

CHAPTER 7

FISHERIES & ANIMAL RESOURCES

FISHERIES

7.01 Orissa is a maritime state, having a coastline of 480 Km. with continental shelf area of 24,000 Sq. Km. along the Bay of Bengal. It is also endowed with brackish water area of 4.18 lakh hectares and fresh water area of 6.70laks hectares. The Chilika Lake which is the largest natural brackish water lagoon of Asia covers major water spread area of brackish water resource. But a large part of the available fishery resources of the State are yet to be fully exploited.

7.02 Pisciculture is however, gradually gaining popularity among the prospective entrepreneurs due to availability of improved technology and rising public interest in fish consumption.

7.03 The State Government has formulated a Policy for Fishery Development as a part of the Agriculture Policy 1996. The policy aims at :

- ✚ *Increasing fish production by adopting scientific methods of culture,*
- ✚ *Assisting fishermen in more efficient fishing,*
- ✚ *Boosting fishing operations in deep sea,*
- ✚ *Transmitting technology both for culture and capture to fishermen and fish farmers,*

✚ *Establishing fish feed mills for culture of fish and prawn.*

7.04 The following activities and programmes are proposed to be given priority in the Eleventh Five Year Plan (2007-12).

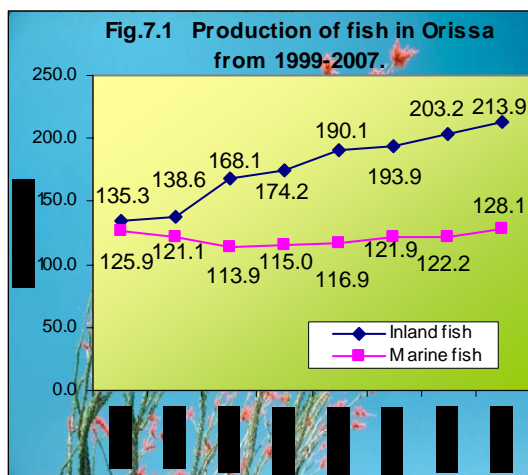
- ◆ *To promote sustainable development in inland fisheries sector for doubling fish production.*
- ◆ *To triple the export and export earning in the state.*
- ◆ *To enhance contribution of fishery sector to food and livelihood security of the people engaged in fisheries.*
- ◆ *To promote public, private partnership in developing, managing, conserving and sharing the fishery resources for state's benefit.*
- ◆ *To create trained human resources for capacity building in the sector.*

Table 7.1
Year wise Production of Fish and Crab in Orissa.

(In thousand MT)

Year	Inland fish production		Marine fish	Total	Per capita consumption of fish (kg.)	Crab Production
	Fresh water	Brackish water				
1999-00	124.9	10.4	125.9	261.2	7.3	0.5
2000-01	125.1	13.4	121.1	259.6	7.7	1.4
2001-02	147.4	20.7	113.9	282.0	8.1	1.2
2002-03	154.2	20.0	115.0	289.2	8.3	2.2
2003-04	165.6	24.5	116.9	307.0	8.4	2.2
2004-05	170.1	23.8	121.9	315.8	8.7	1.7
2005-06	179.7	23.5	122.2	325.4	9.1	1.5
2006-07	191.3	22.6	128.1	342.0	NA	1.7
	(6.42)	(-3.7)	(4.8)	(5.1)	NA	

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



7.05 Table 7.1 reveals that the fish production in the State has an increasing trend. Total fish production in the State during 2005-06 was 325.45 TMT, which has increased to 342.04 TMT during 2006-07, registering an increase of 5.1%. The year-wise fish production is reflected in Fig.7.1.

7.06 The total value of fish produced in the State has increased by 11.34% from Rs.1260.98 crore during 2004-05 to Rs.1404.03 crore during 2005-06. While the value of inland fish production increased by 11.16%, the value of marine fish production increased by 11.81% during the same period.

7.07 The per capita annual consumption of fish in the state during 2005-06 stood at 9.05 kg., as against the per capita annual consumption of fish to 11 kg., recommended by W.H.O.

7.08 The crab production in the state has increased by 20.14% over 2005-06 and reached at 1736.93 MT by the end of 2006-07. Out of total crab production 1736.93 MT,

1613.99 MT (92.93%) were produced from marine sources and balance 122.94MT (7.07%) were from Chilika lake. During 2006-07, while the crab production from marine sources has increased by 24.96% over 2005-06, the crab production from Chilika lake has decreased by 20.21%. Table 7.2 shows the crab production in the state.

Table – 7.2
Source wise crab production in Orissa
(in MT)

Year	Chillika	Marine sources	Total
1997-98	10.40	136.00	146.40
1998-99	9.68	464.00	473.68
1999-00	9.03	526.00	535.03
2000-01	93.60	1255.54	1349.14
2001-02	111.07	1039.96	1151.03
2002-03	149.81	2083.81	2233.62
2003-04	155.51	2043.31	2198.82
2004-05	161.89	1555.26	1717.15
2005-06	154.08	1291.68	1445.76
2006-07	122.94	1613.99	1736.93

Source: Directorate of Fisheries, Orissa, Cuttack.

7.09 Table 7.3 presents the year-wise disposition of fish. Out of the total 325.45 TMT fish produced in the State during 2005-06, about 279.13 TMT (85.77%) was marketed in raw form, 14.96 TMT (4.60%) kept for sun drying, 13.85 TMT (4.25%) for deep freezing and 17.51 TMT (5.38 %) for salt-curing.

Table 7.3
Disposition of Fish Produced in Orissa
(In thousand MT)

Year	Marketed in raw form	Freezing	Drying	Salting	Canning	Total
1999-00	208.40	14.60	32.90	5.30	-	261.20
2000-01	206.70	15.70	27.80	9.30	0.10	259.60
2001-02	229.02	16.03	26.80	10.07	0.03	281.95
2002-03	246.39	16.56	17.60	8.66	-	289.21
2003-04	262.68	16.79	13.27	14.21	-	306.95
2004-05	276.39	13.38	12.89	13.14	--	315.80
2005-06	279.13	13.85	14.96	17.51	0	325.45

Source: Directorate of Fisheries, Orissa, Cuttack

CHAPTER 7

INLAND FISHERIES

7.10 The inland fisheries is classified broadly into two categories i.e. (i) Fresh water fisheries and (ii) brackish water fisheries. The fresh water fishery sources comprise 1,19,681 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 bheels and 1,71,186 hectares water area of rivers and canals. Similarly, the brackish water area comprises 79,000 hectares of Chilika Lake, 2, 97,850 ha. of estuaries, 32,587 ha. of brackish water tanks and 8,100 ha. of backwater.

7.11 It has been proposed to continue different ongoing schemes like production of quality spawn, development of reservoir fisheries and development of inland fisheries through FFDA's etc. During 2006-07 an amount of Rs.175.10 lakh had been spent under programme component like training & subsidy by the G.O.I. & State Govt. and an amount of Rs. 144.04 lakh had been spent under the salary head by the state Government.

(I) FRESH WATER FISHERIES

7.12 The production of fresh water fish from different sources is given in Table 7.4. Tanks and ponds are the major source of fresh water fish followed by rivers and canals, reservoirs and lakes, swamps and bheels. Out of the total fresh water fish production of 191.27 TMT in 2006-07, production from tanks/ponds was 164.49 TMT and the

FISHERIES & ANIMAL RESOURCES

balance quantity of 26.78 TMT was produced from reservoirs, lakes/swamps/bheels and rivers/canals. Fresh water fish production was highest in Ganjam district (21.79 TMT) and lowest in Rayagada district (1.12 TMT) during 2006-07.

Table 7.4
Fresh Water Fish Production
from different Sources in Orissa
(In thousand MT)

Year	Tanks / Ponds	Reservoirs	Lakes / Swamps / bheels	Rivers / Canals	Total
1999-00	88.11	13.81	2.07	20.87	124.86
2000-01	92.44	8.01	2.73	21.93	125.11
2001-02	112.85	7.09	4.00	23.46	147.40
2002-03	119.80	8.50	2.67	23.27	154.24
2003-04	133.62	10.14	2.76	19.08	165.59
2004-05	140.46	11.53	1.79	16.31	169.88
2005-06	153.45	10.75	2.34	13.20	179.74
2006-07	164.49	11.94	2.33	12.41	191.27

Source: Directorate of Fisheries, Cuttack.

7.13 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 nos. of 30 FFDA's, one in each district are functioning, By the end of 2006-07, 57029.43 hectares of tank areas have been developed and 50575 nos. of fish farmers have been trained through these Agencies to boost up production of fish. During 2006-07, 731.41 hectares of tank area have been developed and 1189 fish farmers have been trained. An expenditure of Rs.187.94 lakh under State share and Rs.131.21 lakh from

CHAPTER 7

Central share has been incurred during 2006-07.

7.14 An amount of Rs.3005.60 lakh has been proposed for the Eleventh Five Year Plan which includes Rs.2254.20 lakh towards C.S.P. component of 75% and Rs.751.40 lakh towards 25% of state share. It will be utilized through FFDAs for execution and renovation of pisciculture tank covering an area of 6000 ha. and to impart training to 6000 fish farmers including 1200 ha. of water area and training for 1200 fish farmers during 2007-08.

7.15 Fresh water Prawn Culture Programme 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 218.52 lakh of Fresh Water prawn seeds were collected and distributed among the fish farmers during the year 2006-07 as against 133 lakh prawn seeds distributed in 2005-06.

7.16 In order to meet the growing demand for quality fish seed in the State, emphasis has been given for production of quality fish seed in 25 departmental hatcheries, 5 hatcheries of Orissa Pisciculture Development Corporation & 47 hatcheries in private sector. About 54.67 crore quality fries have been produced and sold to pisciculturists for stocking in their tanks during 2006-07.

FISHERIES & ANIMAL RESOURCES

STATE RESERVOIR FISHERY POLICY, ORISSA

7.17 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 as follows.

-  *To augment fish production from the vast untapped / under-tapped reservoir resources through scientific management.*
-  *To generate gainful rural employment with special reference to fishing communities and economic rehabilitation of displaced persons.*
-  *To introduce systematic management strategies both for conservation and sustained fish production.*
-  *To attract increasing investments from the private sector.*
-  *To stimulate entrepreneurship for fishery sector with special reference to reservoir fishery.*
-  *To substitute traditional methods by introduction of advanced technology in operation of reservoir fishery.*
-  *To generate substantial revenue for the state.*

7.18 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.

CHAPTER 7

BIJU KBK PLAN FOR KBK DISTRICTS

7.19 The project envisages for up-liftment of economic condition of the people of KBK districts through culture based captures fisheries. So far 137 reservoirs covering area of 39472 ha. MWSA, captive nursery measuring 34.54 hectares have been excavated and 111 nos. of fish landing sheds have been constructed. Besides, 1643 nos. of beneficiaries have been trained for scientific pisciculture. Over and above 181.06 lakh of advanced fingerlings has been stocked in these reservoirs.

7.20 It is proposed to develop pisciculture in 24 nos. of new reservoirs covering an area of 18273 ha. and to create 20.70 ha. of captive nurseries, to construct 31 nos. of fish landing shed and to impart training to 462 nos. of fishermen during Eleventh Plan Period. An out lay of Rs.500.43 lakh has been proposed for the purpose. Out of these, ten reservoirs covering 18,955 ha. water area and two fish landing sheds will be taken up during 2007-08.

(II) BRACKISH WATER FISHERIES

7.21 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

FISHERIES & ANIMAL RESOURCES

Banapada in Kendrapara district at a cost of 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.

7.22 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. Out of this Brackish Water Fisheries Development Agencies have identified 32,587 hectares as suitable for prawn culture. These agencies have developed about 14231.38 hectares for prawn culture by the end of 2006-07 since their inception, out of which 907 hectares have been leased out on long-term basis. During 2006-07, brackish water prawn culture was undertaken in an area of 8925.47 hectares and 9782.04 MT of brackish water shrimp was produced. About 10801 nos. of fish farmers were benefited and 4893 farmers had been trained in modern shrimp culture techniques. Loans' amounting to Rs.11.99 crore had been released by different financing banks to these beneficiaries and an amount of Rs.2.51 crore had been released as subsidy up to the end of March, 2007 since the inception of the programme.

CHAPTER 7

7.23 During 2006-07, about 5873.68 lakh brackish water prawn seeds were supplied to the prawn farmers of the State. There are 15 brackish water prawn hatcheries in the State of which the only departmental hatchery at Chandrabhaga produced 24.06 lakh shrimp seeds and 2.515 lakh scampi seeds on experimental basis during 2006-07, which were sold to the farmers.

7.24 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 actively depend on Chilika lake for their livelihood. There are 92 Primary Co-operative Societies comprising of 24,990 members. There are 18 landing centres in which about 9833 MT of fish / shrimps and 123 MT of crab were landed in 2006-07. The brackish water fish/shrimp production from different sources in the State is given at Table 7.5.

Table 7.5
Source wise Brackish Water Fish/Shrimp / Crab Production in Orissa.

(In MT)

Year	Chilika lake	Brackish water shrimp	Estuaries	Total production
1999-00	1,745	3,081	5,616	10,442
2000-01	4,983	6,430	2,029	13,442
2001-02	11,989	7,204	1,467	20,660
2002-03	10,894	7,172	1,898	19,964
2003-04	14,053	8,112	2,312	24,477
2004-05	13,260	7,875	2,641	23,776
2005-06	12,225	8,390	2,880	23,495
2006-07	9,956	9,654	3,013	22,623

Source: Directorate of Fisheries, Orissa.

FISHERIES & ANIMAL RESOURCES

MARINE FISHERIES

7.25 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 with the shortest i.e. 50 kms. About 128.14 TMT of fish was caught from marine sector during 2006-07 out of which Prawn, Clupids, Sciaenids, Catfishes and Pomfrets are some of the important species.

7.26 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 at Talasari and Kirtania have been completed which will provide fish landing facilities to the fishermen. Fishing jetties at Penthakata and Gopalpur on Sea await completion. Fishing jetty at Nairi has been completed and handed over to Managing Director, 'Fishfed' 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 2006-07 is given below.

CHAPTER 7

Table – 7.6
Outlay / expenditure during 2006-07.
(Rs. in lakh)

Item	Outlay	Sanctioned	Expenditure
State Plan	113.33	N.A.	N.A.
CSP	2.76	N.A.	N.A.
Total	116.09	N.A.	N.A.

Source: Directorate of Fisheries, Orissa, Cuttack

7.27 In view of the importance of the fisheries sector in the State's economy, the Plan investment for development of fisheries has 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 2006-07 is given below.

Table 7.7
Outlay / expenditure during 2006-07.
(Rs. in crore)

Share	Revised Outlay	Amount Sanctioned	Expenditure
State Plan	12.95	10.34	10.34
CSP	11.38	6.32	6.32
Central Plan	1.29	0.51	0.51

Source: Directorate of Fisheries, Orissa, Cuttack

7.28 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

FISHERIES & ANIMAL RESOURCES

Fisheries Department also has a freshwater prawn hatchery at Paradeep.

EXPORT AND IMPORT OF FISH

7.29 Table 7.8 reflects the export and import of fish of the State. About 91.75 TMT fish has been exported from Orissa during 2004-05 which has been declined to 89.02 TMT during 2005-06, out of total 89.02 TMT fish exported during 2005-06, 60.98 TMT(68.50%) was from marine Sector, 13.19 TMT(14.81%) from fresh water sector and 14.85 TMT(16.69%) 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, pomfrets, ribbon fish, seer fish, cartel 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.

7.30 About 38.07 TMT of fresh water fish was imported through private trade channels from the neighboring states in 2006-07 as against 44.54 TMT of fresh water fish imported during 2005-06.

CHAPTER 7

FISHERIES & ANIMAL RESOURCES

Table 7.8
Export and Import of Fish in Orissa
(In 000 MT)

Year	Fish export to other states and countries				Import of fresh Water fish
	Marine fish	Fresh Water fish	Brackish Water fish	Total Exported	
1999-00	69.91	9.98	4.44	84.33	42.20
2000-01	61.75	6.26	7.07	75.08	41.99
2001-02	60.52	7.57	8.72	76.81	34.03
2002-03	61.29	7.69	12.58	81.56	35.71
2003-04	62.96	11.34	14.73	89.03	34.59
2004-05	65.72	11.72	14.31	91.75	37.01
2005-06	60.98	13.19	14.85	89.02	44.54
2006-07(P)	NA	NA	NA	NA	38.07

P: Provisional

Source: Directorate of Fisheries, Orissa, Cuttack

FISHERMEN WELFARE SCHEMES

Accident Insurance Scheme

7.31 (i) 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 2006-07, 1.20 lakh fishermen were covered under this scheme and a sum of Rs.2.00 lakh was disbursed covering four death cases.

7.32 (ii) There are 1007 Primary Fishermen Co-operative Societies (PFCS), 5 nos. of Central Fishermen Co-operative Societies (CFCS) registered so far out of which 665 PFCS and one CFCS are working with 1,38,891 and 110 members. Besides one

Apex Society is also functioning in the State with 334 members. 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 additional marketing support could be organized.

Low Cost House under NWFF (National Welfare Fund for Fisherman)

7.33 (iii) This is a centrally sponsored plan scheme, envisages better living amenities for poor fishermen. In this scheme model fisherman villages are being created providing low cost house, drinking water facilities through tube wells and with community hall. Since inception (1987-88) to till March, 2007, 1406 low cost houses have been completed and another 578 houses were under progress. Besides, one community hall and 32 tube wells were also completed by the end of 2006-07.

FOOD FOR WORK

7.34 By the end of 2006-07, about 1442 nos. of tanks have been developed through food for works programme comprising an area of 284.71 ha. and generating 13,76,562 man-days of employment by utilizing 9156.276 MT of food grains.

'STEP' FOR WOMEN PROGRAMME

7.35 An innovative project namely 'Support to Training and Employment Programme' (STEP) for women is being implemented in the marine sector in four (4) coastal districts viz. Balasore, Bhadrak, Puri and Ganjam with a project cost of Rs.220.78 lakh. The

CHAPTER 7

project envisages involvement of 3000 fisher women from lower income group to be organised in to cooperatives and by providing them facilities of training in the preparation of hygienic dry fish and value added fish products. During 2003-04 and 2004-05, a total 32 cooperatives have been organised involving 3000 fisher women members. During 2006-07, 12 officers and 60 women beneficiaries were deputed to Kakinada for exposure visit.

TARGET FOR 11TH FIVE YEAR PLAN

7.36 An amount of Rs.140.00 lakh has been proposed under Group Accident Insurance Scheme comprising Rs. 70.00 lakh as state share and Rs.70.00 lakh as central share to cover one lakh fishermen during Eleventh Five Year Plan.

7.37 An amount of Rs.4.50 crore including Rs.2.75 crore towards central share have been proposed under Savings– cum– Relief scheme to cover 75,000 beneficiaries during Eleventh Five Year Plan period.

7.38 Under low cost housing scheme an amount of Rs. 21.00 crore including Rs.10.50 crore as central share has been proposed in the Eleventh Five Year Plan for construction of 10,000 low cost houses for

FISHERIES & ANIMAL RESOURCES

fisher men. Out of these, 1050 nos. of low cost houses has been proposed to be constructed during 2007-08.

7.39 Further it is also proposed to provide life saving jackets to traditional marine fishermen with unit cost Rs.3000/- per jacket. The fishermen will meet 20% of the cost and the balance 80% is proposed to be contributed by Government of India and state government on 50:50 basis. It has been targeted to cover 10,000 fishermen during Eleventh Five Year Plan.

FISH PRODUCTION AT NATIONAL AND INTERNATIONAL LEVEL

7.40 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 fish productions of Andhra Pradesh, Kerala and Orissa during 2003-04 were 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 in the year 2000, followed by Peru, Japan and India. Thus India holds fourth rank in fish production at International level by then.

ANIMAL RESOURCES

7.41 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 upgrade the animal resources with increase in availability of their products but also to provide employment and income generating opportunities through both main and supplementary enterprises.

7.42 The strategy of eleventh Five Year Plan emphasizes on accelerated poverty reduction and higher economic growth. The policy of Eleventh Five Year Plan relating to Animal Husbandry and Dairy Development is as follows:

- * *Production of live stock vaccines under GMP compatible condition to be taken up to meet the requirements of the state and to stop the dependence on other sources.*
- * *Monitoring of live stock Disease Control Programme through internet services in sub-division and district level for quick remedial measures for livestock health care and removal of epidemics.*

- * *Association of farmers with the livestock disease diagnostic services rendered at the DDLs through information and communication technology.*
- * *Strengthening live stock service infrastructure and automation of government offices with computer facilities.*
- * *Exchange of knowledge and technology in improved A.H. & Dairying practices through organization of exhibition on buyer-seller meet at the block, sub-division, district and state level.*
- * *Establishment of LACs in each newly formed G.Ps to provide primary veterinary Aid & services for the live stock.*
- * *Up-gradation of skill of farmers / un-employed educated youth in A.H. practice and rearing of improve variety of animals for higher yields.*
- * *Provision of input supply to the FSAI centers for uninterrupted production of cross bred females.*
- * *Professional Efficiency Development through organization of training and interaction in the symposiums and conferences on livestock health care and disease control.*
- * *Enhancement of fodder resources through organization of fodder demonstration plots, training and development of grass land and grass reserve areas.*
- * *Stepping up of milk production through integrated approach for the potential areas of the state.*
- * *Creation of self-employment opportunities amongst rural un-employed educated youth through up-gradation of their basic skill on rearing of animals and birds.*

CHAPTER 7

FISHERIES & ANIMAL RESOURCES

LIVE STOCK POPULATION

7.43 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 as against 236.52 lakh recorded in 2001 Census. Out of the total livestock population, cattle population was 142.81 lakh (59.4%), buffaloes 14.39 lakh (6.0%), goats 59.74 lakh (24.9%), sheep 17.59 lakh (7.3%) and pigs 5.69 lakh (2.4%) and out of total live stock about 97% belong to rural areas. The inter Census Growth rate of cattle, buffalo and goat were 0.14%, 0.18% and 1.60% respectively while

the growth rate of sheep and pigs recorded as (-) 1.16% and (-) 5.38% respectively. Out of total 157.20 lakh cattle and buffaloes population, 44.63 lakh were breedable and 11.93 lakh were cross bred / improved varieties, which constitute 28.4% and 7.6% of the total cattle and buffaloes population respectively. According to 2001 live stock census there were 153.91 lakh cattle and buffaloes with 28.6% breedable and 5.9% cross bred/improved varieties. As per 2003 Census while the Growth rate of cross bred cattle recorded as 28.56%, it was 0.14% for cattle (all category) and 0.18% for buffaloes.

Table 7.8

Livestock Population in Orissa

(Figures in lakh)

Census Year	Cattle		Buffaloes	Goats	Sheep	Pigs	Total
	Total	Cross bred					
1982	129.30	N.A.	13.33	49.31	19.90	4.10	215.94
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	142.81	10.43	14.39	59.74	17.59	5.69	240.22

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

AVAILABILITY OF ANIMAL PRODUCTS

7.44 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 2006-07 was about 1431 TMT with per-capita availability of 103 gms. per day as compared to 1342 TMT milk production and per-capita availability of 98 gms. per day in 2005-06. During 2005-06, 91.0 million tonnes of milk was produced at all India level with per-capita availability of milk 232 grams per day.

This indicates that the State have to increase the milk production substantially to reduce the gap.

7.45 Majority of our population are non-vegetarian. With the increase of population, demand for meat and egg also increases. During 2005-06 the production of meat was about 52 TMT with per-capita availability of 1.385 Kg. per annum. It has increased to 55 TMT 5.70% with per capita availability of 1.450 kg. per annum during 2006-07. Out of

ECONOMIC SURVEY

CHAPTER 7

FISHERIES & ANIMAL RESOURCES

total 55 TMT meat production, goat meat comprises 71.87% followed by sheep 16.68% and pig 10.31%.

7.46 The egg production in the State has increased from 1278.71 million in 2005-06 to 1424.64 million during 2006-07, showing an increase of 11.41% over 2005-06. The per capita availability of 34 eggs per annum in 2005-06 has increased to 38 eggs per

annum by the end of 2006-07. 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 though the egg production in the State has increased a lot and nearing the all India figure resulting an increasing trend, still it is to move ahead to cater the need of the state internally.

Table 7.9

**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)
1999-00	847.78	65	36.67	1.029	648.31	18
2000-01	875.13	67	38.38	1.067	730.10	20
2001-02	928.77	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	1282.76	94	50.53	1.358	1215.96	33
2005-06	1342.30	98	52.04	1.385	1278.71	34
2006-07	1430.69	103	55.01	1.450	1424.64	38

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

7.47 Table 7.10 reflects the target and achievement made in some principal activities during 10th plan period and the target fixed during 11th plan period and for the year 2007-08. It is revealed from the table that during 10th plan period except milk

production, the achievement under other activities could not touch the target. While the achievement on production of milk shows 108.7%, in case of egg and meat production the figure were 76.7% and 84.1% respectively against the target.

Table 7.10
Target and achievement of A.H. & D.D. programme in Orissa.

Name of the principal activity	Unit	10th plan period		11th plan period	
		Target	Achievement	Target	Target for 2007-08
1	2	3	4	5	6
Production of milk	TMT	5514	5992.32	7000	1422
Production of Egg.	Million Nos.	7506	5759.86	8500	2025
Production of Meat	TMT	294	247.19	304	64
Breeding bull in use	Nos.	1000	357	243	51
Production of vaccines	Lakh doses	1056.12	497.73	1100	230.75
Vaccinations of animals	Lakh nos.	1145.38	570.11	1500	270

Source: Directorate of Animal Husbandry and Veterinary Services, Orissa, Cuttack

ANIMAL HEALTH CARE

7.48 Animal health care is being provided through a vast network of 540 veterinary hospitals and dispensaries with 827 veterinary doctors and 2,939 livestock Aid Centres (LACs) with 2550 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 2006-07, altogether 46.99 lakh animals were treated against various diseases, 145.63 lakh animals were vaccinated, 2.49 lakh animals were dewormed and 4197 infertility camps were organized as against corresponding figures of 47.37 lakh, 114.36 lakh, 2.30 lakh, and 3785 during 2005-06.

ASSITANCE TO STATES FOR CONTROL OF LIVESTOCK DISEASES (ASCAD)

7.49 Since 2003-04, replacing the ongoing scheme "Animal Disease Surveillance" and "Systematic Control of Livestock Disease" a centrally sponsored plan scheme namely "Assistance to States for Control of Animal

Diseases" (ASCAD) is in operation in the state with an aim to control live stock diseases through conducting malls vaccination and diagnosis of diseases in the newly established DDLS in order to ensure dispensation of causalities and loss to the farmers. During the Eleventh Plan period it is proposed to provide Rs.30.71 crore as central share and Rs.9.57 crore as state share including Rs.4.58 crore central share and Rs.1.37 crore as state share during 2007-08 for implementation of the scheme.

7.50 A central plan scheme titled "National Project on Rinderpest Eradication" (NPRE) is in operation in the state 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 & BUFFALO DEVELOPMENT

7.51 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

CHAPTER 7

FISHERIES & ANIMAL RESOURCES

the State. Out of the total Cattle and Buffalo population, 73.65 lakh were female including 21.37 lakh milch animals, 7.56 lakh of the female are improved / cross bred varieties of which 2.65 lakh are milch animals. 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 bred varieties.

Table 7.11
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	67.07	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

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

7.52 In animal husbandry sector, 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 is being 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 2823 LACs having artificial insemination facilities through frozen semen technology. During the year 2006-07, 8.13 lakh cows were artificially inseminated and 3.15 lakh cross bred progenies were born as against 5.74 lakh artificial insemination and 2.43 lakh progenies born in 2005-06. It has been targeted to perform 12.00 lakh A.I. during 2007-08.

7.53 There are eight livestock breeding and dairy farms functioning under Government sector with the 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 2006-07, 93 bull calves have been produced in these farms.

NATIONAL PROJECT FOR CATTLE & BUFFALO BREEDING (NPCBB)

7.54 The National Project for Cattle and Buffalo Breeding (NPCBB) is in operation in the state with the aim to engage "GOMITRA" under self-employment programme to provide door step Artificial Insemination to the farmers. At present 141 GOMITRAs are being engaged and 200 GOMITRAs are undergone training. It has been decided to provide refresher training to VAS/Live stock inspectors under this programme.

CHAPTER 7

FISHERIES & ANIMAL RESOURCES

ORISSA STATE COOPERATIVE MILK PRODUCER FEDERATION LTD. (OMFED)

7.55 The Orissa State Cooperative Milk Producers Federation Ltd. (OMFED) came into being on 01.10.1980 with the prime 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 (loan & grant) from the Indian Dairy Corporation/ National Dairy Development Board (NDDB) for implementation of different activities like milk processing, technical input programme, and support to Dairy Co-operatives etc. as envisaged under Operation Flood Programme in undivided districts of Cuttack, Dhenkanal, Keonjhar, Puri and Sambalpur. The 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. At present 20 milk unions are functioning under OMFED all over the state. Brief progress of OMFED from 2003-04 to 2006-07 is presented in table 7.12.

Table – 7.12
Brief Progress of OMFED.

Item	2003-04	2004-05	2005-06	2006-07
1	2	3	4	5
No. of DCS organized (cum)	1557	2604	3377	3822
Members enrolled (in 000) (cum)	118.5	167.8	204.0	224.0
Milk procurement (KPD)	131217	188500	302000	354638
Milk marketed (LPD)	148392	174219	318213	354638
Total turnover (Rs. in crore)	87.57	109.68	139.97	NA
Net profit (Rs. in lakh)	69.64	80.83	135.00	NA
Cattle feed production (000 MT)	12.61	12.29	19.52	27.64

Source: OMFED, BHubaneswar.

7.56 OMFED has also received assistance from Govt. of India for implementation of Women's Dairy Projects under STEP. By the end of 2006-07, 868 nos. of women Dairy Co-operative Societies were formed in seven undivided districts viz Cuttack, Puri, Dhenkanal, Sambalpur, Keonjhar, Ganjam and Balasore with 65,515 women members. These societies were procuring 74.96 thousand liters of milk per day. During 2004-05, 170 women's were trained in artificial insemination. Besides, another project on STEP in Turmeric sector for development of rural women of Kandhamal district is also being implemented by OMFED since 2002. By the end of 2006-07, 305 nos. of Women Organic Turmeric Societies were organized with 10457 members. 1768 quintals of improved Turmeric seeds have been supplied to these societies during 2005-06.

CHAPTER 7

FISHERIES & ANIMAL RESOURCES

7.57 During 2006-07, 13 dairy plants with capacity of 440.00 thousand liters per day, 201 chilling plants with 351.00 thousand liters capacity were 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 Jagannathpur, Khurda) and supply of balanced but nutritious 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.

7.58 An Integrated Dairy Development Project (IDDP), 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. During 2005-06, Govt. of India have sanctioned two projects under IDDP PH-V & VI with project cost of Rs.5.56 crore and Rs.5.64 crore respectively. OMFED is the implementing agency for these projects.

Table - 7.13
Achievement under IDDP, 2005-06.

Item	Ph-IV	Ph-V	Ph-VI
District covered	Angul Ganjam Jajpur	Balasore Bhadrak Mayurbhanj	Bolangir Kalahandi Nuapada
Project cost (Rs. in cr.)	7.85	5.56	5.64
No. of societies organised	295	285	128
Members	14629	17314	6982
Milk collection kgs. / day	35294	28111	14081

Source: Directorate of Fisheries, Orissa, Cuttack

7.59 OMFED has started implementation of clean and Quality Milk Production Programme in the districts of Cuttack, Puri, Balasore, Sambalpur, Gajapati and Keonjhar district with a project outlay of Rs.704.43 lakh out of which Govt. will bear Rs.574.51 lakh and the balance amount will be borne by District Milk Unions. So far 38 nos. of Bulk Milk Coolers have been established and 40,500 farmers have been trained.

7.60 Under Revised Long Term Action Plan (RLTAP) OMFED has assisted 2662 numbers of farmers through 50 nos. of Primary Village level Milk Producers Co-operative Societies in the districts of Koraput, Malkangiri, Nawarangpur and Rayagada and 15 nos. of Bulk Milk Coolers have been established. The total Milk Procurement in these areas has been gone up to 12000 liters. / Day from 5000 ltrs/day in 2004-05.

FEED AND FODDER DEVELOPMENT

7.61 Deficiency of feed and fodder resources for livestock in the State is one of the major constraints for low yield from livestock production. Sufficient green fodder

CHAPTER 7

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 development farms which are supplying fodder seeds to farmers at subsidized rate under the fodder minikit programme. During 2006-07, 32464 quintals of green fodder and 67.14 quintals of fodder seeds were produced in the Departmental farms and 43000 minikits were distributed to the farmers against the target of 34976 quintals of green fodder, 220.50 quintals of fodder seeds and 43000 minikits. It has been targeted to produce 33540 quintals green fodder and 187.00 quintals fodder seeds during 2007-08.

SMALL ANIMAL DEVELOPMENT

7.62 In Orissa, majority of non-vegetarian population usually prefer to take meat of goat, sheep and poultry broilers. The State has a good potentiality for development of sheep, goat and piggery resources. The State Agriculture Policy provides incentives to farmers for production of small animals and poultry. During 2006-07, there were 2 sheep breeding farms, 2 goat breeding firms and one piggery breeding farms were functioning under the department to supply traded progenies to the beneficiaries for up gradation of local breeds. During 2006-07, 158 sheeps, 372 goats and 52 pigs were

FISHERIES & ANIMAL RESOURCES

reared in these farms. During the same year 24 sheep, 59 goats and 169 pigs were produced in these farms.

POULTRY DEVELOPMENT

7.63 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 is being increased over the years. There is a vast scope for generation of employment in poultry farming. The egg production in the State during 2006-07 was 1424.64 million with per capita availability of 38 eggs per annum which recorded an increase of about 11.41% over 2005-06 and per capita availability of 34 eggs per annum during 2005-06. The State has 11 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 2006-07, about 1.94 lakh eggs and 0.75 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.

7.64 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

CHAPTER 7

Apex Co-operative Federation in March,84 with an objective to popularize poultry products and create market potential. The Federation 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 having 4 MT capacity per shift. Besides, it has two hatcheries, one at Bhubaneswar with production capacity of 36,000 chicks per month and another at Semiliguda with 50,000 chick production capacity per year. So far 91 Poultry Producers Co-operative Societies of (P.P.C.Ss) are affiliated to it. 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 on veterinary health care to the poultry farmers and organizes poultry workshop, symposia and exhibition.

FISHERIES & ANIMAL RESOURCES

7.65 During 2006-07, OPOLFED has marketed 170.88 lakh eggs worth Rs.310.37 lakh, 11041 nos. of chicken weighted to 137.01 MT valued at Rs.9.62 lakh and 832.25 qtls. of feeds worth of Rs.9.04 lakh in the state. Thus, during 2006-07 OPOLFED made business worth of Rs.3.29 crore as against Rs.1.68 crore made in 2005-06 showing an increase of 95.8% over 2005-06.

7.66 In order to uplift the socio-economic standard of rural women, Orissa Women's Poultry Project" is being implemented by OPOLFED in the district of Khurda and Anugul since April, 2003. Duration of the project is three years and total cost of this project is Rs.4.31 crore. Against the target to form 110 WPCS with 10,000 women beneficiaries, by the end of March, 2006, twenty WPCS have been formed with 1800 members and support service training have been imparted to 1710 women members.

