

**Study Report on
Techno-Socio-Economic Survey of
Fishermen Households in Tamil Nadu**

Presented to
THE DIRECTOR OF FISHERIES
Madras.

BY
THE INSTITUTE FOR TECHNO ECONOMIC STUDIES
76, HARRINGTON ROAD,
MADRAS-600 031.

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PREFACE

The Government of India and the State Government have been trying to improve the Techno-Socio-Economic conditions of the fishermen, who have been living below the poverty line, both in the Marine and Inland sectors, by the various developmental schemes under the Five year Plans and the Annual plans. As it is necessary to assess the impact of the benefits and the development in the Techno-Socio Economic conditions of the fisherman, the Government of India entrusted this work to the various State Governments including Tamil Nadu. The Government of Tamil Nadu approved the proposal of the Director of Fisheries, Madras to entrust this centrally assisted Techno-Socio-Economic Survey to the Institute for Techno Economic studies, Madras-31, at a cost of Rs.1.21 lakhs considering the fact that the Institute had already conducted studies on similar issues relating to the fishing industry in Tamil Nadu.

This Institute examined the relevant aspects of the study and the field work in full swing commenced from the 2nd week of March 1987 on receipt of specific orders from the Government of Tamil Nadu. The field survey was conducted by 50 Investigators and their work was frequently checked in the field. The data have been collected for one year (i.e.) the calendar year 1986. The survey covering 44 Marine fishing villages in nine maritime districts and 87 Inland fishing villages covering 40 blocks in eighteen districts and the task of tabulating the data collected and writing the report was completed in three months.

This Report has been prepared keeping in view the main features of the format that was provided by the Government of India and the data collected according to the format. The identification of the sample villages has also been done according to the requirements of the Government of India. The necessary background information has been supplied in some detail, wherever it is required. It could also form the basis for preparing future plans for the techno-socio-economic uplift of the fishermen in the State.

This report has been prepared by Thiru A.Daniel, Joint Director of Fisheries (Retd) under the guidance and direction of Thiru V.karthikeyan, IAS (Retd), Chief Adviser of this Institute and Thiru S.P.Namasivayam, Secretary, who have spared no pains to make it as specific and useful as possible.

CHAPTER - I

Introduction

1. Since time immemorial the inland waters and inshore areas have been used for subsistence fisheries. Till 1950's both inland and marine fishes were capture fisheries from the natural resources. The fishermen used indigenous fishing crafts and gears. After independence, efforts were taken for the development of fisheries, the major objectives being the improvement of the socio-economic conditions of fishermen and additional fish production to combat mal-nutrition.
2. In order to provide scientific base for long term development, the Government of India set up the Central Marine Fisheries Research Institute, the Central Institute of Fisheries Technology, and the Central Institute of Fisheries Education. These institutes generated new technologies. The State Government through its plan schemes provided assistance to fishermen and created infrastructural facilities for the development of Fisheries. Simultaneously the new technologies were transferred to the field by the extension service wing of the State Fisheries Department.
3. Introduction of mechanisation programme and synthetic fibres, creation of landing and berthing facilities, establishment of ice plants, cold storage/freezing plants etc., provision of quick transport facilities and link roads, development of major reservoir-fisheries, composite fish culture, Fish Farmers Development Agencies, Intensive fish culture and marketing, brackishwater fish culture were the major programmes during the last six five year plan periods. The implementation of the above schemes had resulted in additional production which has generated fish exports and the development of the ancillary industries. This in turn has created new avenues of employment in rural areas and consequent improvement of the socio economic conditions of fishermen who have been living below the poverty line.
4. Both the Government of India and the State Government have been trying to improve their techno-socio-economic conditions by the various schemes implemented under the Five Year Plans. In order to assess the impact of the benefits and the development in the techno-socio economic conditions, the Government of India have now entrusted this work to the various State Governments including Tamil Nadu. The Tamil Nadu State Government have entrusted this work to the Institute for Techno

Economic Studies, Madras-31. The Institute examined the relevant aspects of the study and decided to undertake this work. Although it was envisaged that this work would commence from the 3rd week of February 1987, the actual field survey in full swing commenced only from the 2nd week of March owing to belated receipt of specific orders from the Government.

5. The field survey was conducted by 50 investigators and their work was checked in the field. The data have been collected for one year (ie.) the calender year 1986. The survey covering 44 marine fishing villages in nine maritime districts and 87 inland fishing villages in 40 blocks of eighteen districts, processing and tabulating the data collected and writing up the report was completed in three months.

Sampling Design

6. As already observed by the Government of India, the sampling designs in respect of Marine and Inland fishermen communities are not the same. The Marine fishing villages are easily identified and are invariably situated all along the coast and in addition, there is reliable information in respect of the number of villages, households as well as population. As per the marine Fishery census, there are about 442 fishing villages along the 1000 Km coast of Tamil Nadu. 10% of the fishing villages (ie.) 44 villages have been selected at random to make the sample survey of marine fishing villages. It was ensured that 100% survey was conducted in the selected villages.

7. But, the picture in Inland sector is very much different. A majority of the persons engaged in fishing are only part time fishermen. They are also dispersed all over the state and as such, the villages and households are not easily identifiable as fishing villages or as fishermen households excepting in a few cases where there are small fishing hamlets along the major rivers, reservoirs or backwaters. Therefore, in the Inland sector, a Development Block is taken as a unit for fulfilling the requirement of 10% of the households to be surveyed. Here also, 100% survey was conducted covering the fishermen houses in the selected villages.

8. The format for field survey and schedules of different types to be canvassed were supplied by the Government of India. The schedules actually canvassed in the field were the following:-

- i) Village Schedule
- ii) Household Schedule

- iii) *Techno-details, Inland Fisheries*
- iv) *Techno Details, Marine Fisheries.*

9. The 44 Fishing villages, where the survey had to be conducted together with the total number of families to be surveyed in the Marine sector were furnished by the State Fisheries Department. But as regards the Inland sector, the names of the districts and the blocks were furnished by the State Fisheries Department but the villages were identified by the Institute. In all 7842 families in the Marine sector and 3862 families in the Inland sector were surveyed.

10. This report on the Techno-Socio Economic Survey is presented in Seven Chapters. The first chapter gives the Introduction to the report. The Second deals with the General Profile of the selected villages. The third chapter gives the Social conditions of the surveyed households in the Marine and Inland Sectors. The fourth deals with the economic conditions of the surveyed households in the Marine and Inland sectors. Chapter V gives the Technological Status of the surveyed households in the Marine side, while chapter VI deals with the Technological status of the surveyed households in the Inland sector. The Seventh Chapter gives the summary of the findings.

11. Tables 1.1 and 1.2 give the details about the Districts, Villages and the number of Families covered in the Marine and Inland sectors respectively.

TABLE - 1.1

DISTRICTS AND VILLAGES COVERED IN THE MARINE SECTOR

Sl. No.	Names of the Districts	No. of Marine Fishing villages	Total population	No. of villages selected for sampling	Names of the Villages selected	No. of families as per census of the Dept. 1986	No. of families as per pre-sent survey
1.	2.	3.	4.	5.	6.	7.	8.
1.	Madras	40	46232	4	Anna Nagar C.G.Colony Devendranagar Alcot Kuppam	222 306 168 194	222 306 168 194
					Total	890	890
2.	Chingleput	64	38723	8	Santhakkuppam Indragandhi-kuppam Palavakkam Semmencherikuppam Umarikuppam Perundurkuppam Panaiyurkuppam Naine kuppam	215 36 59 92 150 55 155 150	215 41 59 97 150 55 122 130
					Total	912	869

1.	2.	3.	4.	5.	6.	7.	8.
3.	South Arcot	56	42040	5		115	116
					Kaipanikuppam	27	23
					Pudukuppam	636	591
					Devanampattinam	34	
					Naickarpettai	227	289
					Samiyar pettai	118	103
					Chinnavaikkal		
					Total	1457	1122
4.	Thanjavur	84	87128	8		337	328
					Thoduvali	533	475
					Vanagiri	49	53
					Chinnurpettai	105	95
					Kameswaram	78	78
					Pannal	52	65
					Athikudikadu	97	96
					Kollukadu	121	94
					Adikkathevan		
					Total	1372	1284
5.	Pudukottai	29	10157	2		69	40
					Prathabiraman-		
					pattinam	189	217
					Poonagaram Colony	23	Nil
					Palakkudi		
					Total	281	257

1.	2.	3.	4.	5.	6.	7.	8.
6.	Ramanathapuram	99	65844	10	Damodaranpattinam Karangadu Alagankulam Thonithurai Olaikkuda Savariyar Nagar Chinnapallam Indranagar (Pudukkudiyiruppu) Shanmugavelpattinam Keezhamundal Total	86 200 172 56 117 84 126 62	61 191 130 42 62 81 134 115
7.	Tirunelveli	26	58779		PerumaneI Sippikulam Amalinagar Total	227 158 241 626	192 140 253 585
8.	V.O.C	44	114897	4	Kesavanpenthurai Melkadiapattinam Naduthurai Thoothoor Total	242 643 221 598 1704	246 622 233 582 1683
						1273	1152

TABLE - 1.2
DISTRICTS, BLOCKS AND VILLAGES COVERED IN THE INLAND SECTOR

1.	2.	3.	4.	5.	6.
Sl. No.	Name of the Districts	Blocks in which situated	Name of the village	No. of families to be covered as estimated by Dept.*	No. of families as per present survey
1.	Madras		Narayanawamythottlam	100	100
2.	Chingleput	Gummudiipoondi -do- Kancheepuram	Chinnamangadu Chunnambukalam Kancheepuram	120 80 102	120 80 102
3.	South Arcot	Cuddalore -do- Chidambaram Chidambaram Kattumanarkoil -do-	Uppalavadi Tirupapuliur Prembattu Vallambadukai Lalpet Muttom	200	183
4.	North Arcot	Cheyyar -do- -do- -do- -do- -do- Arcot Arcot	Arsanimangalam Purisai Venkelayaur Cheyyanur Suruttal Munugapattu Irungur Vazhapandal	200	200

* Approximate

1.	2.	3.	4.	5.	6.
5.	Salem	Kolathur	Masilampalayam		
		-do-	Puthuvelamangalam		
		-do-	Kathiyankuttai	200	200
		-do-	Kottaiyur		
		-do-	Navithankottai		
		-do-	Koovar		
		-do-	Keerikavahur		
		-do-	Kunandiyur		
6.	Dharmapuri	Pennagaram	Uttamalai	200	200
7.	Peeriyar	Gobichettipalayam	Periyakoduvai		
		-do-	Velangattupalayam		
		-do-	B.Mettupalayam		
		-do-	Meeanavar Colony	200	200
		-do-	K.Pudur		
		Sathiamangalam	Annanagar		
		-do-	Poongar		
8.	Coimbatore	Perur	Coimbatore		
		Karamadai	Mettupalayam		
		Annamalai	Korattur	300	300
		-do-	Annamalai		
		-do-	Ambarampalayam		
		Madathukulem	Kolumam		

1.	2.	3.	4.	5.	6.
9.	Thanjavur	Mannargudi -do- -do- Papanasam -do- Thiruvaiyaru Kumbakonam Narasingampettai Kumbakonam	Mannargudi Needamangalam Orathur Rajagiri S.Ranganathapuram Thiruvaiyaru Anaikarai -do-	400 400	404
10.	Trichy	Lalgudi Audanallur Paramathi Ariyalur Thirumanur -do- -do-	Lalgudi Srirangam K.Paramathi Ariyalur Thirumalapadi Aranmanaikurichi Karayankurichi	300	240
11.	Pudukottai	Pudukottai Thirumaiyam	Pudukottai Thirumaiyam	200	111
12.	Madurai	Periakulam Bodi Andipatti -do-	Periakulam Bodinayakkanur Vaigai Dam Kullapuram	200	200
13.	Ramanathapuram	Paramakudi -do- Kamuthi	Parthipanoor Paramakudi Kamuthi	200	182

1.	2.	3.	4.	5.	6.
14.	Pasumpon Muthuramalingam	Thirupuvanam -do- Manamadurai	Poovanthi (Pappanpatti) Tirupuvanam Manamadurai	200	119
15.	Kamatajar	Srivilliputtur -do- Virudhunagar Rajapalayam	Kilavikulam Pathraiyituppau Virudhunagar Pudupalayam	200	221
16.	Tirunelveli	Palayankottai -do- -do- -do- -do- -do- -do- Manoor	Melapalayam Pettai Palayankottai Tharuvai Gopalamudram Gangaikondam Chezhianallur Manoor	200	200
17.	V.O.C.	Srivaikundam -do- -do-	Mukkai Kuruvithurai Muramangalam	200	200
18.	Kanyakumari	Thakalay Agastheaswatam -do- -do-	Eraniel Elangadi Kottur Vadassery	200	200
				4000	3862

CHAPTER - II

General Profile of Surveyed Villages

1. This Chapter deals with the analysis of the data collected from the selected villages as a whole with reference to the topography, economic and social amenities, infrastructural facilities, transport and communication facilities.

Families and population

2. The 44 villages in the nine maritime districts had a total of 7842 families and a total population of 38,907, (20,280 Males and 18,627 Females). On the otherhand, the 87 Inland Villages in the eighteen districts had a total of 3862 families with a total population of 16,697, 8928 Males and 7769 Females. Frequency distribution of the selected villages according to population groups is furnished in Table II.1.

Topography

3. All the 44 Marine villages are situated in the sea shore along the 1000 kilometre coastline of Tamil Nadu. As regards the Inland villages 69 are in lowlying areas, three in upland region, 12 on river banks and three on banks of Tanks (Table II.2). 27 of the Marine villages in Madras, Chingleput, South Arcot, Thanjavur and Pudukottai districts were prone to cyclones often causing considerable damages to life and property. But in the Inland Sector 2 villages in Chingleput district situated on the banks of lakes are vulnerable to floods. The rivers, tanks, lakes and Reservoirs in Tamil Nadu receive water supply by the influence of the North East and South West Monsoons. 53 of the villages are periodically affected by scarcity or semi scarcity conditions (drought) with almost regular frequencies. Earthquakes have not been reported in any of the surveyed villages (Table II.3).

Social amenities

4. Table II.4 furnishes the details about the availability of important social amenities like drinking water, health centres and hospitals, educational institutions, places of recreation like cinema halls or Public parks and Library/reading rooms since such amenities would have some bearing on the resident fishermen's socio-economic conditions. Drinking water which is a

minimum need, is available in 98% and 100% in the marine and Inland villages respectively in normal years. At the other extreme is the facility of parks or public gardens - a widely felt need for improving rural environment and village peoples' health standards. It is noticed that it is completely absent in the marine villages and available only in 25 out of the 87 Inland villages. Health and medical facilities are available in 35 out of the 44 Marine villages (79.54%) as against 75 out of the 87 Inland villages (86%).

5. The table under review reveals the fact that the villages on the Inland sector are having more number of educational institutions when compared with the Marine sector. On the Marine side as many as 38 and 34 villages out of the 44 villages possess the facility of primary and High Schools respectively. As against this on the Inland side 84 and 70 villages are having primary and high schools. Fourteen out of the 44 marine villages (31.81%) and 40 out of 87 Inland villages (46%) enjoy the facility of public library or reading room. 22 Marine villages (50%), and 60 Inland villages (69%) have cinema halls.

Infrastructural Facilities

6. Table II.5 gives the details about the number of Marine and Inland villages having certain basic facilities required for fishing operations (ie.) landing facilities, marketing facilities, electricity, banks and Fishermen Cooperative Societies. It is seen that 42 marine villages have minimum landing facilities whereas marketing facility is available in 20 marine and 64 Inland villages only. There is no landing facility in the Inland villages. 39 out of 44 Marine villages (88.63%) and 84 out of 87 Inland villages (97%) are electrified. It indicates that most of the fishing villages are electrified providing scope for overall development. Banking facility is available in 24 Marine and 60 Inland villages (54.54% and 69%). Fishermen Cooperative Societies have made headway and are available in 39 marine villages and 70 Inland villages (88.63% and 80%). This indicates excellent economic and infrastructural development.

Transport and Communication Facilities

7. The Socio Economic conditions of the fishermen to a very large extent depend upon the efficient marketing of their catches both in the Marine and Inland sectors. This to a large extent depends upon transport and communication facilities like bus services, motorable approach roads to the landing centre and the distance of the highway, Railway Station and Post Office available at or near the landing centre. Table II.6 presents details

about the availability of these facilities. 29 Marine villages and 76 Inland villages have the facility of a bus connection within the village (65.91% and 87%) depicting the fact that 34.09% and 13% in the respective sector have to traverse certain distance for reaching the bus stops- a very pressing need for transporting the catches. 14 Marine villages and 55 Inland villages (31.81% and 63.21%) have motorable road to the landing centre which is inadequate for fish marketing. It is seen that 15 out of 44 marine villages and 12 out of 87 inland villages are situated at a distance of more than 5 kms from the highway. The location of the nearest Railway Station in respect of 24 marine villages and 24 inland villages is at a distance of more than 10 Km from the villages. Post Office being an important mode of communication is available at a distance of less than 5 kms in respect of 43 marine and 87 inland villages.

8. It is clear that the selected villages barring a few are in an average or above average condition with reference to the factors enumerated in the preceding paragraphs.

TABLE No. II-2
TOPOGRAPHY OF SURVEYED VILLAGES - PHYSICAL

No.	District	Marine				Inland														
		Low Land	Up-land	Moun- tains	Ziver Lake	Sea shore	Low Land	Up-land	Moun- River	Forest Lake	Forest Sea-shore									
1.	Madras	-	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	-	
2.	Chingleput	-	-	-	-	8	1	-	-	2	-	-	-	-	-	-	-	-	-	
3.	South Arcot	-	-	-	-	5	3	-	-	-	-	-	-	-	-	-	-	-	-	
4.	North Arcot	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	
5.	Balem	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	7	
6.	Thamspuri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7.	Periyar	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
8.	Coimbatore	-	-	-	-	-	3	-	-	4	-	-	-	-	-	-	-	-	-	
9.	Thanjavur	-	-	-	-	-	1	-	-	5	-	-	-	-	-	-	-	-	-	
10.	Trichy	-	-	-	-	0	9	-	-	-	-	-	-	-	-	-	-	-	-	
11.	Pudukottai	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-	-	-	
12.	Madurai	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	
13.	Bembartha- puzan	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	
14.	Pacumpon Muthurainingar	-	-	-	-	10	3	-	-	-	-	-	-	-	-	-	-	-	-	
15.	Kamarejar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
16.	Thrunelveli	-	-	-	-	1	8	-	-	-	-	-	-	-	-	-	-	-	-	
17.	V.C.C	-	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	
18.	Kanyakumari	-	-	-	-	4	4	-	-	-	-	-	-	-	-	-	-	-	-	
Total		-	-	-	-	44	69	3	12	3	12	3	3	3	3	3	3	3	3	3

TABLE No. II-1
FISHERMAN POPULATION

Sl. Districts No.	Marine					Inland								
	Less than 50	51-100	101-250	251-500	501-1000	1001-2000	2001 & above	Less than 50	51-100	101-250	251-500	501-1000	1001-2000	2001 & above
1. Madras	-	-	-	-	3	1	-	-	-	-	1	-	-	-
2. Chingleput	-	-	2	3	3	-	-	-	-	-	3	-	-	-
3. South Arcot	-	-	1	1	1	1	1	-	4	1	1	-	-	-
4. North Arcot	-	-	-	-	-	-	2	3	3	3	-	-	-	-
5. Salem	-	-	-	-	-	-	-	5	3	3	-	-	-	-
6. Dharmapuri	-	-	-	-	-	-	-	-	-	-	-	4	-	-
7. Periyar	-	-	-	-	-	-	-	-	-	5	2	-	-	-
8. Coimbatore	-	-	-	-	-	-	2	1	1	1	1	-	1	-
9. Thanjavur	-	-	-	4	2	-	-	-	-	5	4	-	-	-
10. Trichy	-	-	-	-	-	-	1	-	-	4	2	-	-	-
1. Pudukottai	-	-	-	1	-	1	-	-	-	1	1	-	-	-
2. Madurai	-	-	-	-	-	-	-	-	-	3	1	-	-	-
3. Ramanathapuram	-	-	1	2	6	-	1	-	-	1	1	1	-	-
4. Pudukottai	-	-	-	-	-	-	-	-	1	1	1	-	-	-
5. Madurai	-	-	-	-	-	-	-	-	1	2	2	-	-	-
6. Tirunelveli	-	-	-	-	-	1	1	3	4	4	-	-	-	-
7. V.O.C.	-	-	-	-	1	1	-	-	-	1	2	-	-	-
8. Kanyakumari	-	-	-	-	-	2	2	-	-	2	2	-	-	-
Total	-	-	4	11	16	7	6	17	37	24	2	-	1	-

TABLE No. II-3
TOPOGRAPHY OF SURVEYED VILLAGES - NATURAL

1. Districts	Marine				Inland			
	Floods/ Tidal waves	Drought	Typhoons/ Hurricanes	Earth- quakes	Floods/ Tidal waves	Drought	Typhoons/ Hurricanes	Earth quakes
• Madras	4	-	-	-	-	-	-	-
• Chingleput	8	-	-	-	2	-	-	-
• South Arcot	5	-	-	-	-	6	-	-
• North Arcot	-	-	-	-	-	8	-	-
• Salem	-	-	-	-	-	3	-	-
• Dharmapuri	-	-	-	-	-	1	-	-
• Periyar	-	-	-	-	-	7	-	-
• Coimbatore	-	-	-	-	-	6	-	-
• Thanjavur	8	-	-	-	-	9	-	-
• Trichy	-	-	-	-	-	3	-	-
• Pudukottai	2	-	-	-	-	-	-	-
• Madurai	-	-	-	-	-	-	-	-
• Ramanathapuram	-	-	-	-	-	3	-	-
• Pannapan Mutlu- ramalingam	-	-	-	-	-	3	-	-
• Kararajar	-	-	-	-	-	4	-	-
• Tirunelveli	-	-	-	-	-	-	-	-
7. V.C.C	-	-	-	-	-	-	-	-
8. Kanyakumari	-	-	-	-	-	-	-	-
Total	27	2	-	-	2	53	-	-

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TABLE No. II-4
SOCIAL AMENITIES IN SURVEYED VILLAGES

Sl. No.	Districts	(Marine)									
		Drinking Water	Park-Plantation	Hospitals-Health Centre	Marine Hospitals	Cinema Halls	Library Reading Rooms	Educational Primary School	High College	Institutions	Other
1.	Madras	4	-	4	4	4	4	4	4	4	-
2.	Chingleput	8	-	8	3	-	7	7	1	1	-
3.	South Arcot	5	-	2	2	1	3	2	-	-	-
4.	Thenjavur	8	-	2	3	-	8	6	-	-	-
5.	Pudukottai	2	-	2	-	-	2	1	-	-	-
6.	Mananathapuram	10	-	9	7	4	7	7	-	-	-
7.	Tirunelveli	1	-	1	1	1	1	1	-	-	-
8.	V.C.C	2	-	2	2	1	2	2	-	-	-
9.	Kanyakumari	4	-	3	-	3	4	4	1	1	-
Total		44	-	33	22	14	38	34	6	6	-

TABLE No. II-4 IN RELEASED ATTACHE - MARINE
 DATE: 11-11-59

TABLE No. II-4(a)

SOCIAL AMENITIES IN SURVEYED VILLAGE - INLAND

Sl. No.	Districts	INLAND									
		Drinking Water	Parks/Plantation	Hospital Health Center	Cinema Halls	Library Reading Room	Primary School	High School	College	Other Institutions	
1.	Madras	1	1	1	1	1	1	1	1	1	-
2.	Chingleput	3	-	2	1	-	3	1	-	-	-
3.	South Arcot	6	-	5	2	4	4	2	-	-	-
4.	North Arcot	8	1	8	5	5	8	5	-	-	-
5.	Salom	8	5	8	5	5	8	8	-	-	-
6.	Dharmapuri	1	-	1	1	-	1	1	-	-	-
7.	Periyar	7	2	7	5	1	7	6	-	-	-
8.	Coimbatore	6	2	6	4	3	5	4	-	-	-
9.	Thanjavar	9	5	9	9	8	9	9	2	-	-
10.	Tirichy	7	2	7	7	4	7	4	-	-	-
11.	Pudukottai	2	1	2	2	2	2	2	-	-	-
12.	Madurai	4	3	4	4	2	4	4	1	-	-
13.	Benares (Madhu-ram)	3	-	3	3	3	3	3	3	1	-
14.	Pappalpur (Muthu-ram)	3	-	2	2	-	3	3	3	-	-
15.	Kannur	4	2	4	2	1	4	4	4	3	2
16.	Thirunelveli	8	-	8	7	3	8	8	8	2	2
17.	V.C.C	3	-	3	2	-	3	3	3	-	-
18.	Kanyakumari	4	1	3	3	4	4	4	4	4	1
Total		87	25	75	60	40	84	70	11	5	

TABLE No. II-5
INFRASTRUCTURAL FACILITIES IN SURVEYED VILLAGES

Sl. No.	Districts	Marine						Inland					
		Landing facilities	Marketing facilities	Electri- city	National- ized Bank/ Other Bank	Fisherman Co. Op. Society	Other	Marketing facilities	Electri- city	Used Bank/ Other Bank	Nation- ized Bank/ Other Bank	Fisherman Co. Op. Society	Other
1.	Madras	4	2	4	4	4	3	1	1	1	1	1	1
2.	Chingleput	6	4	6	3	8	-	2	6	3	3	2	3
3.	South Arcot	5	4	3	3	4	-	6	6	1	1	4	4
4.	North Arcot	-	-	-	-	-	-	4	8	8	8	8	8
5.	Salem	-	-	-	-	-	-	1	1	1	1	1	1
6.	Dharmapuri	-	-	-	-	-	-	5	7	1	1	1	1
7.	Periyar	-	-	-	-	-	-	3	6	5	5	6	6
8.	Colombatore	-	-	-	-	-	-	9	9	7	7	6	6
9.	Thanjavur	8	-	8	2	6	-	4	7	4	4	4	4
10.	Trichy	2	-	2	-	-	-	2	2	2	2	2	2
11.	Pudukottai	-	-	-	-	-	-	4	4	4	4	4	4
12.	Madurai	-	-	-	-	-	-	3	3	3	3	3	3
13.	Ramanathapuram	10	3	9	10	10	-	3	3	3	3	3	3
14.	Pasampon Muthu- ramalingam	-	-	-	-	-	-	3	3	3	3	3	3
15.	Kamarajar	1	1	1	-	-	-	4	4	4	4	4	4
16.	Tirunelveli	2	2	2	2	1	-	8	8	8	8	8	8
17.	V.O.C.	4	4	4	2	2	-	3	3	3	3	3	3
18.	Kanyakumari	4	4	4	4	4	-	4	4	4	4	4	4
Total		42	20	39	24	39	3	64	84	60	70	70	6

Note: None of the inland villages has been provided with landing facility.

TABLE No. II-6

TRANSPORT AND COMMUNICATION FACILITIES IN SURVEYED VILLAGES

Sl. No.	Districts	Bus Station		Marine					Post Office		
		Within Village	Outside Village	Motorable approach to Landing Centre	High Way						
					0/5	6/10	11/15	16/ab.		0/5 6/10 11/15 16/ab. 0/5 6/10 Above 10.	
1.	Madras	4	-	2	4	-	-	4	-	4	-
2.	Chingleput	5	3	3	8	-	-	2	1	5	7
3.	South Arcot	2	3	-	5	-	-	2	2 ^a	1	5
4.	Thanjavur	4	4	1	3	3	2	2	2	1	3
5.	Pudukottai	-	2	-	1	1	-	-	-	-	2
6.	Ramanathapuram	7	3	1	8	2	-	4	2	1	3
7.	Tirunelveli	1	-	1	-	-	1	-	-	-	1
8.	V.O.C.	2	-	2	1	1	-	-	1	-	1
9.	Kanyakumari	4	-	4	-	1	1	2	-	2	4
Total		29	15	14	30	8	2	4	14	7	17
										6	43

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TABLE No. II-6(a)
TRANSPORT AND COMMUNICATION FACILITIES IN SURVEYED VILLAGES
(INLAND)

Sl. No.	Districts	Inland														
		Bus Station		Motorable approach to Landing Centre	High Way			Railway			Post Office					
		Within Village	Outside Village			0/5	6/10	11/15	16/ab	0/5	6/10	11/15	16/ab	0/5	ab. 0/5	Above 3
1.	Madras	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
2.	Chingleput	-	3	-	2	1	-	-	-	-	-	-	-	-	-	-
3.	South Arcot	3	3	-	5	1	-	-	-	-	-	-	-	-	-	-
4.	North Arcot	4	4	-	5	2	1	-	1	5	-	-	-	-	-	-
5.	Salem	8	-	-	3	5	-	-	2	6	-	-	-	-	-	-
6.	Marumapuri	-	1	-	1	-	-	-	-	-	-	-	-	1	1	-
7.	Periyar	7	-	-	6	-	-	-	-	1	1	-	-	5	7	-
8.	Coimbatore	6	-	-	6	-	-	-	-	4	2	-	-	6	6	-
9.	Thanjavur	9	-	-	9	-	-	-	-	9	-	-	-	9	9	-
10.	Trichy	7	-	-	7	-	-	-	-	7	-	-	-	7	7	-
11.	Pudukottai	2	-	-	2	-	-	-	-	2	-	-	-	2	2	-
12.	Madurai	4	-	-	4	-	-	-	-	3	-	-	-	4	4	-
13.	Remanathapuram	3	-	-	3	-	-	-	-	2	-	-	-	1	3	-
14.	Pasumpon Muthu-ramalingam	3	-	-	2	-	-	-	-	2	1	-	-	-	3	-
15.	Kamarajar	4	-	-	4	-	-	-	-	3	-	-	-	1	4	-
16.	Tirunelveli	8	-	-	8	-	-	-	-	8	-	-	-	1	9	-
17.	V.O.C	3	-	-	3	-	-	-	-	-	-	-	-	-	3	-
18.	Kanyakumari	4	-	-	4	-	-	-	-	4	-	-	-	-	4	-
	To tal	76	11	55	75	9	3	3	48	15	8	16	87	-	-	-

CHAPTER - III

Social Conditions of the Surveyed Households in the Marine & Inland Sectors

1. The social conditions of the selected households in the Marine and Inland sectors with reference to population on the basis of their age including average family size, sex ratio, marital status, caste and religion, educational status, housing conditions and lighting conditions are dealt with in this chapter. The state profiles and particulars about the Marine fishermen are furnished in Table III.1. These details are not available in respect of Inland Fishermen families.

Population by Sex and Age Group

2. The marine fishermen population forms 0.95% of the population of the state (488.08 lakhs). The details of the fishermen population, sex and age of the surveyed households are presented in Table III.2. The total marine population is 38907 comprising of 20280 males (52.12%) 18627 females (47.88%). The concentration of marine fishermen with reference to the total population of the surveyed households of the districts is more in Kanyakumari District (25.86%) followed by Thanjavur District 5714 (14.69%), South Arcot District 5379 (13.83%) Ramanathapuram district 5203 (13.37%), Madras 4042 (10.39%) and the remaining districts reflect the total percentage. The total population by different age groups is distributed as children below 18 years 16982 (43.65%), adults between 18 to 60 years 20797 (53.45%) and above 60 years 1128 (2.90%). It is quite possible that there is under estimation of the age. This shows that the population of workforce in these households is little more than one-half. The corresponding population in the Inland Sector is given in Table III.3. The total population is 16687 comprising of 8928 males (53.47%) and 7769 females (46.53%). The different age groups are below 18 years 6472 (38.76%), 18 to 60 years 9982 (59.78%) and above 60 years 243 (1.46%). This reveals that the dependant among the Inland sector is less than that in the marine surveyed households.

3. It is also noted that among the marine households, the proportion of persons in the dependants' age group is higher among males (51.68%) than among females (48.32%). The same is the case of Inland sector 53.94% males and 46.06% females. During the survey, the field staff reported about the female labour participation in both the sectors, not in fishing activity but in other allied activities like fresh fish or dried fish trade,

net making, processing etc.

Sex Ratio, Average Family Size

4. It is seen from Table III.4 that the total population of 55604 persons in the surveyed households of both the marine and Inland sector is composed of 29208 males (52.53%) and 26396 females (47.47%). In the case of both the marine and the inland households, the proportion of male in the total population is relatively higher than female population.

5. Sex ratio as indicated by the number of female per 1000 males displays sharp difference between these two sectors; it is 914.29 in the case of marine and 893.29 among inland households. In the districts, it ranges between 802.51 in Pudukottai, and 974.54 in V.O.Chidambaranar district in the marine sector, while it ranges between 602.31 in Dharmapuri and 1044.22 in Madurai districts in the Inland sector. The average size of the family is 4.97 in the marine side and 4.39 in the Inland side among the surveyed households. It is brought to notice that the average size of marine fishermen family for the state is 5.33.

Educational Status

6. Among the total marine fishermen population of 38907, 19127 (49.16%) are illiterates, 10772 (27.69%) have studied upto the Primary level, 4933 (12.68%) upto middle school, 3409 (8.76%) upto High School, 507 (1.30%) upto college level and 159 (0.41%) have taken to technical education.

7. In respect of the Inland Fishermen among the 16697 persons, 7830 (46.90%) are illiterates, 4714 (28.23%) studied upto primary level, 2610 (15.63%) upto middle school, 1326 (7.94%) upto high school, 167 (1.00%) upto college level and 50 (0.30%) taken to technical education. It is noteworthy that nearly 50% of both the marine and inland fishermen are illiterate. But the percentage in the marine sector is more than in the inland sector (see tables III.5 & III.6).

Marital Status

8. (In the marine districts out of the population of 38907 persons, 16720 (42.97) are married, 21564 (55.43%) unmarried, 623 (1.60%) widowed, and no divorcee.) In the Inland sector, out of the total population of 16697 persons, 8554 (51.23%) are married, 7741 (46.36%) unmarried and 402 (2.41%) widowed. Here also there is no divorcee. (Table III.7).

Religion and Community

9. In the marine sector, among the 7842 families surveyed, 5130 (65.42%) are Hindus and 2712 (34.58%) Christians. There are no Muslims among the surveyed household although muslim fishermen do exist in Thanjavur, Pudukottai and Ramanathapuram districts forming 6.07% of the total marine fishermen population. Among the 7842 surveyed families in the marine sector, no family belongs to the Forward Caste, 7833 (99.89%) belong to the backward community and 9 (0.11%) belong to schedule caste. (Table III.8)

10. In the inland sector, among the 3862 families 3283 (85.00%) are Hindus, 498 (12.89%) are Christians and 81 (2.11%) are Muslims. 19 (0.49%) of them are from the Forward Community, 3651 (94.54%) from the Backward community and 192 (4.97%) are from schedule castes (Table III.9). There is no schedule tribe member among the surveyed households both in the marine and inland sectors. The different caste names among the three religious groups are furnished in Table No.III.1.

Availability of Drinking Water

11. In the marine sector, 3187 families (40.64%) are having the facility of protected water supply (ie) Taps and 4655 (59.36%) are getting water from wells. 7651 families (97.56%) get water within a distance of 1 Km and 191 families (2.44%) have to travel a distance of 1 to 3 kms for getting water (see Table III.10). In the inland sector, 2516 families (65.15%) get protected water supply, 927 families (24.00%) get water from wells and 419 (10.85%) take it from Rivers. 3565 families (92.31%) get water supply from within a distance of 1 Km and 297 families (7.69%) have to travel a distance of 1 to 3 kms to get drinking water (see Table III.11)

Lighting Facilities

12. It is noticed that out of the total marine and inland surveyed households, 2063 (26.31%) and 1625 (42.08%) respectively are having the facility of Electricity. The rest of them depend upon kerosene namely, 5779 (73.69%) in the marine and 2237 (57.92%) in the inland sectors (see Tables III.10 & 11).

Housing Facilities

13. Among the marine households, 4540 (57.89%) live in huts and 3302 (42.11%) live in houses. Among them, 4300 and

240 (94.71% and 5.29%) live in owned and rented huts respectively. 3039 and 263 families (92.04% and 7.96% live in owned and rented houses respectively. It is observed that on an average 4.96 persons occupy one house or hut as the case may be. In the Inland sector the average is 4.39 persons per house (Table III.12). In the Inland sector, 2409 families (62.38%) live in huts and 1453 (37.62%) live in houses. Among them, 2907 and 312 families (87.05% and 12.95%) live in owned and rented huts respectively. Likewise, 1013 and 440 families (69.72% and 30.28%) live in owned and rented houses respectively. It is observed that in the Inland sector, the number of individuals occupying a house is less when compared to the fishermen in the marine sector.

Lavatory Facilities

14. Although no mention has been made in the format provided by the Government of India about the availability of toilet facilities, it is an important factor affecting the hygienic conditions of the fishermen and the fish landings in particular. The open sea shore where the fish landings take place is used by the marine fishermen for their toilet purposes. This results in unhygienic condition and affects the environment for handling of fish in the area. The fishermen are therefore to be educated for keeping the seashore clean and their basic sanitary requirement have to be provided for in all marine fishing villages.

State Profiles**Table III.1****Administrative Units**

Total area (Sq.Kms.)	1,30,069
Revenue Taluks	166
Revenue Firkas	1,097
Revenue Villages	17,029
Panchayat Unions	385

<u>Population</u>	<u>1971</u>	<u>1981</u>
Total Population	4,11,99,000	4,84,08,077
Urban Population	33.0%	30.3%
Rural Population	67.0%	69.7%

Education

Literacy rate	39.52	46.8
a) Males	51.32	58.26
b) Females	26.87	24.99

Fishing Data**Fishing Communities****Marine**

Chettiar
 Pattanavar
 Paravar
 Mukuvar
 Muslims (Rowthar)
 Sembadavar
 Valayar
 Pattamgattiar

Inland

Nattar
 Servai

Number of Marine Fishermen by Religion

Hindus	2,48,330
Christians	1,87,330
Muslims	28,140
Total	<u>4,63,800</u>

Total No. of Marine Fishermen	4,63,800
Males	2,36,503
Females	2,27,297

Community

Forward	223	0.05%
Backward	4,57,759	98.70%
SC/ST	5,818	1.25%
Total	<u>4,63,800</u>	

Marine Fishermen by Occupation

1. Fishing	1,01,869	89.69%
2. Fresh Fish Trade	1,191	1.05%
3. Dried Fish Trade	582	0.51%
4. Net Making	477	0.42%
5. Diving	291	0.26%
6. Other than fishing & allied occupation	9,164	8.07%
Total	<u>1,13,574</u>	<u>100.00%</u>

Total Adults Males	1,28,585
Employed fishermen out of Total adults	88.33%

Educational Status (Marine)

Illiterate	54.47%
Primary	22.74%
Middle School	11.96%
High School	6.60%
College	0.89%
Technical	0.34%
	<hr/>
	100.00%

Fishermen Household Expenditure Marine (1966)

<u>Item</u>	<u>% of Expenditure</u>
Food	65.5
Clothing	2.5
Education	0.2
Medical	0.3
Coffee/Tea, Refreshment	10.5
Fuel	6.6
Tobacco	4.5
Drinks	4.0
Religious Ceremonies	0.9
Others	5.0
	<hr/>
	100.0

Note: These details are not available in respect of Inland Fishermen Families.

Table III. 2

Details of Marine Fishermen Population by Sex and Age

Sl. No.	Districts	Total No. of households	Children (Below 12 Years)		Adults (12 - 60 Years)		Above 60 Years		Total Male	Total Female	Total population			
			Male	Female	Male	Female	Male	Female						
1.	Madras	890	715	770	1485	1319	1168	2487	36	34	70	2070	1972	4042
2.	Chingleput	869	896	841	1737	1101	1076	2177	33	31	64	2030	1948	3978
3.	South Arcot	1128	1351	1264	2615	1274	1288	2562	100	102	202	2725	2654	5379
4.	Thanjavur	1284	1274	1262	2536	1593	1353	2986	102	90	192	2969	2745	5714
5.	Pudukottai	257	265	201	466	281	237	518	11	9	20	557	447	1004
6.	Nemrathapuram	1152	1172	915	2087	1621	1367	2988	70	58	128	2863	2340	5203
7.	Tirunelveli	192	238	273	511	329	247	576	20	15	35	587	535	1122
8.	V.C.C.	393	590	562	1152	590	588	1178	30	37	75	1218	1187	2405
9.	Kanyakumari	1683	2269	2124	4393	2012	2513	5325	180	162	342	15261	4799	10060
Total		7842	8770	8212	16982	10920	9877	20797	590	538	1128	20280	18627	38907

Table III.3

Details of Inland Fishermen Population

Sl. No.	District	Total House-holds	Children (Below 10 Years)		Adults (Above 10 Years)		Above 60 (Years)		Total male	Total female	Total population		
			Male	Female	Total	Male	Female	Total				Male	Female
1.	Madras	100	54	64	118	174	142	316	4	6	208	440	
2.	Chingleput	202	150	166	316	417	424	841	8	17	593	1174	
3.	South Arcot	183	204	152	363	227	238	465	5	10	436	838	
4.	North Arcot	300	133	125	258	290	233	523	6	11	429	792	
5.	Salon	300	212	211	430	273	236	509	6	10	498	949	
6.	Thamapuri	300	246	177	423	291	261	552	6	11	543	986	
7.	Periyar	300	340	211	551	600	356	956	13	20	953	1527	
8.	Chinnalore	300	150	159	345	362	313	675	8	14	560	1032	
9.	Thanjavar	404	423	393	726	443	408	851	17	15	883	1609	
10.	Trichy	340	152	156	308	297	253	550	10	18	459	876	
11.	Pudukottai	111	119	111	230	132	149	281	3	6	254	517	
12.	Madurai	300	177	157	334	226	263	409	4	9	407	832	
13.	Kamanthapuram	182	167	156	323	286	253	539	10	18	463	880	
14.	Palampur Muthuramalingam	119	120	81	201	160	151	311	6	11	286	523	
15.	Kararejar	221	207	153	360	294	244	530	10	18	511	905	
16.	Thiruvallur	300	157	167	324	239	225	464	5	9	401	797	
17.	V.O.C.	300	172	215	387	276	246	522	6	11	454	920	
18.	Kanyakumari	300	258	213	471	312	281	600	7	12	584	1083	
Total		3862	3488	2984	6472	5306	4678	9982	134	243	8928	16697	

Table III. 4
Distribution of population by sex and average family size and sex ratio
according to district

Sl. No.	District	Total No. of House-holds	Male	Female	Total	Average family size	Females per 1000 males
MARINE							
1.	Madras	820	2070	1972	4042	4.54	552.65
2.	Chingleput	869	2030	1940	3970	4.57	959.60
3.	South Arcot	1122	2725	2654	5379	4.79	973.50
4.	North Arcot	-	-	-	-	-	-
5.	Salem	-	-	-	-	-	-
6.	Thermapur	-	-	-	-	-	-
7.	Periyar	-	-	-	-	-	-
8.	Coimbatore	-	-	-	-	-	-
9.	Thanjavur	1284	2969	2745	5714	4.45	924.55
10.	Trichy	-	-	-	-	-	-
11.	Pudukottai	257	557	447	1004	3.91	802.51
12.	Madurai	-	-	-	-	-	-
13.	Kannathapuram	1152	2863	2340	5203	4.51	817.31
14.	Pozumpon Madhurai allingam	-	-	-	-	-	-
15.	Keararajar	393	1210	1187	2405	6.11	974.54
16.	V.C.C.	192	507	535	1122	5.84	911.41
17.	Tirunelveli	1603	5251	4799	10060	5.97	912.10
18.	Kanyakumari	-	-	-	-	-	-
Total		7042	20280	18627	38907	44.69/	8288.57/
Average						4.97	914.28

Table III.4 (contd.)

INL/NS

Sl. No.	District	Total No. of House-holds	Male	Female	Total	Average family size	Females per 1000 males
1.	Kadrec	100	232	208	440	4.4	896.95
2.	Chinglput	302	575	592	1174	3.88	1041.73
3.	South Arcot	103	436	402	838	4.57	922.01
4.	North Arcot	200	422	363	782	3.96	846.15
5.	Salem	200	498	451	949	4.75	905.62
6.	Dharmapuri	200	543	443	986	4.93	915.84
7.	Periyar	200	953	574	1527	5.10	602.31
8.	Coimbatore	300	560	470	1030	3.46	853.57
9.	Thanjavur	404	803	726	1609	3.98	822.12
10.	Trichy	240	452	417	876	3.65	900.50
11.	Pudukottai	111	254	263	517	4.62	1030.30
12.	Madurai	200	407	425	832	4.16	1044.23
13.	Ramanathapuram	102	463	417	880	4.03	900.64
14.	Tamilnadu Muthuramalingam	119	206	237	523	4.39	822.67
15.	Kanarejor	221	511	405	916	4.14	752.56
16.	V.O.C.	200	454	466	920	4.60	1026.43
17.	Tirunelveli	200	401	396	797	3.98	907.53
18.	Kanyakumari	200	504	452	1003	5.40	854.40
	Total	3062	8920	7765	16687	4.39	893.29

Table III.5
Education Status of Marine Districts

Sl. No.	District	Illiterate	Primary	Middle school	High School	College	Technical	Total
1.	Madras	1965	987	356	792	29	3	4042
2.	Chingleput	1935	1434	395	214	-	-	3970
3.	South Arcot	2538	1753	674	330	64	20	5379
4.	Thanjavur	4030	1216	293	161	14	-	5714
5.	Pudukottai	677	236	67	22	2	-	1004
6.	Remarathapuram	3614	975	538	74	1	1	5203
7.	Thiruvallur	705	214	90	80	28	5	1122
8.	V.O.C.	617	753	550	230	31	8	2405
9.	Kanyakumari	2646	3204	1962	1500	330	122	10060
Total		19127	10772	4932	3409	507	159	30907

Table III, 6
Educational Status of Indian Districts

Sl. No.	District	Illiterate	Primary	Middle School	High School	College	Technical	Total
1.	Madras	142	104	110	70	14	-	440
2.	Chingleput	730	309	112	23	-	-	1174
3.	South Arcot	351	291	144	43	6	3	830
4.	North Arcot	566	159	43	22	2	-	792
5.	Salem	300	265	230	133	11	2	949
6.	Champanur	698	156	90	2	-	-	906
7.	Periyar	570	505	255	110	7	-	1527
8.	Coimbatore	661	269	57	47	4	-	1030
9.	Thanjavur	657	400	246	97	0	1	1609
10.	Trichy	466	229	139	41	1	-	876
11.	Tutukottai	241	200	60	16	-	-	517
12.	Madurai	152	257	263	149	0	3	832
13.	Ramanathapuram	455	177	127	100	16	5	860
14.	Pondicherry Muthuramalingam	355	125	28	12	3	-	523
15.	Kannur	528	214	106	50	7	3	916
16.	Chinnai	202	316	166	96	17	-	797
17.	V.O.C.	348	303	106	59	10	6	820
18.	Kanyakumari	200	315	240	240	45	27	1003
Total		7830	4714	2610	1326	167	50	16697

Table III.7
Distribution of Population by Marital Status in Districts

Sl. No.	District	Married		Married Widowed		Married Unmarried Widowed		Total	
		M/F	M/F	M/F	M/F	M/F	M/F		
1.	Madras	1894	2038	110	4042	200	214	26	440
2.	Chingleput	1752	2107	119	3878	660	480	34	1174
3.	South Arcot	2229	2997	153	5379	350	439	49	838
4.	North Arcot	-	-	-	-	487	359	6	794
5.	Salem	-	-	-	-	695	215	39	949
6.	Charampuri	-	-	-	-	485	471	30	986
7.	Farlyar	-	-	-	-	1089	403	35	1527
8.	Coimbatore	-	-	-	-	557	481	-	1038
9.	Thanjavur	2742	2944	20	5714	738	832	38	1609
10.	Tirory	-	-	-	-	430	421	25	876
11.	Tutukottal	412	584	0	1004	212	292	13	517
12.	Madurai	-	-	-	-	303	415	34	832
13.	Benarathapuram	2499	2673	31	5203	424	453	3	880
14.	Pattinam Mathu- zavalingam	-	-	-	-	251	270	2	523
15.	Keralarajar	-	-	-	-	435	479	2	916
16.	Tirunelveli	404	716	2	1122	412	360	11	797
17.	V.C.C.	944	1409	52	2405	397	500	23	920
18.	Konyakurari	3844	6096	120	10060	403	646	32	10093
	Total	16720	21534	623	38907	8554	7741	402	16697

Table III.C

Religion and Community of Maringa Districts

Sl. No.	District	Religion			Community		Total
		Hindus	Chris- tians	Muslims	Total	Forward	
1.	Madrab	073	17	-	090	-	090
2.	Chingleput	069	-	-	069	-	069
3.	South Arcot	1122	-	-	1122	-	1122
4.	Thanjavur	1222	62	-	1284	-	1284
5.	Pudukottai	257	-	-	257	-	257
6.	Karanampalayam	767	365	-	1132	-	1132
7.	Thiruvallur	-	192	-	192	-	192
8.	V.O.C.	-	393	-	393	-	393
9.	Kanyakumari	-	1603	-	1603	-	1603
Total		5130	2712	-	7842	-	7842

Table III.2

Religion and Community of Inland Districts

Sl. No.	District	Religion				Community		Total	Forward	Backward	SC/ST	Total
		Hindus	Chris- tians	Muslims	Total	Forward	Backward					
1.	Madras	100	-	-	100	-	100	-	-	-	100	
2.	Chingleput	302	-	-	302	-	302	-	-	-	302	
3.	South Arcot	103	-	-	103	-	103	-	-	-	103	
4.	North Arcot	200	-	-	200	-	200	-	-	-	200	
5.	Salem	100	12	-	200	-	200	-	-	-	200	
6.	Dharmapuri	200	-	-	200	-	200	-	-	-	200	
7.	Periyar	200	10	-	300	-	300	-	-	-	300	
8.	Coimbatore	293	-	7	300	-	300	-	-	-	300	
9.	Thanjavur	369	-	35	404	-	264	-	-	140	404	
10.	Trichy	236	4	-	240	-	177	13	-	50	240	
11.	Pudukottai	80	-	31	111	-	111	-	-	-	111	
12.	Madurai	192	-	0	200	-	192	6	-	2	200	
13.	Ramanathapuram	110	72	-	182	-	182	-	-	-	182	
14.	Fasampor Mutharacalingam	119	-	-	119	-	119	-	-	-	119	
15.	Kannur	221	-	-	221	-	221	-	-	-	221	
16.	Thiruvallur	200	-	-	200	-	200	-	-	-	200	
17.	V.C.C.	-	200	-	200	-	200	-	-	-	200	
18.	Kanyakumari	-	200	-	200	-	200	-	-	-	200	
Total		3283	498	81	3862	19	3651	192	192	3862	3862	

Table III.12
Source of Drinking water and Light in Districts (Marine)

District	Total No. of families	Source				Distance (Km)					Source of Light	
		Taps	Wells	Tanks/ponds	Rivers	C.1	1.3	3.5	above 5	Electricity	Kero-tricity	
Madras	890	890	-	-	-	890	-	-	-	203	687	
Chingleput	869	268	601	-	-	780	81	-	-	127	742	
South Arcot	1122	-	1122	-	-	1122	-	-	-	246	876	
Manjavur	1284	971	313	-	-	1284	-	-	-	130	1154	
Pudukottai	257	8	249	-	-	217	40	-	-	90	167	88
Ramanathapuram	1152	612	540	-	-	1082	70	-	-	361	791	
Thirunelveli	192	192	-	-	-	192	-	-	-	98	94	
V.O.C.	393	-	393	-	-	393	-	-	-	198	195	
Kanyakumari	1683	246	1437	-	-	1683	-	-	-	610	1073	
Total	7842	3187	4655	-	-	7651	191	-	-	2063	5779	

Table III, 1A
Source of Drinking water and Light in Districts (Inland)

Sl. No.	District	Total No. of wells	Source		Distance (M)			Source of Light	
			Protected water supply tanks	Wells ponds	0.1	1.3	3.5 above 5	Electricity	Kerosene
1.	Madras	100	100	-	100	-	-	31	69
2.	Chingleput	302	102	200	182	120	-	65	237
3.	South Arcot	183	-	183	183	-	-	66	117
4.	North Arcot	200	176	24	200	-	-	145	55
5.	Salem	200	200	-	156	44	-	150	50
6.	Dharmapuri	200	-	19	181	-	-	88	112
7.	Teriyar	300	300	-	277	23	-	173	127
8.	Coimbatore	300	172	-	128	-	-	85	215
9.	Thanjavur	404	363	41	404	-	-	106	298
10.	Tiruchy	240	74	166	240	-	-	23	217
1.	Pudukottai	111	111	-	111	-	-	34	77
2.	Madurai	200	156	44	200	-	-	97	103
3.	Ramanathapuram	182	24	48	110	72	110	82	100
4.	Tamilnadu Muthurambalingam	119	77	42	119	-	-	43	76
5.	Kararejar	221	146	75	221	-	-	91	130
6.	Chiramelveli	200	200	-	200	-	-	112	88
7.	V.C.C.	200	200	-	200	-	-	98	102
8.	Kanyakumari	200	115	85	200	-	-	136	64
Total		3862	2516	1927	419	3665	297	1625	2237

Table III. 12.

Housing Facilities in Districts (Merine)

Sl. No.	District	Hut		House		Families	Total population	Family size/Persons per House
		Owned	Rented	Owned	Rented			
1.	Madras	600	76	159	47	090	4042	4.54
2.	Chingleput	489	-	370	2	869	3978	4.57
3.	South Arcot	910	11	177	16	1122	5379	4.79
4.	Tanjavur	771	-	502	11	1284	5714	4.45
5.	Pudukottai	25	76	141	15	257	1004	3.91
6.	Kannuraspuram	820	1	322	1	1152	5203	4.51
7.	Thiruvallur	30	-	162	-	192	1122	5.84
8.	V.C.C.	70	-	302	13	393	2405	6.11
9.	Kalyanmari	553	76	096	150	1603	10060	5.97
Total		4300	240	3039	263	7042	30907	4.96

Table III.13
Housing Facilities in Districts (Inland)

Sl. No.	District	Put		House		Total population	Family Size/ Persons per House
		Owned	Rented	Owned	Rented		
1.	Madras	63	0	26	3	440	4.4
2.	Chingleput	210	0	60	4	1174	3.88
3.	South Arcot	143	-	16	22	838	4.57
4.	North Arcot	193	-	7	-	792	3.56
5.	Salem	152	5	37	0	846	4.75
6.	Madhavaram	142	-	51	7	986	4.53
7.	Periyar	147	16	135	2	1527	5.10
8.	Coimbatore	45	16	04	155	1038	3.46
9.	Thanjavur	200	122	28	12	1608	3.28
10.	Tiruchy	191	39	0	2	076	3.65
11.	Tirupattur	70	21	12	-	536	4.82
12.	Madurai	84	26	45	45	832	4.16
13.	Palnathapuram	54	3	07	30	800	4.83
14.	Pezhampattinam	72	15	29	3	523	4.35
15.	Kanyakumari	87	27	75	22	916	4.14
16.	Tirunelveli	113	9	7	71	797	3.90
17.	V.O.C	26	5	160	3	520	4.60
18.	Kanyakumari	40	-	123	37	1003	5.40
Total		2057	312	1013	440	16716	79.107 4.39

CHAPTER - IV

Economic Conditions

1. After having analysed the social condition of the selected fishermen families both in the marine and inland sectors, it is now relevant to review their economic conditions. This chapter deals with conditions such as ownership of physical assets, occupational pattern, employment and income level, consumption expenditure, savings and indebtedness.

Physical Assets

2. Fishermen's households own physical assets required for their principal occupation viz. fishing boats, fishing gear etc. The holding of these assets is dealt with in Chapters V & VI. Therefore, their ownings of non-fishing assets like furniture, domestic appliances and other consumer durables is discussed here.

3. In Tables IV.1 & 2, the details about these assets possessed by both marine as well as Inland fishermen have been given. None of the sample households own agricultural land. It is seen that all the houses without exception have utensils made of stainless steel or brass or aluminium. 43.47% of the families in both the sectors own furniture like chair, wooden/iron cots and tables. 10% of the marine households and 15% of the inland households own wrist watches. 5.69% and 4.76% own wall clocks and time pieces also. Radio and transistors have now become a fairly common item of household assets. On the marine side, 1084 and 446 families and on the Inland side 734 and 190 families are having Radio or Transistor respectively. Among vehicles for conveyance in both the sectors, 43.47% possess cycle- a poor man's transport. Marine fishermen living on seashore, because of temperate climatic conditions may not need electric fan and therefore it is seen that only 2.37% of the households possess fans. In the inland sector also, only 2% own fans. Two households on the marine sector possess Refrigerator which is a luxury item. There are more sewing machines in the Inland sector when compared with the marine sector (ie) 1.48% and 0.47% respectively.

4. Although these assets may not suggest real economic affluence, these are real signs of growing economic prosperity in these households. The households in both the sectors are in a position to buy items of physical assets which make their

living more comfortable as a result of the increase in their income levels due to mechanisation and scientific modern methods of fishing because of government's financial, technical and extension help. In both the sectors the fishermen appear to be gradually changing their spending priorities as a consequence of their higher income level.

Occupational Structure

5. The economic conditions of a household will to a very large extent depend upon its occupational structure, level of employment and income of the working members of the family. In the previous chapter, it is seen that 20797 (53.45%) and 9982 (59.78%) adults in the Marine and Inland sector respectively are in the age group of above 18 to 60 years. The adults in this age group will form the bulk of the workforce in a family. Out of this total working force, 42.28% and 44.73% in the Marine and Inland sectors respectively are actually engaged in one avocation or other, the rest being the non-working force in the respective sectors.

6. Out of the total workers, 95.72% and 88.03% in the Marine and Inland sectors respectively are engaged in fishing or allied activities and the rest employed in other occupations. In the marine households, 61.69% of the total workers are engaged as hired labourers, while in the Inland households, the corresponding proportion is 30.44% 4.27% and 11.30% are engaged in other allied fishing activities such as retail sale of fish, fabricating or mending of nets, processing and sale of dried fish and transporting fish in head loads.

7. In the non fishing activities, 4.3% and 11.97% in the marine and inland sectors are employed in services. The educated fishermen in the inland sector have more aptitude and preference for employment in services. It is learnt from the survey that the educated fishermen prefer to work in regular services where monthly earnings are assured. Although agricultural labour is a common mode of livelihood in the inland sector, it is not reflected among the surveyed households. Marine fishermen, it appears, consider it beneath their dignity to go in for agricultural labour. Tables IV.3 & IV.4.

Choice of Occupation and Vocational skills

8. In Table IV.5 and IV.6, the choices of occupation and vocational skill of the marine and inland fishermen are given. It shows that out of the 7842 marine fishermen households, 7661 (97.69%) have taken up fishing as hereditary, 169 (2.16%)

have taken it up voluntarily, 5(0.064%) have taken it due to lack of employment elsewhere and 7(0.09%) due to its profitability. In the inland sector also, it is a similar case. 3629 families (93.97%) have taken it up as a hereditary profession, 227 (5.88%) voluntarily, 2(0.05%) due to lack of alternative employment, 4 (0.10%) due to its profitability.

9. It is seen from the data that the main avocation among the households in both the sectors is fishing, 7716 (98.39%) and 3035 (78.58%). This is followed by fish marketing 80 (1.02%) and 761 (19.70%), depicting that in the inland sector, fish marketing forms an important employment potential. Next in priority is Boat and Net making 46 (0.59%) and 66 (1.71%).

Household Expenditure

10. The household expenditure details are given in Tables IV.7 and IV.8 for the marine and inland sectors. The percentage of consumption expenditure details of the two sectors are as follows:

	<u>Marine</u>	<u>Inland</u>
i) Food	70.92	73.00
ii) Clothing	10.32	10.50
iii) Social and Religious ceremonies	7.09	4.40
iv) Medical expenses	5.66	5.80
v) Education	2.20	3.70
vi) Others (ie) (Entertainment, Drinks, Tobacco, Coffee, etc.)	3.81	2.60
Total	100.00	100.0

From this, it could be observed that more than two-third of the expenditure in both the sectors is for "Food". It is noteworthy that the proportion of total expenditure on 'Education' is the lowest in the surveyed households in both the sectors.

Number of Fishing Days in Households

11. The number of fishing days for individual fishermen in a year is determined by several parameters. The factors curtailing fishing days being bad weather and the consequent roughness of the sea, breakdown and repairs of engines, overhauling of hull or engine, social ceremonies and religious festivals. In the marine sector, the data collected is for the four quarters,

January to March, April to June, July to September and October to December (see Table IV.11). The total number of mandays for the 4680 Reporting Households is 10,69,069.6 and the number of fishing days for the reporting year per household is 228.43. Out of nine districts, eight districts, have reported more than 220 days and in Thanjavur District alone, it is reported as low as 184.9 days. The number of Fishing days per worker is only 72.10 revealing the fact, that the level of employment for hired labourer is low and they are very much underemployed.

12. In the Inland sector, the total number of fishing days for each district is given in Table IV.12. In Madras, Chingleput, Salem and Madurai districts, the fishermen are employed for 300 days in a year. The average number of days that an Inland fisherman is reported to be working is 180 days among the surveyed households.

Fish production - Household Income & Expenditure

13. The total annual fish production for all the 7942 families in the nine marine districts is 7122.5 tonnes. The value of the fish caught amounted to Rs.537.24 lakhs. The income from allied occupation is Rs.221.86 lakhs. The income from other occupations is Rs.10.94 lakhs. It is observed from the data that the Income from fish production alone is 69.77% of the total income and if income from allied occupations is also taken into consideration, it is 98.58%, and the remaining 1.42% alone is from other occupations. Another important observation noted in Table IV.9 is that income from other occupations in proportion to household income is insignificant in the sample households. The total expenses connected with fishing is Rs.225.64 lakhs, leaving a net income of Rs.544.42 lakhs. If the total household consumption expenditure of Rs.578.04 lakh is also taken into consideration, the net income is a negative figure revealing the fact that most of the families are indebted. This is dealt with in a separate para. Although there are some savings in the districts of Madras, South Arcot, Thanjavur and Pudukottai, in the other five districts, the fishermen are indebted. The net savings per household in the four districts is given in Table IV.9.

14. In the Inland sector (see Table IV.10), the total fish catch is 1682 tonnes and the value of the fish catch is Rs.203.46 lakhs. The income from allied occupations is Rs.5.50 lakhs and income from other occupations is Rs.27.69 lakhs. The income from fish production alone is 85.98% of the total income and if income from allied occupations are also taken into consideration, it is 88.30%. The remaining 11.70% is the income from other occupations. It is thus observed that the income from

other occupations in the Inland sector is much higher when compared with the marine sector which is only 1.42%. The total expenses connected with fishing is Rs.25.10 lakhs leaving a net income of Rs.211.54 lakhs. The total household consumption expenditure is Rs.217.02 lakhs. Here also, there is no net saving indicating that the Inland Fishermen are also indebted. The net income after deducting the household expenditure and the savings per household are furnished against the respective districts wherever such savings have been reported. Nine out of the 18 inland districts have reported savings.

15. From the above it is observed that due to inflation in the economy, most of the fishermen are unable to make both the ends meet and are therefore under nourished and ill clothed. Bulk of them are living below the poverty line.

Savings in Surveyed Households

16. This para gives details about the savings in the Reporting families only in each district on the marine side. Out of the total number of 7842 surveyed families, only 1860 families (23.71%) reported any surplus after meeting production and consumption expenses (Table IV.15). In Table IV.9, the net savings arrived at is for all the surveyed households and hence in five out of the nine districts, there is no net savings after meeting the consumption expenditure. Out of the savings of Rs.30.23 lakhs in the 1860 Reporting Families, Rs.24.66 lakhs (81.57%) is the net savings of the families in cash, Rs.2.45 lakhs (8.10%) in the form of movable property and Rs.3.13 lakhs (10.33%) in the form of immovable property. It is possible that savings have not been disclosed in a full measure.

17. In the inland sector, out of the total number of 3862 surveyed households, only 1199 households (31.07%) have reported a total savings of Rs.11.80 lakhs. out of this 11.80 lakhs, Rs.9.75 lakhs (82.63%) is in the form of cash, Rs.1.74 lakhs (14.75%) is in the form of movable property and Rs.0.31 lakhs (2.62%) is in the form of immovable property (Table IV.16).

Indebtedness

18. Although a few households have reported some savings after meeting the production and consumption expenditure, there are a number of families among the surveyed households which are unable to pay their way and are therefore compelled to borrow amounts either for production or consumption purposes or for both. In the marine sector, 4910 households (62.61%) have borrowed a total sum of Rs.152.71 lakhs from one source

or other (Table IV.13). 2860 families have borrowed Rs.96.30 lakhs at 36% from Money lenders, 233 families have borrowed Rs.7.02 lakhs at 36% from boat owners, 370 families Rs.9.26 lakhs at 18% from Cooperative Societies, 393 families Rs.10.73 lakhs at 36% from Traders and 644 families Rs.18.66 lakhs at 18% from Banks and 410 families Rs.10.74 lakhs at 36% from Relatives.

19. In the inland sector, (Table IV.14) 2237 families (57.92%) have borrowed to the tune of Rs.53.33 lakhs from one source or other for meeting the deficit. Here, 1232 families have borrowed Rs.30.28 lakhs at 36% from Money lenders, 76 families Rs.1.33 lakhs at 36% from boat owners, 432 families Rs.9.25 lakhs at 18% from Cooperative Societies, 73 families Rs.1.30 lakhs at 36% from Traders, 311 families Rs.8.34 lakhs at 18% from banks and 113 families Rs.2.83 lakhs at 36% from Relatives.

20. The share of the sources from which the fishermen have obtained the loan are as follows:-

	<u>Marine</u>	<u>Inland</u>	<u>Interest</u>
1) Money lender	63.06	56.78	36%
2) Boat owner	4.60	2.49	36%
3) Trader	7.03	2.44	36%
4) Cooperative Society	6.06	17.34	18%
5) Bank	12.22	15.64	18%
6) Relative	7.03	5.31	36%
	<u>100.00</u>	<u>100.00</u>	

Government Assistance

21. Out of the 7842 surveyed households in the Marine sector, 123 families have received Rs.2.04 lakhs as subsidy and 16 families have received Rs.0.48 lakh through welfare schemes. In the Inland sector, 207 families have received 2.33 lakhs by way of subsidy and 88 families Rs.0.44 lakh through welfare measures. (see Table IV.17 & IV.18). Taking both the marine and Inland sectors together for the amount received as subsidy and relief, it appears that the assistance per family is in the order of Rs.45.20 only.

Cooperative Societies

22. In Tamil Nadu, the Fishermen Cooperative Societies follow two tier systems (ie) they are primary and district level societies

but there is no apex or state level Cooperative Society. 4382 (55.88%) on the marine side and 2786 (72.14%) on the inland side are members of primary cooperative societies. Although cooperatives have made considerable progress among the fishermen families, it has not been properly reflected among the surveyed families in the marine sector. It is seen that only 55.88% are members of Primary Fishermen Cooperative Societies (Table IV.17 & IV.18).

Fishermen Cooperative Societies in the State

Type of Fishermen Coop. Societies	Marine	Inland	Total
1. District Fishermen Coop. Societies	6	3	9
2. Primary Fishermen Coop. Societies	287	221	508
3. Fisheries Marketing Societies	6	8	14
4. Fish Marketing Union	6	3	9
5. Prawn Farming Coop. Societies	-	4	4
6. Half-a-million Job Programme and Employment promotion Programme	5	-	5
7. Fisherwomen Coop. Societies	29	-	29
Total	339	239	578

Insurance - Group Insurance

23. According to a centrally sponsored scheme, introduced with effect from 23rd December 1982, the Central Government offered to take 50 per cent of the cost of group insurance scheme which would enable the fishermen to take out an Insurance cover for Rs.15,000 on his life. The remaining 50 per cent was to be shared between the beneficiaries and the State Government. The Tamil nadu Government have since decided to meet the full share of the Insurance premium without getting any contribution from the fishermen. It is needless to point out that fishermen's occupation is full of hazards and risks to life and property and hence, this concession is quite justified. 2312 Marine Fisher-

men and 1519 Inland Fishermen from the surveyed families have been enrolled in the Group insurance Scheme sponsored by the Government. 452 and 415 Marine and Inland Fishermen respectively have joined the Life Insurance Scheme of their own accord (Table IV.17 & IV.18).

Savings for Off-season

24. For about three months in a year fishing remains suspended along the coast. According to an earlier scheme a sum of Rs.10 per month was collected from each fishermen for a period of nine months. This accumulated amount of Rs.90 per head together with a matching contribution of Rs.90 per head by the State Government is passed on to them tide over the off-season requirements. This has not be specifically mentioned by any of the surveyed families in the Marine sector.

TABLE No. IV-1

FAMILIES OWNING DIFFERENT TYPES OF PHYSICAL ASSETS ACCORDING TO DISTRICT (MADRAS)

Districts	Total Number Families	Furniture	Cycle	Radio	Wrist Watch	Other Clocks	Utensils	Fan	Sewing Machine	Refrigerator
1. Madras	890	244	239	110	135	75	890	50	8	2
2. Chingleput	869	108	62	276	-	120	869	28	-	-
3. South Arcot	1122	473	184	110	91	168	1122	37	-	-
4. Thanjavur	1284	666	150	103	67	103	1284	-	-	-
5. Pondicherry	257	54	145	90	67	30	257	20	-	-
6. Esmarathapuram	1152	422	89	200	23	75	1152	-	-	-
7. Tirumelveli	152	110	86	22	-	23	192	5	-	-
8. V.O.C	393	295	35	66	-	42	393	14	12	-
9. Kanyakumari	1683	1029	70	110	63	120	1683	35	17	-
Total	7842	3409	1040	1087	446	756	7842	186	37	2

Note: None of the households interviewed own Scooter or Television.

TABLE No. IV-2
 FAMILIES OWNING DIFFERENT TYPES OF PHYSICAL ASSETS ACCORDING
 TO DISTRICT (INLAND)

Sl. No.	District	Total Number of Families	Furniture	Cycle	Radio	Transistor	Wrist Watches	Other Clocks	Utensils	Fan	Sewing Machine
1.	Madras	100	32	12	20	14	17	42	100	2	-
2.	Chingleput	302	14	5	13	-	22	15	302	3	-
3.	South Arcot	183	99	51	47	17	30	17	183	-	-
4.	North Arcot	200	11	36	37	-	121	-	200	-	-
5.	Salem	200	137	193	110	-	82	-	200	4	-
6.	Dharmapuri	200	161	65	42	-	36	-	200	33	7
7.	Periyar	300	125	290	45	-	20	-	300	2	-
8.	Coimbatore	300	12	64	26	-	36	-	300	-	-
9.	Thanjavur	404	133	131	98	39	40	-	404	1	18
10.	Trichy	240	89	66	53	40	33	30	240	1	-
11.	Pudukottai	111	35	11	8	-	20	11	111	-	-
12.	Madurai	200	121	17	37	-	13	-	200	6	-
13.	Ramanathapuram	182	126	37	70	10	40	13	182	2	6
14.	Palani	119	58	67	20	10	10	9	119	-	-
15.	Muthuramalingam Tamil Nadu	221	185	24	27	50	15	-	221	2	14
16.	Thirunelveli	200	122	30	17	10	22	14	200	2	-
17.	V.O.C	200	191	19	48	-	20	13	200	11	4
18.	Kanyakumari	200	118	41	26	-	33	20	200	11	-
Total		3862	1679	1165	734	190	610	184	3862	80	57

Note: None of the households interviewed own Scooter or Television.

TABLE No. IV-3.
DETAILS OF MAIN OCCUPATION IN SURVEYED FAMILIES (MARINE)

Sl. No.	District	Total Number of Families	Fisheries				Other Services	Others (Non Working)
			Craft and Gear Owner	Family Labour	Family & Labour	Other Activities		
1.	Madras	890	207	452	340	162	2901	
2.	Chingleput	869	689	1309	47	-	2233	
3.	South Arcot	1122	512	1325	315	217	3010	
4.	Thanjavur	1284	887	1943	172	7	2805	
5.	Pudukottai	257	257	267	1	-	479	
6.	Senenathapuram	1152	722	1876	43	60	2501	
7.	Thrunelveli	192	187	378	-	35	522	
8.	V.C.C.	393	190	528	-	67	1620	
9.	Kanyakumari	1583	1029	2489	-	155	6387	
Total		7842	4680	10147	918	703	2245	

Note: None of the Marine Fishermen Families surveyed is engaged in cultivation, Animal Husbandry, Poultry, Labour or Trade.

TABLE No. IV-4
 DETAILS OF MAIN OCCUPATION IN SURVEYED FAMILIES (INLAND)

Sl. No.	Districts	Total Number of Families	Fisheries					Other Fishing Activities			Non Working	Others
			Craft Owner	Craft & Gear Owner	Hired & Family Labour	Other	Services	Services	Others			
1.	Madras	100	43	96	8	3	9	324	440			
2.	Chingleput	302	58	244	127	110	-	693	1174			
3.	South Arcot	183	11	156	137	94	41	410	838			
4.	North Arcot	200	-	200	24	1	22	545	792			
5.	Salem	200	42	198	462	135	86	68	949			
6.	Dharmapuri	200	-	200	2	-	1	783	986			
7.	Periyar	300	-	289	731	270	169	68	1527			
8.	Coimbatore	300	33	296	29	-	59	654	1038			
9.	Thanjavur	404	-	387	81	39	200	902	1609			
10.	Trichy	240	-	240	44	35	48	509	876			
11.	Pudukottai	111	-	111	6	22	6	369	517			
12.	Madurai	200	16	164	44	36	20	568	832			
13.	Zamanathapuram	200	-	95	208	-	2	575	880			
14.	Pagumpon	119	-	65	121	-	67	270	523			
15.	Madhavaram	221	-	162	148	-	76	530	916			
16.	Kazhrajur	200	-	168	68	-	-	561	797			
17.	Marudavayal	200	-	200	44	-	58	618	920			
18.	V.C.O	200	-	163	12	96	30	782	1083			
	Kanyakumari	200	-	163	12	96	30	782	1083			
	Total	3862	203	3434	2296	844	894	9229	16697			

Note: None of the Inland Fishermen Families surveyed is engaged in cultivation, Animal Husbandry, Poultry, Labour or Trade.

TABLE No. IV-5
CHOICE OF OCCUPATION AND VOCATIONAL SKILLS (MARINE)

Sl. No.	District	Total Number of Families	Choice of Occupation			Vocational Skills				
			Voluntary	Hereditary	Lack of employment	Ability	Fishing Farming & Boat making	Fish Marketing	Fish Processing	
1.	Madras	890	135	755	-	-	856	34	-	-
2.	Chingleput	869	19	838	5	7	812	12	45	-
3.	South Arcot	1122	-	1122	-	-	1122	-	-	-
4.	Thenjavur	1284	-	1284	-	-	1284	-	-	-
5.	Pudukottai	257	-	257	-	-	257	-	-	-
6.	Ramanathapuram	1152	15	1137	-	-	1117	-	35	-
7.	Thiruvallur	192	-	192	-	-	192	-	-	-
8.	V.O.C	393	-	393	-	-	393	-	-	-
9.	Kanyakumari	1683	-	1683	-	-	1683	-	-	-
Total		7842	169	7661	5	7	7716	46	80	-

TABLE No. IV-6

SERVICE OF OCCUPATION AND VOCATIONAL SKILLS (INLAND)

Sl. No.	District	Total No. of Families	Types of Occupation			Vocational Skills				Fish Marketing	Fish Processing	
			Voluntary	Mercedary	Lack of Employment elsewhere	Profit-ability	Fishing	Fish Farming	Boat & Net Making			
1.	Madras	100	-	100	-	-	98	-	-	-	-	-
2.	Chingleput	302	-	302	-	-	200	-	-	2	102	-
3.	South Arcot	183	-	183	-	-	183	-	-	-	-	-
4.	North Arcot	200	112	38	-	-	166	-	-	-	34	-
5.	Salem	200	-	200	-	-	149	-	-	17	-	-
6.	Dharmapuri	200	-	200	-	-	200	-	-	-	-	-
7.	Periyar	300	-	300	-	-	269	-	-	-	31	-
8.	Coimbatore	300	-	300	-	-	297	-	-	1	-	-
9.	Thanjavur	404	2	396	2	4	404	-	-	-	-	2
10.	Trichy	240	7	233	-	-	240	-	-	-	-	-
11.	Pudukottai	111	-	111	-	-	111	-	-	-	-	-
12.	Madurai	200	31	169	-	-	164	-	-	-	-	-
13.	Ramanathapuram	182	69	113	-	-	11	-	-	-	36	-
14.	Agrippor	119	-	119	-	-	12	-	-	-	107	-
15.	Muthayyanar	221	6	215	-	-	57	-	-	-	164	-
16.	Kanarejar	200	-	200	-	-	160	-	-	-	40	-
17.	Tirunelveli	200	-	200	-	-	200	-	-	-	-	-
18.	V.C.C	200	-	200	-	-	114	-	-	-	-	-
19.	Kanyakumari	200	-	200	-	-	114	-	-	-	-	86
Total		3862	227	3629	2	4	3035	-	-	66	761	-

TABLE No. IV-7

PERCENTAGE OF HOUSEHOLD EXPENDITURE (MARINE)

Sl. No.	District	Total Number of Families	Food	Clothing	Education	Medical Expenses	Social & Religious Ceremonies	Others	Total
	Madras	890	43,47,560 (28.7%)	3,02,100 (6.16%)	73,090 (1.45%)	94,925 (1.95%)	49,905 (1.01%)	32,765 (0.66%)	49,00,345 (100%)
	Chingleput	869	48,26,670 (75.5%)	4,49,360 (7.02%)	59,005 (0.92%)	3,27,110 (5.11%)	4,17,950 (6.53%)	3,12,360 (4.88%)	63,92,455 (100%)
	South Arcot	1122	30,27,270 (69.2%)	5,94,800 (10.55%)	1,34,765 (2.39%)	2,85,500 (5.07%)	3,48,015 (6.18%)	3,69,750 (6.56%)	56,29,500 (100%)
	Thanjavur	1284	61,38,550 (75.04%)	6,49,730 (7.9%)	1,79,245 (2.19%)	3,62,170 (4.43%)	4,77,800 (5.84%)	3,73,260 (4.56%)	81,80,755 (100%)
	Tindukottai	257	8,78,200 (54.34%)	1,77,450 (13.88%)	12,775 (0.84%)	92,110 (6.75%)	1,15,250 (8.44%)	89,150 (6.53%)	13,64,935 (100%)
	Emmankulam	1152	40,90,840 (53.67%)	13,56,085 (17.79%)	99,355 (1.30%)	2,68,745 (3.52%)	8,48,210 (11.08%)	9,61,805 (12.6%)	76,22,170 (100%)
	Tirunelveli	192	15,34,900 (56.3%)	4,30,000 (15.7%)	60,700 (2.2%)	3,58,300 (13.3%)	3,45,800 (12.6%)	-	27,29,700 (100%)
	V.O.C	393	19,98,400 (63.56%)	5,45,500 (17.3%)	1,55,600 (4.94%)	1,85,500 (5.9%)	1,96,500 (6.25%)	62,350 (1.98%)	31,43,850 (100%)
	Kanyakumari	1683	1,32,04,800 (74.46%)	14,61,940 (8.19%)	4,91,940 (2.75%)	13,00,410 (7.28%)	13,01,170 (7.29%)	-	1,78,40,260 (100%)
	Total	7842	4,09,97,190 (70.92%)	59,66,365 (10.32%)	12,66,475 (2.2%)	32,74,900 (5.66%)	40,97,600 (7.09%)	22,01,440 (3.81%)	5,78,03,970 (100%)

TABLE No. IV-3
PERCENTAGE OF HOUSEHOLD EXPENDITURE (INLAND)

Sl. Districts No.	Total Number of Families	Food		Clothing		Education		Medical Expenses	
		Amount	%	Amount	%	Amount	%	Amount	%
1. Madras	100	240400	87.68	18700	6.82	3700	1.34	6050	2.20
2. Chingleput	302	1455560	66.6	257040	11.76	299680	13.72	128520	5.88
3. South Arcot	183	050600	81.78	60060	5.72	16175	1.54	40550	4.62
4. North Arcot	200	289900	57.57	87540	17.38	23500	4.66	34510	6.85
5. Periyar	300	1432450	61.6	269020	11.57	166950	7.18	216160	8.8
6. Dharmapuri	200	1169900	74.6	244000	15.3	30000	1.88	70000	4.39
7. Salem	200	974110	66.48	242750	16.56	14050	0.95	57175	3.9
8. Coimbatore	300	1001760	83.4	153900	11.86	13100	1.01	30200	2.32
9. Thanjavur	404	873740	71.37	143500	11.72	18550	1.52	55150	4.50
10. Trichy	240	561700	64.53	99675	11.45	19535	2.24	58675	6.74
11. Tutukottai	111	214000	75.4	23600	0.35	5500	2.00	12800	4.52
12. Madurai	200	1083200	79.58	92170	6.77	31225	2.29	63750	4.68
13. Ramanathapuram	192	040200	83.6	54260	5.35	10800	1.06	42600	4.2
14. Pasumpon Muthuramalingam	119	562100	83.86	28600	4.27	5900	0.86	24400	3.64
15. Kanarajar	221	861200	79.4	90800	0.37	24640	2.27	54500	5.03
16. Tirunelveli	200	976850	79.34	94500	7.67	21645	1.75	59510	4.83
17. V.O.C	200	1250260	72.28	191600	11.0	42970	2.46	165260	9.49
18. Kanyakumari	200	1073000	70.19	127840	0.36	57520	3.76	132500	6.66
Total	3862	45635930	73.0	2278555	10.5	805640	3.7	1250310	5.8

TABLE No. IV-8
PERCENTAGE OF HOUSEHOLD EXPENDITURE (INLAND) (Contd.)

Sl. No.	District	Total Number of Families	Social and Religious Ceremonies		Others		Total	
			Amount	%	Amount	%		
1.	Madras	100	100	0.03	5200	1.69	2712.50	100
2.	Chingleput	302	42640	1.96	-	-	2184840	100
3.	South Arcot	103	35100	3.34	31300	2.98	1049785	100
4.	North Arcot	200	33360	6.6	34700	6.89	503510	100
5.	Erliyer	300	106420	4.57	144150	6.19	2325150	100
6.	Thamapuri	200	50000	3.13	10000	0.62	1593900	100
7.	Salem	200	59000	4.03	110020	0.05	1465195	100
8.	Colombatore	300	17950	1.38	-	-	1296910	100
9.	Thenjavur	404	64265	5.22	80920	5.63	1224125	100
10.	Trichy	240	70000	0.05	60870	6.99	870455	100
11.	Tudukottai	111	17000	8.00	10000	3.63	282900	100
12.	Madurai	200	90770	6.66	-	-	1361115	100
13.	Samphathapuram	102	30600	3.01	28400	2.8	1014860	100
14.	Rasumpon Muthu- remalingen	119	20000	4.3	20500	3.5	670300	100
15.	Kanarajar	221	20000	2.66	24600	2.27	1084540	100
16.	Thrunelveli	200	70700	6.39	-	-	1231205	100
17.	V.C.C	200	82650	4.74	-	-	1740740	100
18.	Kanyakumari	200	126400	0.26	11400	0.74	1520660	100
	Total	3062	962945	4.4	569060	2.6	21703340	100

Table IV.9
Fish Production - Household income and expenditure (Marine)

Sl. No.	District	Total No. of families	Total catch in kg.	Value of fish production	Income from allied occupation	Income from other occupation	Total Income
1.	Madras	890	1,63,833	16,38,330	39,53,920	6,11,250	62,03,500
2.	Chingleput	869	23,18,582	92,74,328	6,47,922	1,00,250	1,00,22,500
3.	South Arcot	1122	8,45,498	84,54,980	23,28,770	38,500	1,08,22,250
4.	Thanjavur	1284	5,73,368	57,33,680	59,77,570	92,500	1,18,03,750
5.	Pudukottai	257	1,60,941	16,09,410	4,66,840	-	20,76,250
6.	Ramanathapuram	1152	12,52,018	50,08,072	46,34,928	2,52,250	98,95,250
7.	Tirunelveli	192	2,58,060	20,64,480	3,70,520	-	24,35,000
8.	V.G.C.	393	6,69,370	26,77,480	18,05,520	-	44,83,000
9.	Kanyakumari	1683	17,26,403	1,72,64,030	20,00,470	-	1,92,64,500
Total		7842	71,22,575	5,37,24,790	2,21,86,460	10,94,750	7,70,06,000

Table IV.9 (contd.)
Fish Production - Household income and expenditure (Marine)

Sl. No.	District	Total No. of families	Total expenses on fishing	Net income	Total household expenditure	Total saving after deducting household expenditure	Net saving per household
1.	Madras	890	6,19,750	55,83,750	49,00,345	6,83,405	767.87
2.	Chingleput	869	42,22,750	57,99,750	63,92,455	-	-
3.	South Arcot	1122	34,13,250	74,09,000	56,29,500	17,79,500	1586.00
4.	Thanjavur	1294	33,98,000	84,05,750	81,80,755	2,24,995	175.23
5.	Pudukottai	257	5,76,500	14,99,750	13,64,935	1,34,815	524.57
6.	Ramanathapuram	1152	28,44,250	70,51,000	76,22,170	-	-
7.	Tirunelveli	192	11,90,000	12,45,000	27,29,700	-	-
8.	V.O.C.	393	14,92,500	29,90,500	31,43,850	-	-
9.	Kanyakumari	1683	48,07,000	1,44,57,500	1,78,40,260	-	-
Total		7842	2,25,64,000	5,44,42,000	5,78,03,970	-	-

TABLE No. IV-1C

ANNUAL FISH PRODUCTION - HOUSEHOLD INCOME AND EXPENDITURE (INLAND)

Sl. No.	District	Total Number of Families	Total Fish Catch in KGS.	Value of Fish Production	Income from Allied Occupation	Income from other Occupation	Total Income
1.	Madras	100	43200	671500	20000	-	691500
2.	Chingleput	302	135900	1841750	72500	-	1914250
3.	South Arcot	103	70000	1272250	33750	17500	1323500
4.	North Arcot	200	90000	375000	-	102750	477750
5.	Salem	200	100000	749000	2500	40000	791500
6.	Thamapuri	200	120000	1584500	-	425750	2010250
7.	Pariyar	300	135000	1883000	13750	402500	2379250
8.	Coimbatore	300	133200	1343000	5000	664250	2012250
9.	Thanjavur	404	161600	1277000	21250	40000	1346250
0.	Trichy	240	108000	665000	-	77000	742000
1.	Pudukottai	111	49950	479250	-	-	479250
2.	Madurai	200	73000	1331500	45000	32250	1408750
3.	Bezavathapuram	102	81900	1001250	100750	222250	1412250
4.	Palani Muthu- Kallangam	119	53550	463250	67500	201500	732250
5.	Kamraj	221	72900	939500	73750	454750	1460000
6.	Thrunelveli	200	75600	1345000	40000	-	1305000
7.	V.C.C	200	96000	1506000	-	-	1506000
8.	Kanyakumari	200	73350	1530250	46250	-	1584500
Total		3962	1601950	20346000	550000	2760500	23664500

TABLE No. IV-10 (a)

ANNUAL FISH PRODUCTION - HOUSEHOLD INCOME AND EXPENDITURE (INLANE) (Contd.)

Sl. No.	District	Total Expenses on Fishing	Total Household Expenditure	Net Income	Net Income After Deducting Household Expenditure	Net Savings Per Household
1.	Madras	57600	633900	274150	359750	3597.5
2.	Chingleput	95300	1810950	2104840	-	-
3.	South Arcot	106470	1217030	1049705	167245	913.9
4.	North Arcot	55000	422750	503510	-	-
5.	Salen	235000	556500	2325150	-	-
6.	Dharmapuri	600000	1410250	1593900	-	-
7.	Periyar	340000	2031250	1465195	566055	1006.85
8.	Coimbatore	110400	1093050	1293910	596940	1969.8
9.	Thanjavur	156005	1190245	1224125	-	-
10.	Tirubhy	100000	634000	070455	-	-
11.	Puduchoti	46473	432777	282900	149077	1350.24
12.	Madurai	07699	1321051	1361115	-	-
13.	Tenare thepuram	110750	1293500	1014060	278640	1530.98
14.	Pasumpon Muthuracalingan	39000	693250	670300	22950	192.06
15.	Kannarajar	97200	1370000	1004540	286260	1295.29
16.	Thrunelveli	95970	1209030	1231205	57825	209.12
17.	V.C.C	60950	1445050	1740740	-	-
18.	Kanyakumari	04597	1499903	1520660	-	-
Total		2510414	21154066	21702340	-	-

TABLE No. IV-11
NUMBER OF FISHING DAYS IN HOUSEHOLDS (MARINE)

Sl. District No.	Number of Reporting Households Surveyed	Number of Fishing Workers	Total Number of Fishing Days				Total Number of Days	Number of Fishing Days Per House- hold	Number of Worker
			January To March	April To June	July To September	October To December			
1. Madras	207	639	13558.5 (55.5)	9211.5 (44.5)	13703.4 (66.2)	9252.9 (44.7)	45726.3 (207)	220.9	71.56
2. Chingleput	589	1698	45749.6 (66.4)	51395.4 (74.6)	40375.4 (58.6)	20256.6 (29.4)	157781 (689)	229.0	92.92
3. South Arcot	512	1837	31180.8 (60.9)	32870.4 (64.2)	31385.6 (61.3)	26060.8 (50.9)	121497.6 (512)	237.3	66.14
4. Thanjavur	887	2730	41068.1 (46.3)	50559 (57)	36899.2 (41.6)	35480 (40)	164006.3 (887)	184.9	60.08
5. Pudukottai	257	524	15420 (60)	16011.1 (62.3)	18504 (72)	22616 (88)	72551.1 (257)	282.3	138.46
6. Kamaneethapuram	722	2599	42525.8 (58.9)	42258.6 (61.3)	36244.4 (50.2)	34295 (47.5)	157323.8 (722)	217.9	60.53
7. Tirunelveli	107	565	11781 (63)	11220 (60)	11407 (61)	11568 (64)	46376 (107)	248.0	82.08
8. V.C.C	190	710	12640 (56)	11685 (61.5)	10830 (57)	10030 (57)	43985 (190)	231.5	61.26
9. Kanyakumari	1029	3510	58910.25 (57.25)	60196.5 (50.5)	66370.5 (64.5)	74345.25 (72.25)	259022.5 (1029)	252.5	73.85
Total	4600	14020	-	-	-	-	1069069.6	220.43	72.10

Table IV.12

Total Number of Fishing Days in Households
(Inland)

Sl. No.	District	Total Number of Families	Total Number of Fishing days in a year
1.	Madras	100	300
2.	Chingleput	302	300
3.	South Arcot	182	150
4.	North Arcot	200	90
5.	Salem	200	300
6.	Dharmapuri	200	90
7.	Periyar	300	180
8.	Coimbatore	300	180
9.	Thenjavur	404	180
10.	Trichy	240	180
11.	Pudukottai	111	180
12.	Madurai	200	300
13.	Ramanathapuram	182	90
14.	Pasumpon Muthuramalingam	119	90
15.	Kamarajar	221	90
16.	Tirunelveli	200	180
17.	V.O.C.	200	180
18.	Kanyakumari	200	180
Total		3862	3240

TABLE No. IV-13
INDEBTEDNESS (MAINE)

Sl. No.	District	Money Lender			Boat Owner			Cooperative Society			Trader
		Number of Families	Amount	Rate of Interest %	Number of Families	Amount	Rate of Interest %	Number of Families	Amount	Rate of Interest %	
1.	Madras	189	279750	36	-	-	-	-	-	-	-
2.	Cingoleput	72	150250	36	1	1750	36	1	1750	10	96500
3.	South Arcot	459	1039750	36	6	10500	36	157	372250	10	-
4.	Thanjavur	275	561500	36	26	45500	36	25	53750	10	17500
5.	Pudukottai	238	436500	36	-	-	-	15	26250	10	365000
6.	Ramanathapuram	292	1022750	36	20	62500	36	40	160000	10	133 593750
7.	Thrunelveli	34	153000	36	161	504500	36	-	-	-	-
8.	V.O.S	204	860250	36	15	40500	36	61	146500	10	-
9.	Kanyakumar	11017	5110500	36	4	17000	36	71	165250	36	-
Total		2060	9630250	36	233	702250	36	370	925750	18	393 1072750

TABLE No. IV-13(a)

INDEBTEDNESS (MAJINE) (Contd.)

Sl. No.	District	Banks		Relatives		Total			
		Number of Families	Amount	Date of Interest %	Number of Families	Amount	Number of Families	Amount	
1.	Madras	32	105000	10	22	55750	36	243	440500
2.	Chingleput	70	150750	10	142	345250	36	336	754250
3.	South Arcot	149	306500	10	65	100750	36	656	1909750
4.	Thanjavur	56	276250	10	41	79200	36	433	1033750
5.	Pudukottai	2	8500	10	14	24500	36	469	860750
6.	Emandthapuram	74	169500	10	77	202250	36	636	2310750
7.	Thirunelveli	39	133250	10	-	-	-	234	790750
8.	V.O.C	55	206750	10	-	-	-	415	1254000
9.	Kanyakumari	167	509500	13	29	106250	36	1280	5916500
	Total	644	1066000	10	410	1074000	36	4910	15274000

TABLE No. IV-14
INEFFECTIVENESS (Inland)

1. District	Money Lender			Boat Owner			Cooperative Society			Trader		
	Total Number Families	Amount	Rate of Interest %	Total Number Families	Amount	Rate of Interest %	Total Number of Families	Amount	Rate of Interest %	Total Number of Families	Amount	Rate of Interest %
Madras												
Chingleput	102	170500	36	-	-	-	-	-	-	-	-	-
South Arcot	70	157500	36	-	-	-	-	-	-	-	-	-
North Arcot	63	101500	36	-	-	-	35	61250	18	-	-	-
Salem	-	-	-	76	133000	36	30	66500	18	-	-	-
Madhavpur	19	63250	36	-	-	-	-	-	-	-	-	-
Periyar	69	120750	36	-	-	-	36	63000	18	-	-	36
Coimbatore	87	169750	36	-	-	-	2	3500	18	-	-	-
Madhavpur	104	104500	36	-	-	-	173	302750	18	-	-	-
Trichy							54	94500	18	-	-	36
Tamilnadu	43	120250	36	-	-	-	19	33250	18	-	-	-
Madurai	124	225750	36	-	-	-	2	3500	-	-	-	-
Madhavpur	37	67250	36	-	-	-	0	-	-	-	-	-
Madhavpur	34	59500	36	-	-	-	35	153250	18	-	-	-
Kannur	86	162750	36	-	-	-	6	10500	18	-	-	36
Thirunelveli	90	160000	36	-	-	-	-	-	-	-	-	-
V.O.C	138	511500	36	-	-	-	22	93500	18	-	-	-
Kanyakumari	156	655500	36	-	-	-	2	3500	18	-	-	-
Total	1232	3020250	36	76	133000	36	432	925250	18	73	130250	36

TABLE No. IV-14(a)
INDEPENDENCE (Inland) (Contd.)

District	Banks			Relatives			Total		
	Total Number Families	Amount	Percentage Of Interest %	Total Number Families	Amount	Percentage Of Interest %	Total Number Families	Amount	Percentage Of Interest %
Madras	-	-	-	8	14000	36	110	192500	36
Chingleput	-	-	-	11	19250	36	147	292250	36
South Arcot	31	54250	18	-	-	-	66	191750	-
North Arcot	3	10250	18	13	22750	36	127	222250	36
Salem	-	-	-	-	-	-	19	63250	-
Thirupuri	-	-	-	-	-	-	166	555500	-
Periyar	106	450500	18	26	45500	36	185	323750	36
Coinbatore	88	154000	18	3	5850	-	278	486500	-
Thanjavur	5	8750	18	-	-	-	203	357750	-
Trichy	5	8750	-	-	-	-	-	-	-
Pudukottai	-	-	-	-	-	-	62	153500	-
Madurai	-	-	-	-	-	-	126	229250	-
Ramanathapuram	13	32500	18	14	24500	-	79	175250	-
Pesumpon	-	-	-	34	144500	36	103	357250	36
Muthuramalingam	1	1750	18	4	7000	-	99	185500	36
Kannur	-	-	-	-	-	-	90	160000	-
Thirunelveli	46	80500	18	-	-	-	206	685500	-
V.O.C	13	32500	18	-	-	-	171	701500	-
Kanyakumari	13	32500	18	-	-	-	-	-	-
Total	311	833750	18	113	282750	36	2237	5333250	36

TABLE No. 17-15

SAVINGS IN SURVEYED HOUSEHOLDS (MARINE)

Sl. No.	District	Total Number of Families	Reporting Families	Net Savings In Cash	In the Form of Movable Property	In the Form of Immovable Property	Total Savings for Reporting Families
1.	Madras	690	409	5,36,000	43,000	-	5,79,000
2.	Chingleput	669	128	1,20,000	19,500	6,500	1,46,000
3.	South Arcot	1122	240	2,02,000	-	10,000	2,20,000
4.	Thanjavur	1284	469	4,50,500	95,000	1,000	5,46,500
5.	Pudukottai	257	-	-	-	-	-
6.	Ramanathapuram	1152	370	7,02,000	87,500	1,37,500	9,27,000
7.	Trunelveli	192	7	3,500	-	-	3,500
8.	V.O.C	393	39	13,000	-	1,49,500	1,62,500
9.	Kanyakumari	1683	198	4,39,000	-	-	4,39,000
	Total	7842	1860	24,66,000	2,45,000	3,12,500	30,23,500

TABLE No. IV-16

SAVINGS IN SURVEYED HOUSEHOLDS (INLAND)

Sl. No.	District	Total Number of Families	Reporting Families	Net Savings in Cash	In the form of movable Property	In the form of immovable Property	Total Savings for Reporting Families
1.	Madras	100	38	41,000	27,500	-	68,500
2.	Chingleput	302	114	58,500	1,000	-	59,500
3.	South Arcot	183	31	15,500	-	-	15,500
4.	North Arcot	200	105	69,500	56,500	-	1,26,000
5.	Salem	200	138	1,22,500	36,000	-	1,58,500
6.	Dharmapuri	200	183	2,71,000	-	-	2,71,000
7.	Erliyar	300	194	2,01,000	15,000	-	2,14,000
8.	Coimbatore	300	-	19,500	3,000	-	22,500
9.	Thanjavur	404	45	1,000	3,000	-	4,000
10.	Trichy	240	8	-	-	-	-
11.	Pudukottal	111	-	45,000	-	-	45,000
12.	Madurai	200	45	27,500	6,500	-	34,000
13.	Ramanathapuram	182	79	-	-	21,500	21,500
14.	Pasumpour Muthu- ramalingam	119	28	12,000	6,500	500	19,000
15.	Kararajar	221	102	26,000	21,000	9,000	56,000
16.	Thirunelveli	200	51	35,500	-	-	35,500
17.	V.O.C	200	23	11,500	-	-	11,500
18.	Kanyakumari	200	15	17,500	-	-	17,500
Total		3862	1199	9,74,500	1,74,000	31,000	11,79,500

TABLE No. IV-17
DETAILS ABOUT GOVERNMENT ASSISTANCE, COOPERATIVE SOCIETY
MEMBERS AND INSURANCE (MARINE)

District	Number of Families	Government Assistance				Members			Insurance	
		Number Families	Subsidy Amount	Welfare Scheme Number Families	Relief Programme Amount	Fishermen Cooperative Society	Group Insurance	Life Insurance		
Madras	890	-	-	-	-	472	151	225		
Chingleput	869	-	-	-	-	305	164	5		
South Arcot	1122	-	-	-	-	393	322	-		
Thanjavur	1284	14	42,000	16	48,000	757	220	83		
Pudukottai	257	54	1,62,000	-	-	219	219	1		
Zamanathapuram	1152	55	-	-	-	905	194	138		
Thirunelveli	192	-	-	-	-	161	81	-		
V.C.C	393	-	-	-	-	256	135	-		
Kanyakumari	1683	-	-	-	-	914	826	-		
Total	7842	123	2,04,000	16	48,000	4382	2312	452		

TABLE No. IV-18
 DETAILS ABOUT GOVERNMENT ASSISTANCE, COOPERATIVE SOCIETY MEMBERS
 AND INSURANCE (INLAND)

Sl. No.	Districts	Total No. of Families	Subsidy	Welfare Scheme		Relief Programme		Member of Cooperative Society	Insurance	
				Number of Families	Amount	Number of Families	Amount		Group Insurance	Life Insurance
1.	Madras	100	5000	-	-	-	-	99	99	-
2.	Chingleput	302	20000	-	-	-	-	188	188	-
3.	South Arcot	183	-	-	-	-	-	158	146	-
4.	North Arcot	200	-	-	-	-	-	103	-	51
5.	Salem	200	86000	-	-	-	-	200	194	6
6.	Dharmapuri	200	-	-	-	-	-	-	-	-
7.	Periyar	300	-	-	-	-	-	300	291	9
8.	Ceimbatoze	300	-	-	-	-	-	300	-	300
9.	Thanjavur	404	43500	88	44000	-	-	357	189	3
10.	Trichy	240	78000	-	-	-	-	226	175	8
11.	Pudukottai	111	-	-	-	-	-	110	90	-
12.	Madurai	200	-	-	-	-	-	137	99	-
13.	Tamaraathapuram	182	-	-	-	-	-	110	-	3
14.	Pasumpon Muthuramalingam	119	-	-	-	-	-	37	-	29
15.	Kannurajar	221	-	-	-	-	-	87	-	-
16.	Thrunelveli	200	-	-	-	-	-	168	-	-
17.	V.C.C	200	-	-	-	-	-	170	-	-
18.	Kanyakumari	200	-	-	-	-	-	36	26	12
Total		3862	207	88	44000	-	-	2786	1519	415

CHAPTER - V

Technological Status of the Selected Marine Households Marine Fisheries

Part - I

Fishing constitutes the third important primary sector industry in India, the other two being Agriculture and Animal Husbandry. Tamil Nadu has a coastline of about 1000 Kms out of the total coastline of 7517 Kms. of India. This coastline can broadly be classified into three distinctive regions as follows:-

- i) The Coramandel coast extending from pulicat in Chingleput District in the north to Point Calimere in Thanjavur District in the South.
- ii) The Palk Bay from Point Calimere in the north to Rameswaram in Ramanathapuram District in the South.
- iii) The Gulf of Mannar from Rameswaram in the north to Cape Comorin in Kanyakumari District in the South.

2. In the coramandel coast which is highly surf beaten, only the Raft type catamarans could be operated. The Palk Bay and the Gulf of Mannar are sheltered areas from where the fishermen operate their indigenous Plank built boats, Vallams and canoes. In the Gulf of Mannar area near Cape Comorin, the boat catamarans are in use.

3. The total marine Fishermen Population in Tamil Nadu is 4,63,800 and this forms 0.96 per cent of the total population of the state (488.08 lakhs). The Marine fishermen are concentrated more in Kanyakumari District (8.07%) followed by Thanjavur district (2.14%), Ramanathapuram (1.97%), Tirunelveli (1.64%), Madras (1.41%), followed by the remaining Districts. Madras and Kanyakumari Districts show a higher density of Marine fishermen population per kilometre of coastal length viz. 1778 and 1690 respectively. The State average density is 464 marine fishermen per kilometre of coastal length. The lowest density of 252 has been noted in respect of Ramanathapuram District (undivided).

4. The average family size for the State has been 5.33, the largest size of 5.86 has been recorded in respect of Madras District followed by Tirunelveli 5.79 and Kanyakumari 5.64. The smallest size has been found in Chingleput District. The average marine Fishermen population per village ranges from 350 in Pudukottai District to 2611 in Kanyakumari District, with the state average being 1049 per village.

5. Out of the total fishermen's population of 4,63,800, 1,01,869 are considered as active fishermen and are engaged in operating the catamarans, country crafts and over 2373 mechanised boats. Marine fishermen are full time fishermen and are solely dependent on fishing; they are not engaged in agriculture or any other industries. Among the nine coastal districts of Tamil Nadu covered by the survey, Hindu fishermen dominate except in Tirunelveli, V.O.C. and Kanyakumari districts, where Christian fishermen constitute 95-99% and in Pudukottai and Ramanathapuram districts, where Muslim fishermen prevail to the extent of 40.44%.

6. The coastline of 1000 Kms. has a continental shelf area (to 200 metre depth) of about 41,412 Sq.Kms. The marine fish production which was 45,700 tonnes at the beginning of the 1st plan period 1951-1952 increased over the years and now is 2,44,759 tonnes at the beginning of the 7th plan period 1985-86. The annual catches during the initial years of the plan periods are as follows:-

Ist plan	1951-52	45,700 tonnes
IInd "	1956-57	60,900 "
IIIrd "	1961-62	93,280 "
IVth "	1969-70	2,01,481 "
Vth "	1974-75	1,92,338 "
VIth "	1980-81	2,30,531 "
VIIth "	1985-86	2,44,759 "

The increase which was almost steady till the end of the IVth Plan period (ie) 1973-74 and reached the production level of 2,24,083 tonnes declined to 1,92,338 at the beginning of the Vth plan 1974-75 and now (1985-86) it is 2,44,759 tonnes. This is but natural since marine fishing is a fluctuating resource subject to constant under water movements and hydrological and meteorological variations, unlike any other economic resource of the sea or land. The very fact that the total marine production has increased from 45,700 tonnes in 1951-52 to 2,44,759 in 1985-86 is a clear evidence of the tremendous efforts which have

gone into the Industry over the last 35 years. The range of fluctuation is significantly low to warrant any alarmist view of the situation.

7. The districtwise general information about the marine fishing villages, Infrastructural facilities available, details of the number of families owning and not owning crafts, gears and the employment status are furnished in the Tables V - 1 to 5 respectively.

Marine Fishery Resources

8. The declaration of an Exclusive Economic Zone on account of the enforcement of the Marine Zone Act which has come into force from January 1977 has vested the country with a great challenge and responsibility. The area upto 200 metres depth along (up to 100 fathoms - Continental shelf) off Tamil nadu coast is estimated to be 41,412 sq.kms. Various agencies have assessed the fishery potential resources of Tamil nadu coast as follows:-

i) The Ministry of Agriculture (1972)
Potential catch of shelf region of 8,79,920 tonnes
Tamil Nadu.

ii) Report of the National Commission
on Agriculture (1976)

Demersal off Tamil nadu 73,000 "

Pelagic for the entire east coast 6,70,000 "
(including Orissa & A.P.)

iii) Integrated Fisheries Project (1977)

Demersal	2,85,000
Pelagic	2,65,000
Total	<u>5,50,000 tonnes</u>

iv) Marine products Export Development Authority (1978)
Total potential yield for Tamil Nadu
11.50 lakh tonnes.

v) Report of the committee for organised Develop
ment of Marine Fisheries with small mechanised
boats in Tamil Nadu (1978)
3,53,000 tonnes

Against this, the present level of exploitation is 2,44,759 tonnes (1985-86). It is estimated that the marine fish production at the end of the seventh plan (1988-89) would be of the order of 3.0 lakh tonnes.

The marine fish production districtwise during the year (1985-86) is furnished below:-

<u>Sl.No.</u>	<u>District</u>	<u>Quantity in Tonnes</u>
1.	Madras	8312
2.	Chingleput	7700
3.	South Arcot	10603
4.	Thanjavur	55171
5.	Pudukottai	26107
6.	Ramanathapuram	30588
7.	Tirunelveli	35704
8.	Kanyakumari	70574
		<u>2,44,759</u>

Mechanisation Programme

9. The main thrust for the development of marine fisheries was the introduction of mechanised fishing boats which started in 1955, together with the training of fishermen in handling of modern craft and gear. To date some 2500 boats, the bulk of these in the 30-32 feet class, have been put into commercial operation under credit and subsidy schemes. The subsidies 50% on engine and 25% on hull to start with was reduced to 25% on the cost of entire boat during 1968-70 and then tapered by 5% annually to 15% on both the engine and hull over the years and finally discontinued in 1972-73. In the mid-fifties, nylon twine was introduced and supplied with a subsidy of 25%. To create suitable conditions for operation of mechanised fishing boats, service centres, landing facilities and Ice plants were developed by the Department.

10. As these mechanised fishing boats were engaged mainly in prawn fishing, they gave good returns. Operation and mainten-

ance of these mechanised boats was economic then. The non-mechanised boat operators felt that they were neglected and there were frequent clashes with mechanised boat operators which led to restriction of fishing time, areas, etc. In view of the cost escalation and higher cost of fuel, the operation and maintenance of mechanised fishing boats became uneconomical which resulted in fishermen not going in for mechanised boats from the late seventies.

11. In view of these factors, stress is now to go in for smaller crafts with low Horse power engine thereby reducing the initial cost and the operational expenses on fuel etc. It has also been proposed to mechanise the traditional fishing crafts like catamaran, canoes and vallams with inboard and outboard engines.

12. According to the Central marine Fisheries Research Institute publication entitled Marine Fisheries Information Service Technical and Extension series No.111 (August 1982), the marine fish landings is reported to be 48.20% by the mechanised boats and 51.80% by the non-mechanised traditional crafts. In the study on Modernisation of Marine Fisheries Impact on Employment and Income of Fishermen in Tamil Nadu carried out by this Institute for the National bank for Agriculture and Rural Development, Bombay in 1986, it has been reported that the contribution to marine fish landings by mechanised Fishing crafts in Tamil nadu in 1982-83 as 48.86% and 51.14% by nonmechanised crafts. The source of this information is the Central marine Fisheries Research Institute - Marine Fisheries Information series No.52. In the working paper No.12 (1977) on General Description of Marine Small Scale Fisheries for Tamil Nadu State by the Project for the Development of Small Scale Fisheries in the Bay of Bergal Programme of the Food and Agriculture Organisation of the United Nations, it is stated as follows:- "Of the total marine landings, the traditional fishing craft viz., catamarans and sailing canoes produce 60% (1,35,000 tonne) while small mechanised 30' and 32' boats produce 40% (85,000 tonnes)". In the Status Report on mechanisation Programme for the Development of Marine Fisheries - Information brochure No.4 by the Directorate of Fisheries, Madras, the landing by the mecha/nised and non-mechanised crafts are furnished as follows:-

<u>Year</u>	<u>Mechanised</u>	<u>Non-mechanised</u>
1981-82	34.04%	65.96%
1982-83	26.63%	73.37%
1983-84	34.43%	65.57%
1984-85	22.16%	77.84%
1985-86	24.49%	75.51%

In view of the above variations in the estimates of fish production between these two types of crafts, the average for the last five years is now taken to arrive at the figures reported now. The average being 28.35% and 71.65%, it could be safely taken that out of the total marine production, 30% is by the mechanised crafts and 70% by the non-mechanised traditional crafts.

Marketing and Distribution

13. Marine fish production in India in general and Tamil Nadu in particular is composed of numerous species of fishes and shell fishes. There are large variations in quantities landed annually, due to fluctuations occurring in individual fisheries. Secondary factors are also at work including variations in demand and consumption pattern, prejudices and preferences. It is always reflected in the price structure, not only of different species but also of the same species, during different seasons and from year to year.

14. The 442 fishing villages along the Tamil Nadu coast constitute the primary stage of marketing marine fish. The producers offer their marketable catch for sale, not by weight, but by measures of heaps, lots or baskets: such unit measures vary not only from locality to locality but also within the same locality and for the same types of fish, depending upon the size of the catch. The disposal of marine fish at the landing sites by weight system has not been found practicable because of the great rapidity with which this perishable commodity has to be handled.

15. The fish is generally auctioned by traditional auctioneers or middlemen on commission basis, who also take the responsibility for realising the sale proceeds from the traders. These auctioneers are generally fisherwomen. The fishermen have neither adequate time to take care of the marketing of their catches, nor the business acumen and knowledge of the marketing conditions. The middlemen are also often money lenders, advancing funds to the fishermen and thereby exercising perpetual control over the fishermen's economy. In some fishing villages, there is a practice of annual auction of the right of purchase of fish for which the successful traders pay a premium. In these

cases, the prices of fish are more or less dictated by traders.

16. About 25% of the Marine fish are marketed close to the landing centres by retailers who carry the fish either by head loads or by cycles. The major part however, is taken to the fish markets in the centres and towns run by the corporation or Municipalities or to the private fish markets. Generally fish is not stored in cold storages or preserved with ice immediately after landing. For marketing at nearby places, say within 10 kms, the fish is transported in baskets by means of a cycle or head loads without icing. For despatch to distant markets by trucks or train fish is packed in baskets, in leaf mats or old tea chests with layers of ice and strongly bound by ropes.

PART II

Analysis of Survey Data

Having Stated that there is a vast potential for Marine fishery which form part of cheap and nutritious food for the increasing population, it is now sought to examine the survey data with reference to the spread of technological changes in the households that have been surveyed. The survey was carried out in 44 Marine fishing villages spread over nine coastal districts of Tamil Nadu. 7842 households in these villages were interviewed for intensive study.

Ownership of Fishing crafts

2. Among the 7842 selected households, 4680 owned fishing craft of one type or another and the total number of fishing crafts owned by them are 4732 which indicates that there are a few households that owned more than one craft (Vide Table V.6). It is noted that 4519 out of the 4732 crafts (95.50%) are non-mechanised traditional crafts. Catamaran numbering 3762 (83.25%) forms the bulk of the traditional crafts. It is noted that out of the number of 40,483 crafts owned by the 36,327 households in the state, 3912 are mechanised and 36,571 non-mechanised (ie) 9.66% and 90.34% respectively. But in the selected villages only 213 out of the total number of 4732 crafts are mechanised (ie) only 4.50%. This implies that the selected households in the districts do not represent the actual position of the number of mechanised and non-mechanised boats owned by the households in the state.

Length and Horse Power

3. The type of fishing and the size range of the mechanised crafts is given in the Table V.7. Out of the 213 mechanised crafts, 129 (60.56%) are gill netters and 84 (39.44%) Trawlers. The gill netters are in the size range of 5.5 to 9.1 metres and the Trawlers above 9.1 metres. In the selected households there is total absence of purse-seiners and Long Liners. it is also brought to notice that there are no crafts fitted with O.B.Motors in the selected villages. The 30' boats are generally fitted with Engines of H.P. range of 40 to 45 and the 32' footer boats with Engines of 50 to 65 H.P. range. The 18' to 25' boats are fitted with Engines in the Horse power bracket of 10 to 15 range.

4. Table V.8 gives details of the non-mechanised crafts owned

by the selected households. Out of the total number of 4519 crafts, there are 3762 Catamarans, 732 Plank Built Boats, 2 Vallams and 23 Dug out Canoes.

Age of Boats

5. The age of the Fishing Equipment is furnished in Table V.9. The normal life span of a mechanised craft is taken as 10 years and that of a non-mechanised craft, either Plank Built, canoe or catamaran is considered to be 15 years subject to attack by wood borers under marine conditions. Among the 213 mechanised craft, 126 (59.15%) are more than 4 years old and 87 (40.85%) less than 4 years old. Out of the 4519 non-mechanised crafts, 1970 (43.59%) are more than 4 years old and 2549 (56.41%) are less than 4 years old. Both, among the mechanised and non-mechanised crafts, the crafts of more than 4 years old have naturally suffered tremendous wear and tear and the data collected revealed the fact that a few of the existing fleet with the selected households have outlived their life span.

Ownership of Fishing Gear

6. Fishing gear owned by the fishermen families is the second main asset to their livelihood. Except the Beach shore seine nets which is made partly of hemp and partly of cotton (bag portion alone cotton) all other fishing gear now used by the fishermen are made of synthetic twine either multifilament or monofilament.

7. 4680 households own 9598 nets of different types (Vide Table V.10). It is observed that most of these gear gill nets (7801-81.28%), whereas all the other types of nets forms 18.72%. The gill net is followed by Trawl net 723 (7.53%), Beach seine 304 (3.16%), 271 Boat Seine (2.82%), 49 purse seine (0.51%) seines (0.51%) and others (4.69%). The data reveals that in Ramnathapuram District there are 2315 units (24.11%). It is also observed that 173 nets (1.80%) are rented by the sample households.

Age of Fishing Gear

8. The life span of synthetic fibre gear is considered to be 3 years. Out of the 9598 nets, 3518 nets (36.65%) have outlived their life. However, portions of the webbings of the nets would have been replaced in order to give an extended life to the nets. 6077 (63.31%) are considered to be within their life

span. Table V.9 presents the details about the age of the fishing gear in the districts.

9. The type of ownership of the craft and gear is presented in Table V.11 (ie) owned, rented or mortgaged. Except for the fact that 14 non-mechanised crafts are rented, all the other 4718 mechanised and non-mechanised crafts are owned.

Value of the Fishing Equipment

10. The value of the fishing equipment is presented in Table V.12. Among the 213 mechanised fishing craft, the value of 12 (5.63%) is in the range of Rs.1 to 2.5 lakhs, 118 (55.40%) in the range of Rs.50,000 to 1 lakhs and 83 (38.97%) in the range of Rs.50,000. Among the 4519 non-mechanised crafts, 1244 (27.53%) fall within the range of upto Rs.5001 to 10,000 and the value of 3275 (72.47%) fall within Rs.5000/- range. As far as the fishing gear is concerned, 2942 units (30.65%) is in the range of Rs.2501 to Rs.5000/- and 6653 units (69.32%) fall in the range of upto Rs.2500/-

Source of Finance

11. The source of finance for the procurement of the fishing craft is presented in Table V.13. Out of the 213 mechanised crafts, 104 (48.83%) crafts have been procured out of own sources, 103 (48.37%) from Institutional finance and 6 (2.81%) obtained from borrowings from traders. Among the non-mechanisedboats 2460 (54.44%) are from own sources, 1118 (24.74%) obtained through Institutional finance, 856 (18.94%) from Traders and 85 (1.88%) procured through relatives. In respect of gear 5099 (53.13%) have been obtained from own sources, 1791 (18.66%) from institutional finance, 2028 (21.13%) through borrowings from Traders and 677 (7.05%) obtained through Relatives. Table V.14 gives the details about the status of operation of the fishing equipment by the 7842 surveyed households. 4680 (59.68%) families were owner operators and all the other families (ie) 3162 (40.32%) families were share operators.

Season Wise Fish Catch

12. The production data according to the four-quarterly periods of the reference year 1986 is discussed in this para Table V.15. sets out the relevant details in respect of the reporting households owning crafts. It could be observed that production of

prawn was $2\frac{1}{2}$ times (72.33%) more during the half year July to December (ie) during the non-rainy periods of the South West and North East Monsoons when compared with the first half year January to June. The data collected also reveals the fact that in kanyakumari and V.O.C districts, prawn production was nil during the 1st half of the year. Fish production was 53.19% during the 1st half year and 46.81 during the 2nd half year.

Infrastructural Facilities

13. In view of long coastline and large fleet of mechanised fishing boats, Tamil nadu needs considerable landing and berthing facilities. The existing facilities are inadequate, considering the needs based on the momentum of mechanised fishing. There are 3 Major Fishing Harbours, 5 Minor Fishing Harbours and 5'T' Landing Jettys.

14. All the 4680 surveyed households reported that they have landing facilities on the beach itself at a distance of less than 1Km from their fishing hamlet. (see Table V.16). The availability of Landing Quay, Berthing Quay, Ice, Water, Fuel, Repair facilities shopping centres, community halls and Auction halls to the surveyed households is presented in Table No.V.17.

Mode of Disposal

15. The mode of disposal of the catches by the 4680 households is given in Table V.18. 2063 (44.08%) of the surveyed households sell their catches to wholesale traders, 2102 (44.91%) families to Retail Traders, 245 (5.24%) families to commission agents, 170 (3.63%) families to Cooperative Societies and 100 (2.14%) families sell their catches directly to the consumers.

Mechanised 30' and 32' boats

16. The mechanised boats are planked wooden boats. They operate from harbours and protected sites all along the coast. The 30 feet and 32 feet boats are fitted with Inboard Marine diesel engines in the horse power bracket of 40 to 45 and 50 to 65 respectively. In the 32' boats trawl nets are the main gear used and in the 30' boats both trawl nets and gill nets are operated. The present cost of a 32' boat and 30' boat is Rs.2.5 lakh and 1.75lakh respectively. In view of the high initial cost and the increase in the operation cost dueto the high cost of fuel, the economics of operation of these mechanised boats is becoming unstable. This to some extent may get mitigated

if the shell fishery (prawn fishery) is landed. The gross receipt, total operating expenditure and net income by operating mechanised fishing boats is given in Table V.19.

17. The average present expenditure on important production cost components are as follows:-

<u>Per Mechanised Boat</u>		
i)	Salaries and Wages	32.06%
ii)	Fuel	31.99%
iii)	Lubricating oil etc	1.66%
iv)	Others	1.42%
v)	Shore Costs	1.28%
vi)	Repairs and Maintenance	
	Craft	1.94%
	Engine	5.55%
	Gear	2.32%
vii)	Interest on Capital	16.09%
viii)	Insurance	5.69%
Total		100.00

18. In the Report of the committee for organised Development of Marine Fisheries with small mechanised fishing boats in Tamil Nadu (28.2.1978), wages and salaries to crew and fuel expenditure have been given as 26.39% and 22.62% respectively. These are the two important production cost components. Further, during the earlier years there was no expenditure on the component Interest on capital which is now about 16.09%.

Insurance

The Insurance rates for mechanised boats are as follows:-

Total loss, constructive total loss including salvage charges	2.25%
Including off season of 3 months	1.50%
Total	3.75%
Partial loss 50% of 3.75	1.88%
5.63%	
Riot	0.20%

Partial loss 50% of 3.75	1.88%
	<hr/>
Riot	5.63%
Total	0.20%
	<hr/>
	5.83%

Including Coverage of Kerala coast

Total loss, constructive Total loss including salvage charges	2.25%
Including Kerala Coast	0.25%
	<hr/>
Off Season,	2.50%
	3.00%
	<hr/>
Partial loss 50% of 5.50	5.50%
	2.75%
	<hr/>
Riot	8.25%
	0.20%
	<hr/>
Total	8.45%

19. It is observed from the Table V.19 that in Kanyakumari District, the fishermen do not insure their mechanised boats. This is reported to be due to the high operational expenditure, if the Insurance charges are also included.

TABLE No V-1
General Information of the Marine Fishing Villages

Sl. No.	District	Coastal length of the Maritime Dist. in Kms.	% of the Coast-line	No. of Marine Fishing Villages	Total Population	Density/ Km Coastal length	Population/ Village	Family Size	Persons per House	Number of Landing Centres
1.	Madras	26	2.6	40	46232	1778	1156	5.86	5.86	10
2.	Chingleput	135	13.5	64	38723	287	605	4.79	4.82	58
3.	South Arcot	89	8.9	56	42040	472	751	5.19	5.20	41
4.	Thanjavur	216	21.6	84	87128	403	1037	4.82	4.85	75
5.	Pudukkottai	39	3.9	29	10157	260	350	5.13	5.18	14
6.	Ramana thapuram	261	26.1	99	65844	252	665	5.31	5.44	69
7.	Thirunelveli	166	16.6	26	58779	354	2261	5.79	5.79	28
8.	Kanyakumari	68	6.8	44	114897	1690	2611	5.64	6.30	48
Total		1,000	100.0	442	463800	464	1049	5.33	5.49	343

TABLE No. V-2

Infrastructural Facilities Available in the Districts (Marine)

Sl. No.	District	No. of Fishing Villages	No. of Marine Vessels	No. of villages in which facilities available				Landing and Berthing Facilities		
				Electricity	Drinking Water	Guidance Lights	Community Halls	Cyclone Shelters	School	Harbour
1.	Madras	40	40	36	37	1	1	-	40	Madras Fishing Harbour
2.	Chingleput	64	54	64	64	4	-	9	48	
3.	South Arcot	56	39	53	49	4	1	10	49	Coimbatore Fishing Harbour
4.	Thanjavur	84	78	81	68	16	2	16	63	
5.	Pudukottai	29	28	29	23	1	4	7	14	a) Nagapattinam Fishing Harbour
6.	Ramanathapuram	59	74	83	75	3	16	11	55	b) Kallipattinam Jetty c) Koppalkarai Jetty d) Fazhevar Fishing Harbour a) Kottapattinam b) Manjapuram Jetty and Wharf c) Kaelekarai Jetty d) Valinokkam Fishing Harbour e) Thondi
7.	Thiruvallur	26	24	18	20	5	-	-	23	Intermediate Fishing Harbour at Tuticorin
8.	Kanyakumari	44	44	44	42	6	-	-	43	Major Fishing Harbour at Chinnamuttom
Total		442	381	408	378	40	53	53	345	

TABLE No.V-3
 Details of Crafts in the Districts (Marine)

Sl. No.	District	Mechanised		Non-Mechanised					Total		
		Wooden Boats	F.R.P. Boats	Country Craft with engine	Catamaran	Total	Masula Boat	Vallem		Dugout Canoe	Catamaran
1.	Madras	339	1	-	3	343	18	3	18	2403	2442
2.	Chingleput	1	1	-	-	2	114	9	50	5611	5784
3.	South Arcot	140	25	20	1	186	74	144	363	3100	3681
4.	Thanjavur	675	19	66	-	760	6	1074	195	4969	6244
5.	Pudukottai	84	-	-	-	84	-	998	-	87	1085
6.	Kamennathapuram	698	2	24	-	724	-	3355	703	272	4330
7.	Thirunelveli	167	11	298	597	1073	-	938	1	2851	3790
8.	Kanyakumari	328	23	334	55	740	-	375	1	8839	9215
Total		2432	82	742	656	3912	0.58	6896	1331	28132	36571
Percentage		62.17	2.10	18.97	16.76	100		18.86	3.64	76.92	100
		Number of Families									
		Owning Craft					Not Owning Craft				
1.	Madras	1593					6301				
2.	Chingleput	5036					3044				
3.	South Arcot	3158					4547				
4.	Thanjavur	7025					11070				
5.	Pudukottai	1061					920				
6.	Kamennathapuram	4357					8032				
7.	Thirunelveli	4303					5854				
8.	Kanyakumari	9394					10990				
Total		36327					50758				
Percentage		41.71					58.29				

TABLE No. V-4

Details of Gear Available in Districts (Marine)

Sl. No.	District	Trawl Net	Gill net	Long Lines	Traps	Score Seine	Others	Total	No. of Families	
									Owning Gear	Not Owning Gear
1.	Madras	159	911	9	7	45	1521	2662	1603	6291
2.	Chingleput	75	9063	450	6	303	1693	11580	5761	2319
3.	South Arcot	354	4970	436	239	1040	3605	10644	4794	3311
4.	Thanjavur	2332	68464	97368	303	4217	3169	175854	11756	6339
5.	Pudukottai	932	11966	633	38	46	2	13617	1526	455
6.	Beema thapuzha	339	55232	1399	2412	583	5720	72885	7591	4798
7.	Trunelveli	640	56650	980	1174	176	194	59814	5006	5151
8.	Kanyakumari	415	9327	2904	164	591	2211	15612	9184	11200
Total		8457	220583	104179	4343	7001	18115	362678	47221	39864
Percentage		2.33	60.82	28.73	1.20	1.95	4.99	100.00	54.22	45.78

TABLE No. V-5
Employment Status by Fishermen

Sl. No.	District	Total Adults (Male)	Fishing	Fresh Fish trader	Dried Fish Trade	Net making	Diving	Other than Fishing & allied occupation	Total
1.	Madurai	11027	7758	111	38	11	7	1653	9578
2.	Chingleput	10835	9081	18	4	7	-	401	9511
3.	South Arcot	11810	9555	162	42	165	-	875	10803
4.	Thanjavur	25390	20776	232	112	25	6	1134	22285
5.	Tudukottai	3001	2492	64	23	3	5	59	2646
6.	Ramanathapuram	17710	15471	238	186	98	60	754	16807
7.	Tirunelveli	16317	12409	126	122	135	112	1169	14073
8.	Kanyakumari	32915	24323	240	55	33	101	3119	27871
Total		126585	101969	1191	582	477	291	9164	113574
Percentage			39.69	1.05	0.51	0.42	0.26	8.07	100.00

Employed fishermen out of total adults 80.33%.

TABLE No. V-6.
OWNERSHIP OF FISHING CRAFT IN SURVEYED HOUSEHOLDS

Sl. No.	Districts	Number of Villages	Total Number of Households	Number of Mechanised Craft			Non-Mechanised Craft			Total
				Having Craft	Out-board Motor	In-board Engine	Musula Boat Vallam	Catamaran	Canoe	
1.	Madras	4	890	207	-	8	5	197	5	210
2.	Chingleput	8	869	689	-	-	26	833	-	859
3.	South Arcot	5	1122	512	-	9	22	495	22	526
4.	Thanjavur	8	1283	887	-	47	52	634	52	733
5.	Pudukottai	2	257	257	-	-	215	56	215	271
6.	Ramanathapuram	10	1152	722	-	49	433	159	433	641
7.	Thrunelveli	1	192	187	-	-	-	203	-	203
8.	V.Q.C.	2	393	190	-	30	-	162	-	192
9.	Kanyakumari	4	1683	1029	-	70	4	1023	4	1097
Total		44	7841	4680	-	213	757	3762	757	4732

TABLE No.V-7
OWNERSHIP OF FISHING EQUIPMENT - CRAFTS WITH IN BOARD ENGINES

Sl. No.	Districts	Gill Netter	Trawler	Purse Seine	Long Liner	Trawler Cum Gill Netter	Total
		5.5 - 9.1 Metres (H.F)	Above 9.1 Metres (H.F)	13 Metres and Above (H.F)	5.5 to 10 Metres (H.F)	11 to 15 Metres (H.F)	16 to 15 Metres (H.F)
1.	Madras	-	8	-	-	-	8
2.	Chingleput	-	-	-	-	-	-
3.	South Arcot	7	2	-	-	-	9
4.	Thanjavur	27	20	-	-	-	47
5.	Pudukottai	-	-	-	-	-	-
6.	Bamanathapuram	49	-	-	-	-	49
7.	Thiruvallur	-	-	-	-	-	-
8.	V.O.C	8	22	-	-	-	30
9.	Kanyakumari	38	32	-	-	-	70
Total		129	84	-	-	-	213

MEMBERSHIP OF FISHING EQUIPMENT - CRAFT - NON-MECHANISED
TABLE No. V-8

Sl. No.	District	Gatenaren	Plank Boat	Vallam	Dugout Canoe	Total
1.	Madras	197	5	-	-	202
2.	Chingleput	833	26	-	-	859
3.	South Arcot	495	22	-	-	517
4.	Thanjavur	634	52	-	-	686
5.	Pudukottai	56	210	-	5	271
6.	Benarathapuram	159	413	2	18	592
7.	Trunelveli	203	-	-	-	203
8.	V.C.C	162	-	-	-	162
9.	Kanyakumari	1023	4	-	-	1027
Total		3762	732	2	23	4519

TABLE No. V-2

AGE OF FISHING EQUIPMENT

Sl. No.	Districts	Mechanised Crafts		Non-Mechanised Crafts		Gear		Other Equipment
		Up to 1982	After 1982	Up to 1982	After 1982	Up to 1982	After 1982	
1.	Madras	2	6	57	145	70	274	3
2.	Chingleput	-	-	356	503	629	1014	-
3.	South Arcot	6	3	147	370	267	552	-
4.	Thanjavur	25	22	415	271	680	1142	-
5.	Pudukottai	-	-	-	271	-	914	-
6.	Ramanathapuram	41	8	334	258	1068	1247	-
7.	Trunelveli	-	-	132	71	303	147	-
8.	V.O.C	14	16	59	103	82	127	-
9.	Kanyakumari	38	32	470	557	419	660	-
Total		126	87	1970	2549	3518	6077	3

Note: Reporting Year 1986

Average life of Mechanised Craft/ 10 years

Average life of Non-mechanised Craft 15 years

Average life of Synthetic Gear 3 years.

TABLE No. V-10
 OWNERSHIP OF FISHING EQUIPMENT - TYPE OF GEAR

No.	Districts	Number of fishing gear	Beach/Boat Seine (Hemp and Cotton)	Boat Seine (Synthetic)	Furse Seine (Synthetic)	Gill Nets (Synthetic)	Trawl Net (Synthetic)	Traps	Hook and Line	Others	Total
1.	Madras	207	9	56	-	255	2	-	22	3	347
2.	Chingleput	689	17	83	-	1543	-	-	60	-	1643
3.	South Arcot	512	38	11	-	663	107	-	-	-	819
4.	Thanjavur	887	23	12	-	1671	-	116	-	-	1822
5.	Pudukkottai	257	-	-	-	704	186	-	-	24	914
6.	Benarathapuram	722	63	-	49	1716	428	17	10	32	2315
7.	Thiruvellur	187	-	137	-	226	-	-	87	-	450
8.	V.O.C.	190	58	-	-	151	-	-	-	-	209
9.	Kanyakumari	11029	96	32	-	872	-	-	79	-	1079
Total		4680	304	271	49	7801	723	133	258	59	9598

TABLE No. V 11

GAFF AND GEAR - TYPE OF OWNERSHIP

Sl. No.	Districts	Owned				Rented			Mortgaged	
		Mechanised Craft	Non Mechanised Craft	Other Equip-ment	Mechanised Craft	Non Mechanised Craft	Gear	Other Equip-ment	Mech. Craft	Non-Mech. Craft Gear & Other Equipments
1.	Madras	8	202	344	3	-	-	-	-	-
2.	Chingleput	-	859	1643	-	-	-	-	-	-
3.	South. Arcot	9	517	819	-	-	-	-	-	-
4.	Thanjavur	47	686	1822	-	-	-	-	-	-
5.	Puduchetti	-	257	741	-	-	14	173	-	-
6.	Bemankathapurem	49	592	2315	-	-	-	-	-	-
7.	Thrunelveli	-	203	450	-	-	-	-	-	-
8.	V.O.C.	30	162	209	-	-	-	-	-	-
9.	Kanyakumari	70	1027	1079	-	-	-	-	-	-
Total		213	4505	9422	3	-	14	173	-	-

TABLE No. V-12
VALUE OF FISHING EQUIPMENT

Districts	Mechanised			Non-Mechanised Gear			Other Equipment Upto Rs. 1,00,000 and above
	Up to Rs. 50,000	Rs. 50,000 to 1,00,000	Rs. 1,00,000 to 2,50,000	Up to 5001 to 10,000	Up to 2,500 5,000 & 1,00,000 above	Up to Rs. 1,00,000 and above	
	1	7	192	10	244	3	
Madras	-	-	-	-	-	-	-
Chingleput	-	-	617	242	1216	427	-
South Arcot	5	-	353	164	617	202	-
Thanjavur	-	5	616	70	1519	303	-
Pudukottai	-	-	62	209	810	104	-
Ramanathapuram	6	-	254	338	1127	1188	-
Thrunelveli	-	-	124	79	223	227	-
V.O.C	30	-	92	70	100	109	-
Kanyakumari	42	-	965	62	797	282	-
Total	83	118	3275	1244	6653	2942	3

TABLE No. V-13
SOURCE OF FINANCE

Districts	Own Source				Institutional Finance				Trader & Mcney londer				Relatives						
	Mecha- nised	Non- Mecha- nised	Other Equip- ment	Gear	Mecha- nised	Non- Mecha- nised	Other Equip- ment	Gear	Equip- ment	Mecha- nised	Non- Mecha- nised	Other Equip- ment	Gear	Equip- ment	Mecha- nised	Non- Mecha- nised	Other Equip- ment	Gear	
Aras	6	178	285	3	1	2	13	1	18	38	8	1	18	38	4	8	-	-	-
Chingleput	-	598	1316	-	-	111	129	-	80	128	-	-	80	128	-	70	-	-	-
North Arcot	3	105	244	-	6	297	518	-	35	57	-	-	35	57	-	-	-	-	-
Palanjavur	-	456	773	-	42	18	51	-	201	864	-	-	5	201	11	134	-	-	-
Palnadu	-	58	690	-	-	-	-	-	213	224	-	-	-	213	-	-	-	-	-
Pranathipet	12	283	804	-	37	-	329	-	309	717	-	-	-	309	-	465	-	-	-
Rayachoti	-	171	381	-	-	32	69	-	-	-	-	-	-	-	-	-	-	-	-
T. O. C.	39	72	135	-	-	90	74	-	-	-	-	-	-	-	-	-	-	-	-
Tiruvallur	53	459	471	-	17	568	508	-	-	-	-	-	-	-	-	-	-	-	-
Total	104	2460	5099	3	103	1118	1791	-	6	856	2028	-	6	856	85	677	-	-	-

TABLE No. V-14
STATUS OF OPERATION OF THE FISHING EQUIPMENT BY THE HOUSEHOLDS

Sl. No.	Districts	Owner Operator		Status		Wage Earner
		Operator	Operator	Share Operator	Share Operator	
1.	Madras	207		683		-
2.	Chingleput	689		180		-
3.	South Arcot	512		610		-
4.	Thanjavur	887		397		-
5.	Pudukottai	257		-		-
6.	Samantapuram	722		430		-
7.	Trunelveli	187		5		-
8.	V.O.C	190		203		-
9.	Kanyakumari	1029		654		-
		4680		3162		-

TABLE No. V-15
SEASON WISE PRAWN AND FISH CATCH IN SURVEYED HOUSEHOLDS

Districts	Total Number of House-holds	Jan-March		April to June		July to Sep.		Oct. to Dec.		Total	
		Prawn	Fish	Prawn	Fish	Prawn	Fish	Prawn	Fish		
Madras	890	3232	46505	3693	38598	5855	48227	2245	15478	15025	148808
Chingleput	869	3845	743286	5356	396046	7516	402347	7005	753181	23722	2294860
South Arcot	1122	3830	230502	3740	223211	3994	200878	3482	175861	15046	830452
Thanjavur	1284	28414	127252	33326	163885	16666	114547	15618	73660	94024	479344
Pudukottai	257	528	35598	735	42424	595	43002	357	37702	2215	158726
Ramanathapuram	1152	37472	322589	37255	359267	29024	201438	34006	230967	137757	1114261
Thrunelveli	192	-	53108	16082	51238	17952	53669	12716	53295	46750	211310
V.O.C	393	-	166060	-	193990	15485	140030	7410	146395	22895	646475
Kanyakumari	1683	-	351918	-	351660	141230	372498	142773	366324	284003	1442400
Total	7842	77321	2076818	100187	1820319	238317	1576636	225612	1352863	641437	7326636

TABLE No. V-16
 INFRA-STRUCTURAL FACILITIES AVAILABLE TO SAMPLE HOUSEHOLDS

Sl. No.	Districts	Type of Landing Centre					Distance from Landing				
		Beach Landing	Small Landing or Jetty or Wharf	Minor Fishing Harbour	Major Fishing Harbour	5 and above	3-5	1-3	0-1	1-3	5 and above
1.	Madras	207	-	-	1	207	-	-	-	-	-
2.	Chingleput	689	-	-	-	689	-	-	-	-	-
3.	South Arcot	512	-	1	-	512	-	-	-	-	-
4.	Thanjavur	887	2	2	-	887	-	-	-	-	-
5.	Tudukottai	257	1	-	-	257	-	-	-	-	-
6.	Ramanathapuram	722	2	2	-	722	-	-	-	-	-
7.	Thirunelveli	187	-	-	-	187	-	-	-	-	-
8.	V.C.C	190	-	-	1	190	-	-	-	-	-
9.	Kanyakumari	1029	-	-	1	1029	-	-	-	-	-
Total		4680	5	5	3	4680	-	-	-	-	-

TABLE No. V-17
 NUMBER OF HOUSES REPORTING INFRASTRUCTURE FACILITIES AT THE PLACE OF LANDING

Sl. No.	Districts	Landing Quay	Berthing Quay	Ice	Water	Fuel	Repairs	Cold Storage	Other Facilities Like civil amenities shopping centre community Hall	Auction Hall
1.	Madras	37	8	9	21	-	7	-	22	104
2.	Chingleput	-	-	-	94	-	-	-	61	-
3.	South Arcot	-	-	-	-	-	-	-	-	-
4.	Thanjavur	-	-	-	-	-	-	-	-	-
5.	Pudukottai	-	-	-	-	-	-	-	-	-
6.	Remanathapuram	-	-	-	-	-	-	-	-	-
7.	V.O.C.	-	-	-	-	-	-	-	-	-
8.	Kanyakumari	-	-	-	-	-	-	-	-	-
Total		37	8	9	115	-	7	-	103	104

TABLE No. V-18
MODE OF DISPOSAL OF FISH AMONG SURVEYED HOUSEHOLDS

Sl. No.	Districts	Number of Households Surveyed	Wholesale Trader	Retail Trader	Commission Agent	Cooperative Societies	State Corporations	Directly to Consumer	Others
1.	Madras	207	34	87	-	-	-	86	-
2.	Chingleput	689	244	445	-	-	-	-	-
3.	South Arcot	512	284	136	92	-	-	-	-
4.	Thanjavur	887	155	732	-	-	-	-	-
5.	Pudukottai	257	49	208	-	-	-	-	-
6.	Ramanathapuram	722	498	210	-	-	-	14	-
7.	Tirunelveli	187	113	74	-	-	-	-	-
8.	V.C.C	190	112	78	-	-	-	-	-
9.	Kanyakumari	1029	574	132	153	170	-	-	-
Total		4680	2063	2102	245	170	-	100	-

Table V.19 (a) (contd.)
Economics of Operation of Mechanised Boats (30' & 32')

District	Repairs & Maintenance	Depreciation	Interest payable	Insurance	Average total expenditure/boat	Average net income/boat			
	Craft	Engine	Winch etc.	Hull Gear					
Madras	1,800 (2.55%)	2,400 (3.32%)	2,000 (2.75%)	10%	33 1/3%	11,460 (15.9%)	4,375 (6.05%)	72,235	15,600
Chingleput									
South Arcot	2,500 (5.15%)	3,600 (7.43%)	1,500 (3.10%)	10%	33 1/3%	6,950 (14.34%)	3,750 (7.74%)	48,450	14,300
Thanjavur	1,500 (2.75%)	3,000 (5.50%)	1,500 (2.75%)	10%	33 1/3%	9,350 (17.14%)	3,750 (6.87%)	54,550	17,800
Pudukottai									
Ramanathapuram	1,500 (2.43%)	2,500 (4.04%)	1,200 (1.94%)	10%	33 1/3%	9,950 (16.08%)	3,750 (6.06%)	61,850	17,350
V.O.C.	-	3,000 (6.27%)	1,060 (2.22%)	10%	33 1/3%	7,800 (16.3%)	4,375 (9.15%)	47,835	12,930
Tirunelveli									
Kanyakumari	-	4,000 (8.36%)	1,000 (2.09%)	10%	33 1/3%	7,200 (15.05%)	-	47,850	11,750
Total for 162 boats	1,72,900 (1.94%)	4,94,700 (5.55%)	2,06,180 (2.32%)			14,32,530 (16.09%)	5,06,975 (5.69%)	89,06,435	25,27,340

CHAPTER VI

Technological Status

Part - I

Inland Fisheries

Tamil nadu has 3.69 lakh hectares of Inland water spreads, comprising of rivers and channels, reservoirs, irrigation tanks, etc. The Cauvery, Pennar, Vaigai and Tambaraparani rivers with their tributaries, branches and channels enrich the inland water spreads in the state. The break-up details of inland water spreads are as follows:-

	<u>in hectares</u>
1) Major Reservoirs	50,875
2) Major Irrigation Tanks	1,04,948
3) Seasonal Tanks	1,27,430
4) Ponds	30,000
5) Estuaries and Brackishwaters	55,879
	<u>3,69,132</u>

2. For generating power and for irrigation, Dams and Reservoirs have been formed at many points in the rivers and as on date, there are 42 Major reservoirs in the state with a water spread of 50,875 hectares. The fish farms and Induced spawning Centres established alongside these reservoirs produce the necessary fish seeds required for replenishing the fish stock in the reservoirs and also for improving the fishing potential in the entire inland water system in the state.

3. The Inland fish production at the end of the various Five Year Plan periods is as follows:-

		<u>Tonnes</u>
First Five Year Plan	(1951-52)	36,000
End of " "	(1955-56)	36,000
End of Second "	(1960-61)	43,130
End of Third "	(1965-66)	86,555
End of Annual Plan	(1968-69)	1,19,784
End of Fourth Five year Plan	(1973-74)	1,50,000
End of Fifth "	(1978-79)	1,50,000
End of Sixth "	(1984-85)	1,60,100
Seventh Plan (Ist year)	(1985-86)	1,40,000

INSTITUTE FOR TECHNO ECONOMIC STUDIES

STUDY REPORT ON
TECHNO-SOCIO-ECONOMIC SURVEY OF
FISHERMEN HOUSEHOLDS IN TAMIL NADU

Correction Slip

Correction-1

Chapter VI. Part 1 - Para 3 - Page 107)
Recast the table on fish production as below:-

S.No.	Name of the District	(Quantity in tonnes)	
		1985-86	1986-87
1.	Madras	10	9
2.	Chinglepet	10,400	10,360
3.	South Arcot	12,580	12,590
4.	North Arcot	12,850	12,860
5.	Salem	15,620	15,640
6.	Dharmapuri	7,600	7,630
7.	Periyar	6,700	6,650
8.	Coimbatore	11,500	11,510
9.	Nilgiri	2,800	2,770
10.	Thanjavur	17,560	17,610
11.	Pudukottai	5,600	5,610
12.	Trichy	15,200	15,190
13.	Ramanathapuram	40	36
13.	Madurai	12,320	12,310
14.	Tirunelveli	9,170	9,180
16.	Kanyakumari	50	45
		<u>1,40,000</u>	<u>1,40,000</u>

There has been a steady increase over the plan period except during the 1st plan period when it was fluctuating. For the last two years, the production has decreased to 1,40,000 tonnes. The district wise Inland fish production during the last two years is as follows:-

SL.No.	Name of the District	(Quantity in tonnes)	
		1985-86	1986-87
1.	Madras	10	9
2.	Chinglepet	10,400	10,360
3.	South Arcot	10,580	12,590
4.	North Arcot	12,850	12,860
5.	Salem	15,600	15,640
6.	Dharmapuri	7,600	7,630
7.	Periyar	6,700	6,650
8.	Coimbatore	11,500	11,510
9.	Nilgiri	2,800	2,770
10.	Thanjavur	17,560	19,610
11.	Pudukottai	5,600	5,610
12.	Trichy	15,200	15,190
13.	Ramanathapuram	40	36
13.	Madurai	12,320	12,910
14.	Tirunelveli	9,170	9,180
16.	Kanyakumari	50	45
		<u>1,40,000</u>	<u>1,40,000</u>

Reservoir Fisheries

4. Reservoirs constructed across rivers are used mostly for irrigation purposes, although some of them are used for power generation also. While some of them receive rains only during north-east monsoon, others get two fillings once during the south-west monsoon and the second during the north east monsoon.

5. Irrigation reservoirs and tanks with above 100 acres ayacut are maintained by the P.W.D., while those below 100 acres ayacut are maintained by the Rural Development and Local Administration Department. Fisheries exploitation rights of all reservoirs are vested with the State Fisheries Department, without payment of any royalty. A few of the large reservoirs have been leased out by the Fisheries Department to the Tamil Nadu Fisheries Development Corporation on payment of a royalty of Rs.0.50 per Kg of fish caught.

6. About 2,600 tanks have been brought under the purview

of the Tamil Nadu lease and Licensing Rules, 1972 and the fisheries in them are annually leased to a local primary fishermen cooperative society. Where the society declines to take the lease, such waters are put to public auction by the Revenue Department and the proceeds are credited to the Fisheries Department. While leasing to cooperative Societies, the lease amount is fixed based on the average of the previous three years plus an increase of 20%, once every three years. Although it is expected that the society should stock the lease waters with fish fingerlings, the stocking is either not done or atleast not done adequately.

7. Irrigation reservoirs of less than 100 acres are maintained by the Rural Development and Local Administration Department. The fisheries of these waters are also annually leased out to the nearest primary Fisheries Cooperative Society. If it is not willing, the fishery is disposed off by auction. Where the lease is given to a primary cooperative Society, the lease amount is calculated on the basis of the average of the rental for the past three years, with an increase of 20 per cent once in three years.

Fish Seed Production

8. The fish seed requirement for the development of about 12 lakh ha. of inland water area is estimated as 350 million. To produce one million fish seeds of 5 cm size, about one ha. of rearing space is required. In other words, the state would require about 350 ha. of fish seed rearing space to fully meet the potential demand. However, the state has at present only 21 ha. of fish farm area, 11 ha. of fish seed rearing space and 10 ha. of breeding stock keeping space. There are now 22 induced breeding centres in Tamil Nadu, but no chinese type hatcheries have been constructed so far. The Government of India has sanctioned two 10 ha. fish seed farms at Amaravathi and Bhavani-sagar under the National Fish Seed Farm programme.

Natural Collection:

9. There are at present practically no collection of fish seed from the natural environment in the spawn or hatchling stage. Carps breed in the upper reaches of rivers and the spawn and hatchlings are washed down with the currents to the deltaic regions when they start migrating up stream when they have developed to a fingerling size. They are prevented from migrating beyond the anicuts and such anicuts serve as collection centres

for carps fingerling. This activity goes on from mid-september to the end of January each year. The actual production of fingerling by natural collection compares well with those produced by Induced breeding.

Fish Farmers Development Agencies

10. This is a centrally sponsored scheme which has made a considerable impact on the Inland fisheries development. In Tamil Nadu, there are 12 FFDAs of which 5 are under the Centrally Sponsored list and 7 operated with full finance from the State Government. Up to March 1987, these FFDAs had covered tanks with a water spread area of 2840.97 ha. benefiting 3158 fishermen and fish farmers and resulting in a total fish production of 1257.209 tonnes.

Drought Prone Area Programme (DPAP)

11. Financial assistance was given for infrastructure development at Pilavukkal in Ramanathapuram district, Hogainakkal, Pambar and Chinnar in Dharmapuri district. In these places, fish farms and nurseries are being developed.

Marketing and Distribution (Inland)

12. In departmentally managed Reservoirs, fish catches are pooled and after meeting the local demand by retailing at fixed rates approved by the Department, the balance of fish catch are handed over to fish merchants fixed on open tender basis for a year. The tender is renewable annually. No vendor system of marketing is done by the Department. The TNFDC which has an ambitious programme of developing a fish marketing net work has established 75 retail fish stalls all over Tamil Nadu where fish are procured and kept in deep freezers for retailing. The Mettur Dam Fishermen marketing Society, Mettur in Salem District which is a pioneering organisation in fish marketing has established five fish retailing stalls in Salem Dist. Fishermen Federations of Chingleput and North Arcot District also do some retailing of fresh fish by running stalls. Except to the very restricted extent as mentioned above, there is no system of distribution of fish from landing centres to various parts of the State.

13. Except in Mettur Reservoir, where there is pooling of fish catches of Society members in all other primary societies, there is no system of procuring and selling of individual fish

catch with the result that each fisherman has to find his own market for the produce.

Part - II

Analysis of Survey Data

1. In the Inland sector, 87 villages in 40 blocks were surveyed to study the socio-economic and technical skills of families engaged in Inland fisheries activities. In these 87 villages, 3862 fishermen households were surveyed for intensive study. The Inland fishermen are fishing mostly in Rivers, Reservoirs, Major Irrigation and Minor Irrigation tanks, Ponds and Backwaters/Estuaries. The total Inland water spread area has already been given as 3.69 lakh hectares.

Fishing Crafts

2. Table VI.1 shows that out of the 3862 households surveyed, only 203 (5.26%) owned fishing crafts. The crafts owned are coracle, catamaran or Theppam made up of soft wood. All the crafts are non-mechanised and there are no mechanised crafts (inboard or outboard engines). Since the fishermen in the Inland sector do not go to far away distances for fishing operation, the necessity of motorisation of boats hardly arises. Moreover, the Inland fishermen cannot afford to have a motorised craft out of their meagre earnings.

Fishing Gear

3. Out of the 3862 households surveyed in the eighteen districts, 428 families do not own either a craft or gear indicating that they either work on share basis or wages. 3434 households (88.91%) own 4430 units of net, revealing the fact that some of the families own more than one net. The fishing gear varied from place to place depending mainly on ecological conditions and the varieties of fish available. In the Inland sector also, gill nets are predominant (ie) 2451 out of 4420 (55.45%). The gill nets are mostly fabricated from nylon twine. Next in priority are the cast nets numbering 1587 (35.90%). Cast net is a popular gear utilised by the fishermen round the year and it is handy to operate and can be classified as mono-gear. It can be operated in all types of water sources. This type of gear is fabricated either in cotton or nylon. Bag nets or Drag nets come next in priority, 201 (4.54%). This type of net is fabricated either out of cotton or nylon. The bag net is a stationary gear while drag net is a

moveable gear covering a specified area to catch the fish. In a bag net operation, limited man-power is required while drag net requires more manpower according to the length of the net to cover the specified water area. Encircling net 191 (4.31%) is the other type of net in use. This type of net is also made up of cotton or nylon and is operated by more manpower depending upon the length of the net and the area to be covered Table VI.2.

Type of ownership of Craft and Gear

4. All the 203 crafts in the surveyed households are owner operated. They are neither rented nor mortgaged crafts. Similarly, the 4430 units of gear are also owned (see Table VI.3)

Source of Finance

5. Among the crafts, 200 (98.52%) are obtained through own resources and 3 (1.48%) obtained through Institutional finance. As regards gear 3715 (83.86%) are from own sources, 555 (12.53%) obtained through Institutional finance, 132 (2.98%) from money lenders and 28 (0.63%) obtained through finance from relatives. It is observed from the data that 12.53% of the households availed of credit facilities from Institutions and only 2.98% are under the clutches of money lenders for purchasing their craft and gear. (Table VI.4)

Value of Fishing Craft and Gear

6. The study (Table VI.5) revealed that 37 out of the 203 crafts are valued at upto Rs.500, 156 in the price range of Rs.501 to Rs.1000 and the value of only 10 crafts was between Rs.1001 to Rs.2000. The present cost of a craft used by the Inland fishermen is generally within Rs.1000.

7. As regards gear 3163 (71.40%) fall within the price of upto Rs.500, 1289 (29.10%) are in the price range of Rs.501 to Rs.1000 and only 178 (4.02%) above Rs.1000. The price of a cast net generally ranged from Rs.200 to Rs.350, depending upon the material with which it is fabricated (ie) cotton or nylon. Similarly, even among gill nets, the value of the gear depends upon the material used for fabricating the net.

Age of Fishing Equipment

8. Table VI.6 gives the age of the Fishing equipment viz, craft and gear in use by the sample households. 157 out of 203

crafts are below 4 years old (77.34%). The other 46 crafts (22.66%) are more than 4 years old and have outlived their life. The wood used in Inland waters is generally not hardy. Sometimes discarded catamaran logs used under marine conditions are purchased and used in Inland waters. As regards gear, 2818 (63.61%) are less than 4 years old and the balance 1612 (36.39%) more than 4 years old. These 1612 nets have outlived their life and are still being utilised for fishing by the fishermen. Here also, webbing of the older nets would have been renewed wherever it required replacement.

Type of Water Resources, exploited by capture fisheries operators

9. In Table VI.7 the type of water resource in which the 3434 owner operators are fishing is given. 2237 operators (65.14%) resort to fishing in Rivers, 225 (6.55%) fish in Reservoirs, 200 (5.82%) fish in estuaries, 772 (22.48%) fish in canals, ponds and tanks.

Ownership of Water Resources

10. Among the 3434 owner operators, 2456 (71.52%) families go for fishing in River stretches. Out of 2456 families, 2177 fish in river stretches owned by the Revenue Department and 279 families in river stretches of the P.W. Department 27 families (0.79%) fish in reservoirs owned by the P.W. Department. 310 families (9.03%) fish in Estuaries and Brakish waters, 66 and 244 fish in water sources belonging to panchayat and Revenue Depts. respectively. 641 families (18.67%) resort to fishing in canals, ponds and Tanks owned by panchayat Unions (See Table VI-8).

Lease Period and Lease amount

11. As already stated in the earlier paragraphs in this chapter, most of the River sources and ponds are under the purview of the Tamil Nadu lease and licencing Rules 1972 and the fisheries in them are annually leased out to a local primary fisherman cooperative society. Where a society declines to take the lease, then it is thrown open for public auction. The lease amount is fixed on the average of the previous three years rentals with an increase of 20% once in three years.

12. In the case of Reservoir the fishery right of which is vested with the Fisheries Dept, fishing is usually done by adopting the share system wherein the fisherman are given 1/3 share and 2/3 share is taken by the Fisheries Dept. In certain Reser-

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Correction-2

(Chapter VI: Part III Page 113)
Recast para 14 as below:-

14. The study reveals that the annual average gross income per household is Rs.5059.78. The annual average operating cost per household is Rs.624.48 and annual average net income per household is Rs.4435.25. The net annual income of Rs.7584.15 per household in Madurai district is the highest and net annual income per household of Rs.1011.10 in Kamarajar District is the lowest. The annual average fish catch per household is 408.72 Kgs. This is almost even in all the districts except in a few cases. The average number of working days in a year among the inland fishermen is 180. (see Table VI.10)

voirs the licensing system is in force. Hence the Department has fixed certain fixed rates either on a monthly or annual basis as licence fee depending upon the type of gear used for fishing.

Mode of Sale

13. Among the surveyed households in the 18 districts, fish is sold through the agencies noted in the Table VI.9. It is observed that 1986 (57.83%) families sell their catches directly to consumers. This is followed by sale to Retail Traders 653 (19.02%), wholesale Traders 444 (12.93%), cooperative societies 315 (9.17%) and State corporations 36 (1.05%). The retail traders collect the fish catch directly from the riverside or tank side from the fishermen and transport them by headloads or cycles soon after catching for further disposal to consumers. The wholesale traders transport the catches either by Rail or Road, after icing the fish, to distant towns for disposal. It is also observed from the data collected that 10.22% of the catches is sold through cooperative societies or state corporation. Unlike the marine sector, in the Inland Sector, middlemen do not play any active part in exploiting the illiterate fishermen.

14. The study reveals that the annual average gross income per household is Rs.5924.87. The annual average operating cost per household is Rs.731.05 and annual average net income per household is Rs.5193.52. The net annual income of Rs.10,131.58 per household in Ramanathapuram district is the highest and the net annual income per household of Rs.1600 in South Arcot is the lowest. The annual average fish catch per household is 489.80 Kgs. This is almost even in all the districts except in Ramanathapuram and Pasuponmuthuramalingam districts. The average number of working days in a year among the Inland fishermean is 180.

15. Although culture fisheries technique is encouraged and is implemented through 12 Fish Farmers Development Agencies and is taken by the private sector also, in none of the 3862 families in the 87 villages where intensive study was taken up it has been reported. Similarly, although fish seed farms are available in the private sector, it is not undertaken by any in the surveyed households.

Table VI.1
Ownership of Fishing Equipment - Craft Non-mechanised (Inland)

District	Catamaran/ Theppam	Coracle	Tubes	Total
1. Madras	43	-	-	43
2. Chingleput	58	-	-	58
3. South Arcot	11	-	-	11
4. North Arcot	-	-	-	-
5. Salem	-	42	-	42
6. Dharmapuri	-	-	-	-
7. Periyar	-	-	-	-
8. Coimbatore	-	33	-	33
9. Thanjavur	-	-	-	-
10. Trichy	-	-	-	-
11. Pudukottai	-	-	-	-
12. Madurai	16	-	-	16
13. Ramanathapuram	-	-	-	-
14. Pasumpon Muthuramalingam	-	-	-	-
15. Kamarajar Maavattam	-	-	-	-
16. Tirunelveli	-	-	-	-
17. V.O.C.	-	-	-	-
18. Kanyakumari	-	-	-	-
Total	128	75	-	203

Table No. VI-2
 Ownership of Fishing Equipment - Gear (Inland)

District	Cast net	Gill net	Encircling net	Bag/Drum net	Total
1. Madras	11	93	-	-	104
2. Chingleput	225	40	-	38	303
3. South Arcot	-	372	-	-	372
4. North Arcot	-	200	-	-	200
5. Salem	-	200	-	-	200
6. Dharmapuri	-	200	-	-	200
7. Periyar	-	300	-	-	300
8. Coimbatore	296	-	-	-	296
9. Thanjavur	155	76	35	145	411
10. Trichy	176	78	-	-	254
11. Pudukottai	53	115	-	-	168
12. Madurai	47	26	82	9	164
13. Ramanathapuram	80	40	44	-	164
14. Pudukottai Muthu- rimalingam	84	94	17	-	195
15. Karaikal	91	239	13	9	352
16. Tirunelveli	55	113	-	-	168
17. V.C.C.	151	265	-	-	416
18. Kanyakumari	163	-	-	-	163
Total	1587	2451	191	201	4430

Table VI.2
Type of Ownership

District	Owned		
	Mechanised craft	Non-mechanised craft	Other Equipment
1. Madras	-	43	104
2. Chingleput	-	58	303
3. South Arcot	-	11	372
4. North Arcot	-	-	200
5. Salem	-	42	200
6. Dharmapuri	-	-	200
7. Periyar	-	-	300
8. Coimbatore	-	33	296
9. Thanjavur	-	-	411
10. Trichy	-	-	254
11. Pudukottai	-	16	164
12. Madurai	-	-	164
13. Ramana-thapuram	-	-	164
14. P. Nuthuramalingam	-	-	195
15. Kamarajar	-	-	352
16. Thrunelveli	-	-	168
17. V.O.C.	-	-	416
18. Kanyakumari	-	-	163
Total	-	203	4430

N.B.: Since Rented and Mortgaged ownership of Fishing Equipment is not available in the surveyed households, these columns have been omitted in the tabular statement.

Table VI. 4
Source of Finance

District	Cwn Source			Institutional Finance			Trader/Money Lender			Total
	Mpcha- nised Hised	Non- Hised	Gear	Mpcha- nised	Non- Hised	Other equip- ment	Mpcha- nised	Non- Hised	Other equip- ment	
Madras	-	43	104	-	-	-	-	-	-	147
Chingleput	-	58	303	-	-	-	-	-	-	361
South Arcot	-	11	354	-	-	-	-	-	14	383
North Arcot	-	-	200	-	-	-	-	-	-	200
Salem	-	42	200	-	-	-	-	-	-	242
Kannapur	-	-	200	-	-	-	-	-	-	200
Periyar	-	-	300	-	-	-	-	-	-	300
Kombatore	-	33	96	-	-	-	-	-	-	329
Manjavar	-	-	279	-	-	100	-	-	72	411
Prichy	-	-	238	-	-	85	-	-	46	411
Andicuttai	-	-	168	-	-	16	-	-	-	254
Madurai	-	13	145	-	3	19	-	-	-	168
Mananthapuram	-	-	164	-	-	-	-	-	-	164
Muthuramalingam	-	-	195	-	-	-	-	-	-	195
Manarajar	-	-	200	-	-	152	-	-	-	352
Muzelveli	-	-	187	-	-	41	-	-	-	168
T.C.C.	-	-	355	-	-	61	-	-	-	416
Periyakumari	-	-	87	-	-	76	-	-	-	163
Total	-	200	3715	-	3	555	-	-	132	4633

1.5.1 The columns under source of finance obtained from relatives have been omitted in the tabular statement since only in respect of Coimbatore District 28 families have obtained loan from relatives for the purchase of gear.

Table VI.5

Value of Fishing and other Equipment

District	Graft			Gear			Other Equipment			
	Upto 500	501 to 1000	1001 to 2000	2001 & Above	Upto 500	501 to 1000	1001 & above	Upto 500	501 to 1000	1001 & above
1. Madras	37	6	-	-	104	-	-	-	-	-
2. Chengleput	-	58	-	-	303	-	-	-	-	-
3. South Arcot	-	11	-	-	348	24	-	-	-	-
4. North Arcot	-	-	-	-	177	22	1	-	-	-
5. Salem	-	42	-	-	143	57	-	-	-	-
6. Dharmapuri	-	-	-	-	22	176	2	-	-	-
7. Periyar	-	-	-	-	245	55	-	-	-	-
8. Coimbatore	-	33	-	-	69	175	52	-	-	-
9. Thanjavur	-	-	-	-	350	61	-	-	-	-
10. Trichy	-	-	-	-	248	6	-	-	-	-
11. Pudukottal	-	-	-	-	109	59	-	-	-	-
12. Madurai	-	6	10	-	59	72	33	-	-	-
13. Ramanathapuram	-	-	-	-	106	50	8	-	-	-
14. P. Muthuramalingam	-	-	-	-	152	43	-	-	-	-
15. Kamarajar	-	-	-	-	240	112	-	-	-	-
16. Thrunelveli	-	-	-	-	47	50	71	-	-	-
17. V.O.C.	-	-	-	-	327	78	11	-	-	-
18. Kanyakumari	-	-	-	-	114	49	-	-	-	-
Total	37	156	10	-	3163	1089	178	-	-	-

Table VI.6
Age of the Fishing and other Equipments

District	Craft		Gear		Other Equipment	
	Up to 1982	After 1982	Up to 1982	After 1982	Up to 1982	After 1982
1. Madras	16	27	5	99	-	-
2. Chingleput.	18	40	97	206	-	-
3. South Arcot	-	11	82	290	-	-
4. North Arcot	-	-	-	200	-	-
5. Salem	-	42	154	46	-	-
6. Periyar	-	-	270	30	-	-
7. Dhamapuri	-	-	-	200	-	-
8. Coimbatore	-	33	59	237	-	-
9. Thanjavur	-	-	58	353	-	-
10. Trichy	-	-	23	231	-	-
11. Pudukottai	-	-	46	122	-	-
12. Ramana thapuram	-	-	164	-	-	-
13. P. Muthuramalingam	-	-	142	53	-	-
14. Kamraj	-	-	110	242	-	-
15. Tirunelveli	-	-	131	37	-	-
16. V.O.C.	-	-	133	283	-	-
17. Kanyakumari	-	-	48	115	-	-
18. Madurai	12	4	90	74	-	-
Total	46	157	1612	2818	-	-

Table VI.7

Capture Fisheries - Type of Water Resources Status

District	Owner Operator				Share operator	Wage earner	Culture Fisheries
	River	Reser-voir	Estuaries Brackish water ponds, Ponds, Tanks	Lake Canal			
1. Madras	96	-	-	-			
2. Chingleput	-	-	200	44			
3. North Arcot	143	-	-	13			
4. South Arcot	-	-	-	200			
5. Salem	-	198	-	-			
6. Dharmapuri	200	-	-	-			
7. Periyar	289	-	-	-			
8. Coimbatore	296	-	-	-			
9. Thanjavur	387	-	-	-	NIL	NIL	NIL
10. Trichy	240	-	-	-			
11. Pudukottai	111	-	-	-			
12. Madurai	50	27	-	87			
13. Ramana thapuram	-	-	-	95			
14. P. Muthuremalingam	-	-	-	65			
15. Kamarejar	-	-	-	162			
16. Tirunelveli	168	-	-	-			
17. V.O.C.	200	-	-	-			
18. Kanyakumari	57	-	-	106			
Total	2237	225	200	772			

Table VI.8
Ownership of Water Resources

District	River			Reservoir			Estuaries, Brackish water, Ponds and Impounded Waters			Lake, Canals, Ponds and Tanks		
	PWD	Reve-Dept.	Pan-cha-yat	PWD	Reve-Dept.	Pan-cha-yat	PWD	Reve-Dept.	Pan-cha-yat	PWD	Reve-Dept.	Pan-cha-yat
Madras	-	96	-	-	-	-	-	-	-	-	-	-
Chingleput	-	-	-	-	-	-	-	244	-	-	-	-
South Arcot	-	143	-	-	-	-	-	-	-	-	-	-
North Arcot	-	-	-	-	-	-	-	-	-	-	13	-
Salem	-	198	-	-	-	-	-	-	-	-	200	-
Dharmapuri	-	200	-	-	-	-	-	-	-	-	-	-
Periyar	-	289	-	-	-	-	-	-	-	-	-	-
Coimbatore	279	-	-	-	-	-	-	-	-	-	-	-
Thanjavur	-	387	-	-	-	17	-	-	-	-	-	-
Trichy	-	240	-	-	-	-	-	-	-	-	-	-
Pudukottai	-	111	-	-	-	-	-	-	-	-	-	-
Madurai	-	88	-	27	-	49	-	-	-	-	-	-
Ramanathapuram	-	-	-	-	-	-	-	-	-	-	-	-
P. Muthuremalingham	-	-	-	-	-	-	-	-	-	-	95	-
Kamara jar	-	-	-	-	-	-	-	-	-	-	65	-
Thirunelveli	-	168	-	-	-	-	-	-	-	-	162	-
V.O.C.	-	200	-	-	-	-	-	-	-	-	-	-
Kanyakumari	-	57	-	-	-	-	-	-	-	-	-	106
Total	279	2177	-	27	-	66	-	244	-	-	641	-

Table VI.9
Mode of Sale

District	Wholesale Trader	Retail Trader	Commis- sion agent	Coop- erative soci- eties	State corpe- rations	Directly to con- sumer	Others specify	Total
1. Madras	-	-	-	-	-	96	-	96
2. Chingleput	200	44	-	-	-	-	-	244
3. South Arcot	-	-	-	-	-	156	-	156
4. North Arcot	200	-	-	-	-	-	-	200
5. Salem	-	-	-	115	-	47	-	198
6. Dharmapuri	-	-	-	200	36	-	-	200
7. Periyar	-	-	-	-	-	289	-	289
8. Coimbatore	-	-	-	-	-	296	-	296
9. Thanjavur	12	35	-	-	-	340	-	387
10. Trichy	-	-	-	-	-	240	-	240
11. Pudukottai	32	79	-	-	-	-	-	111
12. Madurai	-	164	-	-	-	-	-	164
13. Ramana thapuram	-	-	-	-	-	-	-	164
14. P.M.	-	-	-	-	-	95	-	95
15. Kamarajar	-	-	-	-	-	65	-	65
16. Thrunelveli	-	168	-	-	-	162	-	162
17. V.O.C.	-	-	-	-	-	-	-	168
18. Kanyakumari	-	163	-	-	-	200	-	200
Total	444	653	-	315	36	1986	-	3434
% to Total	12.93	19.02	-	9.17	1.05	57.83	-	

12.93 19.02 2.17 1.05 57.83 1986 3434

Correction-332 Table VI, 10

Quantity of Fish Caught, Fish catch and Income among the Surveyed Households

District	No. of Households	No. of Reporting Households	No. of Fishing Days	Total Quantity of Fish		Fish Catch per Household	Income per household	Operating cost per household	Net Income per Household
				Quantity	Value				
Madras	100	96	300	43,200	6,71,500	450.00	6,994.79	600.00	6,394.79
Chingleput	302	244	300	1,35,900	18,41,750	556.97	7,548.15	390.57	7,157.58
S. Arcot	183	156	150	78,000	12,72,250	500.00	8,155.45	682.50	7,472.95
N. Arcot	200	200	90	90,000	3,75,000	450.00	1,875.00	275.00	1,600.00
Salem	200	198	300	1,00,000	7,49,000	505.05	3,782.83	1,186.87	2,595.96
Dharmapuri	200	200	90	1,20,000	15,84,500	600.00	7,922.50	3,000.00	4,922.50
Periyar	300	289	180	1,35,000	18,83,000	467.13	6,515.57	1,204.15	5,311.42
Coimbatore	300	296	180	1,32,200	13,43,000	450.00	4,537.16	400.00	4,137.16
Thanjavur	404	387	180	1,61,600	12,77,000	417.57	3,299.74	403.11	2,896.63
Trichy	240	240	180	1,08,000	6,65,000	450.00	2,770.83	450.00	2,320.83
Pudukottai	111	111	180	49,950	4,79,250	450.00	4,317.57	418.68	3,898.89
Madurai	200	164	300	73,800	13,31,500	450.00	8,118.90	534.75	7,584.15
Ramanathapuram	182	95	90	15,690	2,07,100	165.15	2,180.00	250.00	1,930.00
P. Muthuramalingam	119	65	90	10,330	1,36,350	158.92	2,097.69	150.00	1,947.69
Kamarajar	221	162	90	13,970	1,80,000	86.23	1,111.10	100.00	1,011.10
Thrunelveli	200	168	180	75,600	13,45,000	450.00	8,005.95	571.25	7,434.70
V.O.C.	200	200	180	96,000	15,06,000	480.00	7,530.00	504.75	7,025.25
Kanyakumari	200	163	180	44,000	7,03,000	269.94	4,312.88	319.00	3,993.00
Total	3862	3434	3240	14,83,240	1,75,50,200	-	-	-	-
Average	-	-	180	-	-	408.72	5,059.78	624.48	4,435.25

Table VI.10

Quantity of Fish Caught, Fish catch and Income among the surveyed households

Sl. No.	District	No. of Households	No. of Households reporting	No. of Fishing Days	Quantity of Fish caught	Value	Fish catch per household	Income per household	Operating cost per household	Net Income per household
1.	Madras	100	96	300	43,800	5,71,500	450.00	6,994.79	600.00	6,394.79
2.	Chingleput	302	244	300	1,35,500	18,41,750	556.97	7,548.15	390.57	7,157.58
3.	S. Arcot	183	156	150	78,000	12,72,250	500.00	8,155.45	682.50	7,472.95
4.	N. Arcot	200	200	90	90,000	7,75,000	450.00	1,875.00	275.00	1,600.00
5.	Salem	200	198	300	1,00,000	7,49,000	505.05	3,782.83	1,186.87	2,595.96
6.	Dharmapuri	200	200	90	1,20,000	15,04,500	600.00	7,922.50	3,000.00	4,922.50
7.	Periyar	300	209	180	1,35,000	18,83,000	467.13	6,515.57	1,204.15	5,311.42
8.	Coimbatore	300	296	100	1,32,200	13,43,000	450.00	4,537.16	400.00	4,137.16
9.	Thanjavur	404	387	180	1,61,600	12,77,000	417.57	3,299.74	403.11	2,896.63
10.	Trichy	240	240	180	1,08,000	6,65,000	450.00	2,770.83	450.00	2,320.83
11.	Pudukottai	111	111	180	49,950	4,79,250	450.00	4,317.57	410.60	3,906.97
12.	Madurai	200	164	300	73,000	13,31,500	450.00	8,118.90	534.75	7,584.15
13.	Tamaraipuran	102	95	90	81,500	10,81,250	862.10	11,301.50	1,250.00	10,131.50
14.	P. Muthuramalingam	119	65	90	53,550	4,63,250	323.05	7,126.92	600.00	6,526.92
15.	Kannur	221	162	90	72,500	9,39,500	450.00	5,799.30	600.00	5,199.30
16.	Thiruvallur	200	168	180	75,600	13,45,000	450.00	8,005.95	571.25	7,434.70
17.	V.O.C.	200	200	180	86,000	15,06,000	400.00	7,530.00	304.75	7,225.25
18.	Kanyakumari	200	163	180	73,350	15,36,250	450.00	9,437.17	519.00	8,918.17
Total		3862	3434	3240	16,80,950	2,03,46,000	489.79	5924.87	731.05	5193.82
Average				180						

Summary and Findings

1. The Tamil Nadu State Government entrusted the study of the Techno Socio Economic conditions of the Fishermen in 10% of the villages in the marine sector and villages in 10% of the blocks in inland sector to the Institute for Techno Economic Studies, Madras. Specific orders for this work were received during the 2nd week of March 1987. This Institute undertook this work in 44 villages in nine maritime districts and 87 villages in 40 blocks of 18 districts, covering 11,704 households with a total population of 55604. The entire work of survey, processing and tabulating the data and the write up was completed in three months.

General Profile

2. The selected villages barring a few are in an average or above average condition with reference to the location, social amenities like drinking water, health and medical facilities, educational institutions and Library/Reading Room, infrastructural facilities like landing centres, marketing, electricity, banks and fishermen cooperative Societies, transport and communication facilities like bus services, motorable approach road to landing centres and the distance away from Highway, Railway Station and Post Office.

Social Condition of the surveyed households

Population by Sex and Age group

3. The marine fishermen population of the surveyed households is 38,907 comprising of 20,280 males (52.12%) and 18,627 females (47.88%). The concentration of fishermen of the surveyed households is the highest in kanyakumari District. The total population by different age groups is distributed as: below 18 years 43.65%, adults 53.45% and above 60 years 2.90%. The corresponding total population in the inland sector is 16,687 comprising of 8928 males 53.47% and 6472 females 38.76%. The total population by different age groups is distributed: as below 18 years 38.76%, adults 59.78% and above 60 years 1.46%. The proportion of persons in the first and third categories is higher among males than among females in both sectors.

Sex Ratio, Average Family Size

4. The total population in both the sectors is 53,604 persons,

composed of 52.53% males and 47.47% females. The proportion of males is higher than females in both the sectors. The average family size is 4.97 and 4.39 in the marine and inland sectors respectively.

Educational Status

5. Among the total marine population, 49.10% are illiterates and the balance 50.84% literates. Correspondingly in the inland side, 46.90% are illiterates and 53.10% literates. The literate females are more than the literate males by a small margin of 2.26%.

Marital Status

6. 42.97% in the marine side and 51.23% on the inland side are married. There is no divorcee in both the sectors.

Religion and Community

7. Among the surveyed families in the marine sector 65.42% are Hindus and 34.58% are Christians and no muslims. On the inland side, 85.80% are Hindus, 12.89% are christians and 2.11% Muslims. 99.89% belong to the backward community and 0.11% belong to the schedule caste on the marine side. Similarly on the inland side, 0.49% belong to the Forward caste. 94.54% belong to backward castes and 4.97% are from schedule castes. There is no schedule tribe member among the surveyed households in either of the sectors.

Availability of Drinking Water and Lighting

8. In the marine sector out of the total of 7842 households, 40.64% are having protected water supply and 59.36% have wells. 97.56% get water from within a distance of 1 km and 2.44% have to travel a distance of 1 to 3 km for getting water. On the inland side, out of the 3862 families, 65.15% get protected water supply, 24% get water from wells and 10.85% from rivers. 92.31% get water from within a distance of 1 km and 7.69% have to travel 1 to 3 km to get water.

9. In the marine and inland sectors, 26.31% and 42.08% respectively are having the facility of electricity. The rest 73.69% in the marine and 57.92% in the inland sector depend upon kerosene.

Housing Facilities

10. Among the marine households, 57.89% live in huts and 42.11% in houses. 94.71% and 5.29% live in owned and rented huts respectively. 92.04% and 7.96% live in owned and rented houses respectively. The ownership referred to here does not necessarily cover the site. It is observed that on an average, 4.96 persons occupy one house or hut on the marine side. In the inland sector, 62.38% and 37.62% live in huts and houses respectively. Among them 87.05% and 12.95% live in owned and rented huts respectively. Likewise, 69.72% and 30.28% live on owned and rented houses respectively. On an average 4.39 persons occupy a house or hut. It is observed that in the inland sector the number of persons occupying a house is less when compared to the fisherman in the marine sector.

Lavatory Facilities

11. It is brought to notice that the open seashore is used by the marine fishermen for their toilet purposes. Basic sanitary requirements have to be provided for in all marine fishing villages.

Economic Conditions - Physical Assets

12. All the households without exception both on the marine and inland side have utensils made of stainless steel or brass or aluminium. 43.47% of the families in both the sectors own furniture like chair, wooden/iron cots and tables. 10% of the marine households and 15% of the inland households own wrist watches. 5.69% and 4.76% own wall clocks or time pieces. 1084 and 446 families on the marine side and 734 and 190 families on inland side are having Radio or Transistor respectively. 43.47% in both the sectors possess cycles. 2.37% and 2% of marine and inland families possess fans. Two marine households possess Refrigerator and 1.48% and 0.47% on the marine and inland sector respectively possess sewing machines. These assets are real signs of growing economic prosperity in these households.

Occupational structure

13. The economic conditions of a family will to a large extent depend upon the income of the working members. Adults who form 53.45% and 59.78% respectively in the marine and inland sectors constitute the workforce. Out of this, 42.28% and 44.73% in the marine and inland sectors respectively are actually engaged in one avocation or other. 95.72% and 88.03% in the marine and inland sector respectively are engaged in fishing or other allied activities and the rest employed in other occupations. In the marine households 61.69% of the total workers are engaged as hired labourers, while in inland sector, the corresponding proportion is 30.44%. In the nonfishing activities, 4.3% and 11.97%

in the marine and inland sectors respectively are employed in services.

Choice of occupation and vocational skill

14. Out of the 7842 marine households, 97.69% have taken up fishing as a hereditary profession, 2.16% voluntarily, 0.06% due to lack of employment elsewhere and 0.09% due to its profitability. In the inland sector also, it is a similar case (ie) 93.97% have taken it up as a hereditary profession, 5.88% voluntarily, 0.85% due to lack of alternative employment and 0.10% due to its profitability. The main occupation is fishing, followed by fish marketing and then boat and net making.

Household Expenditure

15. More than two-thirds of the total expenditure in both the sectors is on food. This is followed by clothing. The expenditure on education is the lowest in the surveyed households in both the sectors.

Number of Fishing days

16. The number of fishing days per individual fishermen in a year is determined by several parameters. On the marine side, the number of fishing days for the reporting year per household is 228.43. The number of fishing day per worker is only 72.10 revealing that the level of employment for hired labourer is low and they are very much underemployed. An inland fishermen is reported to be working for 180 days in a year among the surveyed households.

Fish production - Income and Expenditure

17. The total fish production of the 7842 households in the marine sector is 7122.5 tonnes. The value of the fish caught amounted to Rs.537.24 lakhs. The income from fish production alone is 69.77% of their total income. It is observed that income from other occupations in proportion to the total household income is insignificant. It is also seen that most of the families are facing dissaving and are indebted, if production and household expenditure are taken into account for calculating the net savings.

18. In the inland sector, the total fish production for all the surveyed families is 1682 tonnes and the value is Rs.203.46 lakhs. The income from fish production alone is 85.98%. It is observed that income from other occupations in the inland sector is very much higher when compared with the marine sector. Here also, there is no net-saving if the household expenditure is added on to the production expenses indicating that there is deficit and indebtedness. It is observed that due to inflation in the economy and low income most of the fishermen families are unable to meet both the ends and are below the poverty line.

Savings in the Surveyed Families

19. There is a savings of Rs.30.23 lakhs for the 1860 (23.72%) of the families surveyed 81.57% of this is in the form of cash, 2.45 lakhs in the form of movable property and 3.13 lakhs in the form of immovable property. In the inland sector, 1199 (31.05% of the families surveyed) households have reported savings of Rs.11.80 lakhs. 82.63% of this is in the form of cash, 1.74 lakhs in the form of movable property and 0.31 lakhs in the form of immovable property.

Indebtedness

20. 4910 families in the marine sector have borrowed Rs.152.71 lakhs. In the inland sector, 2237 families have borrowed Rs.53.33 lakhs. The interest rate is 36% except for loans obtained through Banks and Cooperatives where it is 18%.

Government Assistance

21. 123 families have received subsidy and 16 families benefitted through Welfare Schemes. On the inland sector, 207 have received subsidy and 88 families benefitted through Welfare Scheme. The average quantum of assistance thus received per family covered by the survey works out to Rs.45.20 only.

Cooperatives

22. 55.88% of the families on the marine side and 72.14% of the families on the inland side are members of the F.C.Socie-

ties. Although cooperatives have made considerable progress among the fishermen families, it has not been properly reflected among the surveyed families in the marine sector.

Insurance

23. 2312 marine fishermen and 1519 inland fishermen have been enrolled in the group insurance scheme sponsored by the State & Central Governments. 452 and 415 families on the marine and inland sector have taken to Life Insurance of their own accord.

Technological Status

A. Marine Fisheries

24. Fisheries consists of Marine and Inland fisheries. Tamil Nadu has a coastline of about 1000 Km with a total Marine Fishermen population of 4,63,000. Out of this 1,01,869 are active fishermen. The average family size is 5.33. Various agencies have assessed the marine fishery resources of Tamil Nadu ranging from 3,53,000 tonnes to 8,79,920 tonnes, against which the present level of exploitation is 2,44,759 tonnes. Out of this, it is estimated that about 30% is by mechanised crafts and 70% by traditional crafts.

25. The main thrust for the development of marine fisheries was introduction of mechanised fishing boats with gear made out of synthetic twine which started in the midfifties. Under various programmes, mechanised fishing boats were supplied to the fishermen till 1980. At present mechanised fishing boats are supplied only through NCDC, and so far 66 boats have been supplied till 1986-87. Since there are no schemes on construction and supply of mechanised fishing boats by this Department and in view of the high capital cost of the boats, operational cost and constraints in getting institutional finance additional boats have not been added considerably. Therefore, the stress is now to go in for smaller crafts with low Horse Power Engines, thereby reducing the initial cost and the operational expenses. It is also proposed to mechanise the traditional fishing crafts like catamarans, canoes and vallams with inboard and outboard engines.

26. The disposal of marine fish at the landing sites is not by weight but by measures of heaps, lots or baskets. The fish is generally auctioned by traditional auctioneers or middlemen on commission basis. About 25% of the marine fish catches

is marketed close to the landing centres and the rest transported to distant markets after packing with ice.

27. The total number of mechanised and non-mechanised crafts in the State are 3912 and 36571 respectively. There are 87,085 families in the State out of which 41.71% own crafts and 58.29% not owning crafts. There are 3,62,678 units of gear, out of which 60.82% units are gill nets. Out of the 87,085 families, 54.22% own nets and out of 1,28,585 adult males, 89.69% are engaged in fishing.

28. 7842 households in 44 marine fishing villages were interviewed. Out of the 7842 families, 4680 families own 4732 crafts indicating that some households have more than one craft. 213 of these crafts are mechanised and the balance of 4519 non-mechanised. 4680 households own 9598 units of gear. The bulk of it (ie) 7801 are gill nets. Except the Beach shore seine net which is fabricated out of hemp and cotton, the bulk of the nets are fabricated out of synthetic twine. 87 out of the 213 mechanised crafts are more than 4 years old and 126 crafts less than 4 years. Among the non-mechanised crafts, 2549 are less than 4 years old and 1970 more than 4 years old. 6077 units of gear are less than 4 years old, and 3518 have outlived their life. Almost all the crafts and gears are owner operated except 14 non-mechanised craft and 173 gears which are rented. 118 out of the 213 mechanised crafts fall within the price range of Rs.50,000 to Rs.1,00,000. 3275 non-mechanised crafts are valued at upto Rs.5000/- and 1244 range from Rs.5001/- to Rs.10,000/- in value. The value of 6653 units of gear are upto Rs.2500 and that of 2942 range between Rs.2501/- to Rs.5000/- 104 mechanised, 2460 non-mechanised and 5099 units of gear have been purchased from own source of finance. 103 mechanised, 1118 non-mechanised and 1791 units of gear are obtained through Institutional finance. 6 mechanised, 856 non-mechanised and 2028 units of gear are obtained through loans from Money Lenders and 87 non-mechanised and 677 units of gear have been obtained through loans from relatives.

29. Out of the 7842 households surveyed, 4680 are owner operators and 3762 share operators. The 4680 households owning crafts have produced 6.41 lakh tonnes of prawn fishery and 73.26 lakh tonnes of fin fishery during the reporting year 1986.

30. There are 3 major fishing harbours, 5 minor fishing harbours 5 'T' Jetty's and all the 4680 households have beach landing facilities on the sea shore opposite their fishing hamlets. Out

of the 4680 households, 2063 sell their catches to wholesale traders, 2102 to retail traders, 245 to commission agents, 170 to cooperative societies and 100 directly to consumers.

31. More numbers of mechanised fishing boats have not been introduced by fishermen themselves due to high capital cost of the boats, operational cost and constraints in getting institutional finance, since stoppage of the scheme by this Department.

Technological Status - Inland Fisheries

32. Tamil Nadu State has 3.69 lakh hectares of Inland water spread comprising of major reservoirs, major and minor irrigated tanks, ponds and estuaries. The Inland fish production has decreased to 1,40,000 tonnes for the last two years (ie) 1985-86 and 1986-87, from 1,60,000 tonnes in 1984-85. About 2600 tanks have been brought under the purview of the Tamil Nadu Lease and Licensing Rules 1972. The fisheries in these are annually leased to the nearest primary fishermen cooperative society. When the society declines to take the lease, then it is auctioned. In most of the Reservoirs, either fishing on share basis or fishing by licence issued by the Department is conducted.

33. The state has only 21 hectares of fish seed farm area at present. Two more 10 hec. Fish Seed Farms are being established at Amaravathi and Bhavanisagar in Coimbatore and Periyar Dist. under the National Fish Seed Farm Programme. There are 12 Fish Farmers Development Agencies in Tamil Nadu covering tanks with a waterspread area of 2840.97 ha, benefitting 3158 fishermen.

34. In departmentally managed Reservoirs, fish catches are pooled and handed over to fish merchants on open tender basis for a year, after meeting the local demand by retailing. The TNFDC, Mettur Dam Fishermen Marketing Society, and the Fishermen Cooperate Federations of Chingleput and North Arcot have established retail fish stalls. The Inland fishermen sell their catches to local retail dealers who collect the catches at the place of landing.

35. The survey covered 87 Inland villages in 40 Blocks of 18 districts. 3862 households in these villages were interviewed. Out of the 3862 families, only 203 families owned non-mechanised crafts. The 3862 families own 4430 nets indicating that some families owned more than one net. Here also, the gill nets were more common followed by cast nets. The 203 non-mechanised

crafts and 4430 units of gear are owned and owner-operated. The 200 non-mechanised craft and 3715 units of gear are from own source, 3 non-mechanised crafts and 555 gears have been obtained through Institutional finance and 132 units of gear obtained through loan from Money lenders.

36. 156 out of 203 non-mechanised crafts are of value between Rs.501 to Rs.1000, 37 are of value upto Rs.500 and 10 above Rs.1000. 3163 units of gear are upto Rs.500 in value, 1089 range between Rs.501 to Rs.1000 and 178 above Rs.1000. 157 out of the 203 non-mechanised crafts are less than 4 years old and 46 are more than 4 years old. 2818 units of gear are less than 4 years old and 1612 are more than 4 years old indicating that these nets have outlived their life.

37. Out of the 3434 owner operator households who resort to capture fisheries, 2237 families fish in rivers, 225 families fish in reservoirs, 200 families fish in estuaries and 772 families fish in ponds, canals and tanks. The 3434 households fish in rivers, reservoirs, estuaries and canals, ponds and tanks owned by P.W.D or Revenue Department or Panchayat. Out of the 3434 families, 444 sell their catches to wholesale traders, 605 to retail traders, 315 to cooperative societies, 36 to state corporation and 1986 directly to consumers.

38. The 3434 reporting household land 16.80 lakh tonnes of fish valued at Rs.203.46 lakhs. The average catch per household is 489.79 kg. The average income per household is Rs.5924.87. After deducting the operating costs of Rs.731.05 per household, the net income per household is Rs.5193.82. The average number of fishing days is 180 per year.

39. The study shows that there is overcrowding in fishing activities and there is almost half the year underemployment and unemployment. Even the productivity is quite low and the operating cost quite high on the marine side. In the circumstances, proper rehabilitation measures will necessarily have to include:-

- i) reduction of the fishermen workforce dependent on fishing as a living by diverting them to other occupations.
- ii) suitable measures to subsidise the diesel and other consumable items used in marine fishing.
- iii) more efficient and better marketing facilities minimising if not eliminating the role of middlemen in the disposal of fish.

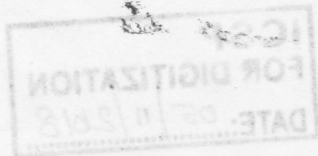
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Chapter VII. Page 132) Recast Para 38 as below:-

The 3434 reporting households land 14.83 tonnes of fish valued at Rs.175.50 lakhs. The average catch per household is 408.72 Kg. The average income per household is Rs.5059.78. After deducting the operating cost of Rs.624.48 per household the net income per household is Rs.4435.25. The average number of fishing days is 180 per year.



Chapter VII. (Page 12X) Recast Para 58 as below:-
The 3434 reporting households land 14.83
tonnes of fish valued at Rs.175.50 lakhs. The ave-
rage catch per household is 408.72 Kg. The average
income per household is Rs.2059.78. After deduc-
ting the operating cost of Rs.624.48 per household
the net income per household is Rs.1435.30. The
average number of fishing days is 180 per year.

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