Nowarangpur	29175	42261	59990
22	Phulbani	32225	44524	597979
23	Puri	40774	46530	38403
24	Rayagada	22870	31706	41835
25	Sambalpur	48101	76807	95026
26	Sonepur	16803	23614	28420
27	Sundargarh	36755	73156	96426
	<b>Orissa</b>	<b>1045050</b>	<b>1426171</b>	<b>1560846</b>

(Contd.)

P - Provisional

Source : Agriculture Census, Board of Revenue, Cuttack

**ANNEXURE - 4.8(Concl.d.)**

Sl. No.	Name of the District	Area under different operational holdings		
		Medium (4.0 to 10.0 hect)	Large (10.0 hect and above)	Total (All groups)
1	2	3	4	5
1	Angul	23776	4861	173422
2	Balasore	37704	3977	188742
3	Bargarh	77982	24442	297300
4	Bhadrak	44787	2266	228265
5	Balangir	80311	25604	297262
6	Cuttack	17117	5047	167792
7	Dhenkanal	14763	3875	150300
8	Ganjam	50285	22240	344347
9	Gajapati	5705	810	60574
10	Jagatsinghpur	10514	1252	113131
11	Jajpur	21978	4231	163289
12	Kalahandi	98164	25990	314954
13	Kendrapara	19781	4615	159956
14	Keonjhar	41557	5903	248066
15	Khurda	12788	8798	113899
16	Koraput	6352	20153	251045
17	Malkangiri	22250	1467	110930
18	Mayurbhanj	52514	6155	357155
19	Nawapara	32590	6334	132106
20	Nayagarh	13571	3200	107761
21	Nowarangpur	32318	5813	169557
22	Phulbani	32920	7915	168563
23	Puri	19147	5135	149989
24	Rayagada	33520	9049	138980
25	Sambalpur	68786	23271	309991
26	Sonepur	17208	4604	90649
27	Sundargarh	66543	14877	287757
<b>Orissa</b>		<b>1011831</b>	<b>251884</b>	<b>5295782</b>

Source: Agriculture Census, Board of Revenue, Cuttack



**ANNEXURE - 4.9**

***Districtwise Estimates of Number of different Categories of Operational Holdings in Orissa during 1990-91.***

Sl No	Name of the district	Number of different categories of operational holdings		
		Marginal (below 1.0 hect)	Small (1.0 to 2.0 hect)	Semi-Medium (2.0 to 4.0 hect)
1	2	3	4	5
1	Angul	68717	44518	20564
2	Balasore	131545	41831	12702
3	Bargarh	69396	46412	33669
4	Bhadrak	74418	37231	37910
5	Balangir	78342	45986	34889
6	Cuttack	119666	39314	15777
7	Dhenkanal	62364	41600	16549
8	Ganjam	721338	65022	32421
9	Gajapati	41565	11156	5521
10	Jagatsinghpur	81089	25867	10932
11	Jajpur	81155	37275	17320
12	Kalahandi	64751	42516	35481
13	Kendrapara	78861	38518	16812
14	Keonjhar	100886	55946	28221
15	Khurda	74084	24414	10051
16	Koraput	55962	38831	30202
17	Malkangiri	16823	22084	18020
18	Mayurbhanj	163122	80052	33615
19	Nawapara	28956	23046	16324
20	Nayagarh	73841	25372	10319
21	Nowrangpur	49334	30570	23083
22	Phulbani	65233	31429	19395
23	Puri	93267	33078	14915
24	Rayagada	41081	22703	15795
25	Sambalpur	84318	55295	36318
26	Sonepur	33034	17475	11021
27	Sundargarh	65281	51767	35696
<b>Orissa</b>		<b>2118429</b>	<b>1035308</b>	<b>593522</b>

(Contd..)

Source : Agriculture Census, Board of Revenue, Cuttack.

*ANNEXURE - 4.9(Concl.d.)*

Sl.	Name of the district	Number of different categories of operational holdings		
		Medium (4.0 to 10.0 hect)	Large (10.0 hect. and above)	Total (All groups)
1	2	3	4	5
1	Angul	4518	304	138099
2	Balasore	6821	279	193178
3	Bargarh	14338	1748	165563
4	Bhadrak	8180	181	157920
5	Balangir	14822	1795	175834
6	Cuttack	3212	201	178170
7	Dhenkanal	2915	134	126562
8	Ganjam	9277	957	329015
9	Gajapati	1067	53	62362
10	Jagatsinghpur	2007	95	119990
11	Jajpur	4060	159	139969
12	Kalahandi	17548	1791	162087
13	Kendrapara	3685	223	138099
14	Keonjhar	7832	345	193230
15	Khurda	2479	228	111256
16	Koraput	10949	1084	137028
17	Malkangiri	4257	114	61298
18	Mayurbhanj	9539	322	286650
19	Nawapara	5853	406	74585
20	Nayagarh	2579	178	112289
21	Nowarangpur	5785	358	109130
22	Phulbani	6000	521	122578
23	Puri	3669	228	145157
24	Rayagada	5981	628	86188
25	Sambalpur	12531	1518	189980
26	Sonepur	3339	332	65201
27	Sundargarh	12279	984	166007
<b>Orissa</b>		<b>185522</b>	<b>15166</b>	<b>3847947</b>

*Source :Agriculture Census, Board of Revenue, Cuttack.*



**ANNEXURE 5.1**

**Districtwise Classification of Forest Area in Orissa as on 1998-99(P)**

(Area in sq. km)

Sl No	Name of the district	Geographical area	Total forest area	Forest land under control of Forest Department		Forest land under control of Revenue Department		
				Reserve forests	Un-classified forests (Forest Deptt buildings, Forest roads, nurseries etc.)	Demarcated Protected	Un-demarcated Protected	Other forests under Revenue Deptt.
1	2	3	4	5	6	7	8	9
1	Angul	6232	2716.82	1760.76	1.15	273.21	11.99	669.71
2	Balasore	3634	332.21	202.69	0.19	21.54	-	107.79
3	Bargarh	5834	1216.13	583.52	0.13	451.19	-	181.29
4	Bhadrak	2677	97.07	-	0.01	3.96	32.98	60.12
5	Balangir	6569	1543.85	1105.68	0.14	3.63	-	434.40
6	Boudh	3444	1277.17	983.33	1.02	43.48	-	249.34
7	Cuttack	3733	787.90	522.39	0.45	101.41	-	163.65
8	Deogarh	2784	1560.22	578.40	0.04	243.86	-	737.92
9	Dhenkanal	4595	1737.62	1141.02	0.04	13.78	-	582.78
10	Gajapati	3850	2468.98	416.89	0.13	108.15	1149.41	794.40
11	Ganjam	8706	3149.90	1485.69	0.86	143.54	1167.39	352.45
12	Jagatsinghpur	1973	132.92	1.23	0.02	4.77	83.06	43.84
13	Jajpur	2888	725.27	6.35	0.01	299.32	-	419.50
14	Jharsuguda	2200	202.44	35.53	0.04	109.97	-	56.90
15	Kalahandi	8364	2538.01	1449.03	0.54	488.51	313.37	286.56
16	Kendrapara	2548	248.05	14.49	4.50	127.57	62.32	39.17
17	Keonjhar	8303	3097.18	1834.09	0.26	273.64	220.79	768.40
18	Khurda	2889	618.67	298.81	0.68	209.87	-	109.31
19	Koraput	7897	1879.53	478.86	0.68	284.88	-	415.41
20	Malkangiri	6190	3355.88	352.44	0.30	940.61	861.92	1400.61
21	Mayurbhanj	10418	4392.13	3330.14	2.20	245.06	-	814.73
22	Nawapara	3408	1849.69	-	0.44	1504.00	-	345.25
23	Nayagarh	4242	2080.97	1301.99	0.25	188.03	135.58	455.12
24	Nowrangpur	5294	2462.73	535.34	0.07	685.77	-	1241.55
25	Phulbani	7650	5709.83	2010.06	2.00	1783.30	-	1914.47
26	Puri	3051	137.10	15.66	0.51	85.88	-	35.05
27	Rayagada	7580	2812.33	771.62	0.96	1147.19	-	892.56
28	Sambalpur	6698	3631.77	2151.71	1.18	383.01	-	1115.87
29	Sonepur	2344	415.78	309.52	0.03	-	-	106.23
30	Sundargarh	9712	4957.32	2651.88	1.72	836.85	-	1466.87
<b>Orissa</b>		<b>155707</b>	<b>58135.47</b>	<b>26329.12</b>	<b>20.55</b>	<b>11655.68</b>	<b>3838.78</b>	<b>10261.34</b>

*P : Provisional*

Source : Principal Chief Conservator of Forests, Orissa, Bhubaneswar.





*ANNEXURE 5.2*  
*Forest Area diverted to Non-Forest use in Orissa*

Sl.No	Year	Number of projects	Area diverted to non-forest use (in hectare)
1	2	3	4
1	1982	1	3.43
2	1983	4	124.02
3	1984	18	2000.89
4	1985	5	517.38
5	1986	3	770.08
6	1987	5	952.90
7	1988	9	975.63
8	1989	13	1737.38
9	1990	24	2714.92
10	1991	5	3.17
11	1992	7	508.84
12	1993	8	4729.25
13	1994	3	788.92
14	1995	6	317.94
15	1996	12	1354.61
16	1997	14	1902.49

*Source : Status Report of Orissa Forest, 1997.*



**ANNEXURE 5.3**  
**Forest Area Diverted to Non-Forest use in Orissa**  
**(Sectorwise as on 1997)**

Sl.No.	Name of sector	Area diverted (In hectare)
1	2	3
1	Irrigation	5405.09
2	Mining/quarrying and other	5349.94
3	Power and transmission	2206.71
4	Roads and bridges	208.51
5	Railways	1886.91
6	Defence	3865.25
7	Miscellaneous	479.45

*Source : Status Report on Orissa Forest, 1997.*



**ANNEXURE - 6.1**

***Districtwise Quantity and Value of Fish Produced in Orissa***

( Qty. in MT, Value in lakh Rs )

Sl No	District	1996-97		1997-98		1998-99	
		Quantity	Value	Quantity	Value	Quantity	Value
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1.	Angul	6502.08	1704.53	6010.00	1582.75	5588.15	1587.74
2.	Balasore	46041.41	12591.21	50072.00	12708.81	46390.71	13228.14
3.	Bargarh	4935.65	1293.89	6156.00	1621.20	5039.93	1437.12
4.	Bhadrak	15065.57	4019.93	16858.00	4693.72	12372.00	3527.83
5.	Bolangir	5732.22	1502.71	5330.00	1403.67	5461.04	1557.20
6.	Boudh	1473.72	386.34	1761.00	463.76	1323.73	377.46
7.	Cuttack	7168.91	1879.36	7250.00	1909.30	6921.11	1973.53
8.	Deogarh	3063.86	803.20	2906.00	765.30	2804.42	799.67
9.	Dhenkanal	3651.85	1481.65	5736.00	1510.59	3628.19	1034.56
10.	Gajapati	388.72	101.90	253.00	66.63	275.16	78.46
11.	Ganjam	16266.19	5224.82	26257.00	7257.52	22163.38	6319.81
12.	Jagatsinghpur	43092.57	11644.59	51296.00	14746.55	48376.15	13794.28
13.	Jajpur	6886.65	1805.35	6525.00	1718.37	6721.81	1916.70
14.	Jharsuguda	4302.88	1128.01	4301.00	1132.68	4309.61	1228.87
15.	Kalahandi	3817.45	1000.75	5752.00	1514.80	5367.03	1530.39
16.	Kendrapara	27627.65	7503.85	27822.00	6441.92	26011.64	7417.12
17.	Keonjhar	3201.43	839.26	3266.00	860.11	3421.00	975.49
18.	Khurda	7965.17	3872.56	7127.00	2771.06	7138.64	2035.56
19.	Koraput	1366.95	358.35	1731.00	455.86	1712.01	488.17
20.	Malkangiri	156.35	2285.00	599.02	2328.00	476.97	136.01
21.	Mayurbhanj	9082.54	2381.01	11413.00	3005.64	12317.18	3512.19
22.	Nuapada	671.24	175.97	875.00	230.43	826.44	235.66
23.	Nayagarh	3140.23	823.22	3288.00	865.90	3183.24	901.99
24.	Nawarangpur	1662.18	435.74	1417.00	373.17	1502.00	428.29
25.	Phulbani	279.83	73.36	256.00	67.42	271.14	77.31
26.	Puri	34551.15	9855.20	36749.00	8999.52	34620.12	9871.80
27.	Rayagada	407.64	106.86	546.00	143.79	581.35	165.77
28.	Sambalpur	5860.06	1536.23	5607.00	1476.62	5708.29	1627.70
29.	Sonepur	4005.41	1050.03	4311.00	1135.31	4467.18	1273.80
30.	Sundergarh	4471.65	1172.25	5318.00	1400.51	5293.38	1509.39
ORISSA		272839.21	79037.13	306788.02	83650.91	284233.00	81048.00

**P - Provisional**

*Source : Directorate of Fisheries, Orissa.*



**ANNEXURE - 7.1**

***Districtwise Number of Veterinary Institutions and Personnel  
in Orissa (As on 31.03.99) [P]***

Sl. No	District	Veterinary Hospitals & Dispensaries	Veterinary Assistant Surgeons/ Addl. VAS	Live Stock Aid Centres	L Is./ Vety. Tech. Etc
1	2	3	4	5	6
1	Angul	16	23	78	103
2	Balasore	21	28	114	139
3	Bargarh	19	25	126	78
4	Bhadrak	13	17	99	109
5	Bolangir	21	24	114	109
6	Boudh	7	8	25	30
7	Cuttack	25	36	151	281
8	Deogarh	4	5	20	23
9	Dhenkanal	18	22	86	143
10	Gajapati	11	12	49	42
11	Ganjam	37	50	236	329
12	Jagatsinghpur	13	20	109	134
13	Jajpur	19	27	119	119
14	Jharsuguda	9	11	36	28
15	Kalahandi	21	27	122	121
16	Kendrapara	20	20	112	63
17	Keonjhar	14	22	47	111
18	Khurda	23	26	119	163
19	Koraput	20	28	167	98
20	Malkangiri	25	25	112	108
21	Mayurbhanj	13	10	51	48
22	Nuapada	42	56	181	241
23	Nayagarh	17	15	66	50
24	Nawarangpur	16	22	68	91
25	Phulbani	8	10	62	51
26	Puri	15	26	145	80
27	Rayagada	16	19	85	68
28	Sambalpur	18	17	107	179
29	Sonepur	10	12	37	35
30	Sundergarh	30	30	116	147
<b>ORISSA</b>		<b>541</b>	<b>673</b>	<b>2939</b>	<b>3321</b>

*Contd*

*ANNEXURE - 7.1 (Concl'd.)*

Sl. No.	District	A.I. Centres						Normal Live stock
		Pure A.I. Centres	LACs doing A.I.	Key Village Centre Block	Units	I.C.D.P. Block	Units	
1	2	7	8	9	10	11	12	13
1	Angul	5	13	2	20	-	-	40
2	Balasore	10	57	1	10	-	-	37
3	Bargarh	6	31	-	-	2	50	39
4	Bhadrak	13	22	2	20	-	-	44
5	Bolangir	3	35	1	10	-	-	66
6	Boudh	-	13	-	-	-	-	12
7	Cuttack	37	42	2	22	1	21	29
8	Deogarh	-	4	-	-	-	-	16
9	Dhenkanal	13	13	1	12	-	-	48
10	Gajapati	-	4	1	10	-	-	35
11	Ganjam	12	-	2	20	4	60	144
12	Jagatsinghpur	29	-	4	44	-	-	36
13	Jajpur	19	2	1	12	-	-	88
14	Jharsuguda	-	5	-	-	-	7	24
15	Kalahandi	4	34	-	-	-	-	84
16	Kendrapara	4	25	-	-	-	-	83
17	Keonjhar	8	17	1	10	-	-	12
18	Khurda	14	16	1	10	-	-	78
19	Koraput	6	70	-	-	1	21	69
20	Malkangiri	6	2	-	-	3	48	56
21	Mayurbhanj	-	4	-	-	-	-	47
22	Nuapada	18	14	2	20	-	-	109
23	Nayagarh	2	15	-	-	1	12	37
24	Nawarangpur	4	29	-	-	-	-	35
25	Phulbani	-	46	-	-	-	-	16
26	Puri	19	25	-	-	2	58	43
27	Rayagada	11	14	-	-	-	-	60
28	Sambaipur	2	7	-	-	2	53	45
29	Sonepur	3	18	-	-	-	-	16
30	Sundergarh	4	32	2	20	-	-	60
<b>ORISSA</b>		<b>252</b>	<b>609</b>	<b>23</b>	<b>240</b>	<b>16</b>	<b>330</b>	<b>1508</b>

*P : Provisional*

*Source : Directorate of Animal Resources Development, Orissa, Cuttack*



**ANNEXURE - 7.2**

***Districtwise Livestock Population in Orissa (As on 01.09.95)***

Sl No.	District	Cattle			Buffalo		
		Total	milch	working	Total	milch	working
1	2	3	4	5	6	7	8
1	Angul	521446	154346	178784	51269	14437	18232
2	Balasore	912831	228084	333297	7180	1872	1373
3	Bargarh	513192	121577	1227566	39191	7520	18971
4	Bhadrak	550135	143037	190225	14213	5650	1273
5	Bolangir	599083	153890	244968	117014	29181	24049
6	Boudh	231880	61652	85831	35609	8301	14628
7	Cuttack	640966	202052	169940	62516	10772	32057
8	Deogarh	181339	50177	72801	21094	5770	8718
9	Dhenkanal	487218	149484	165982	75075	26927	16570
10	Gajapati	272771	63607	111059	18140	8309	405
11	Ganjam	1029367	331769	4545	151874	37321	71594
12	Jagatsinghpur	437831	128324	154573	15804	7864	268
13	Jajpur	634022	49718	81829	11932	2770	14234
14	Jharsuguda	193344	187763	189590	21209	4046	2350
15	Kalahandi	540290	138027	222720	125945	26701	58356
16	Kendrapara	308767	69574	131134	76230	20461	26803
17	Keonjhar	471102	120637	151419	22148	8462	907
18	Khurda	695939	168497	279214	37851	12744	6359
19	Koraput	424744	220502	118412	143271	5624	12139
20	Malkangiri	366796	111451	160877	39039	33210	32951
21	Mayurbhanj	894541	99694	139675	31233	10078	16287
22	Nuapada	380378	187014	439326	106961	6011	17307
23	Nayagarh	390629	91035	178054	62358	15101	57092
24	Nawarangpur	289683	126864	116627	70232	10477	39703
25	Phulbani	461382	74389	121343	26232	12124	37956
26	Puri	405439	148577	149597	115385	9134	4398
27	Rayagada	566965	107518	159787	25452	32925	40504
28	Sambalpur	429453	108142	180923	36578	8987	16332
29	Sonepur	258342	59956	117410	30086	5695	16735
30	Sundergarh	676121	164122	296987	60929	12471	28567
<b>ORISSA</b>		<b>14765996</b>	<b>4021479</b>	<b>6174495</b>	<b>1652050</b>	<b>400945</b>	<b>637118</b>

(Contd.)

**ANNEXURE - 7.2 (Concl'd.)**

Sl. No	District	Sheep	Goats	Pigs	Other Livestock	Total Livestock Excluding Dogs	Total Poultry	Dogs
1	2	9	10	11	12	13	14	15
1	Angul	58865	195151	1863	3	828597	246040	21066
2	Balasore	7407	332059	13974	16	1273464	782114	51457
3	Bargarh	47607	111264	7456	3	718713	377842	15259
4	Bhadrak	6756	152121	3348	1	726574	312667	24833
5	Bolangir	161596	269796	1894	6	1149389	741613	24868
6	Boudh	59027	69612	3053	8	399189	203905	13719
7	Cuttack	108303	190181	3856	63	1005885	302821	36953
8	Deogarh	6029	87450	5870	-	301782	181943	12796
9	Dhenkanal	55883	154198	3986	8	776378	215575	25054
10	Gajapati	11773	106364	19880	69	428797	346164	15444
11	Ganjam	135735	216375	11944	99	1545394	1470193	43975
12	Jagatsinghpur	49765	91805	3933	4	599142	246701	31675
13	Jajpur	45360	210037	6539	2	907892	421958	29107
14	Jharsuguda	6630	46577	5212	1	272973	176264	6535
15	Kalahandi	112588	217303	7582	5	1003713	692683	29873
16	Kendrapara	7336	193685	56293	2	642313	540833	24888
17	Keonjhar	42844	110644	2053	-	648591	159255	19140
18	Khurda	172280	360044	27255	47	1293416	1096976	31867
19	Koraput	106317	150930	63276	24	888562	717705	39648
20	Malkangiri	18513	134582	57162	-	616082	403072	19010
21	Mayurbhanj	169790	484293	70222	6	1850085	2649686	126807
22	Nuapada	75120	127663	38870	13	729005	595502	24545
23	Nayagarh	44974	109787	172	7	607927	139332	17431
24	Nawarangpur	44316	99766	1254	160	505411	183323	9473
25	Phulbari	87378	98012	1484	-	674488	330628	23665
26	Puri	35006	122952	40143	2	718927	393093	16236
27	Rayagada	67234	82923	3195	14	745783	595165	26214
28	Sambalpur	16278	151284	21857	2	655452	374055	20564
29	Sonepur	43441	81684	2545	4	416102	202853	7603
30	Sundergarh	60863	653475	86463	31	1537882	908466	43413
<b>ORISSA</b>		<b>1884814</b>	<b>5412017</b>	<b>572434</b>	<b>600</b>	<b>24267968</b>	<b>16008427</b>	<b>832118</b>

Source : Directorate of Animal Resources Development, Orissa, Cuttack.



**ANNEXURE - 8.1**

***Districtwise Employment Generation Under JRY for the year 1998-99***

Sl. No	District	Funds available (Rs. in crore )	Total expenditure ( Rs. In crore)	Employment generation(in lakh mandays)			
				SC	ST	OC	Total
1	2	3	4	5	6	7	8
1	Angul	4.13	3.43	1.44	0.71	2.83	4.98
2	Bolangir	5.75	6.19	4.52	3.80	3.08	11.40
3	Balasore	6.83	5.81	4.41	3.16	5.06	12.63
4	Baragarh	5.45	4.30	2.52	2.72	3.26	8.50
5	Bhadrak	4.68	3.80	3.78	0.98	2.85	7.61
6	Boudh	4.31	3.44	2.61	1.58	2.68	6.87
7	Cuttack	5.21	4.65	4.81	0.50	3.98	9.29
8	Dengarh	2.59	2.30	1.10	1.51	1.74	4.35
9	Dhenkanal	3.79	3.74	2.42	1.32	3.60	7.34
10	Gajapati	6.13	5.83	3.60	4.35	3.72	11.67
11	Ganjam	7.86	6.85	5.48	2.02	6.06	13.56
12	Jagatsinghpur	3.46	3.56	2.26	0.48	4.10	6.84
13	Jajpur	6.13	5.09	5.20	1.36	3.46	10.02
14	Jharsuguda	3.60	2.98	2.02	2.29	1.47	5.78
15	Kalahandi	8.36	5.53	3.99	3.62	2.76	10.37
16	Kendrapara	4.30	3.24	1.66	0.01	4.71	6.38
17	Keonjhar	7.83	7.05	3.64	5.09	5.36	14.09
18	Khurda	3.62	3.63	2.59	1.39	3.29	7.27
19	Koraput	5.50	5.50	4.27	7.10	0.76	12.13
20	Malkangiri	9.54	8.65	5.18	10.38	1.68	17.24
21	Mayurbhanj	14.16	11.32	1.69	12.56	7.39	21.64
22	Nabarangpur	10.71	8.55	2.28	8.39	4.53	15.20
23	Nuapada	3.83	3.60	2.23	2.42	1.91	6.56
24	Nayagarh	3.64	3.45	2.70	0.72	2.93	6.35
25	Phulbani	5.49	5.87	2.21	6.10	3.90	12.21
26	Puri	3.79	3.61	1.87	0.07	4.26	6.20
27	Rayagada	7.51	6.69	3.36	8.02	2.01	13.39
28	Sambalpur	5.04	3.99	2.73	3.44	1.63	8.00
29	Sonepur	2.76	2.13	1.83	1.20	1.68	4.69
30	Sundargarh	7.82	7.14	1.14	9.71	3.43	14.28
	Other Agency	0.79	0.00	0.00	0.00	0.00	0.00
	Hqrs. Admn.	0.44	0.27	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>175.05</b>	<b>152.19</b>	<b>89.54</b>	<b>107.00</b>	<b>100.30</b>	<b>296.84</b>

Source : Panchayati Raj Department, Orissa, Bhubaneswar.





*ANNEXURE - 8.2*

*Progress under Economic Rehabilitation of Bonded Labour*

Sl. No.	Period	Bonded labourers released (Number)	Bonded labourers rehabilitated (Number)	Expenditure incurred (Rs. in lakh)
1	2	3	4	5
1	Upto the end of 7th Plan	48,832	46,504	1716.52
2	1990-91	(-)58	183	57.91
3	1991-92	80	82	18.46
4	1992-93	12	12	6.75
5	1993-94	-	31	1.35
6	1994-95	-	4	-
7	1995-96	88	11	0.25
8	1996-97	-	32	3.75
9	1997-98	35	48	4.70

Source : Panchayati Raj Department, Orissa, Bhubaneswar



*Annexure - 8.3*

*Achievement under Anti Poverty Programmes*

Sl. No.	Name of the scheme	Year of commencement	Unit	Achievement upto 1997-98				Expenditure upto 1997-98 (Rs. in crore)
				Total	SC	ST	Women	
1	2	3	4	5	6	7	8	9
1	IRDP	1978-79	Families covered (in lakh)	30.70	6.86	8.03	5.49	684.06
2	JRY	1989-90	Mandays generated (in crore)	36.58	11.00	13.78	10.38	1428.98
3	FAS	1993-94	-do-	14.45	3.97	6.10	4.50	647.14
4	OBB	1990-91	-do-	1.22	0.37	0.38	0.34	58.21
5	DWCRA	1983-84	Women and children covered (in lakh)	1.51	0.07	0.07	1.51	19.80
6	Rehabilitation of Bonded Labour	1978-79	Bonded labourers rehabilitated (in Lakh)	0.47	0.13	0.18	-	18.10
7	TRYSEM	1980-81	Youths rehabilitated (in Lakh)	1.77	0.49	0.40	0.64	47.89

(Contd.)

**ANNEXURE - 8.3**

***Achievement under Anti Poverty Programmes***

Sl. No	Name of the Scheme	Year of commencement	Unit	Achievement during 1998-99				Expenditure during 1998-99 (Rs. in crore)
				Total	SC	ST	Women	
1	2	3	4	10	11	12	13	14
1	IRDP	1978-79	Families covered ( in lakh)	0.95	0.22	0.25	0.33	73.66
2	JRY	1989-90	Mandays generated ( in crore)	2.97	0.90	1.07	0.92	152.19
3	EAS	1993-94	-do-	3.40	1.07	1.16	1.01	173.42
4	OBB	1990-91	-do-	0.12				8.12
5	DWCRA	1983-84	Women and children covered ( in lakh)	0.35	0.10	0.10	0.35	4.08
6	Rehabilitation of Bonded Labour	1978-79	Bonded labourers rehabilitated ( in lakh)	Nil	Nil	Nil	Nil	Nil
7	TRYSEM	1980-81	Youths rehabilitated ( in lakh)	0.07	0.02	0.02	0.03	3.82

(Concl.d.)

Source : Panchayati Raj Department, Orissa, Bhubaneswar.



**ANNEXURE - 9.1*****Number of Registered Factories, Value of Output and Value added by Manufacture in Organised Sector in Orissa.***

Sl. No.	Period	Number of registered factories				Total employment (number)
		Covered	Closed	Defaulted	Reported	
1	2	3	4	5	6	7
1	1985-86	1,922	423	180	1339	144,671
2	1986-87	1,972	506	205	1261	139,810
3	1987-88	1,981	595	150	1236	156,500
4	1988-89	2,060	611	114	1337	156,265
5	1989-90	2,025	515	171	1339	156,404
6	1990-91	2,130	608	169	1353	155,018
7	1991-92	2,237	645	150	1442	166,462
8	1992-93	2,124	615	122	1387	176,092
9	1993-94	2,263	669	126	1468	180,343
10	1994-95	2,346	719	80	1547	189,480
11	1995-96	2,290	665	84	1541	186,538
12	1996-97	2,358	698	120	1540	177,860
13	1997-98 (P)	2,423	822	135	1466	178,925

(Contd.)

*ANNEXURE - 9.1 (Concl'd.)*

Sl. No	Period	Value of output (Rs. in lakh)	Value of input (Rs. in lakh)	Value of depreciation (Rs. in lakh)	Value added by manufacture (Rs. in lakh)
1	2	8	9	10	11
1	1985-86	199,325	149,291	10,521	39,513
2	1986-87	234,318	177,438	12,881	43,999
3	1987-88	288,255	223,955	19,083	45,217
4	1988-89	427,849	313,828	32,740	81,081
5	1989-90	482,194	332,921	32,583	116,690
6	1990-91	458,962	332,833	32,683	93,446
7	1991-92	654,402	485,572	42,095	126,735
8	1992-93	763,103	575,941	48,086	139,071
9	1993-94	823,457	599,966	44,966	178,825
10	1994-95	982,719	719,007	50,687	212,955
11	1995-96	1,184,313	857,319	67,905	259,089
12	1996-97	1,223,508	929,084	71,990	222,434
13	1997-98 (P)	1,425,390	1,068,761	139,521	217,108

*. P : Provisional*

*Source : Annual Survey of Industries, CSO - 1997-98*



**ANNEXURE - 9.2**

***Productive Capital, Net Value Added by Manufacture  
and number of Persons Employed in Organised Industries  
in Orissa in the year 1997-98 (Provisional)***

Sl. No.	Industry Code	Description	Productive capital (Rs. in thousand)	Net value added by manufacture (Rs. in thousand)	Persons employed (number)
1	2	3	4	5	6
1	201	Manufacture of dairy products.	105343	35548	508
2	203	Processing, canning & preserving of fish, crustacea of similar foods.	497574	473496	479
3	204	Grain milling.	967666	256275	7993
4	205	Manufacture of bakery products.	56329	14485	376
5	206	Manufacture of refining of sugar.	1839548	140787	2179
6	208	Production of common salt.	6808	12323	465
7	211	Manufacture of vegetable oils and fats (other than hydrogenated).	221613	45974	820
8	215	Processing of edible nuts.	5894	6400	174
9	216	Manufacture of ice.	23739	4676	148
10	217	Manufacture of prepared animal and bird feed.	56254	5119	245
11	219	Manufacture of food products n.e.c.*	166600	5538	485
12	221	Manufacture of wine.	28328	29900	251
13	222	Manufacture of malt liquors and malts.	15624	29683	304
14	224	Manufacture of soft drinks and syrups.	221288	54525	706
15	226	Manufacture of beet.	50896	29710	1139
16	228	Manufacture of snuff, zarda, chewing tobacco and other tobacco products n.e.c.*	9957	7422	215
17	233	Weaving and finishing of cotton textiles on handlooms.	1900	1978	81
18	234	Weaving and finishing of cotton textiles on power looms.	(-) 124	2480	162

(Contd.)

**ANNEXURE - 9.2**

1	2	3	4	5	6
19	235	Cotton spinning, weaving and processing in mills.	(-) 638281	203429	11528
20	253	Preparatory operations including carding and combing) on sanhep and other vegetable fibres n.e.c	9920	18389	518
21	254	Spinning, weaving and finishing of Jute and mesta textiles.	298028	59794	2512
22	261	Manufacture of all types of threads, cordage, ropes, twines and nets etc.	69928	29804	528
23	265	Manufacture of all types textile garments and clothing accessories. n.e.c.*	11904	4405	115
24	269	Manufacture of textiles/textile products n.e.c.	15337	5081	223
25	270	Sawing and planing of woods (other than plywood)	62474	48391	1114
26	272	Manufacture of structural wooden goods such as beams posts, doors & windows	2164	188	19
27	274	Manufacture of wooden industrial goods n.e.c.*	600065	(-) 21306	417
28	276	Manufacture of wooden furniture and fixtures	17234	3524	205
29	280	Manufacture of pulp paper and paper board including manufacture of news-prints.	8004893	700477	8360
30	281	Manufacture of containers & boxes of paper or paper board.	90431	18871	237
31	282	Manufacture of paper & paper board articles & pulp products n.e.c.*	41222	7833	151
32	283	Manufacture of special purpose papers wheather or not printed n.e.c.	11878	1333	43
33	284	Printing and publishing of news papers.	11475	18874	268

(Contd.)

**ANNEXURE - 9.2**

1	2	3	4	5	6
34	285	Printing and publishing of periodicals books, Journals, directories, maps, sheet music, schedules and pamphlets etc.	185082	113833	3379
35	300	Manufacture of industrial organic and inorganic chemicals	385807	51162	1467
36	301	Manufacture of fertilisers and pesticides.	10787471	132957	4975
37	303	Manufacture of paints, varnishes and related products, articles, colours and ink.	49209	3716	268
38	304	Manufacture of drugs medicines and allied products.	119958	17932	749
39	305	Manufacture of perfumes, cosmetics lotions, hair dressings, tooth pastes, soap in any form, detergents, shampoo, shaving products, washing and cleaning.	39032	12960	448
40	308	Mfr. of explosives, ammunition and fire works.	124072	(-) 47231	1015
41	309	Manufacture of chemical products n.e.c.*	1830979	(-) 128990	1277
42	310	Tyre and tube industries.	2062899	585206	2368
43	312	Manufacture of rubber products not elsewhere classified.	385774	64162	273
44	313	Manufacture of plastic products not elsewhere classified.	548351	223126	1889
45	315	Bolling of natural gas or liquified petroleum gas	194160	(-) 414462	305
46	318	Manufacture of cokeoven product.	12002	(-) 10966	185
47	319	Manufacture of other coal and coal products not elsewhere classified.	20821	7159	101

(Contd.)



**ANNEXURE - 9.2**

1	2	3	4	5	6
48	320	Manufacture of refractory products and structural clay products.	3299917	1026893	8246
49	323	Manufacture non-structural ceramic ware.	34832	12035	568
50	324	Manufacture of cement lime and plaster.	5151144	229283	3563
51	326	Stone dressing and crushing manufacture of stone goods and stoneware.	180010	8304	1366
52	329	Manufacture of misc. non-metallic mineral products not elsewhere classified.	331667	148917	3256
53	330	Manufacture of iron and steel in primary/semi-finished forms.	70249199	3074746	35207
54	331	Manufacture of semi-finished iron and steel products in re-rolling mills, cold rolling mills and wire drawing mills.	131082	52427	1508
55	332	Manufacture of Ferro-Alloys.	7955583	459434	4691
56	335	Aluminium manufacturing	14582296	2189257	7092
57	337	Casting of metals	215534	106817	1961
58	340	Manufacture of fabricated structural metal products.	208167	74095	1575
59	341	Manufacture of fabricated metal products not elsewhere classified.	427756	26522	1276
60	342	Manufacture of furniture and fixture primarily of metals.	(-) 9127	6569	152
61	343	Manufacture of hand tools, weights and measures and general hardware.	49123	(-) 1654	425
62	346	Manufacture of metal cutlery, utensils & kitchen ware.	24032	9441	351
63	349	Manufacture of metal products (except machinery and equipment n.e.c.*)	3744	1006	40

(Contd.)

**ANNEXURE - 9.2**

1	2	3	4	5	6
64	350	Manufacture of agricultural machinery & equipment & parts thereof.	9602	6151	177
65	354	Manufacture of industrial machinery for other than food and textile industries.	621233	274253	2118
66	356	Manufacture of general purpose non-electrical machinery/equipment, their components and accessories n.e.c.*	28273	13785	297
67	359	Manufacture of special purpose machinery/equipment and their components & accessories n.e.c.*	49130	9624	154
68	360	Manufacture of electrical industrial machinery, apparatus and parts thereof.	104982	49418	500
69	361	Manufacture of insulated wires and cables including manufacture of optical fibrocables.	361901	47329	673
70	366	Manufacture of television receivers, reception apparatus for radio broadcasting, radio telephony/telegraphy, video recording or reproducing apparatus, turntables, record players, cassette players and other sound producing apparatus, microphone, amplifiers & louds speakers, sound amplifiers & pre-recorded audio/video records/tapes.	64650	1075	615
71	369	Manufacture of radio graphic, x-ray apparatus, x-ray, tubes and parts of mfr. Of electrical equipment n.e.c.*	64470	11434	260

(Contd.)

**ANNEXURE - 9.2**

1	2	3	4	5	6
72	373	Manufacture of heavy motor vehicles coach work	7515	5437	105
73	374	Manufacture of motor cars and other motor vehicles principally designed for transport of less than ten persons.	145650	15929	213
74	389	Manufacture of miscellaneous products n.e.c.*	120307	31832	699
75	395	Repair of electrical industrial machinery and apparatus.	713	1498	30
76	398	Repair of heavy motor vehicles	66803	40078	988
77	399	Repair of machinery and equipment, n.e.c.*	541149	127557	1974
78	400	Generation and transmission of electric energy.	97314553	10651945	35778
79	741	Ware-housing of agricultural products with refrigeration (cold storage).	84513	74384	234
80	974	Repair of motor vehicles and motor cycles except trucks, lorry and other heavy vehicles.	128234	55768	957
81	979	Repair enterprises not elsewhere classified	29334	7264	179
<b>Total</b>			<b>232207494</b>	<b>21710787</b>	<b>178925</b>

n.e.c.\* not else classified

Source - Directorate Economics & Statistics, Orissa



### ANNEXURE - 9.3

#### District-wise (Un-divided) Achievement of Orissa State Financial Corporation

		(Rs. in lakh)						
Sl. No.	District	Loans disbursed during 1994-95				Cumulative		Recovery
		Small scale industries		Other than small scale industries		disbursement		in
		No.	Amount	No.	Amount	No.	Amount	1994-95
1	2	3	4	5	6	7	8	9
<b>(A) Backward Districts</b>								
1	Dehenkanal	3	23.41	36	136.63	1329	2484.83	261.91
2	Balahandi	5	38.32	11	33.92	752	1482.34	198.34
3	Keonjhar			38	110.87	757	1785.58	176.36
4	Paraput	11	126.10	24	112.72	909	2013.74	224.60
5	Mayurbhanj	25	106.96	22	76.74	1142	2445.84	221.63
<b>Sub-Total (A)</b>		<b>44</b>	<b>294.79</b>	<b>131</b>	<b>470.88</b>	<b>4889</b>	<b>10212.33</b>	<b>1082.84</b>
<b>(B) No Industry Districts</b>								
6	Balasore	4	319.22	46	283.44	1435	7681.58	707.85
7	Bolangir	18	82.86	25	54.95	1050	2760.19	297.74
8	Phulbani			20	72.27	617	1176.49	92.86
<b>Sub-Total (B)</b>		<b>22</b>	<b>402.08</b>	<b>91</b>	<b>410.66</b>	<b>3102</b>	<b>11618.26</b>	<b>1098.45</b>
<b>(C) Other Districts</b>								
9	Cuttack	36	221.15	181	1070.19	6912	17927.52	1591.76
10	Ganjam	31	97.20	52	283.09	1361	3899.97	275.52
11	Puri	41	434.50	80	659.31	4195	14661.07	1760.33
12	Sambalpur	25	298.45	64	246.78	1074	4381.78	638.60
13	Sundargarh	26	304.44	49	258.57	1255	7074.56	870.88
<b>Sub-Total (C)</b>		<b>159</b>	<b>1355.74</b>	<b>426</b>	<b>2517.94</b>	<b>14797</b>	<b>47944.90</b>	<b>5137.09</b>
<b>Grand Total (A+B+C)</b>		<b>225</b>	<b>2052.61</b>	<b>648</b>	<b>3399.48</b>	<b>22788</b>	<b>69775.49</b>	<b>7318.38*</b>

Source : Orissa State Financial Corporation, Cuttack.

\* Recovery does not include Rs.358.78 lakh which has been transferred to Principal A/C on DICGC settlement.



## ANNEXURE - 9.4

### *District-wise Details of Small Scale Industries in Orissa*

Sl. No.	District	1996-97			1997-98			1998-99		
		Number of SSI units established	Total capital investment (Rs. lakh)	Employment generated (number)	Number of SSI units established	Total capital investment (Rs. lakh)	Employment generated (number)	Number of SSI units established	Total capital investment (Rs. lakh)	Employment generated (number)
1	2	3	4	5	6	7	8	9	10	11
1	Angul	137	375.83	501	134	168.61	410	140	229.74	549
2	Balasore	191	1074.35	873	209	1067.64	1156	192	594.00	802
3	Baragarh	80	163.17	424	99	1313.11	677	110	718.30	430
4	Bhadrak	80	147.42	356	85	153.66	409	84	209.64	422
5	Bolangir	101	346.34	375	95	186.38	347	95	583.74	480
6	Boudh	29	31.36	106	24	39.55	150	15	106.77	120
7	Cuttack	245	810.67	1354	230	1314.42	1387	257	4746.55	1586
8	Deogarh	20	22.64	72	20	68.81	116	15	18.20	73
9	Dhenkanal	80	157.32	290	81	108.42	280	81	121.28	304
10	Ganjam	254	932.57	1543	266	875.88	1348	224	1752.08	1472
11	Gajapati	50	172.13	304	55	693.82	436	51	151.53	382
12	Jagatsingpur	63	70.36	196	72	70.58	199	85	96.17	307
13	Jajpur	126	160.84	722	160	295.36	751	142	697.66	648
14	Jharsuguda	40	34.33	197	43	150.11	199	49	127.16	262
15	Kalahandi	50	164.89	257	55	617.68	357	56	536.70	337
16	Kendrapara	79	105.21	283	80	85.06	248	72	162.82	262
17	Keonjhar	99	253.85	447	115	566.14	712	112	993.75	496
18	Khurda	240	1345.36	1355	240	2066.67	1621	243	1793.92	1472
19	Koraput	101	416.70	496	112	319.14	467	100	492.95	461
20	Malkangiri	25	32.03	63	13	17.82	45	26	35.50	62
21	Mayurbhanj	164	429.61	966	154	337.38	1006	166	364.15	688
22	Nawapara	16	158.56	150	15	78.74	78	21	70.30	57
23	Nawarangpur	35	88.13	118	40	116.13	118	45	144.38	204
24	Nayagarh	45	73.38	195	49	52.31	254	53	154.94	245
25	Phulbani	41	37.48	120	49	38.89	131	51	54.89	136
26	Puri	112	428.36	637	113	419.32	624	104	569.10	623
27	Rayagada	85	248.39	429	97	117.04	485	98	519.44	533
28	Sambalpur	79	640.33	470	75	634.65	511	80	250.90	361
29	Sonepur	31	41.12	82	35	56.16	164	38	50.90	262
30	Sundargarh	400	1489.77	2228	371	1320.25	2035	379	2646.96	2498
<b>Total</b>		<b>3096</b>	<b>16492.52</b>	<b>15929</b>	<b>3100</b>	<b>13469.70</b>	<b>16719</b>	<b>3184</b>	<b>19096.26</b>	<b>16776</b>

Source : Directorate of Industries, Orissa, Cuttack



## ANNEXURE - 9.5

### *Districtwise (un-divided) Progress of Handloom Industries in Orissa (co-operative Sector)*

Sl. No.	District	1997-98				1998-99 (P)			
		Number of looms (cumulative)	Investment (Rs. in lakh)	Production (in lakh sq.mt.)	Employment generated	Number of looms (cumulative)	Investment (Rs. in lakh)	Production (in lakh sq.mt.)	Employment generated
1	2	3	4	5	6	7	8	9	10
1	Balasore	3627	474.20	21.79	7854	3431	598.72	15.20	6862
2	Balangir	12243	2159.10	22.84	24486	12767	2800.56	15.88	25534
3	Cuttack	15518	2505.03	106.63	31036	15752	3696.85	61.87	31504
4	Dhenkanal	2241	280.88	10.68	4482	1721	341.43	5.07	3442
5	Ganjam	3976	947.60	25.44	7952	3798	1137.14	17.60	7596
6	Kalahandi	3975	599.15	2.50	7950	1166	608.35	0.93	2312
7	Keonjhar	1231	169.99	4.23	2462	1145	189.45	1.58	2290
8	Koraput	1260	223.08	0.52	2520	1280	230.86	0.48	2560
9	Mayurbhanj	2073	308.50	5.90	4146	2093	330.25	4.29	4186
10	Phulbani	2955	412.34	4.23	5910	2981	474.77	1.21	5922
11	Puri	13169	1450.40	63.92	26338	13268	1974.26	36.96	26536
12	Sambalpur	16287	2700.20	45.16	32674	16393	3940.72	37.06	32766
13	Sundargarh	1450	150.00	10.89	2900	1430	208.80	7.35	2860
<b>ORISSA</b>		<b>80205</b>	<b>12399.47</b>	<b>324.73</b>	<b>160410</b>	<b>77195</b>	<b>16532.16</b>	<b>205.48</b>	<b>164390</b>

Source : Directorate of Textiles, Orissa, Bhubaneswar



**ANNEXURE - 9.6**

**Districtwise Number of Cottage Industries Set-up in Orissa with Investment and Employment Generated during 1996-97 to 1998-99**

Sl. No.	District	1996-97			1997-98			1998-99(P)		
		Number of cottage industries set-up	Investment (Rs. lakh)	Persons employed (number)	Number of cottage industries set-up	Investment (Rs. lakh)	Persons employed (number)	Number of cottage industries set-up	Investment (Rs. lakh)	Persons employed (number)
1	2	3	4	5	6	7	8	9	10	11
1	Angul	1730	178.36	3318	1887	263.53	2209	NR	NR	NR
2	Balasore	2636	353.10	4988	2368	299.32	3435	2992	476.84	434
3	Baragarh	897	45.22	1411	1274	74.56	2423	1207	51.86	236
4	Bhadrak	1313	198.88	1879	571	23.47	971	1325	237.00	172
5	Bolangir	3981	178.44	7982	4514	80.26	9028	6125	393.30	1210
6	Boudh	755	87.44	1510	752	70.02	1504	1206	114.89	240
7	Cuttack	2335	257.87	5256	2311	265.49	3991	1885	198.64	377
8	Deogarh	58	1.74	118	287	20.14	874	243	8.38	47
9	Dhenkanal	1433	132.70	3107	1533	198.70	3238	3573	471.05	664
10	Ganjam	1938	190.17	3876	2511	321.61	5022	2128	325.10	425
11	Gajapati	298	16.28	598	383	29.70	644	228	12.41	45
12	Jagatsingpur	1454	181.76	3157	1924	192.34	2846	1932	216.44	386
13	Jajpur	1523	202.76	2452	2023	373.10	6009	2083	236.08	354
14	Jharsuguda	233	9.46	439	527	24.48	1031	450	23.04	86
15	Kalahandi	679	24.16	1284	1756	88.17	3512	1626	122.77	325
16	Kendrapara	2664	277.00	3598	1005	503.59	1327	2021	224.35	392
17	Keonjhar	1018	139.41	2030	1274	220.59	2552	1353	234.61	270
18	Khurda	572	77.24	1260	434	0.87	385	937	217.35	132
19	Koraput	1760	260.89	2298	2287	225.55	3158	2151	254.25	282
20	Malkangiri	419	35.70	534	1273	191.32	1597	796	75.70	92
21	Mayurbhanj	3873	345.94	7748	4245	588.11	8450	4710	734.46	942
22	Nawapara	490	42.02	589	780	44.07	1580	676	67.05	132
23	Nawarangpur	1150	78.05	1813	1224	107.89	1486	1690	114.54	242
24	Nayagarh	484	47.28	928	639	47.11	504	237	14.19	42
25	Phulbani	432	43.98	864	1551	161.10	3092	1510	225.30	272
26	Puri	1511	185.87	2821	1512	180.71	2156	2005	293.89	322
27	Rayagada	904	70.27	1728	274	7.48	548	212	93.35	42
28	Sambalpur	258	17.43	362	980	48.86	1717	929	31.52	182
29	Sonepur	2715	101.41	5430	2354	48.83	4708	2799	148.46	562
30	Sundargarh	1791	165.15	3085	1679	192.22	3162	1578	207.18	322
<b>Total</b>		<b>41478</b>	<b>3888.88</b>	<b>78516</b>	<b>45802</b>	<b>4888.18</b>	<b>82941</b>	<b>50607</b>	<b>5899.00</b>	<b>925</b>

P : Provisional

Source : Directorate of Handicrafts Cottage Industries, Orissa, Bhubaneswar.



## ANNEXURE - 9.7

### *Performance of Industrial Development Corporation of Orissa Ltd.*

Sl. No.	Period*	Total Investment	Employment generated	Source of finances		Profit (+) Deficit (-)	
				State Govt.	Other Sources		
1	2	3	3	4	5	6	7
1	Till 1993-94	20588	2707	8217	12371	(+) 2901	
2	1994-95	1432	(-) 11	432	1000	(+) 754	
3	1995-96	4358	153	109	4249	(+) 1596	
4	1996-97	(-) 329	(-) 4	296	(-) 625	(-) 1241	
5	1997-98	2809	(-) 379	(-) 864	3673	(-) 2461	
6	1998-99	(-) 1861	(-) 70	-	(-) 1861	(-) 3224	

Source : Industrial Development Corporation of Orissa Limited, Bhubaneswar





## ANNEXURE - 9.8

### *State-wise Information from Annual Survey of Industries 1997-98 (P)*

Sl. No.	State	Number of factories	Invested capital (Rs. in lakh)	Number of workers	Value of output (Rs. in lakh)	Net value added by manufacture (Rs. in lakh)
1	2	3	4	5	6	7
1	Andhra Pradesh	18,780	4,249,738	1,028,213	5,675,230	1,157,938
2	Assam	1,861	563,537	124,504	751,290	126,751
3	Bihar	3,297	2,061,678	206,746	2,893,490	928,279
4	Delhi	3,561	484,348	92,017	1,532,293	299,583
5	Goa	341	239,407	18,873	431,146	88,135
6	Gujarat	13,386	8,341,773	655,695	9,159,183	1,438,720
7	Haryana	4,017	1,638,207	224,996	2,943,654	472,396
8	Himachal Pradesh	577	432,108	46,115	448,997	115,461
9	Jammu & Kashmir	416	154,298	21,749	124,424	20,660
10	Karnataka	6,955	3,248,310	471,870	4,269,078	864,723
11	Kerala	4,897	1,146,022	295,663	1,995,730	325,087
12	Madhya Pradesh	4,234	3,009,200	323,256	4,422,747	866,723
13	Maharashtra	20,542	10,701,660	1,041,091	17,329,894	3,379,213
14	Manipur	77	18,356	2,825	21,397	9,301
15	Meghalaya	43	28,448	3,701	22,435	9,182
16	Nagaland	165	23,501	3,388	32,383	2,693
17	Orissa	1,643	1,890,486	136,146	1,440,470	375,416
18	Punjab	6,576	2,123,177	339,024	3,201,909	468,757
19	Rajasthan	5,039	1,966,516	215,072	2,848,615	561,362
20	Tamil Nadu	19,746	4,994,961	1,015,420	8,261,186	1,350,145
21	Tripura	243	28,663	7,142	32,759	10,559
22	Uttar Pradesh	10,583	7,179,871	589,005	7,183,727	1,436,512
23	West Bengal	6,903	3,467,526	661,785	4,189,466	972,670
24	A & N Island	79	20,007	5,440	15,883	3,932
25	Chandigarh	339	41,141	17,971	126,154	17,587
26	Dadra Nagar Haveli	360	280,586	13,069	643,386	157,048
27	Daman & Diu	531	135,017	14,755	343,211	59,147
28	Pondichery	380	179,967	29,377	380,136	96,705
<b>INDIA</b>		<b>138,551</b>	<b>58,638,508</b>	<b>7,604,907</b>	<b>82,542,261</b>	<b>15,594,665</b>

*P : Provisional*

Source : Annual Survey of Industries, 1997-98 (C.S.O.)



**ANNEXURE - 12.1**

**District-wise Length of different Types of Roads in Orissa  
as on 31. 03. 99 (P)**

Sl. No.	District	(In km.)					
		National Highway	Express Highway	State Highway	M.D.R.	O.D.R.	C.V.R.
1	2	3	4	5	6	7	8
1	Angul	164	-	47	84	169	190
2	Balasore	118	-	31	141	211	61
3	Baragarh	66	-	100	113	177	45
4	Bhadrak	40	-	88	103	88	91
5	Bolangir	-	-	86	238	189	205
6	Boudh	-	-	168	57	29	41
7	Cuttack	64	-	58	308	312	144
8	Deogarh	84	-	55	22	6	100
9	Dhenkanal	89	-	5	119	241	211
10	Gajapati	-	-	251	66	39	37
11	Ganjam	87	-	669	158	452	200
12	Jagatsinghpur	10	-	62	88	197	188
13	Jajpur	74	67	39	115	270	96
14	Jharsuguda	-	-	21	-	51	105
15	Kalahandi	-	-	176	79	267	282
16	Kandhamal	-	-	340	182	63	279
17	Kendrapara	45	-	63	50	271	45
18	Keonjhar	92	-	229	142	189	289
19	Khurda	109	-	58	456	207	129
20	Koraput	157	-	121	288	30	541
21	Malkangiri	-	-	158	149	56	152
22	Mayurbhanj	193	-	82	401	392	309
23	Nawarangpur	-	-	-	122	-	226
24	Nayagarh	-	-	144	125	235	99
25	Nuapada	-	-	110	13	79	48
26	Puri	-	-	55	173	221	59
27	Rayagada	-	-	248	254	50	175
28	Sambalpur	168	-	164	62	138	43
29	Sonepur	-	-	72	59	62	1
30	Sundargarh	117	-	279	296	76	279
<b>ORISSA</b>		<b>1677*</b>	<b>67</b>	<b>3977</b>	<b>4463</b>	<b>4767</b>	<b>4670</b>

(Contd.)

**ANNEXURE - 12.1 (Concid.)**

**District-wise Length of different Types of Roads in Orissa  
as on 31. 03. 99 (P)**

Sl. No	District	Village Road	P.S. Road	G.P. Road	Forest Road	Municipal Roads	Total
1	2	9	10	11	12	13	14
1	Angul	637	450	7333	408	410	9892
2	Balasore	1285	303	1682	59	861	4762
3	Baragarh	1058	788	6560	314	235	9456
4	Bhadrak	468	369	1572	-	762	3581
5	Bolangir	1057	382	5827	250	527	8761
6	Boudh	755	53	3745	256	62	5166
7	Cuttack	890	440	2641	156	814	5625
8	Deogarh	571	173	2891	98	93	4093
9	Dhenkanal	522	383	5670	213	298	7751
10	Gajapati	431	153	4253	107	144	5481
11	Ganjam	2146	12	6717	480	1100	12021
12	Jagatsinghpur	559	448	1308	-	275	3135
13	Jajpur	902	396	2656	36	151	4802
14	Jharsuguda	488	159	2850	13	672	4359
15	Kalahandi	821	126	9954	309	368	12382
16	Kandhamal	682	221	5651	323	212	7953
17	Kendrapara	654	384	2511	20	418	4461
18	Keonjhar	1180	324	2436	228	536	5647
19	Khurda	733	257	4925	305	1115	8294
20	Koraput	458	628	4973	210	957	8363
21	Malkangiri	647	221	2954	94	216	4647
22	Mayurbhanj	2157	746	6641	799	265	11965
23	Nabarangpur	826	695	5127	113	103	7212
24	Nayagarh	425	195	5497	322	74	7116
25	Nuapada	359	388	4133	270	116	5516
26	Puri	998	166	7282	8	870	9832
27	Rayagada	780	603	4032	183	281	6606
28	Sambalpur	398	277	6499	726	741	9216
29	Sonepur	468	88	3032	50	108	3640
30	Sundargarh	1197	350	8621	680	991	12666
<b>ORISSA</b>		<b>24582</b>	<b>10178</b>	<b>139673</b>	<b>7030</b>	<b>13777</b>	<b>215131**</b>

P: Provisional

\*\*Total does not include

1. Irrigation Road - 8277 Kms.

2. GRIDCO Road - 88 Kms and NH 807 Kms

\* Districtwise breakup of 807 km of N.H. has not been finalised yet.

Source: Chief Engineer, N.H. / R & B/ R.W., P.R. Deptt. & C.C. Forest



## ANNEXURE - 12.2

### *District-wise Length of Railway Route and Number of Railway Stations in Orissa as on 31.03.99(P)*

Sl No	District	Railway route length (in km)			No. of Railway stations
		Broad gauge	Narrow gauge	Total	
1	2	3	4	5	6
1	Angul	107	-	107	12
2	Balasore	115	2	117	18
3	Baragarh	53	-	53	3
4	Bhadrak	32	-	32	6
5	Bolangir	177	-	177	14
6	Boudh	-	-	-	-
7	Cuttack	103	-	103	18
8	Deogarh	-	-	-	-
9	Dhenkanal	67	-	67	6
10	Gajapati	-	50	50	7
11	Ganjam	80	-	80	11
12	Jagatsinghpur	67	-	67	8
13	Jajpur	102	-	102	11
14	Jharsuguda	66	-	66	9
15	Kalahandi	38	-	38	5
16	Kandhamal	-	-	-	-
17	Kendrapara	-	-	-	-
18	Keonjhar	40	-	40	4
19	Khurda	125	-	125	21
20	Koraput	252	-	252	21
21	Malkangiri	-	-	-	-
22	Mayurbhanj	62	88	150	20
23	Nawarangpur	-	-	-	-
24	Nayagarh	-	-	-	-
25	Nuapada	32	-	32	3
26	Puri	36	-	36	9
27	Rayagada	203	4	207	15
28	Sambalpur	140	-	140	12
29	Sonepur	13	-	13	1
30	Sundargarh	263	-	263	31
<b>ORISSA</b>		<b>2173</b>	<b>144</b>	<b>3317</b>	<b>274</b>

P : Provisional

Source - Divisional Manager, Sambalpur/ Kharagpur/  
Waltair/ Khurda / Bilaspur / Chakradharpur.



## ANNEXURE - 12.3

### *Different Categories of Motor Vehicles on Road in Orissa*

Sl No	Year (As on 31st March)	No. of buses	Goods vehicles	Car/taxis/ jeeps etc.	Motor cycles/ scooters	Three wheelers
	1	2	3	4	5	6
1	1986	2110	18443	17860	101142	978
2	1987	2405	21900	18625	119678	692
3	1988	2644	23221	20916	149104	698
4	1989	2700	25615	19927	176381	575
5	1990	2714	25828	22544	207293	813
6	1991	2764	26556	23231	255408	1821
7	1992	2753	26756	23573	248063	1860
8	1993	3050	30017	28595	274156	2087
9	1994	3391	33075	30561	313809	1940
10	1995	3681	37822	31807	370974	2281
11	1996	3920	43701	32099	411103	2919
12	1997	4083	48750	34533	466701	2658
13	1998	4226	53672	34800	520908	3969
14	1999 (P)	4229	57999	39930	578301	4520

P: Provisional

(Contd.)

### *ANNEXURE - 12.3 (Concl'd.)*

Sl No	Year (As on 31st March)	Others	Total	Percentage of annual growth	No. of buses per lakh pop- ulation	No. of buses per 1000 sq. km.	No. of goods vehicles per lakh population
	1	7	8	9	10	11	12
1	1986	787	141320	10.43	7	14	64
2	1987	1226	164726	16.56	8	16	74
3	1988	1332	198189	20.31	9	17	77
4	1989	1200	226396	14.23	9	17	84
5	1990	1213	260402	16.02	9	17	83
6	1991	798	310578	19.27	9	18	84
7	1992	876	303881	(-)2.16	9	18	83
8	1993	1173	339082	11.58	9	20	92
9	1994	4101	386877	14.10	10	22	100
10	1995	4876	461441	16.69	11	24	112
11	1996	6208	499950	10.74	11.5	25	128
12	1997	6048	562973	12.81	12	26	140
13	1998	6272	625747	11.15	12	27	152
14	1999 (P)	9148	694425	10.98	12	27	163

P: Provisional

N. B. - Goods vehicles include trucks, lorries, three wheelers  
petrol and water carriers, tractors, and trailers

Source: Commissioner, State Transport Authority, Cuttack.



## ANNEXURE - 13.1

### *Progress of Co-operative Movement in Orissa*

Sl No	Year	Co-operative societies functioning	Membership (in lakh)	Working capital (Rs. in crore)	Per capita working capital (in Rs.)
1	2	3	4	5	6
1	1973-74	7001	24.07	194.71	808.93
2	1977-78	5793	30.64	374.13	1221.05
3	1978-79	5810	31.38	477.75	1522.47
4	1979-80	5748	32.64	584.06	1789.40
5	1984-85	7108	44.68	1284.54	2833.39
6	1985-86	6329	46.01	1196.46	2600.43
7	1986-87	6333	46.36	1236.45	2667.06
8	1987-88	6488	74.51	1254.40	2640.29
9	1988-89	6516	48.15	1443.01	2996.91
10	1989-90	6491	45.67	1581.39	3249.21
11	1990-91	6563	49.13	1455.00	2961.53
12	1991-92	6686	49.98	1588.56	3178.39
13	1992-93	6691	51.42	1655.31	3219.19
14	1993-94	4511	50.84	844.86	1661.80
15	1994-95	4393	50.44	1066.13	2113.66
16	1995-96	4293	54.00	1184.16	2192.89
17	1996-97	4424	52.00	1413.44	2718.15
18	1997-98	4553	52.39	1389.12	2651.50

Source : Registrar, Co-operative Societies, Orissa, Bhubaneswar.



**ANNEXURE - 13.2**

***Membership, Working Capitals and Advances of Agricultural and Non-Agricultural Credit Co-operative Societies in Orissa***

Sl No	Year	Membership (in thousand)		Working capital (Rs. in lakh)		Loans advanced (Rs. in lakh)		Loans outstanding (Rs. in lakh)	
		Agril.	Non-agril.	Agril.	Non-agril.	Agril.	Non-agril.	Agril.	Non-agril.
1	2	3	4	5	6	7	8	9	10
1	1965-66	1,285	53	1,910	177	1,155	126	1,522	124
2	1973-74	891	71	7,809	418	1,683	175	4,920	261
3	1978-79	2,611	111	15,998	1,127	4,927	814	10,142	774
4	1984-85	3,444	181	37,471	3,725	8,056	2,721	24,251	2,572
5	1985-86	3,815	192	38,555	4,462	6,556	3,265	24,105	3,005
6	1986-87	3,846	198	39,855	5,122	6,099	1,998	23,447	3,196
7	1987-88	3,883	214	42,045	6,885	7,500	6,392	24,338	3,977
8	1988-89	3,918	222	43,879	7,780	7,009	4,899	23,724	5,057
9	1989-90	3,948	237	45,716	9,380	1,967	3,991	24,861	6,307
10	1990-91	3,893	235	39,669	11,718	3,507	5,424	18,855	9,366
11	1991-92	4,037	242	37,320	14,327	4,105	8,443	16,971	11,701
12	1992-93	4,150	238	40,432	17,968	6,643	7,047	19,712	11,759
13	1993-94	4,192	892	45,989	38,497	9,287	2,577	20,686	15,248
14	1994-95	4,260	784	48,929	57,684	12,286	8,085	23,975	18,958
15	1995-96	4,300	1,100	55,812	62,604	16,730	17,237	33,870	25,223
16	1996-97	4,200	1,000	62,600	78,744	19,387	50,430	31,288	33,047
17	1997-98(p)	4,149	1,090	73,429	85,463	22,567	26,475	35,986	92,557

Source : Registrar, Co-operative Societies, Orissa, Bhubaneswar.



## ANNEXURE 14.1

### *Number of Educational Institutions in Orissa*

Sl. No.	Year		Primary schools	Middle schools	High schools	General colleges
1	2		3	4	5	6
1	1991-92	Total	54595	10941	4495	542
		Formal	41204	9818	-	-
		Non-formal	13391	1123	-	-
2	1992-93	Total	54652	11308	4921	615
		Formal	41204	10412	-	-
		Non-formal	13448	896	-	-
3	1993-94	Total	55052	11816	4921	677
		Formal	41604	10920	-	-
		Non-formal	13448	896	-	-
4	1994-95	Total	51656	12256	5231	735
		Formal	41604	11360	-	-
		Non-formal	14552	896	-	-
5	1995-96	Total	56656	12406	5808	893
		Formal	42104	11510	-	-
		Non-formal	14552	896	-	-
6	1996-97	Total	65552	12406	5967	967
		Formal	42104	11510	-	-
		Non-formal	23448	896	-	-
7	1997-98	Total	65552	12406	6072	1031
		Formal	42104	11510	-	-
		Non-formal	23448	896	-	-
8	1998-99(P)	Total	65552	12406	6072	1034
		Formal	42104	11510	-	-
		Non-formal	23448	896	-	-

P : Provisional

*Source : Directorate of Elementary Education, Orissa, Bhubaneswar*





## ANNEXURE 14.2

### *Number of Teachers in Primary Schools, Middle Schools, High Schools and General Colleges.*

Sl No	Year	Primary schools	Middle schools	High schools	General colleges
1	2	3	4	5	6
1	1991-92	111499 (13391)	39955 (2246)	40020	11669
2	1992-93	115460 (13448)	39751 (1792)	44289	13129
3	1993-94	118788 (13448)	39951 (1792)	44425	13749
4	1994-95	120392 (14552)	39993 (1792)	45785	14329
5	1995-96	125092 (14552)	40206 (1792)	47096	15909
6	1996-97	134488 (23448)	40706 (1792)	50218	16610
7	1997-98	134488 (23448)	40706 (1792)	51436	17332
8	1998-99(P)	134488 (23448)	40706 (1792)	51436	17400

P : Provisional

*N.B.: Figures in brackets indicate number of teachers in non-formal schools.*

*Source : Directorate of Elementary Education, Orissa, Bhubaneswar.*



### ANNEXURE 14.3

#### *Number of Students in Primary Schools, Middle Schools, High Schools and General Colleges.*

Sl No	Year	No. of Students (In lakh)			
		Primary schools	Middle schools	High schools	General colleges
1	2	3	4	5	6
1	1991-92	39.89	10.76	7.79	2.75
2	1992-93	40.42	11.13	7.93	2.91
3	1993-94	40.97	11.66	7.98	3.19
4	1994-95	41.79	12.07	8.15	3.45
5	1995-96	42.65	12.92	8.22	4.40
6	1996-97	45.31	13.18	8.66	4.74
7	1997-98	45.91	13.84	8.81	5.05
8	1998-99(P)	46.66	13.90	10.31	5.15

P : Provisional

Source : Directorate of Elementary Education, Orissa, Bhubaneswar.



**ANNEXURE - 15.1**

***Districtwise Government Medical Institutions in Orissa as on 31.03.99***

Sl No	Districts	MCH	DHH	SDH	OH	TOTAL	CHC	PHC	PHC (N)	MHU	TOTAL
1	2	3	4	5	6	7	8	9	10	11	12
1.	Angul	-	1	2	3	6	3	6	27	1	43
2.	Balasore	-	1	1	4	6	6	8	66	-	86
3.	Baragarh	-	1	-	2	3	5	9	43	1	61
4.	Bhadrak	-	1	-	3	4	6	1	49	-	60
5.	Bolangir	-	1	2	3	6	5	10	38	1	60
6.	Boudh	-	1	-	2	3	-	3	10	-	16
7.	Cuttack	1	1	2	11	15	5	9	52	-	81
8.	Deogarh	-	1	-	1	2	1	3	6	-	12
9.	Dhenkanal	-	1	1	5	7	6	4	31	-	48
10.	Gajapati	-	1	-	2	3	3	4	18	2	30
11.	Ganjam	1	1	2	9	13	10	15	83	-	121
12.	Jagatsingpur	-	1	-	1	2	4	4	36	-	46
13.	Jajpur	-	1	-	3	4	5	6	54	-	69
14.	Jharsuguda	-	1	-	1	2	2	4	14	-	22
15.	Kalahandi	-	1	1	6	8	6	8	39	1	62
16.	Kandamal	-	1	1	5	7	7	6	34	2	56
17.	Kendrapara	-	1	-	1	2	7	2	44	-	55
18.	Keonjhar	-	1	2	7	10	9	6	57	2	64
19.	Khurda	-	2	-	8	10	4	7	60	-	81
20.	Koraput	-	1	1	3	5	5	9	46	-	65
21.	Malakanagiri	-	1	-	4	5	4	4	25	1	39
22.	Mayurbhanja	-	1	3	7	11	13	15	74	2	115
23.	Nuapada	-	1	-	1	2	4	2	15	-	23
24.	Nabarangapur	-	1	-	2	3	5	5	36	-	49
25.	Nayagarh	-	1	-	9	11	4	4	32	-	50
26.	Puri	-	1	-	10	11	5	6	43	-	65
27.	Rayagada	-	1	-	2	3	6	6	35	-	50
28.	Sambalpur	1	1	1	2	5	5	6	29	-	45
29.	Sonepur	-	1	-	2	3	4	2	17	-	26
30.	Sundargarh	-	1	2	6	9	8	10	54	1	82
	<b>ORISSA</b>	<b>3</b>	<b>31</b>	<b>21</b>	<b>125</b>	<b>161</b>	<b>157</b>	<b>184</b>	<b>1167</b>	<b>14</b>	<b>1702</b>

*M.C.H. Medical College Hospital*

*D.H.H. District Head quarters Hospital*

*S.D.H. Sub-Divisional Hospital*

*O.H/A.H. Other Hospital/Area Hospital*

*C.H.C. Community Health Centre*

*P.H.C. Primary Health Centre*

*P.H.C. (N) Primary Health Centre (New)*

*M.H.U. Mobile Health Unit*

*Source : Directorate of Health Services.*

*N.B. : The Old Dispensaries, Addl. PHCs, Subsidiary Health Centres and Medical Health Centres have been amalgamated and redesignated as PHC (New) in 1996-97.*



**ANNEXURE 17.1**

**Achievement of Orissa Renewable Energy Development Agency  
(Numbers)**

Sl. No	Items	Up to	During			
		end of 1994-95	1995-96	1996-97	1997-98	1998-99(P)
1	2	3	4	5	6	7
1	Bio-gas plants installed (National Project)	1,00,615	12,024	7,964	9,082	6,064
2	Community/ Institutional Bio-Gas plants installed	22	-	1	1	4
3	Improved chullah supplied / installed	9,00,915	2,12,463	1,00,000	2,04,830	1,01,565
4	Solar photo-voltaic programme :-					
	(a) Community lighting system	1,871	1,671	-	52	3,000
	(b) SPV pumping system	51	51	-	-	-
	(c) SPV operated TV	50	52	-	-	-
	(d) SPV lanterns supplied	1,093	1,094	274	766	870
5	Solar Thermal Extension Programme:-					
	(a) LPD of solar water heating system	92,730	2,900	40	3,500	5,200
	(b) LPD of solar distillation system	1,010	2,750	200	10	10
	(c) Solar cooker supplied	2,258	374	116	50	300

(P) : Provisional

Source : Managing Director, OREDA, Bhubaneswar.



**ANNEXURE - 18.1**

**Itemwise Value of Exports from Orissa**

(Rs in lakh)

Sl. No.	Item	1994-95	1995-96	1996-97	1997-98	1998-99(P)
1	2	3	4	5	6	7
<b>I. METALLURGICAL</b>						
1.	Charge - chrome	19613.97	16170.54	13949.42	10268.93	8476.71
2.	Aluminium metal	28842.20	27174.76	33356.51	32813.00	20934.87
3.	Alumina	19721.97	30658.89	30429.06	34416.00	42283.97
4.	Ferro manganese	313.18	7.52	5.29	-	3.65
5.	Silicon manganese	6500.62	4568.97	4783.09	7650.33	5651.66
6.	Hard ferrite	142.00	168.83	-	-	-
7.	Sponge Iron/ Pig Iron/M.S. billet	85.16	82.46	37.53	50.84	196.87
8.	Ferro-chrome/powder	1.39	17287.25	9925.23	24281.24	24440.06
9.	Others	-	-	236.22	26.48	12.96
<b>SUB TOTAL - I</b>		<b>75220.49</b>	<b>96119.22</b>	<b>92722.35</b>	<b>109506.82</b>	<b>102000.74</b>
<b>II. ENGG./ CHEMICAL AND ALLIED PRODUCTS</b>						
1.	Machineries	75.07	353.90	104.46	61.76	60.15
2.	Aluminium conductor	197.31	279.46	-	-	-
3.	Refractory & products	3091.37	4978.80	-	4452.23	3121.13
4.	Paper & paper products	1443.00	3421.05	5129.66	3487.07	3292.04
5.	M.S. plates	1127.80	163.74	-	1840.36	366.16
6.	Transformer	53.39	164.65	148.19	423.31	-
7.	P.U. foam	4.34	15.18	5.43	-	-
8.	H.D.P.E./PVC Pipes and fittings.	65.94	122.00	621.09	410.41	219.10
9.	C.I. Products	193.45	525.25	368.50	661.07	862.93
10.	Cylinders	43.60	148.85	103.63	78.36	14.50
11.	Sanitary wares (Ceramic items)	50.00	36.71	42.93	3.11	2.00
12.	Cement	921.33	518.48	909.45	1941.56	979.53
13.	Granite tiles, slabs and monuments	351.78	326.10	86.11	357.76	362.90
14.	Cables	33.87	747.30	126.51	6.10	8.22
15.	Explosives	105.49	132.98	550.00	320.48	379.08
16.	Chemicals	14.49	-	-	2.93	1.96
17.	Timber Products	837.59	263.72	-	-	-
18.	Tyre and Tubes	4853.99	5775.89	6860.97	7237.06	7952.89
19.	Clinkers	21.70	-	-	79.62	-
20.	Literale, Fasteners	4.08	16.89	-	-	-
21.	Aluminium Extrusion	395.25	882.24	42.23	207.91	174.33
22.	Pesticides	95.54	144.46	4977.26	162.53	306.00
23.	Others	-	-	826.47	927.76	806.77
<b>SUB TOTAL - II</b>		<b>13960.36</b>	<b>16717.65</b>	<b>20616.76</b>	<b>22614.36</b>	<b>16616.69</b>

(Contd.)

**ANNEXURE - 18.1 (Contd.)**

Sl No	Item	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7
<b>III. MINERAL PRODUCTS</b>						
1	Iron ore	9664.05	9039.00	7169.12	6560.82	4784.28
2	Chrome ore	11897.19	10392.00	14926.00	10140.01	4851.80
3	Synthetic Rutile	736.86	866.37	833.44	48.94	-
4	Ilemenite & ore	587.21	828.87	2237.72	3234.12	3499.72
5	Chrome concentrate	-	8075.80	8503.78	7934.19	17685.96
6	Titanium	-	-	-	171.42	-
7	Garnet	-	-	-	-	155.40
<b>SUB TOTAL - III</b>		<b>22696.31</b>	<b>29202.04</b>	<b>33880.06</b>	<b>26068.80</b>	<b>30877.16</b>
<b>IV. AGRICULTURE AND FOREST PRODUCTS</b>						
1	Sal seed fat extraction	-	28.14	-	-	-
2	Niger seed	46.73	650.39	737.33	649.38	616.09
3	Mango Kernel doc/ Cashew Kernel	59.33	-	28.77	59.33	163.00
4	Rice (non basmati) & boiled rice	114.50	4225.95	1982.92	30.84	877.97
5	Others	-	-	9.73	-	37.00
<b>SUB TOTAL - IV</b>		<b>220.56</b>	<b>4904.48</b>	<b>2768.75</b>	<b>738.55</b>	<b>1692.06</b>
<b>V. MARINE PRODUCTS</b>						
1	Frozenshrimp/ Prawn/Fish	16375.38	16453.37	24353.36	25507.98	26263.97
2	Others	-	506.70	40.05	19.11	312.20
<b>SUB TOTAL - V</b>		<b>16375.38</b>	<b>16960.07</b>	<b>24393.41</b>	<b>25527.09</b>	<b>26576.17</b>
<b>VI. HANDLOOM PRODUCTS</b>						
1	Handloom products (Silk, Rayon, Viscose, Cotton fabrics and garments etc.)	3673.60	3307.85	169.27	95.31	131.32
<b>SUB TOTAL - VI</b>		<b>3673.60</b>	<b>3307.85</b>	<b>169.27</b>	<b>95.31</b>	<b>131.32</b>
<b>VII. HANDICRAFTS</b>						
1	Silver Filigree	-	0.39	-	-	-
2	Handicrafts (Stone, Wood, Applique etc)	13.56	26.71	34.08	49.89	61.83
<b>SUB TOTAL - VII</b>		<b>13.56</b>	<b>27.10</b>	<b>34.08</b>	<b>49.89</b>	<b>61.83</b>

(Contd.)

**ANNEXURE - 18.1 (Concl'd.)**

Sl. No	Item	1994-95	1995-96	1996-97	1997-98	1998-99 (P)
1	2	3	4	5	6	7
<b>VIII. TEXTILES</b>						
1.	Readymade Garments	354.60	250.87	87.58	252.42	481.00
2.	Cotton/Cotton yarn	-	-	58.96	117.02	685.00
3.	Poly Suiting & Shirting	71.02	17.22	8.21	-	-
4.	P.S.F. (Polyester Staple Fibre)	190.71	2181.30	676.94	660.21	157.18
5.	Jute Bag/Twine/Yarn	481.65	246.40	462.72	654.57	14.98
6.	P.P. Fabrics/Sacks	-	-	-	171.40	-
7.	Tufted Carpet	2.30	3.60	-	2.30	5.70
8.	P.F.Y. (Polyester filament Yarn)	15.11	-	-	-	-
9.	Silk Saree & Others	-	-	-	-	3.20
<b>SUB TOTAL - VIII</b>		<b>1121.39</b>	<b>2699.39</b>	<b>1294.71</b>	<b>1887.92</b>	<b>1347.00</b>
<b>IX. LEATHER</b>						
1.	Leather	-	-	-	-	-
<b>SUB-TOTAL - IX</b>		-	-	-	-	-
<b>X. GEMS &amp; JEWELLARY</b>						
1.	Semi Precious & Jewellery	30.17	14.44	-	4.34	-
2.	Jewellery	16.72	-	-	1.18	-
3.	Gem Stones/Semi-Precious Trimmed & Tumbled Stones	-	-	11.20	-	-
<b>SUB TOTAL - X</b>		<b>46.89</b>	<b>14.44</b>	<b>11.20</b>	<b>5.52</b>	-
<b>XI. PHARMACEUTICAL PRODUCTS</b>						
1.	Medicines (Homoeopathic)	2.73	0.12	0.27	0.38	0.31
2.	Absorbent cotton	8.08	35.96	-	-	-
<b>SUB TOTAL - XI</b>		<b>10.81</b>	<b>36.10</b>	<b>0.27</b>	<b>0.38</b>	<b>0.31</b>
<b>XII. ELECTRONIC GOODS</b>						
1.	Computer Software	48.17	95.33	-	-	5342.76
2.	Computer Hardware & Others	94.15	8.00	152.40	42.26	21.00
<b>SUB TOTAL - XII</b>		<b>142.32</b>	<b>103.33</b>	<b>152.40</b>	<b>42.26</b>	<b>5363.76</b>
<b>GRAND TOTAL</b>		<b>133491.89</b>	<b>174093.67</b>	<b>176044.96</b>	<b>188525.42</b>	<b>189081.00</b>

P : Provisional

Source : Directorate of Export Promotion & Marketing, Orissa, Bhubaneswar.



**ANNEXURE - 21.1**

**District-wise Socio-Economic Indicator of Orissa, 1991 Census**

Sl No	District	Distribution of land area (%)	Distribution of population (%)	Number of females per thousand males	Percentage of urban to total population	Density per square kilometre
1	2	3	4	5	6	7
1	Angul	4.08	3.04	942	11.46	151
2	Balasore	2.38	5.36	955	9.09	485
3	Bargarh	3.75	3.81	979	6.67	207
4	Bhadrak	1.79	3.49	985	9.93	397
5	Bolangir	4.21	3.89	981	10.51	188
6	Boudh	2.21	1.00	987	4.87	92
7	Cuttack	2.51	6.23	919	24.63	504
8	Deogarh	1.79	0.74	982	7.37	84
9	Dhenkanal	2.95	2.99	954	8.24	206
10	Gajapati	1.94	1.44	1027	10.29	151
11	Ganjam	5.18	8.54	1006	15.67	335
12	Jagatsinghpur	1.12	3.20	977	7.50	583
13	Jajpur	1.85	4.38	977	3.85	480
14	Jharsuguda	1.41	1.41	938	35.67	203
15	Kalahandi	5.26	3.57	999	6.91	138
16	Kendrapara	1.65	3.63	1007	5.50	448
17	Keonjhar	5.33	4.23	974	12.48	161
18	Khurda	1.85	4.74	903	34.37	520
19	Koraput	5.38	3.25	991	16.67	123
20	Malkangiri	3.93	1.33	985	8.16	69
21	Mayurbhanj	6.69	5.95	979	6.17	181
22	Newapara	2.19	1.48	1002	5.49	138
23	Nayagarh	2.54	2.47	958	3.35	198
24	Nawarangpur	3.40	2.67	989	4.97	160
25	Phulbani	3.51	1.73	999	6.53	100
26	Puri	1.96	4.13	970	12.52	427
27	Rayagada	4.87	2.26	1012	12.51	94
28	Samhalpur	4.31	2.56	956	25.40	121
29	Sonepur	1.47	1.51	979	7.30	209
30	Sundargarh	6.24	4.97	936	33.36	162
	ORISSA	100.00	100.00	971	13.36	203

\* Area figures supplied by Surveyor General, India.

(Contd.)



**ANNEXURE - 21.1**

Sl No	Districts	Percentage of SC population	Percentage of ST population	Literacy rate	Percentage of cultivators to main workers	Percentage of agricultural labourers to main workers	Percentage of main workers to total population
1	2	8	9	10	11	12	13
1	Angul	16.82	11.68	51.53	41.27	28.23	32.84
2	Balasore	18.57	10.57	57.64	48.58	26.78	27.89
3	Bargarh	18.44	19.56	47.65	45.94	32.56	37.02
4	Bhadrak	21.71	1.69	60.54	57.64	18.97	25.70
5	Bolangir	15.39	22.06	38.63	49.04	30.89	34.57
6	Boudh	19.64	12.92	40.98	51.90	32.48	37.99
7	Cuttack	18.19	3.49	65.44	30.57	22.28	28.58
8	Deogarh	14.60	33.31	44.45	51.81	31.20	36.59
9	Dhenkanal	16.03	12.68	54.91	39.69	32.99	29.99
10	Gajapati	8.77	47.88	29.37	50.20	35.39	41.94
11	Ganjam	17.91	2.93	46.72	38.96	32.94	35.02
12	Jagatsinghpur	21.72	0.61	65.78	46.40	21.14	26.52
13	Jejpur	22.87	7.40	58.00	41.79	28.41	25.49
14	Jharsuguda	17.15	31.88	52.64	32.71	23.91	33.52
15	Kalahandi	17.01	28.88	31.08	42.85	41.04	37.68
16	Kendrapara	19.83	0.40	63.61	55.91	20.35	24.31
17	Keonjhar	11.49	44.52	44.73	47.68	24.52	32.91
18	Khurda	13.62	5.14	67.72	25.97	19.16	29.03
19	Koraput	13.41	50.67	24.64	48.15	31.26	41.08
20	Malkangiri	19.96	58.36	20.04	74.56	15.55	37.39
21	Mayurbhanj	6.99	57.87	37.88	48.49	31.83	37.28
22	Nawapara	13.09	35.95	27.52	55.38	30.52	36.95
23	Nayagarh	13.78	5.96	57.20	49.05	28.05	30.23
24	Newarangpur	15.09	55.27	18.62	52.22	35.65	38.78
25	Phulbani	18.21	51.51	37.23	48.34	34.62	38.98
26	Puri	18.56	0.27	63.30	45.85	23.12	28.19
27	Rayagada	14.28	56.04	26.01	40.20	41.13	41.25
28	Sambalpur	17.07	35.08	51.56	33.88	33.26	38.12
29	Sonepur	22.11	9.50	42.62	48.27	34.01	36.19
30	Sundargarh	8.78	50.74	52.97	38.77	17.92	32.29
<b>ORISSA</b>		<b>16.20</b>	<b>22.21</b>	<b>49.09</b>	<b>44.31</b>	<b>28.68</b>	<b>32.78</b>

(Contd.)

**ANNEXURE - 21.1 (Concl.)**

Sl No	District	Percentage of total workers to total population	Fertiliser consumption in 1997-98 (kg/hectare)	Yield rate of rice in 1998-99 (qtl / hectare)	Credit deposit ratio of all Scheduled Commercial Banks as on March 31 1999	Percentage of villages electrified as on March 31 1999
1	2	14	15	16	17	18
1	Angul	38.30	22.16	7.34	25.47	75.98
2	Balasore	29.52	73.07	7.93	75.40	90.45
3	Bargarh	44.30	82.70	16.23	121.34	80.88
4	Bhadrak	26.64	82.96	14.30	49.32	99.83
5	Bolangir	40.74	18.99	7.80	49.44	84.89
6	Boudh	29.68	37.78	17.13	43.28	55.95
7	Cuttack	46.55	17.38	9.36	63.21	96.82
8	Deogarh	44.87	27.02	8.48	42.14	33.95
9	Dhenkanal	32.90	15.28	14.96	47.78	88.30
10	Gajapati	49.29	39.47	17.83	35.14	48.52
11	Ganjam	40.08	45.92	17.45	33.81	85.63
12	Jagatsinghpur	27.53	44.98	15.13	20.52	93.10
13	Jajpur	26.44	44.35	13.10	44.86	91.55
14	Jharsuguda	39.06	57.40	10.33	24.94	98.58
15	Kalahandi	45.07	18.02	7.12	65.43	66.96
16	Kendrapara	25.08	38.43	12.59	34.44	87.82
17	Keonjhar	38.82	20.38	7.31	45.15	82.75
18	Khurda	29.94	36.32	16.78	39.23	92.00
19	Koraput	49.90	12.81	15.33	48.06	52.01
20	Malkangiri	46.86	15.49	14.34	48.31	40.45
21	Mayurbhanj	45.82	23.14	8.59	40.28	64.49
22	Nawapara	45.65	10.78	8.54	64.82	67.65
23	Nayagarh	32.28	24.20	17.12	57.74	69.29
24	Nawarangpur	49.00	30.22	13.62	79.11	74.49
25	Phulbani	47.75	4.34	12.78	53.91	46.53
26	Puri	29.36	44.58	12.07	43.47	95.78
27	Rayagada	48.89	22.45	16.99	42.64	38.20
28	Sambalpur	44.08	77.81	13.52	38.65	65.30
29	Sonepur	44.06	36.20	14.03	49.83	77.23
30	Sundargarh	39.44	19.03	7.56	41.43	86.79
	ORISSA	37.53	34.93	12.12	42.50	73.43

Source : Col. 15 & 16 Directorate of Agriculture and Food Production, Orissa, Bhubaneswar.

Col. 17 - Banking Statistics, Quarterly Handout March'99

Col. 18 - GRID Corporation, Orissa, Bhubaneswar.



**ANNEXURE - 21.2**  
**Statewise Socio-Economic Indicators**

Sl No	State	Percentage distribution of area	Percentage distribution of population, 1991 census	Percentage of urban population to total, 1991 census	Population density (per sq km of area), 1991 census	Percentage of literacy, 1991 census
1	2	3	4	5	6	7
1	Andhra Pradesh	8.4	7.9	28.89	242	44.1
2	Arunachal Pradesh	2.6	0.1	12.80	10	41.8
3	Assam	2.4	2.6	11.10	286	52.9
4	Bihar	5.3	10.2	13.14	497	38.5
5	Goa	0.1	0.1	41.01	316	75.5
6	Gujarat	6.0	4.9	34.49	211	61.3
7	Haryana	1.3	1.9	24.63	372	55.9
8	Himachal Pradesh	1.7	0.6	8.69	93	63.9
9	Jammu and Kashmir	6.8	0.9	23.83	35	N.A.
10	Karnatak	5.8	5.3	30.92	235	56.0
11	Kerala	1.2	3.4	26.39	749	89.8
12	Madhya Pradesh	13.5	7.8	23.18	149	44.2
13	Maharashtra	9.4	9.3	38.69	257	64.9
14	Manipur	0.7	0.2	27.52	82	59.9
15	Meghalaya	0.7	0.2	18.60	79	49.1
16	Mizoram	0.6	0.1	46.10	33	82.3
17	Nagaland	0.5	0.1	17.21	73	61.7
18	Orissa	4.7	3.7	13.38	203	49.1
19	Punjab	1.5	2.4	29.55	403	58.5
20	Rajasthan	10.4	5.2	22.88	129	38.6
21	Sikkim	0.2	0.1	9.10	57	58.9
22	Tamil Nadu	4.0	6.6	34.15	429	54.6
23	Tripura	0.3	0.3	15.30	263	60.4
24	Uttar Pradesh	9.0	16.4	19.84	473	41.6
25	West Bengal	2.7	8.1	27.48	767	57.7
	INDIA	100.0	100.0	25.71	257	52.1

*N.B. : Since Union territories have been excluded, the sum total of the percentage will not be equal to 100.0*

*Source : Census of India, 1991*

(Contd.)

**ANNEXURE - 21.2**  
**Statewise Socio-Economic Indicators**

Sl NO.	State	Percentage of SC population 1991	Percentage of ST population 1991	Percentage of total workers to total popula- tion 1991	Percentage of Main workers to total popul- ation 1991
1	2	8	9	10	11
1	Andhra Pradesh	15.93	6.31	45.1	42.8
2	Arunachal Pradesh	0.47	63.66	46.2	45.2
3	Assam	7.40	12.82	36.1	31.2
4	Bihar	14.55	7.66	32.2	29.7
5	Goa	2.08	0.03	35.3	32.8
6	Gujarat	7.41	14.92	40.2	34.1
7	Haryana	19.75		31.0	28.7
8	Himachal Pradesh	25.34	4.22	42.8	34.4
9	Jammu and Kashmir	N.A.	N.A.	N.A.	N.A.
10	Karnatak	16.38	4.26	42.0	38.4
11	Kerala	9.92	1.10	31.4	28.5
12	Madhya Pradesh	14.55	23.27	42.8	37.7
13	Maharashtra	11.09	9.27	43.0	39.3
14	Manipur	2.02	34.41	42.2	38.5
15	Meghalaya	0.51	85.53	42.6	40.3
16	Mizoram	0.10	94.75	48.8	42.0
17	Nagaland		87.70	42.6	42.2
18	Orissa	16.20	22.21	37.5	32.8
19	Punjab	28.31		30.9	30.1
20	Rajasthan	17.29	12.44	38.9	31.8
21	Sikkim	5.93	22.36	41.7	40.4
22	Tamil Nadu	19.18	1.03	43.3	40.8
23	Tripura	16.36	30.95	31.2	29.1
24	Uttar Pradesh	21.05	0.21	32.2	29.7
25	West Bengal	23.62	5.59	32.2	30.2
INDIA		16.48	8.08	37.5	34.1

(Contd.)

**ANNEXURE - 21.2**

Sl. NO.	State	Percentage of forest area to total area 1993-94	Percentage of net area sown to total area 1993-94	Percentage of net area irrigated to net area sown 1992-93	Consumption of fertiliser per unit gross cropped area 1996-97 (kg/hect.)
1	2	12	13	14	15
1	Andhra Pradesh	22.8	37.8	38.5	135.6
2	Arunachal Pradesh	61.4	1.8	24.0	2.1
3	Assam	25.3	34.5	21.1	14.6
4	Bihar	17.0	41.9	46.7	78.6
5	Goa	31.3	34.5	16.7	38.6
6	Gujarat	10.0	49.9	27.6	76.6
7	Haryana	3.9	80.3	75.6	131.7
8	Himachal Pradesh	30.7	16.8	17.3	33.4
9	Jammu and Kashmir	61.0	16.3	42.6	41.7
10	Karnatak	16.1	56.6	20.3	65.2
11	Kerala	27.8	57.6	14.9	61.9
12	Madhya Pradesh	17.1	58.6	24.4	41.3
13	Maharashtra	33.0	44.5	13.7	63.3
14	Manipur	27.4	6.4	46.4	70.7
15	Meghalaya	42.5	9.1	22.4	14.3
16	Mizoram	62.0	3.1	12.3	4.3
17	Nagaland	50.8	12.0	29.4	3.9
18	Orissa	35.6	40.6	32.8	30.52
19	Punjab	5.8	83.7	93.3	180.5
20	Rajasthan	7.1	47.4	26.4	46.5
21	Sikkim	36.7	13.6	16.8	4.9
22	Tamil Nadu	16.5	45.3	46.4	114.8
23	Tripura	60.6	26.3	19.0	19.4
24	Uttar Pradesh	17.3	57.9	65.6	107.9
25	West Bengal	13.7	62.8	35.8	103.9
<b>INDIA</b>		<b>22.4</b>	<b>46.6</b>	<b>35.2</b>	<b>77.5</b>

Source : Col. 12 to 15, C.M.I.E. India's Agricultural Sector,  
September 1998 and Profile of States, March' 97.

(Contd.)

**ANNEXURE - 21.2**

Sl No	State	Yield rate of rice 1996-97 (qtl./hect.)	Yield rate of food grains 1996-97 (qtl/hect.)	Percentage share of food grains production to all India 1996-97	Percentage of villages electrified upto March 1998	Percentage consumption of electricity in KWH 1995-96
1	2	16	17	18	19	20
1	Andhra Pradesh	24.9	17.8	8.36	100.0	330.52
2	Arunachal Pradesh	11.5	11.8	0.11	87.2	78.59
3	Assam	13.4	12.9	1.77	98.5	70.77
4	Bihar	14.3	15.6	7.09	70.7	108.68
5	Goa	27.6	24.0	0.08	100.0	867.03
6	Gujarat	14.7	13.0	2.81	98.8	588.02
7	Haryana	29.7	28.4	5.75	100.0	468.42
8	Himachal Pradesh	13.5	15.6	0.65	100.0	289.37
9	Jammu and Kashmir	15.7	15.1	0.66	96.5	202.67
10	Karnatak	23.4	12.7	4.65	98.0	329.71
11	Kerala	19.4	18.6	0.43	100.0	235.97
12	Madhya Pradesh	11.7	11.1	9.81	94.9	313.17
13	Maharashtra	17.7	10.6	7.32	98.3	537.47
14	Manipur	N.A.	22.8	0.20	99.0	119.28
15	Meghalaya	11.4	11.4	0.08	49.1	141.92
16	Mizoram	17.2	17.3	0.07	100.0	128.39
17	Nagaland	10.9	10.8	0.11	98.8	76.96
18	Orissa	9.9	9.0	2.40	88.4	209.50
19	Punjab	34.0	37.9	10.82	100.0	753.28
20	Rajasthan	11.8	10.0	6.44	87.8	265.86
21	Sikkim	N.A.	13.7	0.05	92.6	171.97
22	Tamil Nadu	28.7	17.9	3.84	100.0	427.45
23	Tripura	21.0	20.4	0.28	100.0	74.12
24	Uttar Pradesh	21.2	20.8	21.42	76.6	175.09
25	West Bengal	21.8	21.3	6.89	76.8	172.95
<b>INDIA</b>		<b>18.8</b>	<b>16.0</b>	<b>100.00</b>	<b>86.4</b>	<b>335.25</b>

Source : Col 16,17,18 - C.M.I.E. India's Agricultural Sector Sept'98

Col 19 & 20 - India's Energy Sector, C.M.I.E. April 1999.

(Contd.)

**ANNEXURE - 21.2**

Sl. No.	State	Population Per bank (in thousand) as on March 1999	Credit/ deposit ratio as on March 1999	Estimated annual birth rate per 1000 population 1997	Estimated annual death rate per 1000 live birth 1997	Estimated annual infant mortality rate 1997
1	2	21	22	23	24	25
1	Andhra Pradesh	14.8	68.5	22.5	8.3	63
2	Arunachal Pradesh	15.1	14.1	21.4	5.8	47
3	Assam	21.3	31.5	28.2	9.9	76
4	Bihar	20.3	25.2	31.7	10.0	71
5	Goa	4.4	25.0	14.2	7.7	19
6	Gujarat	12.7	48.9	25.6	7.6	62
7	Haryana	12.6	42.2	28.3	8.0	68
8	Himachal Pradesh	7.4	21.9	22.6	8.1	63
9	Jammu and Kashmir	11.0	38.7	NA	NA	NA
10	Karnatak	10.8	64.5	22.7	7.6	53
11	Kerala	10.1	41.1	17.9	6.2	12
12	Madhya Pradesh	18.9	48.4	31.9	11.0	94
13	Maharashtra	14.3	72.8	23.1	7.3	47
14	Manipur	24.6	41.6	19.7	5.9	30
15	Meghalaya	11.7	16.7	30.2	8.8	54
16	Mizoram	11.3	20.6	15.0	4.8	19
17	Nagaland	22.2	15.7	NA	NA	NA
18	Orissa	16.2	42.5	26.5	10.9	96
19	Punjab	8.9	38.7	23.4	7.4	51
20	Rajasthan	16.1	45.1	32.1	8.9	85
21	Sikkim	12.1	20.0	19.8	6.5	51
22	Tamil Nadu	12.9	93.0	19.0	8.0	53
23	Tripura	17.6	29.4	18.3	6.8	51
24	Uttar Pradesh	18.3	27.2	33.5	10.3	85
25	West Bengal	17.5	43.8	22.4	7.7	55
	<b>INDIA</b>	<b>14.9</b>	<b>55.5</b>	<b>27.2</b>	<b>8.9</b>	<b>71</b>

Source : Col 21 & 22 - Banking Statistics Quarterly Hand Out, March 1999  
Col.23 to 25- Selected Socio-Economic Statistics, India 1998. C.S.O

(Contd.)

## ANNEXURE - 21.2

Sl. No.	State	Length of roads per 1,000 sq. km of area 1996-97 (in km )	Railway route length per 1000 sq. km of area 1997-98 (in km )	Railway route length per lakh population 1997-98 (in km.)	Registered motor vehicles per 1000 persons 1996-97	Vehicle density per sq. km. 1996-97	Percentage of villages connected with all weather roads 96-96
1	2	26	27	28	29	30	31
1	Andhra Pradesh	647	18.39	6.87	38.55	10.18	59
2	Arunachal Pradesh	168	0.01	0.10	21.42	0.25	22
3	Assam	872	30.27	9.14	14.83	4.82	70
4	Bihar	508	29.84	5.20	14.45	8.14	35
5	Goa	2314	18.65	5.27	186.02	65.46	96
6	Gujarat	464	27.10	11.74	84.49	19.27	90
7	Haryana	637	35.08	8.47	59.74	24.09	99
8	Himachal Pradesh	542	4.83	4.73	23.83	2.41	45
9	Jammu and Kashmir	97	0.38	0.96	25.12	0.97	63
10	Karnatak	751	15.51	5.97	51.68	13.26	49
11	Kerala	3749	27.02	3.29	43.01	34.86	100
12	Madhya Pradesh	451	13.35	7.94	34.98	5.79	28
13	Maharashtra	1176	17.76	6.26	52.48	14.68	48
14	Manipur	490	0.04	0.05	31.90	2.92	48
15	Meghalaya	378	N.A.	N.A.	23.75	2.14	49
16	Mizoram	229	0.09	0.23	24.44	0.86	86
17	Nagaland	1107	0.78	0.85	72.63	6.49	90
18	Orissa	1687	14.04	6.21	20.91	4.87	40
19	Punjab	1278	41.66	9.59	96.79	41.59	99
20	Rajasthan	379	17.27	11.37	39.05	5.80	36
21	Sikkim	258	N.A.	N.A.	20.15	1.38	61
22	Tamil Nadu	1588	31.15	6.69	53.12	24.46	71
23	Tripura	1404	4.29	1.44	11.96	3.50	82
24	Uttar Pradesh	868	30.18	5.56	20.18	10.75	45
25	West Bengal	850	42.47	4.99	18.07	15.17	47
<b>INDIA</b>		<b>750</b>	<b>19.01</b>	<b>6.56</b>	<b>39.68</b>	<b>11.33</b>	<b>48</b>

Source : Col.26 to 31 C.M.I.E., Infrastructure, December 1999.

(Contd.)



**ANNEXURE - 21.2**

Sl. No.	State	No. of Post Offices per lakh of population 1997-98	Percentage distribution of factory workers to total to all India factory workers 1997-98	Percapita gross output in industry 1997-98 (in Rs.)	Percapita value added by manufacture 1997-98 (in Rs.)
1	2	32	33	34	35
1	Andhra Pradesh	22	13.52	7713.6	1573.8
2	Arunachal Pradesh	31	N.A.	N.A.	N.A.
3	Assam	15	1.64	2891.1	487.8
4	Bihar	12	2.72	2897.5	929.6
5	Goa	20	0.25	32588.5	6661.8
6	Gujarat	20	8.62	3180.7	3180.7
7	Haryana	14	2.98	2880.8	2580.8
8	Himachal Pradesh	49	0.61	7889.6	2028.8
9	Jammu and Kashmir	19	0.29	1418.6	235.5
10	Karnatak	20	6.20	8564.2	1734.7
11	Kerala	16	3.89	6260.1	1019.7
12	Madhya Pradesh	15	4.25	5934.9	1149.6
13	Maharashtra	15	13.69	19841.9	3889.0
14	Manipur	35	0.04	1028.7	447.2
15	Meghalaya	25	0.05	1088.5	445.5
16	Mizoram	50	N.A.	N.A.	N.A.
17	Nagaland	22	0.04	2119.3	176.2
18	Orissa	23	1.79	4231.2	1065.7
19	Punjab	18	4.48	14642.0	2143.6
20	Rajasthan	20	2.83	5480.0	1060.7
21	Sikkim	44	N.A.	N.A.	N.A.
22	Tamil Nadu	20	13.35	13845.6	2230.1
23	Tripura	24	0.09	1048.0	337.8
24	Uttar Pradesh	13	7.75	4494.9	898.8
25	West Bengal	12	8.70	5551.9	1289.0
<b>INDIA</b>		<b>16</b>	<b>100.00</b>	<b>8659.5</b>	<b>1638.0</b>

Source : Col.32 - CMIE, Infrastructure, December 1999

Col.33 to 35, Annual Survey of Industries, CSO, 1997-98.

(Contd.)

## ANNEXURE - 21.2

Sl. No.	State	Per capita total revenue of State including resources transferred from Centre 1998-99 (in Rs.)	Per capita own revenue (tax and non-tax) 1998-99 (in Rs.)	Per capita own Tax revenue 1998-99 (in Rs.)
1	2	36	37	38
1	Andhra Pradesh	2099.5	1378.58	1117.2
2	Assam	8494.4	680.4	96.3
3	Assam	1957.7	594.0	448.2
4	Bihar	1147.2	508.0	332.0
5	Goa	9645.4	8393.3	2790.8
6	Gujarat	2863.4	2245.3	1858.0
7	Haryana	3511.5	2822.7	1934.9
8	Himachal Pradesh	3879.5	1028.2	808.4
9	Jammu and Kashmir	4908.6	821.8	570.0
10	Karnatak	2617.8	1850.1	1564.4
11	Kerala	2787.6	1980.8	1759.6
12	Madhya Pradesh	1783.2	1014.3	693.0
13	Maharashtra	2688.2	2171.2	1780.3
14	Manipur	4498.2	729.4	237.6
15	Meghalaya	4578.1	748.3	449.0
16	Mizoram	7510.4	507.0	69.6
17	Nagaland	5702.2	497.8	208.0
18	Orissa	1589.6	730.2	546.4
19	Punjab	3848.7	3118.6	1621.5
20	Rajasthan	1922.7	1112.2	836.3
21	Sikkim	27575.3	20768.4	642.2
22	Tamil Nadu	2513.9	1862.0	1694.1
23	Tripura	4020.9	327.8	227.9
24	Uttar Pradesh	1257.7	705.7	576.4
25	West Bengal	1520.1	809.7	741.8
INDIA		1628.6	1344.0	1053.2

Source : Col.36 to 38 CMIE (Public Finance) February 1999.

(Contd.)

## ANNEXURE - 21.2

Sl. No.	State	Percapita State budgetary expenditure 1998-99(both revenue and capital account .(in Rs.)	Percapita State Govt. expenditure on Medical Public Health and Family Welfare 1998-99	Percapita State Govt. expenditure on Education, Sports Art and Culture 1998-99 (in Rs.)	Percapita milk production 1994-5 (in kg)
1	2	39	40	41	42
1	Andhra Pradesh	2623.0	105.6	335.8	50
2	Arunachal Pradesh	9596.1	390.1	1030.1	NA
3	Assam	2449.8	88.8	626.5	35
4	Bihar	1614.2	61.1	372.6	32
5	Goa	11575.2	440.6	1273.4	NA
6	Gujarat	3522.0	162.8	533.3	81
7	Haryana	5114.6	156.8	744.2	220
8	Himachal Pradesh	6555.8	311.5	925.7	116
9	Jammu and Kashmir	5968.2	308.5	785.2	70
10	Karnatak	3102.7	135.4	521.4	60
11	Kerala	3400.1	164.1	691.8	60
12	Madhya Pradesh	2346.0	75.7	272.4	78
13	Maharashtra	3618.4	107.0	536.3	52
14	Manipur	5493.8	220.4	1080.2	51
15	Meghalaya	5601.3	266.5	936.1	24
16	Mizoram	8756.5	378.0	1276.8	NA
17	Nagaland	8488.9	300.5	825.6	NA
18	Orissa	2568.1	76.2	354.4	15
19	Punjab	5427.8	210.9	635.5	300
20	Rajasthan	2734.3	129.1	558.9	97
21	Sikkim	31946.9	513.9	1863.5	73
22	Tamil Nadu	3367.7	142.7	582.7	67
23	Tripura	5172.7	140.4	762.6	18
24	Uttar Pradesh	2029.1	63.1	316.2	75
25	West Bengal	2179.6	106.8	386.8	47
INDIA		2934.0	110.8	456.1	70

Source : Col.39 to 41- CMIE, Public Finance., February' 1999.  
Col. 42- CMIE, India's Agricultural Sector, July' 1996.

(Cont)

**ANNEXURE - 21.2 (Concl'd.)**

Sl. No.	State	Percentage of population below poverty line			Per capita Net State Domestic Product	
		1993-94			1997-98 (q)	
		Rural	Urban	Combined	At current prices (In Rs.)	At constant (1980-81) prices (In Rs.)
1	2	43	44	45	46	47
1	Andhra Pradesh	15.9	38.3	22.2	10590	2413
2	Arunachal Pradesh	45.1	7.7	39.3	13424	3727
3	Assam	45.0	7.7	40.3	7335	1673
4	Bihar	58.2	34.5	54.6	4654	1073
5	Goa	5.3	27.0	14.9	19719*	6227*
6	Gujarat	22.1	27.9	24.2	16251	3976
7	Haryana	28.0	16.4	26.1	17626	3997
8	Himachal Pradesh	30.3	9.2	23.4	8747**	2518**
9	Jammu and Kashmir	30.3	9.2	25.4	6658*	2009*
10	Karnatak	29.9	40.1	33.2	10279*	2841*
11	Kerala	25.8	24.6	25.4	11936	2444
12	Madhya Pradesh	40.6	48.3	42.5	8114	1961
13	Maharashtra	37.9	35.2	36.4	18365	4791
14	Manipur	45.1	7.7	38.7	7510*	2075*
15	Meghalaya	45.1	7.7	37.3	8474*	1837*
16	Mizoram	45.1	7.7	35.7	9570**	NA
17	Nagaland	45.1	7.7	37.6	11174*	NA
18	Orissa	49.7	41.6	48.6	6767	1688
19	Punjab	11.9	11.4	11.8	19500	4416
20	Rajasthan	26.5	30.5	27.5	9215	2215
21	Sikkim	45.1	7.7	41.4	9472**	NA
22	Tamil Nadu	32.5	39.8	35.3	11708*	2918*
23	Tripura	45.1	7.7	38.0	5432*	2197*
24	Uttar Pradesh	42.3	35.4	40.4	7263	1757
25	West Bengal	40.8	22.4	35.6	10636	3002
<b>INDIA</b>		<b>37.3</b>	<b>32.4</b>	<b>35.9</b>	<b>13193</b>	<b>2814*</b>

Source : Col.43-45 - Modified Expert Group of Planning Commission  
Col.46-47- Central Statistical Organisation, New Delhi.

\* - Relates to 1996-97 (Q)

\*\* - Relates to 1995-96



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