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ALL INDIA MARINE FISHERIES CENSUS

FRAME SURVEY-1973-77

The first attempt to build up a planned survey of marine fish landings on an all India basis was made by the Central Marine Fisheries Research Institute in 1948-49. The pilot survey conducted by this Institute brought forth a realistic picture of the fishing activities which are so essential for planning a suitable sampling design for the estimation of marine fish production and fishing effort in India. Village-wise data on the total fishermen population, number of active fishermen, fishing units of different types, varieties of fish caught and fishing season were collected at that time. With the expansion of the fishery resources survey scheme during the successive plan periods periodic surveys of fishing villages were undertaken during 1957-58 and 1961-62.

The surveys conducted during later years brought additional information such as number of fish landing centres, approach to fishing villages and landing centres, jetty facilities available for the landings of mechanised fishing boats and other infrastructure facilities available

such as number of cold storages, freezing plants, canning plants etc. at important landing centres. A similar survey was conducted during 1973-77 covering detailed information on the number of mechanised boats, different category of indigenous fishing crafts and gears etc. in each maritime State of India the highlights of which are given here. For this survey covering the marine sector fisherman is defined as one who is engaged in fishing activities, the active fisherman as one who is engaged in actual fishing, the fishermen population as the members belonging to a fisherman family including himself, the fishing village as the village where the fishermen population reside and the landing centre as the place where the fishing units land their catches.

All India (Tables 1 & 2)

1. The total number of marine fishing villages in India (excluding Andamans and Lakshadweep) increased to 1913 during 1973-77 as compared to 1797 in 1961-62 showing an increase of 116 villages.

Table 1. Census on Marine Fishing Villages, Fishermen Population and Fishing Crafts (1961-62) in India

Sl. No.	Name of State	Number of fishing villages	Total Marine fishermen population	Number of active fishermen	Number of fishing crafts	Average annual fish landings (1961-65) (in tonnes)
1.	West Bengal and Orissa	182	35,941	9,434	2,894	10,180
2.	Andhra Pradesh	321	136,893	47,700	19,772	65,391
3.	Tamil Nadu (including Pondicherry)	363	214,868	56,586	29,661	116,248
4.	Kerala	279	333,822	74,241	20,667	262,648
5.	Karnataka	131	51,636	8,963	6,357	52,919
6.	Maharashtra	265	103,535	20,698	7,894	123,458
7.	Gujarat	256	82,242	11,732	3,179	92,834
TOTAL		1,797	958,937	229,354	90,424	723,678

(Excluding Goa, Andamans & Laccadives)

2. There are 1,365 landing centres.

3. The total marine fishermen population and the active fishermen in India increased to 14.35 lakhs and 3.23 lakhs respectively, the percentage increase being 49.66% and 40.63% respectively. Kerala ranks first in having maximum number of fishermen population, closely followed by Tamil Nadu, Andhra Pradesh, Maharashtra and Gujarat (excluding Kutch).

4. The total number of fishing crafts (both mechanised and non-mechanised) during 1973-77 increased by 24,142 (26.70%) to 1,14,566. Tamil Nadu has the maximum number of fishing crafts followed by Andhra Pradesh, Kerala and Maharashtra. In respect of mechanised fishing crafts, Maharashtra ranks first, Gujarat, Tamil Nadu, Karnataka and Kerala coming next in the order.

Table 2. Census on Marine Fishermen Population, Crafts, Gears etc. in India-(1973-77)

Sl. No.	Items	West* Bengal & Orissa	Andhra Pradesh	Tamil nadu	Pondi- cherry	Kerala	Karna- taka	Goa	Maha- rashtra	Gujarat**	Total
1.	Coastal length (in km.)	1,080	970	960		600	270	110	600	1,500	6,090
2.	No. of fishing villages	179	408	374	21	268	145	40	299	179	1,913
3.	No. of landing centres	51	280	371	24	223	95	40	173	108	1,365
4.	Marine fishermen population:-										
	Male	17,769	75,558	93,718	4,676	125,217	30,064	6,191	47,803	29,788	430,784
	Female	17,284	72,235	91,172	4,781	124,864	30,403	5,088	50,046	31,060	426,933
	Children	26,029	89,677	103,696	6,957	141,819	38,365	3,586	103,574	63,738	577,441
	Total	61,082	237,470	288,586	16,414	391,900	98,832	14,865	201,423	124,586	14,35,158
	Active	15,076	64,592	68,317	3,785	80,898	21,740	4,067	41,539	22,518	322,532
	% of active to total population	24.7	27.2	23.7	23.1	20.6	22.0	27.4	20.6	18.1	22.5
5.	Fishing Crafts:-										
	Mechanised	58	418	1,533	47	1,026	1,044	192	2,034	1,734	8,086
	Non-mechanised	6,667	25,976	30,501	1,767	21,718	6,248	1,118	8,288	4,197	106,480
	Total	6,725	26,394	32,034	1,814	22,744	7,292	1,310	10,322	5,931	114,566
6.	Fishing Gears:-										
	Rampani	—	—	—	—	—	164	112	—	—	276
	Shore seine	375	1,471	1,920	34	1,739	493	53	16,300	—	22,385
	Nylon gill net	1,427	16,676	3,232	—	3,044	4,478	—	136,596	10,491	175,944
	Bottom set gill net	—	1,481	5,955	—	246	844	—	—	—	8,526
	Gill net	5,048	18,541	111,023	1,301	7,763	9,219	1,345	8,410	118,172	280,822
	Drift net	323	1,889	7,966	359	6,763	1,945	—	—	5,329	24,574
	Drag net	2,466	5,729	3,678	298	—	936	58	12,635	1,341	27,141
	Bag net	1,034	159	1,855	458	534	13	—	20,503	17,031	41,587
	Purse seine	—	—	—	—	—	124	22	—	—	146
	Trawl net	—	—	—	13	269	246	144	1,966	167	2,805
	Boat seine	1,561	6,480	4,875	—	9,027	—	—	—	—	21,943
	Encircling net	—	—	—	—	279	—	—	—	—	279
	Hooks & lines	48	2,587	6,107	43	2,887	696	177	—	1,598	14,143
	Others	28,478	11,267	12,644	271	845	5,908	652	52,693	5,655	118,413
	TOTAL	40,760	66,280	159,255	2,777	33,396	25,066	2,563	249,103	159,784	738,984

* Census covers only Contai coast of Midnapur district.

** Excluding Kutch region

5. There are 7,38,984 fishing gears in the country.

West Bengal and Orissa (Table 3)

1. The number of fishing villages decreased to 179 from 182 recorded during 1961-62.

2. The total fishermen population and the active fishermen increased by 25,141 and 5,642 reaching 61,082 and 15,076 respectively.

3. An increase of 3,831 in respect of fishing crafts was seen during 1973-77 survey.

4. There are 40,760 fishing gears consisting of shore seine, nylon gillnet, gill net, drift net, drag net, bag net, boat seine, hooks and lines and others.

Andhra Pradesh (Table 4)

1. The total number of fishing villages increased to 408. Srikakulam district has the maximum number of fishing villages while West Godavari district accounts for the minimum.

2. Both the total marine fishermen population and the active fishermen showed an increase of 100,577 (73.47%) and 16,892 (35.41%) respectively. In respect of total marine fishermen population Srikakulam district has the maximum number, West Godavari district accounting for the minimum number. But in respect of active fishermen population Vishakapatnam district records the highest number, West Godavari district having the lowest number.

3. The total number of fishing crafts increased by 6,222 (33.49%) to 26,394. While Srikakulam district has the maximum number of fishing crafts, West Godavari district possesses the minimum number.

4. There are 66,280 fishing gears comprising of shore-seine, nylon gill net, bottom set gill net, gill net, drift net, drag net, bag net, boat seine, hooks and lines and others.

Tamil Nadu (Including Pondicherry)

Since the estimates of marine fish production in Tamil Nadu and Pondicherry were combined until 1964,

the frame survey data collected during 1961-62 do not have separate information for these two states. During 1973-77, however, separate information is available for these two states. From Table 1, and Table 2 it is seen that in Tamil Nadu (including Pondicherry) the total

number of fishing villages, the total number of fishermen population, the active fishermen and the number of fishing crafts during 1973-77 showed an increase of 32; 90, 132; 15,516 and 4,187 respectively as compared to 1961-62.

Table 3 Census on Marine Fishing Villages, Fishermen Population, Fishing Crafts and Gears (1973-77) in Different States

Sl. No.	Items	West Bengal & Orissa		Karnataka		Total	Goa
		Pondicherry	South Kanara	North Kanara			
1.	No. of fishing villages	179	21	72	73	145	40
2.	No. of landing centres	51	24	47	48	95	40
3.	No. of marine fishermen:-						
	Male	17,769	4,676	17,990	12,074	30,064	6,191
	Female	17,284	4,781	19,228	11,175	30,403	5,088
	Children	26,029	6,957	24,936	13,429	38,365	3,586
	TOTAL	61,082	16,414	62,154	36,678	98,832	14,865
	Active	15,076	3,785	12,426	9,314	21,740	4,067
	% of active to total population	24.7	23.1	20.0	25.4	22.0	27.4
4.	Fishing crafts:-						
	Chot	300	—	—	—	—	—
	Pankhya	371	—	—	—	—	—
	Patia	162	—	—	—	—	—
	Carvel built boat	48	—	—	—	—	—
	Nava	522	—	—	—	—	—
	Masula padava	345	—	—	—	—	—
	Catamaran	4,342	1,670	—	—	—	—
	Dungi	60	—	—	—	—	—
	Dungo	517	—	—	—	—	—
	Padagu	—	53	—	—	—	—
	Dugout canoe	—	44	1,188	784	1,972	—
	Dhoni	—	—	1,250	1,091	2,341	—
	Rampani bandi	—	—	54	—	54	—
	Kairampani	—	—	18	—	18	—
	Plank built boat	—	—	297	1,487	1,784	—
	Pandi	—	—	26	53	79	—
	Out rigger plank built hodi	—	—	—	—	—	820
	Out rigger panale hodi	—	—	—	—	—	258
	Panale vallam	—	—	—	—	—	40
	TOTAL	6,667	1,767	2,833	3,415	6,248	1,118
5.	Fishing gears						
	Purse seine	—	—	112	12	124	22
	Shore seine	375	34	161	332	493	53
	Drift net	323	359	346	1,599	1,945	—
	Bag net	1,034	458	—	13	13	—
	Drag net	2,466	298	—	936	936	58
	Hooks & lines	48	43	136	560	696	177
	Nylon gill net	1,427	—	1,058	3,420	4,478	—
	Boat seine	1,561	—	—	—	—	—
	Gill net	5,048	1,301	1,290	7,929	9,219	1,345
	Bottom set gill net	—	—	20	824	844	—
	Trawl net	—	13	216	30	246	144
	Rampani	—	—	83	81	164	112
	Others	28,478	271	1,960	3,948	5,908	652
	TOTAL	40,760	2,777	5,382	19,684	25,066	2,563

Tamil Nadu (Table 5)

1. There are 374 fishing villages in Tamil Nadu alone. The Tanjore district has the maximum number of fishing villages, Madras district having the minimum.

2. The total marine fishermen population and the active fishermen during 1973-77 were 288,586 and 68,317 respectively. Kanyakumari district has the maximum

number of both total marine fishermen population and the active fishermen while Pudukottai district accounts for the lowest number of both total marine fishermen population and active fishermen.

3. There are 32,034 fishing crafts in Tamil Nadu, the maximum being in Kanyakumari district and the minimum in Pudukottai district.

4. There are 159,255 fishing gears consisting of shore-seine, nylon gill net, bottom set gill net, gill net, drift net, drag net, bag net, boat seine, hooks and lines and others.

Pondicherry (Table 3)

1. There are 21 fishing villages in Pondicherry.

2. The total marine fishermen population and the number of active fishermen are 16,414 and 3,785 respectively.

3. There are 1,814 fishing crafts consisting of 47 mechanised boats and 1,767 non-mechanised boats.

4. The total number of fishing gears are 2,777 comprising of shore-seine, gill net, drift net, drag net, bag net, boat seine, hooks and lines and others.

Kerala (Table 6)

1. The total number of fishing villages declined by 11 to 268. This was due to closure of some fishing villages and shifting of fishing activities to the neighbouring villages. Cannanore and Trivandrum districts have the maximum number of villages with 52 and 51 numbers respectively while Ernakulam district has the minimum number with 18 fishing villages.

Table 4 Census on Marine Fishing Villages, Fishermen Population, Fishing Crafts and Gears (1973-77) in Andhra Pradesh

Sl. No.	Items	Districts								Total
		Srikakulam	Visakhapatnam	East Godavari	West Godavari	Krishna	Guntur	Prakasam	Nellore	
1.	No. of fishing villages	109	74	72	9	29	16	45	54	408
2.	No. of landing centres	55	52	42	10	25	8	40	48	280
3.	No. of marine fishermen:-									
	Male	17,676	16,437	14,828	2,733	4,546	5,585	6,869	6,884	75,558
	Female	18,942	16,355	12,172	2,606	4,095	5,137	6,332	6,596	72,235
	Children	20,569	20,825	12,957	2,701	6,055	8,830	8,901	8,839	89,677
	TOTAL	57,187	53,617	39,957	8,040	14,696	19,552	22,102	22,319	237,470
	Active	13,972	15,998	11,657	1,160	4,413	5,493	6,182	5,717	64,592
	% of active to total population	24.4	29.8	29.2	14.4	30.0	28.1	28.0	25.6	27.2
4.	Fishing crafts:-									
	Nava	26	—	1,096	—	43	—	—	—	1,165
	Catamaran	6,990	3,802	1,754	—	—	362	2,502	2,722	18,132
	Padava	1,146	1,952	70	—	—	839	89	88	4,184
	Palmryah dhoni	—	—	168	58	—	—	—	—	226
	Big sail boat	—	—	56	53	—	—	—	—	109
	Small sail boat	—	—	420	252	—	—	—	—	672
	Dhoni	—	—	555	25	20	398	18	—	1,016
	Dinghi	—	—	—	—	472	—	—	—	472
	TOTAL	8,162	5,754	4,119	388	535	1,599	2,609	2,810	25,976
5.	Fishing gears:-									
	Shore seine	741	399	146	22	15	—	—	148	1,471
	Boat seine	2,129	1,984	895	—	—	42	728	702	6,480
	Nylon gill net	4,237	2,505	2,471	174	—	4,145	953	2,191	16,676
	Gill net	10,002	4,707	654	20	—	1,223	1,547	388	18,541
	Drag net	—	888	1,299	1,136	—	840	1,406	160	5,729
	Drift net	—	57	160	128	1,544	—	—	—	1,889
	Bag net	—	159	—	—	—	—	—	—	159
	Hooks & lines	765	1,493	294	25	10	—	—	—	2,587
	Bottomset gill net	—	1,481	—	—	—	—	—	—	1,481
	Others	205	—	4,056	2,828	2,921	1,188	23	46	11,267
	TOTAL	18,079	13,673	9,975	4,333	4,490	7,438	4,657	3,635	66,280

2. The total number of marine fishermen population increased by 58,078 (17.39%) reaching 391,900. The number of active fishermen also showed an increase of 6,657 (8.97%). While Trivandrum district has the maximum fishermen population and active fishermen, Ernakulam district possesses the minimum number of total fishermen and Trichur district the minimum number of active fishermen.

3. An increase of 2,077 in the number of fishing crafts is seen during the 1973-77 survey bringing the total number to 22,744. The maximum and minimum number of fishing crafts are found in the districts of Trivandrum and Ernakulam respectively.

4. There are 33,396 fishing gears comprising of shore-seine, nylon gill net, bottom set gill net, gill net,

drift net, drag net, bag net, trawl net, boat seine, encircling net, hooks and lines and others.

and active fishermen, North Kanara district having the minimum.

Karnataka (Table 3)

1. An increase of 14 numbers is noticed in the total number of fishing villages. While North Kanara district has 73 numbers, South Kanara district has 72 numbers.

2. The total marine fishermen population showed an increase of 47,186 (47.75%) to 98,832. The number of active fishermen also increased by 12,777. South Kanara district has the maximum number of both total

3. An increase of 935 in respect of total number of fishing crafts is seen bringing the number to 7,292. North Kanara district possesses the maximum number of fishing crafts, the minimum number being in South Kanara district.

4. There are 25,066 fishing gears consisting of Rampani, shore-seine, nylon gill net, bottom set gill net, gill net, drift net, drag net bag net, purse-seine, trawl net, hooks and lines and others.

Table 5 Census on Marine Fishing Villages, Fishermen Population, Fishing Crafts and Gears (1973-77) in Tamil Nadu

Sl. No.	Items	Districts								Total
		Chengal-pattu	Madras	South Arcot	Tanjore	Pudukottai	Ramanathapuram	Thirunelveli	Kanyakumari	
1.	No. of fishing villages	63	15	51	93	17	67	26	42	374
2.	No. of landing centres	67	12	42	75	15	72	26	62	371
3.	No. of uariner fishermen:-									
	Male	8,709	5,750	9,533	17,534	1,471	10,187	10,623	29,911	93,718
	Female	8,326	6,003	9,158	17,201	1,544	9,604	10,425	28,911	91,172
	Children	9,994	4,816	11,981	21,643	2,362	14,004	9,443	29,453	103,696
	Total	27,029	16,569	30,672	56,378	5,377	33,795	30,491	88,275	288,586
	Active	7,278	3,393	7,081	15,028	1,242	8,348	5,834	20,113	68,317
	% of active to total population	26.9	20.5	23.1	26.6	23.1	24.7	19.1	22.8	23.7
4.	Fishing crafts:-									
	Catamaran	4,421	1,494	1,068	4,258	—	155	2,345	10,817	24,558
	Plank built boat	252	35	64	668	385	—	140	—	1,544
	Masula boat	—	—	180	140	—	—	—	—	320
	Canoe	—	—	1,410	159	—	—	—	163	1,732
	Vathai	—	—	—	—	—	881	3	—	884
	Thoni	—	—	—	183	51	303	5	—	542
	Vallam	—	—	—	—	—	189	424	308	921
	TOTAL	4,673	1,529	2,722	5,408	436	1,528	2,917	11,288	30,501
5.	Fishing gears:-									
	Boat seine	431	427	—	885	—	—	1,033	2,099	4,875
	Gillnet	2,972	737	4,050	39,447	2,656	24,306	23,513	13,342	111,023
	Shore seine	262	63	13	565	57	373	10	577	1,920
	Hooks & lines	785	123	203	876	217	615	354	2,934	6,107
	Bag net	871	7	965	—	—	12	—	—	1,855
	Nylon gill net	998	—	—	1,452	782	—	—	—	3,232
	Drift net	—	—	—	2,168	240	1,041	3716	801	7,966
	Bottom set gill net	—	—	—	2,544	665	65	905	1,776	5,955
	Drag net	—	310	243	109	—	3,016	—	—	3,678
	Others	999	—	22	8,980	98	2,261	23	261	12,644
	TOTAL	7,318	1,667	5,496	57,026	4,715	31,689	29,554	21,790	159,255

Goa (Table 3)

For the first time frame survey was conducted in the Union territory of Goa during 1973-77. The salient features are:-

1. There are 40 fishing villages in this State.

2. The total marine fishermen population and the active fishermen are 14,865 and 4,067 respectively.

3. The total number of fishing crafts is 1,310.

4. There are 2,563 fishing gears consisting of Rampani, shore-seine, gill net, drag net, purse-seine, trawl net, hooks and lines and others.

Maharashtra (Table 7)

1. The total number of marine fishing villages increased by 34. While Ratnagiri district has the maxi-

imum number of fishing villages, Greater Bombay district possesses the minimum number.

2. An increase of 97,888 (94.55%) and 20,841 (100.69%) is seen in respect of total and active fishermen bringing their totals to 201,423 and 41,539 respectively. The maximum and minimum number in these two categories are seen in Ratnagiri and Greater Bombay districts respectively.

3. The total number of fishing crafts is 10,322 showing an increase of 2,428. The maximum number of fishing crafts is seen in Ratnagiri district and the minimum in Thane district.

4. There are 249,103 fishing gears consisting of shore-seine, nylon gill net, gill net, drag net, trawl net, bag net and others.

Table 6 Census on Marine Fishing Villages, Fishermen Population, Fishing Crafts and Gears (1973-77) in Kerala

Sl. No.	Items	Districts								Total
		Trivandrum	Quilon	Alleppey	Ernaulam	Trichur	Malapuram	Kozhikode	Cananore	
1.	No. of fishing villages	51	28	34	18	19	24	42	52	268
2.	No. of landing centres	51	32	34	14	17	12	26	37	223
3.	No. of marine fishermen:-									
	Male	32,168	15,960	17,506	9,538	13,642	9,966	12,925	13,512	125,217
	Female	31,660	15,427	15,189	9,578	14,088	10,475	13,379	15,068	124,864
	Children	34,530	15,245	17,120	10,190	13,380	14,466	20,955	15,933	141,819
	Total	98,358	46,632	49,815	29,306	41,110	34,907	47,259	44,513	391,900
	Active	21,210	8,669	12,982	6,376	6,073	7,314	10,232	8,042	80,898
	% of active to total population	21.6	18.6	26.1	21.8	14.8	21.0	21.6	18.1	20.6
4.	Fishing Crafts:-									
	Catamaran	8,643	1,047	—	—	—	—	—	—	9,690
	Plank built boat	960	684	86	57	1,024	984	42	—	3,837
	Dug out canoe	432	628	1,604	826	254	692	2,242	1,513	8,191
	Total	10,035	2,359	1,690	883	1,278	1,676	2,284	1,513	21,718
5.	Fishing Gears:-									
	Shore seine	1,005	256	384	33	16	—	18	27	1,739
	Boat seine	2,468	464	271	126	284	3,047	1,493	874	9,027
	Drift net	3,754	845	79	356	326	383	593	427	6,763
	Gill net	4,846	1,468	324	524	550	207	1,732	1,156	10,807
	Trawl net	—	96	—	—	45	—	24	104	269
	Bag net	—	—	534	—	—	—	—	—	534
	Encircling net	—	—	97	182	—	—	—	—	279
	Hooks & lines	2,171	61	90	28	13	121	282	121	2,887
	Bottom set gill net	83	163	—	—	—	—	—	—	246
	Others	17	38	23	115	44	—	549	59	845
	TOTAL	14,344	3,391	1,802	1,364	1,278	3,758	4,691	2,768	33,396

Gujarat (Table 8)

1. The total number of fishing villages in Gujarat (excluding Kutch) was 179.

2. The total marine fishermen population and the number of active fishermen are 124,586 and 22,518 respectively. Bulsar district has the maximum number of fishermen population as well as active fishermen. While Bhavanagar district accounts for minimum number of the same.

3. There are 5,931 fishing crafts in this State, Bulsar district accounting for the maximum and Bhavanagar district having the minimum.

4. As many as 159,784 fishing gears comprising of nylon gill net, gill net, drift net, drag net, bag net, trawl net, hooks and lines and others are recorded in this State.

Fish processing (Table 9)

1. There are 264 freezing plants, 64 canning plants 131 ice making plants, 83 peeling sheds, 31 fish meal plants and 319 cold storages in the country. The figure do not include the number of minor and temporary peeling sheds.

2. Kerala has the maximum number of fish processing plants with 103 freezing plants, 39 canning plants, 50 ice making plants, 46 peeling sheds, 3 fish meal plants and 131 cold storages. Tamil Nadu ranks next with 43 freezing plants, 4 canning plants, 32 ice making plants, 4 peeling sheds, 5 fish meal plants and 57 cold storages. The details of fish processing plants in other maritime States of India are shown in Table 9.

Fisheries Co-operatives (Table 10)

1. There are 2,759 primary fisheries co-operative societies in the country of which only 748 function

efficiently showing profit, forming about 27% of the total number of fisheries co-operative societies.

2. Kerala ranks first in the total number of primary co-operative societies, but only 13.2% of them are showing profit.

3. There are 381 co-operative societies in Maharashtra, ranking first in running them efficiently. 47.5% of the total number of co-operative societies are running with profit.

Table 7 Census on Marine Fishing Villages, Fishermen Population, Fishing Crafts and Gears (1973-77) in Maharashtra

Sl. No.	Items	Districts				Total
		Rantnagiri	Kolaba	Greater Bombay	Thane	
1.	No. of fishing villages	134	75	20	70	299
2.	No. of landing centres	72	40	21	40	173
3.	No. of marine fishermen					
	Male	14,752	11,370	7,861	13,820	47,803
	Female	16,441	12,167	7,815	13,623	50,046
	Children	31,614	21,794	16,279	33,887	1,03,574
	Total	62,807	45,331	31,955	61,330	201,423
	Active	14,634	11,184	3,471	12,250	41,539
	% of active to total population	23.3	24.7	10.9	20.0	20.6
4.	Fishing crafts:-					
	Beach seine boat	193	—	—	—	193
	Plank built boat	1,124	769	425	298	2,616
	Dug out canoe	2,860	948	933	690	5,431
	Others	—	—	—	48	48
	TOTAL	4,177	1,717	1,358	1,036	8,288
5.	Fishing gears:-					
	Drag net	979	4,819	1,118	5,719	12,635
	Gill net	6,468	827	969	146	8,410
	Nylon gill net	35,262	38,513	25,874	36,947	136,596
	Trawl net	1,521	282	148	15	1,966
	Shore seine	16,300	—	—	—	16,300
	Bag net	8,275	3,612	5,393	3,223	20,503
	Others	13,244	20,331	4,413	14,705	52,693
	TOTAL	82,049	68,384	37,915	60,755	249,103

Source: Department of Fisheries, Govt. of Maharashtra, Bombay

Table 8 Census on Marine Fishing Villages, Fishermen Population, Fishing Crafts and Gears (1973-77) in Gujarat *

Sl. No.	Items	Districts								Total
		Bulsar	Surat	Broach	Amreli & Kaira	Junaghat	Bavanagar	Jamnagar	Rajkot	
1.	No. of fishing villages	51	38	29	4	23	12	18	4	179
2.	No. of landing centres	31	12	9	4	21	9	18	4	108
3.	No. of marine fisherman:-									
	Male	17,896	3,143	2,245	392	4,535	148	1,225	204	29,788
	Female	18,445	3,441	2,458	406	4,784	149	1,201	176	31,060
	Children	35,586	5,736	4,096	844	14,472	304	2,274	426	63,738
	Total	71,927	12,320	8,799	1,642	23,791	601	4,700	806	124,586
	Active	12,852	2,040	1,457	286	4,493	141	1,071	178	22,518
	% of actual to total population	17.9	16.6	16.6	17.4	18.9	23.5	22.8	22.1	18.1
4.	Fishing crafts:-									
	Plank built boat	1,054	442	316	58	76	—	374	100	2,420
	Dug out canoe	595	52	37	113	910	9	57	4	1,777
	Total	1,649	494	353	171	986	9	431	104	4,197
5.	Fishing gears:-									
	Trawl net	8	—	—	—	159	—	—	—	167
	Bag net	7,920	648	463	359	4,738	1137	716	1,050	17,031
	Drag net	8	—	—	177	991	165	—	—	1,341
	Hooks & lines	—	—	—	—	845	—	631	122	1,598
	Gill net	15,482	3,184	2,274	216	90,475	—	6,541	—	118,172
	Drift net	455	531	379	—	—	—	3,964	—	5,329
	Nylon gill net	3,008	3,509	2,507	—	—	—	1,141	326	10,491
	Others	1,688	1,186	847	615	666	—	653	—	5,635
	TOTAL	28,569	9,058	6,470	1,367	97,874	1,302	13,646	1,498	159,784

* Excluding Kutch region

Table 9 Distribution of Freezing Plants, Canning Plants etc. in Maritime States of India as on 31-12-1977
(Plant capacity in tonnes per day)

State	Freezing		Canning		Ice making		Peeling		Fish meal		Cold storage	
	Total No.	Total Capacity	Total No.	Total Capacity	Total No.	Total capacity	Total No.	Total Capacity	Total No.	Total Capacity	Total No.	Total Capacity
West Bengal	21	54.25	—	—	4	75.0	6	18.0	2	16.0	20	1,061.0
Orissa	10	26.00	1	1.00	3	18.0	1	5.0	—	—	10	605.0
Andhra Pradesh	12	38.50	1	0.25	19	160.3	7	15.5	—	—	15	1,046.0
Tamilnadu	43	140.04	4	5.50	32	353.5	4	8.0	5	57.0	57	3,728.5
Pondicherry	—	—	1	1.50	—	—	—	—	—	—	1	5.0
Kerala	103	486.75	39	148.70	50	561.8	46	230.2	3	62.5	131	10,986.5
Karnataka	30	121.80	9	38.00	13	172.0	13	48.5	5	150.0	29	2,462.0
Goa	8	29.50	6	41.50	1	10.0	—	—	1	12.0	6	235.0
Maharashtra	30	199.50	1	2.50	3	190.0	3	11.5	6	55.0	36	4,750.0
Gujarat	7	63.50	1	6.40	6	71.5	3	11.0	9	166.0	14	1,810.0
Laccadives	—	—	1	1.00	—	—	—	—	—	—	—	—
TOTAL	264	1,159.84	64	246.35	131	1,612.1	83	347.7	31	518.5	319	26,689.0

Source: Marine Products Export Development Authority, Cochin-16.

Table 10 Performance of Primary Fisheries Co-operatives in the the Maritime States of India

Sl. No.	Name of State	Number of primary fisheries co-operative societies	Societies showing project	Society showing loss	Societies with no profit no loss	% of societies showing profit
1.	Orissa	154	48	63	43	31.2
2.	Andhra Pradesh	597	114	363	120	19.1
3.	Tami Nadu	448	169	270	9	37.7
4.	Kerala	985	130	780	75	13.2
5.	Karnataka	121	74	30	17	61.2
6.	Goa, Daman & Diu	11	4	7	—	36.2
7.	Maharashtra	381	181	156	44	47.5
8.	Gujarat	59	25	27	7	42.4
9.	Lakhadweep	3	3	—	—	100
	TOTAL	2,759	748	1,696	315	27.1

Source: Report of the National Commission on Agriculture, 1976.

Contribution by small scale fisheries sector in total marine fish production (Tables 11 & 12)

Table 11 gives the gearwise estimates of marine fish production in various maritime States of India during 1977. The production by boats operated by outboard motors and other power driven boats particularly in Maharashtra and Gujarat States are excluded. The salient features are:-

Kerala ranks first in respect of marine fish production by the small scale fisheries sector, its share being 237,613 tonnes forming about 39% of the total all India landings by the small scale fisheries sector, closely followed by Tamil Nadu (26%) and Andhra Pradesh (12%).

At all India level boat-seine contributed to the maximum catch (29.54%), the other important gears gill net and bag net contributing 26.70% and 11.89% respectively.

Kerala occupies the first place in respect of landings by boat seine, followed by Tamil Nadu and

Andhra Pradesh.

In respect of gill net operations, Tamil Nadu takes the lead, followed by Andhra Pradesh and Kerala.

Maharashtra contributes to the maximum landings by bag net followed by Kerala and Tamil Nadu.

Details of important fishes caught, fishing season and contribution in respect of both catch and value by the small scale fisheries sector are shown in Table 12. The total value of marine fish produced by small scale fisheries sector during 1977 in India (excluding Kutch in Gujarat State, Andamans and Lakshadweep) was Rs. 10,750 lakhs forming about 46.9% of the total value of fish produced.

Kerala ranks first in respect of production in this sector, the value of which being Rs. 4,801 lakhs followed by Tamil Nadu and Andhra Pradesh. Pondicherry State accounts for the minimum catch with the value of Rs. 56 lakhs.

Table 11 Contribution to Total Marine Fish Production in India by Small scale Fisheries Sector during 1977 (in tonnes)

Non-mechanised units	West Bengal	Orissa	Andhra Pradesh	Tamil Nadu	Pondicherry	Kerala	Karnataka	Goa	Maharashtra	Gujarat*	Total	Percentage to total small scale fisheries sector
Shore seine	477	755	12,460	7,760	675	12,922	328	—	45	—	35,422	5.86
Bag net	5,632	169	—	8,971	410	19,694	117	—	36,921	—	71,914	11.89
Drift net	478	4,824	617	16,169	1,316	11,770	9,669	—	—	779	45,622	7.54
Gill net	—	3,642	37,171	70,242	1,874	24,529	4,019	1,806	11,293	6,924	161,500	26.70
Boat seine	—	411	18,771	24,897	58	134,468	68	—	—	—	178,673	29.54
Stake net	—	1,005	1,983	—	—	—	—	—	—	423	3,411	0.56
Hooks & lines	—	28	2,492	15,482	34	8,080	857	96	884	—	27,953	4.62
Drag net	—	—	—	2,696	416	—	—	67	—	—	3,179	0.53
Scoop net	—	—	—	2,239	—	—	—	—	—	—	2,239	0.37
Encircling net	—	—	—	—	—	16,058	—	—	—	—	16,058	2.66
Rampani	—	—	—	—	—	—	31,554	4,630	1,225	—	37,409	6.18
Other types	—	43	311	6,240	—	10,092	2,940	279	1,068	541	21,514	3.55
Total for small Scale fisheries sector	6,587	10,877	73,805	154,696	4,783	237,613	49,552	6,878	51,436	8,667	604,894	100.00
Mechanised units	102	4,195	26,951	51,350	1,679	107,424	47,600	17,853	213,016	173,633	643,803	—
Total fish landed	6,689	15,072	100,756	206,046	6,462	345,037	97,152	24,731	264,452	182,300	1248,697	

* Excluding Kutch

Table 12 Details of important fishes caught, fishing season, contribution in respect of both catch and value by the small scale fisheries sector during 1977

Sl. No.	Name of State	Important fishes caught	Major fishing season	Contribution by small scale fisheries sector		Contribution by mechanised sector		TOTAL	
				Catch in tonnes	Value in lakhs rupees	Catch in tonnes	Value in lakhs rupees	Catch in tonnes	Value in lakhs rupees
1.	West Bengal	Sciaenids, <i>Harpodon nehereus</i> Anchovies and other clupeids	October to December	6,587	107	102	2	6,689	109
2.	Orissa	<i>Hilsa ilisha</i> , elasmobranchs, pomfrets, and catfishes	October to December	10,877	327	4,195	126	15,072	453
3.	Andhra Pradesh	Lesser sardines, sciaenids, Anchovies and ribbonfish	January to March	73,805	1,269	26,951	463	100,756	1,732
4.	Tamil Nadu	Lesser sardines, elasmobranchs, silver bellies and catfishes	January to March	154,696	2,255	51,350	749	206,046	3,004
5.	Pondicherry	Lesser sardines and Anchovies	January to March	4,783	56	1,679	20	6,462	76
6.	Kerala	Oil sardine, lesser sardines, mackerel and penaeid prawns	October to December	237,613	4,801	107,424	2,170	345,037	6,971
7.	Karnataka	Oil sardine and mackerel	October to December	49,552	569	47,600	546	97,152	1,115
8.	Goa	Lesser sardines and mackerel	October to December	6,878	104	17,853	269	24,731	373
9.	Maharashtra	<i>Harpodon nehereus</i> , non penaeid prawns and penaeid prawns	October to December	51,436	1,100	213,016	4,657	264,452	5,757
10.	Gujarat (Excluding Kutch)	<i>Harpodon nehereus</i> and sciaenids	October to December	8,667	162	173,633	3,250	182,300	3,412
	All India (Excluding Kutch, Andamans and Lakshadweep)		October to December	604,894	10,750	643,803	12,252	12,48,697	23,002

