

4. ANIMAL HUSBANDRY, FISHERIES AND FORESTRY

The contribution of animal husbandry sector to the economy is substantial in terms of creation of value addition, provision of employment and earning of foreign exchange. Animal Husbandry activities are important both as principal activity, subsidiary activity along with agriculture. Fisheries sector is also playing a vital role in provision of employment, meeting of domestic fish consumption and earning of foreign exchange. Forestry sector not only plays a crucial role in maintaining ecological balance but also contributes to livelihood security. The sector contributes significantly to economic growth.

1. Animal Husbandry:

Tamil Nadu is endowed with a sizeable livestock population. The Department of Economics and Statistics conduct Quinquennial Livestock Survey in the State. The latest Survey available pertains to the year 2001. The cattle population has shown variations between 1982 and 2001. In 1982 the cattle population which stood at 103.66 lakhs has now reduced to 91.82 lakhs in 2001. Buffalo population has been gradually declining - it was 32.12 lakhs in 1982 and 27.08 lakhs in 2001.

In terms of percentage, 36.06 per cent of population is concentrated viz., Villupuram (10.58%), Tiruvannamalai (7.92%), Vellore (6.36%), Dharmapuri (5.81%) and Cuddalore (5.39%) out of the total cattle population of 91.82 lakhs in 2001. Buffaloes are distributed mainly in Namakkal (10.77%), Erode (9.74%), Dharmapuri (6.42%), Kancheepuram (6.12%) and Villupuram (5.82%). These 5 districts accounted for 38.87 per cent of the total buffalo population of 27.08 lakhs in 2001. Cattle and buffalo population combined together is more pronounced in Villupuram (8.13%), Dharmapuri (6.98%), Tiruvannamalai (6.06%), Erode (5.55%) and Vellore (5.28%). All these 5 districts account for 32 per cent of the total cattle and buffalo population of 118.90 lakhs in 2001.

Sheep population was reported at 53.47 lakhs while population of goats was put at 68.08 lakhs. Significantly, it may be mentioned that poultry population has been increasing - it was 182.84 lakhs in 1982 and rose to 359.41 lakhs in 2001.

Table - 1: Trends in Livestock Population (lakhs)

Year	Cattle	Buffaloe	Sheep	Goats	Others	Total	Poultry
1982	103.66 (-4.03)	32.12 (4.35)	55.37 (4.69)	52.46 (24.85)	18.26 (135.31)	261.87 (8.45)	182.84 (27.44)
1989	93.53 (-9.77)	31.28 (-2.62)	58.81 (6.21)	59.20 (12.85)	20.85 (14.18)	263.66 (0.68)	215.70 (17.97)
1994	90.96 (-2.75)	29.31 (-6.30)	56.12 (-4.57)	58.65 (-0.93)	21.75 (4.32)	256.79 (-2.61)	238.54 (10.59)
1997	90.47 (-0.54)	27.41 (-6.48)	52.59 (-6.29)	64.16 (9.39)	24.76 (13.84)	259.39 (1.01)	365.11 (53.06)
2001 [@]	91.82 (1.49)	27.08 (-1.20)	53.47 (1.67)	68.08 (6.11)	4.78 ^{\$} --	245.22 ^{**} (-5.46)	359.41 (-1.56)

[@] Inter Census Estimate; ^{\$} Relates to pigs; ^{**} Provisional
Source: Directorate of Veterinary Services, Chennai-6.

The State is following a strategy of increasing the productivity of cattle and buffalo by the adoption of an improved breeding policy. This policy has made substantial impact seen in terms of an increase in number of crossbred population. The share of crossbred has increased from 12.23 per cent in 1989 to 24.08 per cent in 1997, whereas the share of native pure and indigenous cattle population has declined from 87.77 per cent to 75.92 per cent during the above mentioned period. As regards buffalo, the share of murrah and graded buffaloes increased from 17.15 per cent in 1989 to 22.04 per cent to 77.96 per cent during the same period. Out of total 117.88 lakhs cattle and buffalo population, 23.61 lakh animals (20%) are crossbred and upgraded animals. The Government strategy is to increase the population of crossbred and upgraded animals and eliminate unproductive animals. The underlying objective is to increase productivity from cattle wealth. The productivity of the animals has increased because of the introduction of exotic and murrah germplasm. This has led to an increase in crossbred and graded murrah population, which has resulted in improvement in average per animal yield.

Table - 2: Average Yield Rate of Milk (Kgs., / Animal / day)

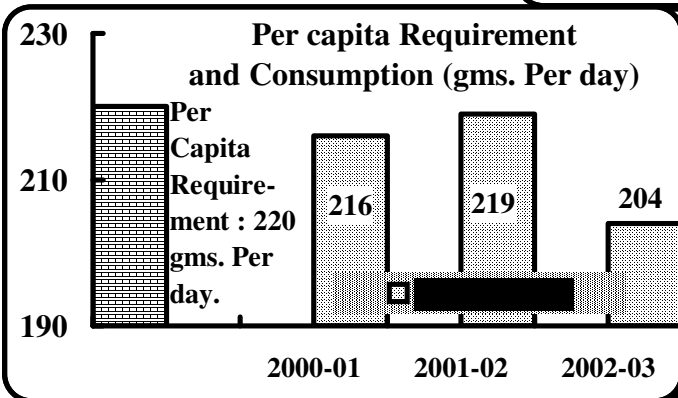
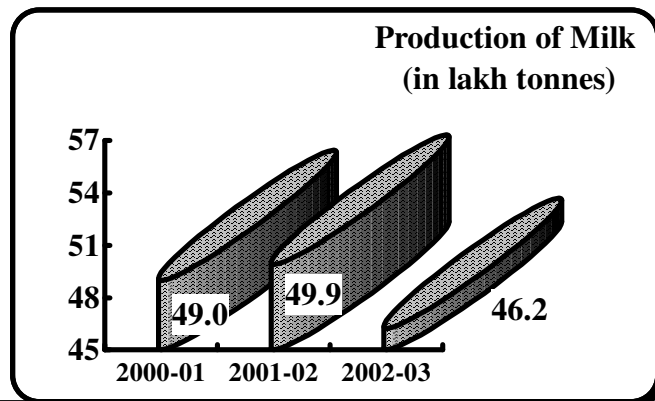
	Breed	2000-01	2001-02	2002-03
I.	Cows			
a.	Exotic and Cross Bred	6.002	6.244 (4.0)	6.150 (- 1.51)
b.	Indigenous	2.698 (4.7)	2.696 (- 0.1)	2.554 (- 5.27)
	Sub-Total	8.700 (1.4)	8.940 (2.8)	8.704 (-2.64)
II.	Buffaloes	4.074 (4.1)	4.078 (0.1)	4.112 (0.8)
	Total	12.774 (2.3)	13.018 (1.9)	12.816 (- 1.6)

(Figures in brackets indicates percentage change over the previous year)

Source: Directorate of Veterinary Services, Chennai-6.

1.1. Milk Production and Per capita Availability:

In view of the growing urbanisation, rising per capita income and changing consumption pattern, sustained step-up in milk production is imperative. Milk production declined from 49.88 lakh tonnes in 2001-02 to 46.22 lakh



tonnes in 2002-03. The dip in milk production was engendered by monsoon failure and dry conditions. Eventually, the availability of fodder, a prime source of nutrition had become so acute. Per capita availability of milk per day was at 204 grams in 2002-03 compared 219 grams in 2001-02. Since the quantity of milk produced decreased in 2002-03, the per capita

availability also correspondingly came down in 2002-03.

Table - 3 : Milk Production and Percapita Requirement Availability

Year	Tamil Nadu	All India	% share of Tamil Nadu	Per capita availability (gms. per day)	
	(Lakh tonnes)			Tamil Nadu	All India
1999-2000	45.74	781	5.9	203	214
2000-01	48.99 (7.1)	814 (4.2)	6.0	216 (6.4)	223 (4.2)
2001-02	49.88 (1.9)	846 (3.9)	5.9	219 (1.4)	226 (1.3)
2002-03	46.22 (-7.3)	NA	-	204 (- 6.8)	N.A.

Per capita daily requirement 220 grams, NA - Not Available.

(Figures in brackets indicates percentage change over the previous year)

Source: Directorate of Veterinary Services, Chennai-6.

The Co-operative Milk Producers' Federation has been procuring milk through a well-knit 9821 Primary Milk Producers' Co-operative Societies. These societies procured milk to the extent of one-third of the total milk production of 49.90 lakh litres. These societies are able to stabilize the price of milk both in rural and urban areas and meet the growing requirements of the consumers without giving rise to imbalance between the demand for and supply of milk produced.

1.2. Animal Health Care:

The State has been undertaking pro-active animal health care measures over the years through implementation of various Livestock Development Programmes. Total animals treated stood at 167.21 lakhs in 2002-03. The performance in respect of the major parameters over the period from 2000-01 to 2002-03 is presented in the table given below.

Table - 4: Animal Care and Performance Details

(lakh numbers)

Sl.No.	Item	2000-01	2001-02	2002-03
1.	Animals treated	154.04	149.59	167.21
2.	Vaccination done	243.37	258.87	225.78
3.	De-worming done	145.79	154.13	154.44
4.	Castration done	7.02	6.85	6.23
5.	Artificial Insemination Performed	32.35	32.97	32.28
6.	Calves born	10.51	10.51	11.48

Source: Directorate of Veterinary Services, Chennai-6

1.3. Meat Production:

Along with change in income levels, consumption habits and life styles consumption of meat products has been increasing which in turn is reflected in increasing meat production. In order to meet the consumption requirements of the people the State has been enhancing the meat production from 390.40 lakh kgs., in 2000-01 to 401.2 lakh kgs., in 2002-03.

Table - 5: Meat Production

Sl.No.	Item	2000-01	2001-02	2002-03
1.	Registered Slaughter Houses (Nos.)	183	183	182
2.	Animal Slaughtered (lakhs)			
a.	Sheep	9.35	10.22	11.53
b.	Goat	7.79	8.64	10.13
c.	Cattle	0.83	0.97	0.86
d.	Buffaloes	1.26	0.92	0.72
e.	Pig	0.46	0.47	0.33
	Total	19.69	21.22	23.57
3.	Meat Production (lakh kgs.)			
a.	Mutton	90.15	100.09	121.01
b.	Chevon	82.41	89.33	111.65
c.	Beef	72.34	86.43	77.21
d.	Cara Beef	116.66	86.66	71.88
e.	Pork	28.84	28.72	19.45
	Total	390.40	391.23	401.20

Source: Directorate of Veterinary Services, Chennai-6

1.4. Infrastructure Development:

In order to support the cattle population besides sustaining rural livelihoods the State has built up adequate veterinary infrastructure. As a result, Tamil Nadu is one of the leading States in dairy and animal husbandry activities. Table below highlights the achievements in terms of creation of veterinary care institutions.

Table -6: Veterinary Care Institutions (Numbers)

Sl.No.	Particulars	2000-01	2001-02	2002-03
I.	Veterinary Health Services			
a.	Polyclinics	3	3	3
b.	Clinician Centres	24	25	25
c.	Mobile Veterinary Units	54	54	54
d.	Mobile Veterinary Dispensaries	382	382	382
f.	Veterinary Dispensaries	140	139	139
g.	Sub-Centres	2123	2123	2123
II.	Animal Disease Intelligence Units	15	15	15
III.	Cattle breeding and Fodder Development	20	20	20
IV.	Institute of Veterinary Preventive Medicine	1	1	1
V.	Poultry Disease Diagnostic Laboratory	2	2	2
VI.	Artificial Insemination Centres	3572	3572	3572
VII.	Frozen Semen Production Stations	4	4	4
VIII.	Frozen Semen Banks	12	12	12

Source: Directorate of Veterinary Services, Chennai-6.

1.5. Feed and Fodder Production:

Sustainability and growth of dairy and Animal Husbandry sector is largely influenced by the assured availability of cattle feed and fodder. Individual activity is also supplemented by the efforts of the State Government. The performance has been impacted due to the continued drought situations in the State.

Construction of silos in adequate number will go towards solving the fodder shortage in the State. For producing Cattle Feed the Tamil Nadu Co-operative Milk Producers Federation (TCMPF) has been running three Cattle Feed Centres - Madhavaram, Kappalur and Erode.

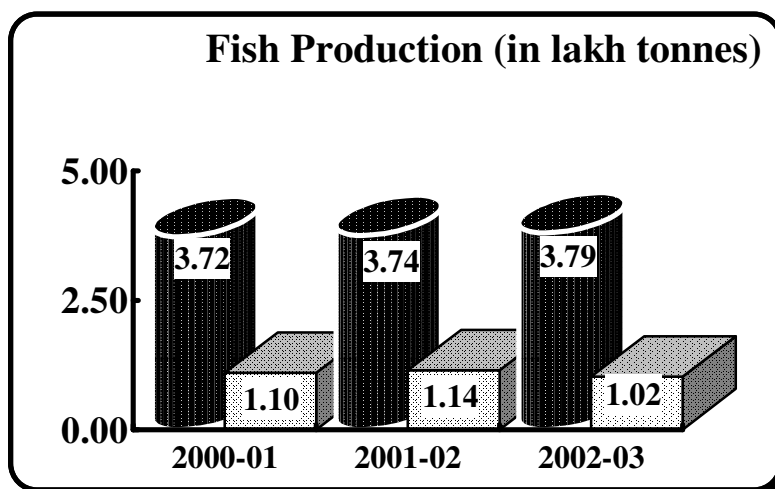
Table - 7: Achievement in Fodder Production

Sl. No.	Particulars	2000-01	2001-02	2002-03	% Change in 2002-03 over 2001-02
1.	Total area under cultivation (acres)	3572	3454	3472	0.52
2.	Fodder Seed Production Units (Nos.)	7	7	7	--
3.	Production of				
	- Slips (lakhs)	119.34	116.18	117.20	0.88
	- Seeds (kgs.)	362.40	12500	13500	8.00
	- Seedlings (lakh)	4.10	1.00	1.10	--

Source: Directorate of Veterinary Services, Chennai-6.

2. Fisheries:

Tamil Nadu has a coastal line stretching over 1076 kilometers which forms 15 per cent of the India's coastal line and continental shelf of 41412 sq. kms. The State has a rich maritime heritage and fishing has been an important activity over the years. It has a major impact on the life of millions of households particularly in the coastal regions. About 6.9 lakhs people are engaged in fishing activities for their livelihood. The importance of fisheries sector can be gauged in terms of provision of employment, value addition and export earnings.



Box -1
Fisheries Policy

- *To reduce fishing pressure in the inshore areas by encouraging fishermen to exploit the under utilized fishery resources*
- *To augment aquatic resource production in the inshore areas by conservation measures, stock enhancement and establishing of artificial reefs etc., along the coast*
- *To promote sustainable eco friendly coastal aquaculture*
- *To strengthen the infrastructure facilities for fish landing and marketing*
- *To increase the inland fish production*
- *To uplift the socio economic condition of the fisher folk by implementing welfare schemes*
- *To generate direct and indirect employment opportunities for fisher folk and rural masses*
- *To strengthen the fishermen / fisherwomen cooperative societies to make them viable*
- *To strengthen inland Fish Marketing by providing infrastructure facilities.*

(Source: Policy note on Fisheries –2002-03.)

2.1. Fish Production:

Urbanisation and changing consumption pattern have led to increased fish production. Fish production originates in two sources viz., inland fishery and marine fishery. In 2002-03 total fish production was of the order of 4.81 lakh tonnes as compared to 4.88 lakh tonnes in preceding year.

Table - 8: Fish Production

(Lakh Tonnes)

Year	Inland	% Change	Marine	% Change	Total	% Change
2000-2001	1.10	(-) 3.5	3.72	(-) 0.5	4.82	(-) 1.2
2001-2002	1.14	3.6	3.74	0.5	4.88	1.2
2002-2003	1.02	(-) 10.5	3.79	1.3	4.81	(-) 1.4

Source: Commissioner of Fisheries, Chennai-6.

2.2. Marine Fish Production:

In 2002-03 total boats in operation were at 68036 consisting of 11889 mechanical boats, and 56147 non-mechanical boats. Higher share of non-mechanical boats is indicative of the fact that fisheries activities are being operated on conventional lines.

With respect of quantum of fish catches made by the boats, it amounted to 3.7 lakh tonnes in 2002-03, of which catch from mechanised boats was 2 lakh tonnes while non-mechanised boats contributed 1.79 lakh tonnes.

Table - 9: Marine Fish Catches by Boats

Year	Boats in operation (number)			Fish catches through (tonnes)		
	Mecha-nised	Non-mechanised	Total	Mecha-nised	Non-mechanised	Total
2000-2001	10278	49123	59401	203252	169150	372402
2001-2002	11444	53844	65288	187142	186719	373861
2002-2003	11889	56147	68036	200468	178746	379214

Source: Commissioner of Fisheries, Chennai-6.

2.3. Inland Fish Production:

In addition to marine fisheries, inland fisheries too are important. In order to step up inland fish production Fish Farmers Development Agency has been in operation in the State since 1976. There are 12 Fish Farmers Development Agencies in 2002-03. The quantum of inland fish production is a function of number of fish ponds / tanks and availability of water and size of investment. There are 1095 major reservoirs, 34465 major irrigation tanks, 39283 seasonal tanks etc. Total catch by the source reveals that seasonal tanks and major irrigation tanks alone accounted for 72 per cent of total inland fish production of 102217 tonnes in 2002-03. The relevant figures are furnished in the table below.

Table -10: Inland Fish Production : By Sources

(In tonnes)

Sl.No.	Sources	2000-01	2001-02	2002-03
1.	Major Reservoirs	996	973	1095
2.	Major Irrigation Tanks (both perennial and long seasonal)	37826	36182	34465
3.	Seasonal Tanks	43613	42687	39283
4.	Estuaries and backwaters	7893	8591	7500
5.	Fish Farmers Development Agencies	5394	3814	1686
6.	Rivers, Streams, Canals and other Water sources	8058	11812	8500
7.	Miscellaneous (Rice fields, Swamps etc.)	6352	9631	9688
	Total	110134	113691	102217

Source: Commissioner of Fisheries, Chennai-6.

The spread and quantum of rainfall has been rather erratic, over the last two years with resultant dry spells and drought. As a result, fishing activity has been affected. Dry periods and drought conditions for two years in succession impinged upon the fishing activity to a greater extent.

2.4. Export of Fishing:

Marine exports have been an important source of foreign exchange earning. Tamil Nadu is one of the major exporter of Fish. The State is exporting marine products to foreign countries. In 2002-03 the total quantity of fish exported was to the tune of 70147 tonnes valued at Rs.250787 lakhs. At all India level the export was at 467297 tonnes realising a value of Rs.688131 lakhs. The share of Tamil Nadu in total quantity of fish exported worked out to 36.44 per cent.

Table - 11
Export of Fish and Fish Products

Year	Tamil Nadu		All-India	
	Quantity (Tonnes)	Value (Rs.in Lakhs)	Quantity (Tonnes)	Value (Rs.in Lakhs)
2000-2001	53005	226478	444073	644389
2001-2002	58482	201640	424470	595705
2002-2003	70147	250787	467297	688131

Source: Commissioner of Fisheries, Chennai-6..

2.5. Development Initiatives:

With respect of marine fisheries the State evolved Marine Fisheries Policy. An integrated Marine Fisheries Development Project Phase-I has been in implementation. The State is extending financial assistance to motorised traditional crafts and relief to fishermen. Sound infrastructure such as landing facilities was created in areas which are badly in need.

With regard to inland fisheries sufficient fish seed had been produced in WGDP areas and secured infrastructure had been created. The Department is providing training and extension services to the fishermen. For the welfare of fishermen, housing scheme, saving-cum-relief scheme, Group Insurance scheme and Co-operatives are being encouraged. The Tamil Nadu State Apex Fisheries Co-operative Federation Ltd., was created in 1992 to improve the socio-economic conditions of the fishermen.

2.6. Sustainable Fish Development:

The Government of India has imposed a 45 days ban on fish catching during summer season in notified areas in the sea with a view to arresting over-exploitation of fish. This policy will contribute towards improved breeding of fish and ensuring sustainable development of fish population. The Supreme Court of India directed that all the aqua farmers in the coastal areas should obtain approval from Aqua cultural Authorities of India. This move is to regulate pisciculture in the Coastal Regulation Zone.

3. FORESTRY:

Upon the health of the hills depends the wealth of the plains. Forest confers multiple benefits on the society, as detailed below:

- Supply of timber, fuel wood, fodder and a wide range of non-wood products;
- Natural habitat for bio-diversity and repository of genetic wealth;
- Provision of recreation and opportunity for eco-tourism;
- Playing an integral part of the watershed to regulate the water regime, conserve soil and control floods; and
- Carbon sequestration and carbon sink

3.1. Extent and Quality of Forests:

Total geographical area under forest is at 17.59 per cent as against the normative requirement of 33.3 per cent prescribed in the National Forest Policy, 1988 mandates increase of forest cover to 23 per cent of geographical area by 2007 and 33 per cent by 2012 which is also endorsed by the Union Planning Commission. As per State of Forest Report (FSI 2001), at the national level, the forest cover is at 20.55 per cent of the total geographical area. The Forest Survey of India assesses the forest cover biennially by interpreting satellite data using digital image processing technique which is in contrast with the previous assessment where visual interpretation of satellite data had been the main mode of interpretation.

The latest assessment on forest cover (FSI 2001) indicates that 9.6 per cent of the total geographical area is dense forest (over 40 per cent crown density) and 6.9 per cent is open forest (10-40 per cent crown density). In order to improve the quality of forest and bringing additional area under forest, the Forest Department has been focusing on implementation of major schemes. At the national level Forest Policy was evolved in 1988 in order to maintain environmental stability and restore ecological balance through conservation and upgradation. Major highlights of the objectives of the National Forest Policy, 1988 are detailed below:

Box -2 : National Forest Policy 1988 - Highlights

- *Increasing substantially the forest / tree cover in the State;*
- *Ensuring environmental stability and restoration of ecological balance;*
- *Conservation of bio-diversity for the benefit of present and future generations;*
- *Mitigating floods and droughts and also retarding siltation of reservoirs by checking soil erosion and denudation in catchment areas of rivers, lakes and reservoirs;*
- *Meeting the genuine requirement of fuel, fodder, non-wood forest produce and small timber to the extent possible on a sustainable basis (through Joint Forest management);*
- *Extension of improved forest technology to farmers for creating alternative sources of forest produce outside the Reserved Forests;*
- *Improving the habitat for all living beings including micro organisms, insects, birds and animals;*
- *Making available the traditional forest produce to be used rightfully by the tribal people living inside forests.*
- *Creating a massive people's movement with the involvement of women, for achieving these objectives and to minimise pressure on existing forests.*

3.2. Plan Expenditure:

Increasing forest cover is high on the development agenda of the State. With a view to achieving the above goal the Government has been increasing funds earmarked for development of forestry sector. The First Plan expenditure on forest was at Rs.30.43 lakhs. It rose to Rs.60312 lakhs during the IX Plan. A sum of Rs.12978 lakhs has been set apart for forestry sector during the X Five Year Plan, as delineated in the table.

Funds earmarked for forestry sector had gone into various components such as Forestry and Wild Life, Plantations, Hill Area Development, Ecology and Environment, etc.

A look at the expenditure pattern reveals that the component forestry and wild life alone claimed a lion's share of 85 per cent out of the total expenditure of Rs.19181.28 lakhs in 2002-03. Next to this component, ecology and environment got a share of 6.13 per cent in 2002-03 out of the total funds spent

Table - 12: Trends in Expenditure on Forestry : By Activity

Plan Period	Year	Plan Expenditure (Rs. in lakhs)	Area Covered (Lakh hectare)
I Plan	1951-56	30.43	0.15
II Plan	1956-61	147.00	0.78
III Plan	1961-66	372.14	0.76
Post III Plan	1966-69	279.99	0.39
IV Plan	1969-74	574.71	0.68
V Plan	1974-78	1198.33	1.09
Post V Plan	1978-80	516.13	0.41
VI Plan	1980-85	5700.00	2.13
VII Plan	1985-90	11189.00	1.80
Post VII Plan	1990-92	8504.00	0.85
VIII Plan	1992-97	28364.00	2.77
IX Plan	1997-2002	60312.00	4.15
X Plan	2002-2007 (2002-2003)	12978.00	0.37

Source: Office of Principal Chief Conservator of Forest.

Table - 13: Expenditure on Forestry : By Activity (Rs. in Lakhs)

Sl.No.	Activity	2001-02 (Accounts)	2002-03 (Accounts)
1.	Welfare of SC/ST & BC population	100.59	108.48
2.	Soil and Water Conservation	191.66	175.88
3.	Social Security	2.85	2.98
4.	Forestry and Wildlife	19294.67	16948.47
5.	Plantations	1.15	0.99
6.	Forest Research and Education	236.55	43.25
7.	Hill Area Development	724.79	726.03
8.	Ecology and Environment	248.79	1175.20
	Total	20801.05	19181.28

Source: Office of Principal Chief Conservator of Forest.

Total revenue from forestry came to Rs.156.41 crores in 2002-03 against Rs.96.08 crores in 2001-02. The item of sale of timber and other project product alone accounted for a larger share of 80.5 per cent out of the total revenue of Rs.156.41 crores in 2002-03.

Table-14: Revenue from Forestry (Rs. in crores)

Sl.No.	Item	2001-02	2002-03
1.	Sale of timber and other Forest products	69.95	125.87
2.	Receipts from Social and Farm forestry	11.15	13.15
3.	Other receipts	14.98	17.39
	Total	96.08	156.41

Source: Office of Principal Chief Conservator of Forest.

A brief review of major forest schemes implemented in the State is highlighted below.

3.3. Tamil Nadu Afforestation Project:

Phase-I of the scheme Tamilnadu Afforestation Project has been implemented since 1997-98 up to 2001-2002 with the financial assistance from Japan Bank for International Co-operation.

Under Tamilnadu Afforestation Project an area of 34900 ha. of interface zone was covered in 2002-03. The eco restoration zone was at 1497 ha. and production zone totalled 633 ha.

Table - 15: Area Planted under Forest Component (Area in ha.)

Sl.No.	Zone	Area Covered	
		2001-02	2002-03
1.	Eco restoration zone	1266	1497
2.	Production zone	2405	633
3.	Interface zone	75250	34900

Source: Office of Principal Chief Conservator of Forest.

In order to consolidate the gains from the first phase of the Tamilnadu Afforestation Project, the project was extended for two more years, viz., 2002-03 and 2003-04 with an outlay of Rs.172 crores. Major activities under this project for 2002-03 are as follows.

Table - 16: Details of Activities under Tamilnadu Afforestation Project

Sl. No.	Activity	2002-03
1.	No. of villages covered	108
2.	Degraded forest areas covered	27000 ha.
3.	Water Augmentation	5400 ha.
4.	Greening of community lands	2500 ha.
5.	Buffer zone activities in 2002-03 villages	108 villages
6.	Consolidation of 1997-98 and 1998-99 areas and buffer zone activities	213 villages

Source: Office of Principal Chief Conservator of Forest

Apart from this, another scheme viz., Tamil Nadu Natural Resources Management Project (Tamil Nadu Afforestation Project Phase - II) had been mooted for implementation with an outlay of Rs.779 crores for a 5-year period. The focus of the scheme would be on reduction of poverty, prevention of destruction of forest and conservation of forests besides urban forestry in corporation and municipal towns to abate pollution. It is proposed to treat about 2.50 lakh ha., of degraded forest in 1000 forest fringe villages under the scheme over a period of 5-years.

3.4. Hill Area Development Programme:

This scheme is implemented with financial assistance from the Government of India. It has built in provision for eco-restoration. The scheme is being implemented in the Nilgiris district. Activities like planting in degraded forest area, erection of chain link fencing around shola forest, enriching degraded sholas through soil and water conservation measures etc. are some of the important aspects of the scheme.. In 2002-03 this scheme was implemented over an area of 437 ha. with planting of indigenous species with financial outlay of Rs.348.344 lakhs.

3.5. Western Ghats Development Programme:

The Western Ghats Development Programme is implemented with Government of India funding and is being implemented in 57 blocks spreading over 33 taluks in 8 districts. This programme is also focusing on degradation of forest, eco-system and improvement of existing status of forest with enriched flora and fauna, gap planting, construction of water harvesting structures in micro watersheds, etc. Watershed strategy is the life line of this scheme. In the year 2002-03 this programme was implemented over an area of 1060 ha with mixed species with financial outlay of Rs.346.46 lakhs.

3.6. National Afforestation Project:

In order to establish linkages between rural development, assured rural employment generation and forest conservation, Government of India have contemplated Forest Development Agency concept with interlink approaches with a single umbrella scheme viz., National Afforestation Project. The Government of India-funded afforestation schemes are being implemented from 2002-2003 onwards through Forest Development Agencies on Joint Forest Management basis for which Forest Development Agencies are being formed in the implementing Divisions. Of the total 32 potential territorial and wildlife divisions, the Tamilnadu Forest Department has sent proposal for forming 31 Forest Development Agencies for five years covering 862 villages over an area of 44177 ha. So far, the Government of India have sanctioned FDAs to be implemented in 25 divisions with total outlay of Rs.7223.93 lakhs for 5-years and sanctioned Rs.910.52 lakhs for 2002-03. For 2003-04, the Government of India sanctioned Rs.1635 lakhs for these 25 Forest Development Agencies.

3.7. Wasteland Development Programme:

The Wasteland Development Programme in Tamilnadu is being implemented with the objective of making unproductive wastelands productive. During 2002-2003 Forest Department produced 54 lakhs seedlings for planting in wastelands of 10 districts viz., Tirunelveli, Madurai, Tiruvannamalai, Vellore, Theni, Salem, Namakkal, Tiruchi,

Dindigul, Ramnad and Pudukottai. An amount of Rs.3.62 crores was spent during 2002-03 under the scheme for the above purpose.

A total of 22 lakhs of quality seedlings other than karuvel such as Neem, Vagai, Sisoo, Tamarind, Pungan, Eucalyptus, Subabul, Casuarina, etc. raised under Wasteland Development Programme will be planted over an extent of 3,100 ha. in the tank foreshores of 10 selected districts during 2003-04. For this purpose a sum of Rs.3.50 crores has been sanctioned.

3.8. Gulf of Mannar Biosphere:

A Project proposal on "Conservation and sustainable use of Gulf of Mannar Biosphere Reserve Coastal Bio-diversity" has been approved for assistance from the Global Environmental Facility (GEF). The objective of the project is to conserve coastal bio-diversity and to reduce the pressure on the marine sea resources caused by overexploitation and shift it to land-based activities through employment generation. The project with an outlay of Rs.123.94 crores will be implemented by this department through a trust, which has been constituted by the Government. This project was launched by the Hon'ble Chief Minister on 18.7.2002. During 2002-03, assistance from the Global Environmental Facility (GEF) was received for Rs.50.00 lakhs. During 2003-04 the scheme is proposed to be implemented with an outlay of Rs.5.15 crores.