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CHAPTER 7

FISHERIES AND ANIMAL RESOURCES

FISHERIES

7.01 Orissa having a coastline of 480 Km and abundant inland water coverage has excellent scope and potentialities for development of the Fishery Sector. The State has 6,70,017 ha of fresh water area and 4,17,537 ha of brackish water area. Orissa occupies 7th position at all India level in fish production with percapita availability of 8.35 Kg./annum. As per 2001 Population Census, the fishermen population in the State was 10.84 lakh which is about 3% of the State's total population, with 2.04% consisting of inland fishermen and the rest marine fishermen. In spite of abundant resources, the economic status of fishermen is below the poverty line (BPL). Therefore allout efforts are being made by the State Government to boost up the fisheries sector with introduction of improved technology but keeping the ecological balance intact.

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

i. Increasing fish production by adopting scientific methods of culture,

ii. Assisting fishermen in more efficient fishing,

iii. Boosting fishing operations in deep sea,

iv. Transmitting technology both for culture and capture to fishermen and fish farmers,

v. Establishing fish feed mills for culture of fish and prawn.

7.03 Efforts are being made to step-up fish seeds production as well as fish production to create self employment opportunities and to increase per capita income by utilising un-exploited water resources through application of new technologies and expansion of infrastructural facilities during the 10th plan period. It is proposed to give priority to the following activities.

i. Increase in production of fish seeds in private sector by 1.25 crore.

ii. Increase of water area by 2,500 hect. under aqua-culture sector.

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iii. Culture based capture in 11 reservoirs of KBK districts under RLTAP programme.

iv. Development of reservoir fisheries in non-KBK districts through a suitable Reservoir Fishery Policy.

v. Development of fresh water prawn culture.

vi. To provide training and extension support to fish farmers to raise their income and employment opportunities.

vii. To provide incentives for production of fish seed and fish on commercial basis.

viii. Enforcement of Orissa Marine Regulation Act / Rules with due care for endangered species like Olive Ridley Turtles for sustainable fisheries to improve living condition of marine fishermen with special emphasis on health, hygiene and sanitation.

ix. Strengthening of infrastructure in inland fish marketing.

x. Provision of infrastructural facilities for pisciculture.

7.04 The Table 7.1 indicates the total production of fish and crab in the State since 1999-2000.

Table 7.1

Production of Fish and Crab in Orissa

(In thousand MT)

Sl. No.	Year	Inland fish production			Marine fish	Total	Per-capita consumption of fish (kg.)	Crab production
		Fresh water	Brackish water	Total				
1	2	3	4	5	6	7	8	9
1	1999-00	124.86	10.44	135.30	125.94	261.24	7.33	0.54
2	2000-01	125.11	13.44	138.55	121.09	259.64	7.71	1.35
3	2001-02	147.40	20.66	168.06	113.89	281.95	8.14	1.15
4	2002-03	154.42	19.96	174.38	115.01	289.39	8.28	2.23
5	2003-04	165.59	24.48	190.07	116.88	306.95	8.28	2.20
6	2004-05 (P)	170.09 (2.72)	23.78 (-2.86)	193.87 (2.00)	121.93 (4.32)	315.80 (2.88)	8.35	1.72

P : Provisional
Figures in brackets indicate % change over previous year.
Source : Directorate of Fisheries, Orissa, Cuttack

7.05 As per Fisheries Department sources, fish production in the State is in an increasing trend. Fish production suffered in 1999-2000 and 2000-01 due

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to super cyclone, but thereafter showing an increasing trend, it mounted to 315.80 TMT in 2004-05, registering an increase of about 2.88% over 2003-04. The total value of fish produced in the State has increased by 2.46% from Rs.1230.23 crore during 2003-04 to Rs.1260.46 crore during 2004-05. While the value of inland fish production decreased by 0.20% over 2003-04 due to decrease of Brackish water fish production in 2004-05, the value of marine fish production increased by 9.82% during the same period.

7.06 The per-capita annual consumption of fish in the State has increased from 8.28 kg in 2003-04 to 8.35 kg in 2004-05. In order to raise the per-capita annual consumption of fish in Orissa to11kg, which is the W.H.O. recommended annual per-capita fish consumption level, it is targetted to increase the production of fish to 1,602 TMT by the end of Tenth Plan.

7.07 The crab production in the State which was 0.54 TMT in 1999-2000 has increased to 2.23 TMT by the end of 2002-03. Thereafter, it showed a declining trend and came down to 1.72 TMT in 2004-05, decreased by 21.8% over 2003-04. Out of 1.72 TMT crab production in 2004-05, 0.16 TMT was from Chilka lake and the balance 1.56 TMT was from marine sources. While the crab production from Chilka lake increased by 4.10% over 2003-04, it decreased by 23.89% in marine sources.

7.08 Table 7.2 represents the year-wise disposition of fish. Out of the total 315.80 TMT fish produced in the State during 2004-05, about 270.27 TMT (85.6%) was marketed in raw form, 13.64 TMT (4.3%) kept for sun drying, 17.27 TMT (5.5%) for deep freezing and 14.62 TMT (4.6%) for salt-curing. The quantity marketed in raw form during 2004-05 has increased by 2.89% over 2003-04.

Table 7.2

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Disposition of Fish Produced in Orissa

(In thousand MT)

Sl. No.	Year	Marketed in raw form	Freezing	Drying	Salting	Canning	Total
1	2	3	4	5	6	7	8
1	1999-00	208.40	14.60	32.90	5.30	-	261.20
2	2000-01	206.70	15.70	27.80	9.30	0.10	259.60
3	2001-02	229.02	16.03	26.80	10.07	0.03	281.95
4	2002-03	246.39	16.56	17.60	8.66	-	289.21
5	2003-04	262.68	16.79	13.27	14.21	-	306.95
6	2004-05 (P)	270.27	17.27	13.64	14.62	--	315.80

P : Provisional

Source : Directorate of Fisheries, Orissa, Cuttack

INLAND FISHERIES

7.09 The inland fisheries can be classified broadly into two categories i.e. (i) fresh water fisheries, and (ii) brackish water fisheries. The fresh water fishery sources comprise of 1,18,452 hectares of small and big tanks and ponds, 2,00,379 hectares of small (area above 10 ha), medium and large reservoirs, 1,80,000 hectares of fresh water lakes, swamps, jheels and 1,71,186 hectares water area of rivers and canals. Similarly, the brackish water area comprises of 79,000 hectares of Chilika lake, 2,97,850 hectares of estuaries, 32,587 hectares of brackish water tanks and 8,100 hectares of backwater.

7.10 For development of inland fisheries in the State, it has been proposed to continue different ongoing schemes like production of quality spawn, development of reservoir fisheries, development of inland fisheries through FFDAs etc. during 2004-05.

(I) FRESH WATER FISHERIES

7.11 The fresh water fish production in the State at the end of 9th Plan period was about 147.4 TMT increased by 15.8% over the production achieved at the end of 8th Plan period. During 2004-05, 170.09 TMT of fresh water fish was produced in the State, out of which 140.46 TMT (82.6%) was produced from tanks/ponds and the balance 29.63 TMT from reservoirs, lakes/swamps/jheels and river/canals. Fresh water fish production was highest in Ganjam district (17.81 TMT) and lowest in Rayagada district (0.89 TMT) during 2004-05. Table 7.3 shows the fresh water fish production

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from different sources in Orissa since 1999-2000.

Table 7.3

Fresh Water Fish Production from different Sources in Orissa

(In thousand MT)

Sl. No.	Year	Tanks/ Ponds	Reservoirs	Lakes/ Swamps/ Bheels	Rivers/ Canals	Total
1	2	3	4	5	6	7
1	1999-00	88.11	13.81	2.07	20.87	124.86
2	2000-01	92.44	8.01	2.73	21.93	125.11
3	2001-02	112.85	7.09	4.00	23.46	147.40
4	2002-03	119.80	8.50	2.67	23.27	154.24
5	2003-04	133.62	10.14	2.76	19.08	165.59
6	2004-05(P)	140.46	11.53	1.79	16.31	170.09

P : Provisional

Source : Directorate of Fisheries, Cuttack

7.12 A Centrally Sponsored Scheme, "Fish Farmers' Development Agencies (FFDAs)" is being implemented in the State to develop pond areas and to impart training to fish farmers in modern pisciculture techniques. A total of 30 FFDAs are functioning, one in each district. By the end of 2004-05, 54,769 hectares of tank areas have been developed and 48,396 fish farmers have been trained through these Agencies to boost up production of fish. During 2004-05, 628.40 hectares of tank area have been developed and 1483 fish farmers have been trained with an expenditure of Rs.183.31 lakh under State share and Rs116.05 lakh from Central share. It has been targetted to develop 12,500 hectares of water area and to train 1,500 fish farmers during the 10th Plan period.

7.13 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. About 108.0 lakh of Fresh Water prawn seeds were collected and distributed among the fish farmers during the year 2004-05 against the target of 108.50 lakh.

7.14 In order to meet the growing demand for quality fish seed in the State,

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emphasis has been given for production of quality fish seed in 19 departmental hatcheries, 5 hatcheries of Orissa Pisciculture Development Corporation & 22 hatcheries in private sector. During 2004-05, about 60.48 crore quality fries have been produced and sold to pisciculturists for stocking in their tanks.

STATE RESERVOIR FISHERY POLICY, ORISSA

7.15 The State Reservoir Fishery Policy, Orissa has been formulated with a view to introduce scientific pisciculture in reservoirs and thereby to create employment opportunities. The objectives of this policy are –

i. to augment fish production from the vast untapped / under-tapped reservoir resources through scientific management.

ii. to generate gainful rural employment with special reference to fishing communities and economic rehabilitation of displaced persons.

iii. to introduce systematic management strategies both for conservation and sustained fish production.

iv. to attract increasing investments from the private sector.

v. to stimulate entrepreneurship for Fishery Sector with special reference to reservoir fishery.

vi. to substitute traditional methods by introduction of advanced technology in operation of reservoir fishery.

vii. to generate substantial revenue for the State.

7.16 This policy permits transfer of reservoirs with the area of 100 acres and above to the Fisheries & Animal Resource Department, Government of Orissa. The F & A.R.D. Department, Government of Orissa has been empowered to lease out these reservoirs to the Primary Fishermen Cooperative Societies, registered under the Orissa Self-help Cooperative Act, 2001. This Policy would give preference to displaced persons / project affected persons.

(II) BRACKISH WATER FISHERIES

7.17 For ensuring development of fisheries programme in the State, a project was launched under World Bank Assistance during 1992-93 at an estimated cost of Rs.70.13 crore. The project aimed at development of brackish water area for shrimp culture and reservoirs for exploiting fishing resources. Under this programme, the brackish water shrimp culture unit has already been setup at Jagatjore and Banapada in Kendrapara district at a cost of

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Rs.25.27 crore where 405 ponds each with 0.5 hectares area and 76 ponds with one hectare area have been excavated and put into culture through private entrepreneurs / farmers.

7.18 Brackish Water Fisheries Development Agencies (BWFDA) have been set up in seven coastal districts of the State, which work for development of brackish water fish farming with special emphasis on prawn culture. The total brackish water area of the State is around 4.18 lakh hectares including shrimp culture areas, estuaries, brackish water lake and backwaters of which Brackish Water Fisheries Development Agencies have identified 32,587 hectares as suitable for prawn culture. These agencies have developed about 13,635.17 hectares for prawn culture by the end of 2004-05 since their inception, out of which 907 hectares have been leased out on long-term basis. During 2004-05, brackish water prawn culture was undertaken in an area of 8,012.20 hectares and 7,875 MT brackish water prawn was produced. About 10,053 fish farmers were benefited and 4,793 farmers were trained in modern shrimp culture techniques. Loans amounting to Rs.11.91 crore was released by different financing banks to these beneficiaries and an amount of Rs.2.46 crore had been released as subsidy up to the end of March, 2005, since the inception of the programme. It has been targetted to develop 1,000 hectares of brackish water area and to train 1,050 fish farmers during the Tenth Plan period. During 2005-06, it has been programmed to develop 200 hectares of brackish water area and to train 300 beneficiaries. Further, a target for production of culture shrimp has been fixed at 8,000 MT during 2005-06.

7.19 During 2004-05, about 4,921 lakh brackish water prawn seeds were supplied to the prawn farmers of the State. There are 12 brackish water prawn hatcheries in the State of which the only departmental hatchery at Chandrabhaga produced 20.58 lakh shrimp seeds during 2004-05, which were sold to the farmers. For 2005-06, there is a target for production of 60 lakh shrimp/prawn seeds (P.monodon-50 lakh and Scampi-10 lakh) in Chandrabhaga hatchery.

7.20 Chilika lake is the main source of brackish water fish with average water spread area of 906 sq. kms in summer and 1,165 sq. kms in monsoon and island area of 223 sq. kms. There are 132 fishermen villages with 22,032 families and 1,22,339 population of which 30,936 fishermen entirely depend on Chilika lake for their livelihood. There are 99 Primary Co-operative Societies comprising of 27,490 members.

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There are 18 landing centres in which about 13,098 MT of fish/shrimps and 162 MT of crab were landed in 2004-05. The brackish water fish/shrimp production from different sources in the State is given in Table 7.4.

Table 7.4

Brackish Water Fish/Shrimp/ Crab Production from different Sources in Orissa

(in MT)

Sl. No.	Year	Chilika lake	Brackish water shrimp	Estuaries	Total production
1	2	3	4	5	6
1	1999-00	1,745	3,081	5,616	10,442
2	2000-01	4,983	6,430	2,029	13,442
3	2001-02	11,989	7,204	1,467	20,660
4	2002-03	10,894	7,172	1,898	19,964
5	2003-04	14,053	8,112	2,312	24,477
6	2004-05(P)	13,260	7,875	2,641	23,776

P : Provisional

Source : Directorate of Fisheries, Orissa.

MARINE FISHERIES

7.21 The State has a coastline of 480 kms 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 six coastal districts, Puri has the longest coastline of 155 kms and Bhadrak the shortest i.e. 50 kms. About 121.93 TMT of fish was caught from marine sector during 2004-05 out of which Prawn, Clupids, Sciaenids, Catfishes and Pomfrets are some of the important species.

7.22 The Orissa Maritime Fishing Regulation Act is being implemented in the State to safeguard the coastal water areas of the State. Registration of trawlers, renewal of licenses and conservation of the endangered species of fish and turtles are being taken up. Fishing jetties to provide fish landing facilities at Talasari, Kirtania, Penthakata, Gopalpur on Sea await completion. Fishing jetty at Nairi has been completed and handed over to Managing Director, Fish Fed for operation. Two schemes namely Small landing Centers/berthing facilities and Fishing harbours have been merged & the new scheme is named as “Establishment of Fishing harbour and fish landing center”. Out lay and expenditure under the scheme during 2004-05 is given below.

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(Rs. in lakh)

Item	Outlay	Sanctioned	Expenditure
1	2	3	4
State Plan	20.00	14.43	14.43
CSP	173.76	-	-
Total	**193.76**	**14.43**	**14.43**

7.23 In view of the importance of the fisheries sector in the State's economy, the Plan investment for development of fisheries has been increased from Rs.0.29 crore during the First Plan to Rs.57.83 crore during the Ninth Plan period. The annual outlay / expenditure status during 2004-05 is given below.

Table 7.5

Outlay / expenditure during 2004-05

(Rs. in crore)

Sl. No.	Share	Revised Outlay	Amount Sanctioned	Expenditure
1	2	3	4	5
1	State Plan	3.79	3.39	3.39
2	Centrally Sponsored Plan	6.09	1.86	1.86
3	Central Plan	0.48	0.07	0.07

7.24 Both fresh water and brackish water prawn culture have assumed considerable importance on account of their profitability as well as their foreign exchange earning capabilities. In the mean time, private entrepreneurs have set up prawn seed hatcheries in Puri and Ganjam districts to cater to the needs of prawn farmers. There is a Government shrimp hatchery at Chandrabhaga in Puri district and another at Gopalpur in Ganjam district under the Marine Products Export Development Agency (MPEDA). Besides, 12 other private shrimp hatcheries were established at different areas of Gopalpur, Konark and Puri. The

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Fisheries Department also has a freshwater prawn hatchery at Paradeep.

DEVELOPMENT OF PISCICULTURE UNDER REVISED LONG TERM ACTION PLAN FOR KBK DISTRICTS

7.25 Development of pisciculture under RLTAP, aims at promoting fisheries sector to raise income of the people of KBK districts. During 2004-05, it is proposed to develop 34 reservoirs with water spread area of 1,558 hectares under culture based capture fisheries in reservoirs of KBK districts under RLTAP programme.

EXPORT AND IMPORT OF FISH

7.26 Table 7.6 reflects the export and import of fish from the State. About 91.75 TMT fish has been exported from Orissa during 2004-05 out of which 65.72 TMT(71.6%) was from marine Sector, 11.72 TMT(12.8%) from fresh water sector and 14.31 TMT(15.6%) from brackish water sector. The marine products from Orissa are being exported to foreign countries like Japan, China, U.S.A., UK, UAE, Indonesia, Hong Kong etc., over the years. Frozen marine products like shrimps, H.L. scampi, pomfret, ribbon fish, seer fish, cuttle fish, crab etc. and dry fish are generally exported to these countries. But the export of frozen shrimps constitutes the major portion of the amount of marine products exported over years.

7.27 About 37.01 TMT of fresh water fish was imported through private trade channels from the neighboring States in 2004-05 as against 34.59 TMT of fresh water fish imported during 2003-04. This indicates that the demand for fresh water fish in the State is more than the production.

Table 7.6

Export and Import of Fish

(Quantity-in 000 MT,
Value – Rs. in crore)

Sl.	Year	Fish export to other states and countries	Import of	Export of marine

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No.		Marine fish	Fresh Water fish	Brackish Water fish	Total Exported	fresh Water fish	Product to foreign countries	
							Quantity	Value
1	2	3	4	5	6	7	8	9
1	1999-00	69.91	9.98	4.44	84.33	42.20	9.57	332.95
2	2000-01	61.75	6.26	7.07	75.08	41.99	10.64	379.10
3	2001-02	60.52	7.57	8.72	76.81	34.03	11.32	371.38
4	2002-03	61.29	7.69	12.58	81.56	35.71	11.69	365.16
5	2003-04	62.96	11.34	14.73	89.03	34.59	11.89	334.43
6	2004-05(P)	65.72	11.72	14.31	91.75	37.01	N.R	N.R

P : Provisional

N.R : Not Reported

Source : Directorate of Fisheries, Orissa, Cuttack

FISHERMEN WELFARE SCHEMES

7.28 The Accident Insurance Scheme was introduced in 1983-84 in the State. Under this scheme a fisherman's life is insured and an amount of Rs.50,000/- is provided in the event of his accidental death or permanent disability and up to Rs.25,000/- in the event of partial disability. The premium of Rs.14.00 for insurance coverage for each fisherman is shared by the State Government and Government of India on 50 : 50 basis. During 2004-05, 1.20 lakh fishermen were covered under this scheme.

7.29 There are 977 Primary Fishermen Co-operative Societies, Central PFCS and one Apex Society registered by the end of 2004-05 in the State with 1,10,651, 199 and 334 members respectively. There is further need to organise fish farmers in all the three sectors of marine, brackish and inland fisheries so that more group schemes can be launched and marketing support organised.

FISH PRODUCTION AT NATIONAL AND INTERNATIONAL LEVEL

7.30 Fish production in different States of India is presented in Annexure 7.1. During 2003-04, West Bengal tops the list with 1169.60 TMT of fish production. The total fish production of Andhra Pradesh, Kerala and Orissa during 2003-04 are 944.64 TMT, 684.70 TMT and 306.95 TMT respectively. Orissa produced 4.80 percent of the total fish production in the country and occupied 7th position at National level. Among the top ten fish producing countries, China occupies the first position, followed by Peru, Japan and India.

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ANIMAL RESOURCES

7.31 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. Over 80% of the rural households in Orissa keep livestock of one specie or other. 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 to increase availability of their products but also to provide employment and income generating opportunities through both main and supplementary enterprises.

7.32 During the 9th Plan period, emphasis was laid on bringing about genetic improvements in the live stock breeds and to enhance their productivity. Besides, efforts have also continued to upgrade skill of farmers by imparting required training. During the Tenth Plan the following strategies have been envisaged.

i. Expanding and Strengthening of cross-breeding programme through Frozen Semen Technology and improvement of local cattle and buffalo wealth of the State for production of high-yielding milch cows and working bullocks.

ii. Control of major livestock disease through systematic research and monitoring.

iii. Strengthening of disease reporting network.

iv. Revamping of production infrastructure for biologicals with a view to enhancing quantum of production of life-saving vaccines for livestock.

v. Genetic improvement of small animals for enhancement of meat production.

vi. Introduction of State implementing agency “Orissa Livestock Resources Development Society” for facilitating

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implementation of project Cattle and Buffalo Development.

vii. Utilisation of surplus milk by establishment of Milk Powder Plant.

viii. Reduction of Livestock Mortality and development of nutritional status of tribal through cluster approach of integrated Animal Husbandry in KBK districts.

ix. Professional efficiency development by enforcement of the Veterinary Council Act.

x. Creation of resources by introducing user charges for various veterinary services to provide better qualitative and non-interrupted services.

LIVESTOCK POPULATION

7.33 As per livestock Census conducted in the year 2003, the livestock population in the State excluding horses, dogs, donkeys etc. was about 240.22 lakh, increased by 2.40% over the previous Census conducted in the year 2001. Out of the total livestock population, cattle population was 142.81 lakh (59.4%) buffaloes 14.39 (6.0%), goats 59.74 (24.9%), sheep 17.59 (7.3%) and pigs 5.69 (2.4%). Out of total 157.19 lakh cattle and buffaloes population, 44.63 lakh were breedable and 11.00 lakh were cross breed/improved varieties, which constitute 28.4% and 7.0% of the total cattle and buffaloes population respectively as against 153.91 lakh cattle and buffaloes population recorded in 2001 livestock Census with 28.6% breedable and 5.9% cross breed/improved varieties.

Table 7.7

Livestock Population in Orissa

(Figures in lakh)

Census Year	Cattle		Buffaloes	Goats	Sheep	Pigs	Total
	Total	Cross bred					
1	2	3	4	5	6	7	8
1982	129.30	N.A.	13.33	49.31	19.90	4.10	215.94

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1991	135.77	5.63	15.09	48.04	18.41	5.90	223.21
1995	147.66	7.44	16.52	54.12	18.65	5.72	242.67
2001	140.03	8.71	13.88	58.80	17.79	6.02	236.52
2003(P)	142.81	10.43	14.39	59.74	17.59	5.69	240.22

P : Provisional

Source: Directorate of Animal Husbandry & Veterinary Services, Orissa, Cuttack.

AVAILABILITY OF ANIMAL PRODUCTS

7.34 The production and per-capita availability of animal products in the State has by and large gone up steadily. The milk production in the State during 2004-05 was 1,283 TMT with per-capita availability of 92 gms/day as compared to 995 TMT milk production and per-capita availability of 74 gms/day in 2003-04. During 2004-05, 91.0 million tonnes of milk was produced at all India level with per-capita availability of milk 232 gms/day. This indicates that the State have to increase the milk production substantially to reduce the huge gap.

7.35 Majority of our population are non-vegetarian. With the increase of population, demand for meat and egg also increases. The production of meat during 2004-05 was about 51 TMT with per-capita availability of 1.32 Kg./annum. While the meat production in the State has increased by 12.56% over 2003-04, the per-capita availability of meat has gone up from 1.218 Kg/annum in 2003-04 to 1.32 Kg/annum in 2004-05.

7.36 The egg production in the State during 2004-05 was 1215.96 million, increased by 30.6% over 2003-04. The per-capita availability of 25 eggs per annum in 2003-04 has increased to 32 eggs per annum by the end of 2004-05. During 2004-05, the egg production at all India level was 41,000 millions with per-capita availability of 41 eggs per annum. This indicates that the egg production in the State is still to move ahead.

Table 7.8

Year-wise Production and Per capita 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 thousand MT)	Per capita availability of meat (Kg/annum)	Production of eggs (in millions)	Per capita availability of eggs (nos/annum)
1	2	3	4	5	6	7
1999-00	847.78	65	36.67	1.029	648.31	18

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2000-01	875.00	67	38.38	1.067	730.10	20
2001-02	929.00	70	42.64	1.176	858.02	24
2002-03	941.00	71	44.72	1.224	909.49	25
2003-04	995.08	74	44.89	1.218	931.06	25
2004-05(P)	1282.76	92	50.53	1.320	1215.96	32

P : Provisional

Source: Directorate of Animal Husbandry & Veterinary Services, Orissa, Cuttack.

ANIMAL HEALTH CARE

7.37 Animal health care is being provided through a vast network of 540 veterinary hospitals and dispensaries with 725 veterinary doctors, 2,939 livestock Aid Centres (LACs) with 2627 Livestock Inspectors and Technicians. Besides, 3 Clinical Investigation Laboratories, 3 Disease Research Centers, one Animal Disease Research Institute and two Biological Products Institutes are also functioning in the State to provide curative and preventive health services to live stock. During the year 2004-05 altogether 49.37 lakh animals were treated against various diseases, 112.74 lakh animals were vaccinated, 2.13 lakh animals were dewormed and 4,587 infertility camps were organized.

7.38 In order to supplement the efforts of State Government "Assistance to State for Control of Animal Disease "(ASCAD) is in operation.The major objectives of this programme are investigation, strengthening Orissa Biological Product Institutes, diagnostic laboratory and mass awareness.

7.39 National Project on Rinderpest Eradication (NPRE) a fully Central funded ongoing scheme which aimed to eradicate rinderpest diseases in cattle and buffaloes including small animals by arousing mass awakening among farmers of the State is now in the surveillance phase. The State has been declared free from Rinderpest since 1996.

CATTLE AND BUFFALO DEVELOPMENT

7.40 According to the livestock census held in 2003, the cattle and buffalo population together was 157.19 lakh which constituted 65.44% of the total livestock population of the State. Out of the total 157.19 lakh cattle and buffalo population, 73.65 lakh were female including 21.37 lakh milched 7.56 lakh of the female are improved / cross breed varieties and 2.65 lakh of them are

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milched. Besides, the Census also shows that there were 44.63 lakh breedable cattle and buffaloes in the State including 4.83 lakh (10.8%) improved/cross breed varieties.

Table 7.9

Cattle and Buffalo Population as per 2003 Animal Census

(In lakh)

Category	All Total		Female		Milch		Breedable	
	Total	C.B.	Total	C.B.	Total	C.B.	Total	C.B.
1	2	3	4	5	6	7	8	9
Cattle	142.80	10.43	67.06	7.19	19.28	2.49	40.43	4.58
Buffaloes	14.39	0.57	6.58	0.37	2.09	0.16	4.20	0.25
Total	**157.19**	**11.00**	**73.65**	**7.56**	**21.37**	**2.65**	**44.63**	**4.83**

C.B. = Cross Breed

7.41 Milk has emerged as the single largest product both in terms of quality and value. In Orissa the average milk yield per lactation of a cow is abysmally low due to several genetic erosion and fodder scarcity. The livestock can be genetically upgraded through systematic and scientifically adopted breeding programme. The artificial insemination programme in the State has been adopted extensively. Besides the veterinary hospitals and dispensaries, there are 252 pure artificial insemination centers and 2180 LACs having artificial insemination facilities through frozen semen technology. During the year 2004-05, 5.32 lakh cows were artificially inseminated and 2.18 lakh cross breed progenies were born.

7.42 There are eight livestock breeding and dairy farms functioning under Government sector with aim to produce cross breed bull calves for supply to State Semen Collection Centers and to inaccessible areas for natural services of local breeds. During 2004-05 bull calves have been produced in these farms.

7.43 The National Project on Cattle and Buffalo Breeding (NPCBB) has been approved by Government of India for a period of 3 years commencing from 2001-02. During 2003-04 and 2004-05, self employment through 'GOMITRA' in the rural areas for administrating AI has been introduced and 289 GOMITRA's have been trained under the programme. Orissa Livestock Resource Development Society

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(OLRDS) has been formed and is functioning as State Implementation Agency for NPCBB.

7.44 The Orissa State Cooperative Milk Producers Federation Ltd. (OMFED) came into being on 01.10.1980 with objectives of promoting production, procurement, processing and marketing of milk and milk products for the economic development of the rural farming community. The Federation had received funds from the Indian Dairy Corporation/National Dairy Development Board (NDDB) for implementation of different activities like Milk processing, Technical input programme, support to Dairy co-operatives etc. under Operation Flood Programme in undivided districts of Cuttack, Dhenkanal, Keonjhar, Puri and Sambalpur. This Federation had also received funds for Co-operative Development Programme and Technology Mission on Dairy Development Programme from NDDB which was successfully implemented in the undivided districts of Cuttack, Puri, Sambalpur and Keonjhar. Apart from NDDB, the Federation is also receiving financial assistance from the Government of Orissa as Grant-in-aid and share capital for different activities.

7.45 The Federation has also received assistance from Government of India for implementation of Orissa Women's Dairy Projects under STEP programme in the undivided districts of Cuttack, Dhenkanal, Puri, Sambalpur,Keonjhar, Ganjam and Balasore as well as IDDP projects in Angul, Jajpur and Ganjam districts. OMFED has already started implementing Clean Milk Production Programme in undivided Cuttack, Puri and Balasore in the Ist phase and Sambalpur,Koraput, Gajapati and Kalahandi in 2nd phase.

7.46 During 2004-05, 9 dairy plants with capacity of 225.00 thousand litre per day, 22 chilling plants and 89 Bulk cooling units are functioning in the State under the fold of OMFED. Establishment of 10,000 liter capacity dairy plants at Bhawanipatna and expansion of dairy plant at Bhubaneswar are under progress. Besides, OMFED is also providing support to technical input activities (animal health care, breeding etc.), training orientation programmes (through its own Training and Demonstration Center, located at Jaganathpur, Khurda) and supply of balanced but nutrious cattle feed (produced by its own Cattle Feed Plant, having the capacity of 100 M.T/Day) at a subsidized price to the milk producers. OMFED has started selling of Mineral Mixture in 2 Kg. Packet to remove vitamin deficient diseases.

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7.47 There are 1885 Milk Producers Cooperative Societies functioning in the State. These societies procured 1,88,500 kg milk per day on an average. OMFED marketed 1,92,366 litres milk per day on an average. It has also marketed milk products such as ghee, sweet curd, plain curd, butter, butter milk and paneer etc. during 2004-05. Besides, OMFED has taken over the management of Fruit Processing Units from Horticulture Department on request of Government of Orissa and now produces Squash, Fruit Juice, Tamato sauce, Chilli sauce, Sugar free tamato sauce and Lemon ginger fruit drinks etc. and sells them to consumers at a competitive price.

7.48 An Integrated Dairy Development Project, designed for hilly and backward areas, is being implemented since 1994-95 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 30,000 litres of milk per day with potentiality of generating income of about Rs.2.40 lakh to the milk producers.

FEED AND FODDER DEVELOPMENT

7.49 Deficiency of feed and fodder resources for livestock in the State is one of the major constraints for low livestock production. Sufficient green fodder is essential not only for raising production of milk, meat and eggs but also for reducing the cost of rearing animals and keeping them 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. There are seven Departmental fodder seed farms which are supplying fodder seeds to farmers at subsidised rate under the fodder minikit programme. During 2004-05, 34,852 quintals of green fodder and 191.32 quintals of fodder seeds were produced in the Departmental farms and 17195 minikits were distributed to the farmers against the target of 43,160 quintals of green fodder, 357.55 quintals of fodder seeds and 15450 minikits. It has been programmed to produce 41,105 quintals of green fodder, 269 quintals of fodder seeds to ensure expansion of fodder cultivation activities in the State during 2005-06.

SMALL ANIMAL DEVELOPMENT

7.50 In Orissa majority of population are non-vegetarian and usually prefer to take meat of goat, sheep and poultry broilers. The State has a good potentiality

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for development of sheep, goat and piggery resources. The State Agriculture Policy provides incentives to farmers for production of small animals and poultry. By the end of 2004-05 six farms for goats, two farms for sheep and four farms for pigs are functioning in the State. During 2004-05, 423 sheep, 325 goats and 118 pigs were reared in these farms. During the same year 29 sheep and 12 goats were born in these farms. Besides, two goat breeding farms, one at Chipilima in Sambalpur district and other at Kuarmunda in Sundargarh district are being strengthened under Central Plan Scheme for scientific breeding of goats. It is also proposed to strengthen the pig breeding programme for production of improved boars.

POULTRY DEVELOPMENT

7.51 Poultry development in Orissa has made significant progress over the years. As per 2003 live stock Census, the total poultry population including duckery in the State, was 189.95 lakh as against 184.73 lakh in 2001 census. The demand for poultry meat and egg has been increasing over the years. There is a vast scope for generation of employment in poultry farming. The egg production in the State during 2004-05 was 1215.96 million with percapita availability of 32 eggs per annum which recorded an increase of about 30.6% over 2003-04 and percapita availability of 25 eggs per annum during 2002-03. The State has 9 departmental poultry and duck breeding farms to supply day old chicks and ducklings to farmers. At present, three poultry farms at Sundargarh, Bolangir and IPDP Bhubaneswar and one duck farm at Khapuria are being revitalized through central assistance. During 2004-05, about 1.66 lakh eggs and 0.43 lakh chicks were produced in these farms and supplied to the poultry farmers. In order to increase the egg production, it is proposed to rear Rhode Island Red, Kalinga Brown, and Commercial Parent line poultry birds in departmental poultry farms.

7.52 Orissa State Poultry Producers Co-operative Marketing Federation Ltd., which is widely known as OPOLFED came into existence in March,76 and declared as an Apex Co-operative Federation in March,84 with an objective to popularize poultry products and create market potential. The Federations is operating all over the State through its three zonal offices at Angul, Bhubaneswar and Cuttack. It has two modern Feed Mixing Plants, one at Bhubaneswar with 8 MT capacity per shift and another at Angul 4 MT capacity per shift. Besides, it has two hatcheries one at Bhubaneswar with production capacity of

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36,000 chicks per month and another at Semiliguda with 50,000 chick production capacity per month. So far 71 numbers of P.P.C.Ss are affiliated to it and at present 67 nos of PPCS are in operation with 2,345 members. OPOLFED assists these societies by providing inputs like day old broiler chicks, balanced premixed poultry feed at subsidized rate , technical guidance and health care. It also imparts training to the poultry farmers and organizes poultry workshop, symposia and exhibition.

7.53 During 2004-05, OPOLFED has marketed 26.52 lakh eggs worth Rs.38.33 lakh as against 25.38 lakh eggs worth of Rs.35.58 lakh marketed during 2003-04. Besides, the Federation has also marketed 17.26 MT of birds valued at Rs.11.66 lakh and 164.65 MT of poultry feeds valued Rs.18.10 lakh during 2004-05.

7.54 “Orissa Women’s Poultry Project“ is being implemented by OPOLFED from April 2003 in the district of Khurda and Angul under STEP with the aim to uplift the socio-economic standard of the rural women through poultry farming. The duration of the project is 3 years and the total project cost is Rs.4.31 crore. A total number of 110 “Women Poultry Co-operative Societies (WPCS)” will be organised in the above districts in 3 years benefiting 10,000 women beneficiaries during the project period. Under this project each women beneficiary will be given 20 numbers of one month old chicks, cages and a substantial amount for pre-mixed poultry feed. Government of India have released Rs.1.26 crore as Ist instalment (90% of the cost of the project) for 45 WPCS covering 4050 women. Women members will rear the poultry birds and marketing of eggs and chicken meat will be carried out through the W.P.C.S. and OPOLFED, as a joint venture.

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