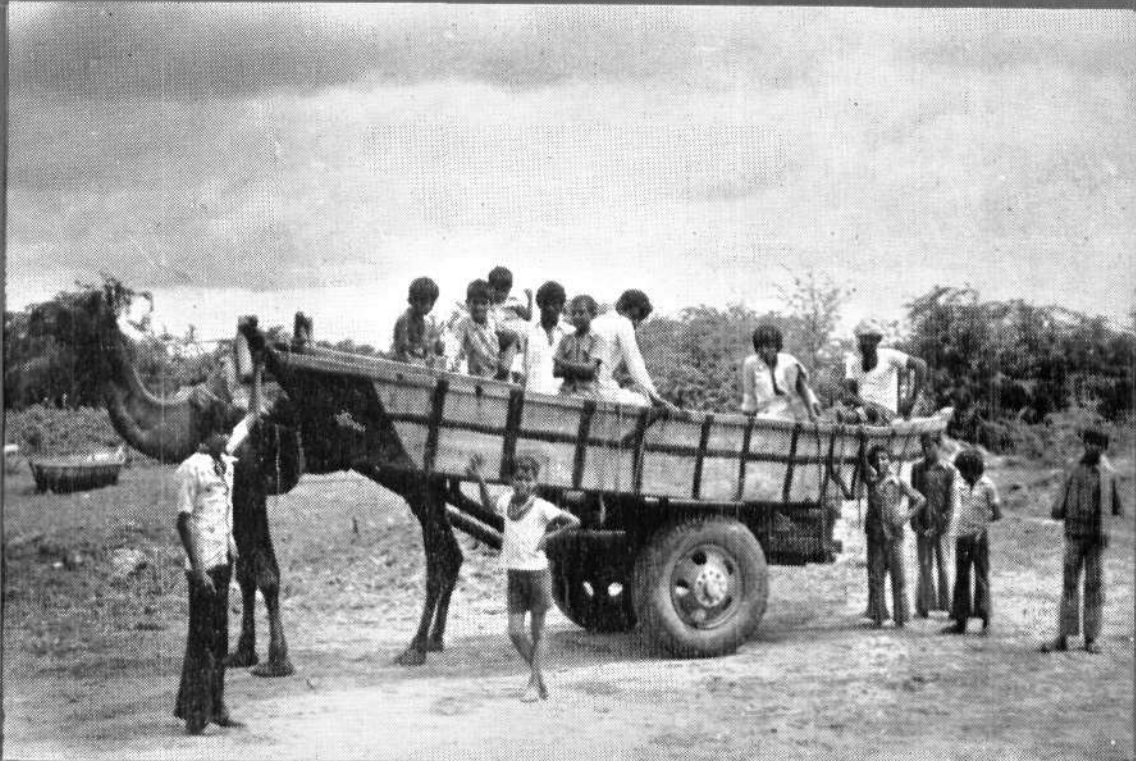


# MARINE FISHERIES INFORMATION SERVICE



No. 52

AUGUST 1983

*Technical and Extension Series*

CENTRAL MARINE FISHERIES RESEARCH INSTITUTE

COCHIN, INDIA

INDIAN COUNCIL OF AGRICULTURAL RESEARCH

**THE MARINE FISHERIES INFORMATION SERVICE:** Technical and Extension Series envisages the rapid dissemination of Information on marine and brackish water fishery resources and allied data available with the Fishery Data Centre and the Research Divisions of the Institute, results of proven researches for transfer of technology to the fish farmers and industry and of other relevant information needed for Research and Development efforts in the marine fisheries sector.

Abbreviation -- *Mar. Fish. Infor. Serv, T & E Ser.*, No. 52 : 1983

## CONTENTS

Trends in marine fish production in India - 1982-83

Cover photo: Transportation of fishing craft on camel cart in Gujarat. (courtesy: J. P. Karbhari)

## TRENDS IN MARINE FISH PRODUCTION IN INDIA — 1982-83\*

The total marine fish production in India during the financial year 1982-83<sup>1</sup> was estimated at 14.15 lakh tonnes as compared to 14.21 lakh tonnes recorded during the previous year 1981-82, showing a marginal decline of about 6,000 tonnes. Barring the states of West Bengal, Karnataka and Gujarat where there was a marked decline, the total marine fish production increased in all other maritime states of India (Table 1). While the landings increased significantly in the states of Andhra Pradesh, Pondicherry, Kerala and Andamans there was only a marginal increase in Orissa, Tamil Nadu, Goa and Maharashtra.

**Table 1.** *Statewise total marine fish production in India during the years 1982-83 and 1981-82 (In tonnes)*

Sl.No.	State	1982-83	1981-82
1.	West Bengal	22,444	28,116
2.	Orissa	33,490	32,859
3.	Andhra Pradesh	1,26,004	1,07,786
4.	Tamil Nadu	2,35,953	2,35,423
5.	Pondicherry <sup>2</sup>	12,985	10,449
6.	Kerala	3,48,443	3,04,808
7.	Karnataka	1,27,968	1,62,962
8.	Goa <sup>3</sup>	35,874	34,995
9.	Maharashtra	2,67,527	2,56,369
10.	Gujarat	1,96,437	2,41,640
11.	Andamans	4,284	1,919
12.	Lakshadweep	3,810	3,907
<b>TOTAL</b>		<b>14,15,219</b>	<b>14,21,233</b>

### Pelagic and demersal group of fishes

In Table 2 the specieswise composition of total marine fish landings in India is shown. The species

1. From 1982 onwards the marine fish production in India is furnished on a financial year basis and accordingly the figures for the period from April 1982 to March 1983 are furnished. This has been given effect to meet the requirements of the various central and state Governments and other end users.
2. Excluding Mahe and Yenam which are included in Kerala and Andhra Pradesh respectively.
3. Excluding Daman and Diu which are included in Gujarat.

**N.B.:** For Andamans and Lakshadweep the figures were obtained from the Governments of the respective Union Territories.

\* Prepared by Fishery Resources Assessment Division.

were grouped into pelagic and demersal. The pelagic group of species comprises wolf herring, oil sardine, other sardines, hilsa shad, other shads, anchovies, other clupeoids, Bombay duck, half beaks, full beaks, flying fishes, ribbon fishes, carangids, mackerel, seer fishes, tunnies, bill fishes, baracudas, mullets and unicorn cod. Elasmobranchs, eels, catfishes, lizard fishes, perches, goat fishes, threadfins, croakers, silver bellies, big jawed jumper, pomfrets, flatfishes, prawns, lobsters, crabs, stomatopods and cephalopods form the demersal group. For the purpose of comparison estimated specieswise composition of landings in 1981-82 and calendar year 1982 are given in Tables 3 and 4. The statewise break-up of pelagic and demersal group of fishes is shown in Table 5.

**Table 5.** *Statewise break-up of the landings of pelagic and demersal group of species during 1982-83 (In tonnes)*

Sl. No.	State	Pelagic	Demersal	Total
1.	West Bengal	9,301	13,143	22,444
2.	Orissa	14,639	18,851	33,490
3.	Andhra Pradesh	63,529	62,475	1,26,004
4.	Tamil Nadu	92,259	1,43,694	2,35,953
5.	Pondicherry	7,294	5,691	12,985
6.	Kerala	2,40,734	1,07,709	3,48,443
7.	Karnataka	77,264	50,704	1,27,968
8.	Goa	12,938	22,936	35,874
9.	Maharashtra	94,898	1,72,629	2,67,527
10.	Gujarat	78,931	1,17,506	1,96,437
11.	Andamans	2,617	1,667	4,284
12.	Lakshadweep	517	3,293	3,810
<b>TOTAL</b>		<b>6,94,921</b>	<b>7,20,298</b>	<b>14,15,219</b>

From Table 5, it is seen that Kerala accounted for the highest catch of pelagic group of species during 1982-83 followed by Maharashtra, Tamil Nadu, Gujarat Karnataka and Andhra Pradesh in the order of abundance. As regards demersal group of fishes, Maharashtra accounted for the maximum followed by Tamil Nadu, Gujarat, Kerala, Andhra Pradesh and Karnataka. Figs 1 and 2 show the comparative landings of oil sardine, Bombay duck, anchovies, other sardines, ribbon fishes and mackerel belonging to the pelagic group and penaeid prawns, croakers, silver bellies, elasmobranchs, cat fishes and non-penaeid prawns of demersal group of fishes during 1982-83 and 1981-82.



Contd.

20. Tunnies														
a. <i>E. affinis</i>	—	292	817	2,666	20	4,414	2,205	—	152	228	—	27	10,821	
b. <i>Auxis</i> spp.	—	9	—	500	—	1,409	31	—	4	—	—	—	1,953	
c. <i>K. pelamis</i>	—	3	—	1	—	49	—	—	—	—	31	2,055	2,139	
d. <i>T. tonggol</i>	—	—	—	4	—	7	—	—	—	—	—	—	11	
e. Other tunnies	—	1	124	302	34	426	7	6	2,968	62	9	552	4,491	
21. Bill fishes	—	5	362	241	87	272	47	—	165	889	5	41	2,114	
22. Barracudas ( <i>Sphyræna</i> )	—	23	173	1,621	40	543	83	28	217	262	47	10	3,047	
23. Mulllets ( <i>Mugil</i> )	86	4	459	449	..	32	9	76	27	1,290	133	—	2,565	
24. Unicorn cod ( <i>Bregmaceros</i> )	—	—	—	—	—	—	—	—	64	—	—	—	64	
25. Flat fishes														
a. Halibut ( <i>Psettodes erumei</i> )	—	—	34	339	2	116	12	—	617	264	—	—	1,384	
b. Flounders	—	—	85	4	—	6	—	2	—	—	—	—	97	
c. Soles	4	395	807	2,833	291	12,160	1,666	735	2,703	1,985	—	—	23,579	
26. Crustaceans														
a. Penaeid prawns	288	2,031	8,706	13,049	265	32,288	7,732	5,914	34,814	12,316	64	—	1,17,467	
b. Non penaeid prawns	682	226	4,871	410	9	33	—	—	44,799	5,064	—	—	56,094	
c. Lobsters	—	35	10	325	33	110	1	18	534	321	2	—	1,389	
d. Crabs	72	118	1,491	10,972	982	371	409	546	486	5,533	20	—	21,000	
e. Stomatopods	25	268	412	1,241	8	5,360	6,520	3,732	3,254	4,110	—	—	24,930	
27. Cephalopods	21	232	424	3,689	117	3,206	945	218	5,203	2,941	—	20	17,016	
28. Miscellaneous	2,071	671	1,989	15,779	681	8,171	11,716	2,039	5,752	7,619	155	230	56,873	
<b>TOTAL</b>	<b>22,444</b>	<b>33,490</b>	<b>1,26,004</b>	<b>2,35,953</b>	<b>12,985</b>	<b>3,48,443</b>	<b>1,27,968</b>	<b>35,874</b>	<b>2,67,527</b>	<b>1,96,437</b>	<b>4,284</b>	<b>3,810</b>	<b>14,15,219</b>	

Table 3. Estimated marine fish landings in India during 1981-82 (in tonnes)

Sl.No.	Name of fish	West Bengal	Orissa	Andhra Pradesh	Tamil Nadu	Pondicherry	Kerala	Karnataka	Goa	Maharashtra	Gujarat	Andamans	Lakshadweep	Total
1.	Elasmobranchs													
a.	Sharks	514	2,395	2,999	2,594	180	3,747	3,354	362	8,359	8,565	16	190	33,275
b.	Skates	368	—	140	116	—	347	—	—	229	462	—	—	1,662
c.	Rays	190	824	1,090	10,167	219	1,320	237	61	2,244	4,423	10	23	20,808
2.	Eels	21	32	294	190	12	7	7	6	2,807	2,740	—	—	6,116
3.	Cat Fishes	9,921	5,091	2,591	5,487	93	9,326	8,598	1,673	10,820	11,309	21	—	64,930
4.	Clupeoids													
a.	Wolf herring	360	1,244	1,245	2,220	83	1,063	154	55	3,910	3,651	21	—	14,006
b.	Oil sardine	—	—	—	295	—	1,72,230	73,327	9,399	393	—	—	—	2,55,644
c.	Other sardines	—	4,251	14,652	22,741	1,582	7,091	5,290	1,493	433	—	277	—	57,810
d.	Hilsa shad	2,683	2,169	32	113	—	11	1	1	685	17	—	—	5,712
e.	Other shads	37	23	1,688	3,884	103	15	52	12	1,277	7,638	18	—	14,747
f.	Anchovies													
	<i>Coilia</i>	177	59	57	277	6	—	—	—	15,502	3,622	—	—	19,700
	<i>Setipinna</i>	439	179	186	285	70	—	2	—	—	—	—	—	1,161
	<i>Stolephorus</i>	5	132	11,051	7,681	268	4,674	7,430	86	83	—	214	—	31,624
	<i>Thryssa</i>	—	—	—	—	—	—	—	—	—	—	—	—	—
	<i>Thryssa</i>	110	338	2,421	6,249	515	682	207	517	1,452	2,277	—	—	14,768
	Other clupeoids	3,088	1,963	4,875	4,769	386	951	257	338	3,341	3,441	—	—	23,409
5.	Bombay duck	810	84	905	—	—	—	1	1	71,700	59,146	—	—	1,32,647
6.	Lizard fishes	—	76	845	1,741	241	5,648	418	663	1,335	523	—	—	11,490

Contd.

7.	Half beaks & full beaks	1	1	63	823	56	673	120	—	80	—	18	103	1,938
8.	Flying fishes	—	—	166	2,464	614	7	—	—	—	—	3	14	3,268
9.	Perches													
a.	Rock cods	—	178	41	1,008	15	269	10	1	107	188	—	—	1,817
b.	Snappers	—	33	261	724	—	350	—	2	143	438	—	—	1,951
c.	Pig-face breams	—	—	—	1,158	18	115	1	—	4	—	—	—	1,296
d.	Threadfin breams	—	19	1,624	2,211	383	6,905	278	713	3,017	3,065	—	—	18,215
e.	Other perches	28	110	3,505	3,040	493	1,533	107	529	180	2,457	246	253	12,481
10.	Goat fishes	—	114	868	1,247	135	38	1	—	1,116	294	—	24	3,837
11.	Threadfins	323	491	1,110	240	1	126	3	14	431	2,268	—	—	5,007
12.	Croakers	224	2,100	6,893	19,994	324	2,747	1,655	1,546	16,343	34,840	—	—	86,666
13.	Ribbon fishes	202	376	7,287	7,513	164	7,058	286	592	9,287	9,458	16	—	42,239
14.	Carangids													
a.	Horse Mackerel	—	236	411	147	—	235	981	113	120	688	—	—	2,931
b.	Scads	—	47	3,302	1,320	162	1,518	—	—	—	—	—	—	6,349
c.	Leather-jackets	60	33	495	827	10	617	241	5	406	2,873	—	—	5,567
d.	Other carangids	—	144	1,447	8,154	1,569	4,931	1,827	672	860	157	167	103	20,031
15.	Silver bellies	—	536	7,334	52,682	899	3,124	1,329	1,566	203	—	315	—	67,988
16.	Big-jawed jumper	—	44	691	449	43	935	440	902	891	5,700	—	—	10,095
17.	Pomfrets													
a.	Black pomfret	54	416	1,393	617	103	538	71	96	2,095	2,832	1	—	8,216
b.	Silver pomfret	3,115	2,487	1,453	449	9	868	172	10	15,850	19,229	8	—	43,650
c.	Chinese pomfret	544	2	29	4	—	15	8	—	5	1	—	—	608
18.	Mackerels													
a.	Indian Mackerel	—	515	3,967	4,425	273	12,788	14,359	5,570	275	—	139	—	42,311
b.	Other mackerels	—	—	—	—	4	—	—	—	—	—	—	—	4
19.	Seer fishes													
a.	<i>S. commerson</i>	1,186	579	1,269	4,438	50	2,163	1,947	248	1,646	—	64	28	13,618
b.	<i>S. guttatus</i>	102	2,588	3,215	543	28	2,253	1,003	168	1,192	3,785	68	30	14,975
c.	<i>S. lineolatus</i>	—	52	13	35	—	6	188	31	—	—	—	—	325
d.	<i>Acanthocybtum</i> Sp:	—	—	—	—	—	—	—	—	—	—	—	—	—
20.	Tunnies													
a.	<i>E. affinis</i>	—	227	201	2,966	10	5,235	2,324	48	240	627	—	30	11,908
b.	<i>Auxis</i> spp.	—	—	—	126	—	1,446	1	—	—	—	—	—	1,573
c.	<i>K. pelamis</i>	—	—	—	23	—	1	—	—	7	—	14	2,285	2,330
d.	<i>T. Tonggol</i>	—	—	—	—	—	64	—	—	—	14	—	—	78
e.	Other tunnies	—	14	76	470	43	192	—	49	1,127	113	20	615	2,719
21.	Bill fishes	—	1	210	178	20	142	3	—	114	—	—	19	687
22.	Baracudas	—	12	246	1,190	55	903	14	38	12	454	57	9	2,990
23.	Mulletts	1	—	178	373	9	117	1	104	25	1,309	72	—	2,189
24.	Unicorn cod	—	—	—	—	—	—	—	—	19	—	—	—	19
25.	Flat fishes													
a.	Halibut	—	1	72	217	11	196	—	—	10	486	—	—	993
b.	Flounders	—	—	1,037	32	—	—	—	—	65	—	—	—	1,134
c.	Soles	2	35	1,112	1,912	183	4,564	743	607	2,113	3,951	—	—	15,222
26.	Crustaceans													
a.	Penaeid prawns	299	1,326	6,714	15,582	312	21,809	5,313	2,556	21,925	11,250	26	—	87,112
b.	Non-penaeid prawns	848	55	1,577	803	19	142	4	—	43,002	4,514	—	—	50,964
c.	Lobsters	—	6	5	207	7	59	48	12	583	921	2	—	1,850
d.	Crabs	45	132	1,012	11,164	223	218	1,171	624	203	10,286	20	—	25,098
e.	Stomatopods	—	125	210	1,287	—	2,838	11,972	1,955	622	3,066	—	—	22,075
27.	Cephalopods	—	73	589	2,463	52	2,904	301	56	2,074	2,570	—	15	11,097
28.	Miscellaneous	2,359	891	2,639	13,109	394	2,054	16,705	1,501	5,407	5,992	86	166	56,303

TOTAL 28,116 32,859 1,07,786 2,35,423 10,449 30,808 1,62,962 34,995 2,56,369 2,41,640 1,919 3,907 14,21,233

Table 4. Estimated marine fish landings in India during the calendar year 1982 (in tonnes)

Sl.No.	Name of fish	West Bengal	Orissa	Andhra Pradesh	Tamil Nadu	Pondicherry	Kerala	Karnataka	Goa	Maharashtra	Gujarat	Andaman	Lakshadweep	Total
1.	Elasmobranchs													
a.	Sharks	523	1,986	4,673	2,890	99	4,415	4711	454	8,887	10,880	25	221	39,764
b.	Skates	210	4	231	448	—	357	—	—	1,111	984	—	—	3,345
c.	Rays	503	347	1,543	10,444	292	1,571	347	168	2,377	3,583	13	19	21,207
2.	Eels	36	83	529	155	2	19	7	15	3,843	2,790	—	—	7,479
3.	Cat fishes	9,075	3,995	3,182	6,048	20	9,532	10,253	1,941	10,919	12,662	37	—	67,664
4.	Clupeoids													
a.	Wolf herring	611	1,141	1,245	2,666	117	1,060	394	74	4,357	3,537	20	—	15,222
b.	Oil sardine	—	—	—	1,084	—	1,43,215	55,126	5,518	351	—	—	—	2,05,294
c.	Other sardines	4	4,112	13,758	23,291	1,383	7,388	3,151	963	475	—	971	—	55,496
d.	Hilsa shad	1,083	1,125	148	174	1	39	13	—	432	153	—	—	3,168
e.	Other shads	79	318	2,478	4,011	103	—	45	—	1,330	4,990	21	—	13,375
f.	Anchovies	—	—	—	—	—	—	868	—	10	—	—	—	878
	<i>Coilia</i>	243	26	231	172	—	—	11	1	10,408	5,231	—	—	16,323
	<i>Setipinna</i>	584	292	469	18	—	—	7	—	—	—	—	—	1,370
	<i>Stolephorus</i>	45	325	5,934	9,697	384	13,597	11,480	22	81	—	259	—	41,824
	<i>Thryssa</i>	107	210	2,822	4,912	458	969	934	2,138	1,967	4,795	—	—	19,312
g.	Other clupeoids	2,563	1,592	4,984	5,540	492	3,095	603	271	2,983	3,901	—	—	26,024
5.	Bombay duck	1,663	181	1,534	2	—	—	1	—	45,162	37,933	—	—	86,476
6.	Lizard fishes	—	330	1,658	1,932	240	5,480	250	403	1,160	807	—	—	12,260
7.	Half beaks & full beaks	—	—	48	825	188	1,005	279	10	157	1	29	87	2,629
8.	Flying fishes	—	—	168	1,617	175	1	—	—	1	—	9	25	1,996
9.	Perches													
a.	Rock cods	11	187	35	1,294	32	285	18	5	334	111	—	—	2,312
b.	Snappers	—	37	330	1,199	3	337	—	5	43	170	—	—	2,124
c.	Pig-face breams	—	—	—	2,256	3	114	—	—	7	—	—	—	2,380
d.	Threadfin breams	—	831	2,457	3,737	528	9,223	296	437	4,410	1,754	—	—	23,673
e.	Other perches	41	735	4,316	3,911	736	1,218	204	461	922	1,402	361	230	14,537
10.	Goatfishes	—	107	1,520	1,457	108	244	1	—	1,720	—	—	27	5,184
11.	Threadfins	133	92	2,043	379	22	118	3	—	482	3,573	—	—	6,845
12.	Croackers	1,072	3,713	8,779	2,2029	561	3,581	2,326	2,298	15,926	26,962	—	—	87,247
13.	Ribbon fishes	181	443	6,795	6,365	108	11,034	1,062	1,035	12,355	9,474	23	—	48,875
14.	Carangids													
a.	Horse Mackerel	—	231	708	150	—	921	380	—	196	330	—	—	2,916
b.	Scads	—	59	2,714	643	1,599	2,076	46	2	21	26	—	—	7,186
c.	Leather-jackets	79	97	585	703	20	534	375	60	623	2,618	—	—	5,694
d.	Other carangids	4	202	2,426	6,158	713	9,160	1,865	1,368	1,799	169	151	214	24,229
15.	Silver bellies	24	1,133	5,132	52,577	538	8,730	2,417	1,011	169	—	937	—	72,668
16.	Big-jawed jumper	—	8	818	679	27	1,609	830	966	2,519	6,416	—	—	13,872
17.	Pomfrets	—	—	—	9	—	—	—	246	591	—	—	—	846
a.	Black pomfret	254	449	2,131	754	101	1,944	1,979	80	2,600	2,203	4	—	12,499
b.	Silver pomfret	3,504	2,291	1,870	521	14	2,288	1,077	37	13,631	11,025	20	—	36,278
c.	Chinese pomfret	65	4	151	73	—	13	20	—	118	1	—	—	345
18.	Mackerels													
a.	Indian mackerel	—	620	2,971	4,441	527	10,717	5,511	2,607	258	—	348	—	28,000
b.	Other mackerels	—	—	—	6	1	—	—	—	—	—	—	—	7
19.	Seer fishes													
a.	<i>S. commerson</i>	664	707	2,476	4,376	69	3,621	4,898	108	2,313	—	77	50	19,359
b.	<i>S. guttatus</i>	165	1,375	3,225	515	4	1,958	1,924	527	1,202	2,656	74	49	13,674
c.	<i>S. lineolatus</i>	—	40	—	81	—	38	4	—	1	1	—	—	163
d.	<i>Acanthocybium</i> Sp.	—	—	—	1	—	—	—	—	—	—	—	—	1

9 Contd.

20. Tunnies														
a. <i>E. affinis</i>	—	405	647	2,521	—	5,265	2,230	—	245	276	—	30	11,619	
b. <i>Auxis spp.</i>	—	1	—	371	—	1,478	31	—	4	—	—	—	1,885	
c. <i>K. pelamis</i>	—	2	—	5	—	50	—	—	—	—	28	2,314	2,399	
d. <i>T. tonggol</i>	—	—	—	—	—	43	—	—	—	—	—	—	43	
e. Other tunnies	—	1	169	317	52	445	7	6	2,943	82	7	622	4,651	
21. Bill fishes	—	—	223	258	85	253	47	—	191	889	—	42	1,988	
22. Barracudas	—	12	286	1,787	49	656	66	28	188	473	71	10	3,626	
23. Mulletts	75	—	396	511	4	33	8	64	27	1,234	123	—	2,475	
24. Unicorn cod	—	—	—	—	—	—	—	—	69	—	—	—	69	
25. Flat fishes														
a. Halibut	—	1	58	347	6	181	7	—	424	417	—	—	1,441	
b. Flounders	—	—	74	7	—	—	—	2	5	—	—	—	88	
c. Soles	3	272	720	2,909	225	11,422	1,373	617	2,549	2,609	—	—	22,699	
26. Crustaceans														
a. Penaeid prawns	299	2,096	9,892	14,095	304	26,708	7,698	3,491	33,914	12,237	63	—	1,10,797	
b. Non-penaeid prawns	884	222	4,637	367	16	65	—	—	40,809	4,148	—	—	51,148	
c. Lobsters	—	38	8	312	27	94	49	24	727	483	2	—	1,764	
d. Crabs	103	62	955	12,668	917	347	1,003	904	474	7,638	28	—	25,099	
e. Stomatopods	12	115	295	2,096	6	4,023	9,930	3,504	2,397	5,141	—	—	27,519	
27. Cephalopods	6	195	595	3,238	84	3,536	153	166	4,781	3,023	—	22	15,799	
28. Miscellaneous	2,741	707	1,962	13,912	615	9,690	18,518	2,004	5,532	7,417	158	239	63,495	
<b>TOTAL</b>	<b>27,649</b>	<b>33,557</b>	<b>1,18,034</b>	<b>2,45,961</b>	<b>12,058</b>	<b>3,25,795</b>	<b>1,54,836</b>	<b>34,041</b>	<b>2,53,429</b>	<b>2,07,204</b>	<b>3,859</b>	<b>4,201</b>	<b>14,20,624</b>	

Table 6 (d). Statewise landings of marine fish from mechanised and non-mechanised fishing crafts in Goa and Maharashtra during 1982-83 (In tonnes)

Name of fish	GOA					Non-mechanised	Grand total	MAHARASHTRA					Non-mechanised	Grand Total
	Mechanised fishing		Power propulsion		Total			Mechanised fishing		Power propulsion		Total		
	Trawl net	Purse seine	Drift/gill net	Others				Trawl net	Dol net	Drift/gill net	Hooks & lines			
Oil sardine	—	1,640	—	—	1,640	3,580	5,220	87	—	—	87	235	322	
Mackerel	—	52	—	3	55	11	66	64	—	4	68	276	344	
Bombay duck	—	—	—	—	—	—	—	271	47,366	7	47,644	1,330	48,974	
Croakers	2,197	41	2	—	2,240	263	2,503	12,093	1,666	684	78	14,521	2,532	
Perches	1,292	98	7	—	1,397	116	1,513	7,288	38	10	7,343	230	7,573	
Pomfrets	159	5	52	—	216	192	408	1,687	7,127	5,135	13,949	1,695	15,644	
Tunnies	—	—	5	—	5	1	6	1,357	—	384	1,741	1,383	3,124	
Penaeid prawns	5,860	7	1	—	5,868	46	5,914	28,804	4,275	143	33,222	1,592	34,814	
Non-penaeid prawns	—	—	—	—	—	—	—	4,479	39,484	—	39,963	4,836	44,799	
Others	12,974	4,094	695	72	17,835	2,409	20,244	58,343	17,279	7,387	453	83,462	11,418	
<b>TOTAL</b>	<b>22,482</b>	<b>5,937</b>	<b>762</b>	<b>75</b>	<b>29,256</b>	<b>6,618</b>	<b>35,874</b>	<b>1,10,473</b>	<b>1,17,235</b>	<b>13,754</b>	<b>538</b>	<b>2,42,000</b>	<b>25,527</b>	<b>2,67,527</b>
No. of operations of units	75,139	7,599	9,756	90	64,690			1,85,152	2,20,284	87,484	2,201	4,11,121		



## Statewise marine fish production

### West Bengal

During 1982-83, the total marine fish landings in West Bengal were estimated at about 22,400 t. in comparison to about 28,000 t. recorded in 1981-82, showing a decline of about 5,600 t. This was due to reduced landings of cat fishes, hilsa shad, other clupeoids and seer fishes by about 6,200, 1,600, 1,200 and 200 t. respectively. The landings of croakers, pomfrets, wolf herring and Bombay duck, however, showed an increase of 960, 950, 700 and 690 t. respectively.

### Orissa

The total catch in Orissa during 1982-83 increased marginally to about 33,500 t. from 32,900 t. recorded in 1981-82. The landings of croakers, perches, anchovies, penaeid prawns and other sardines increased by about 1,900, 1,300, 1,200, 700 and 280 t. respectively. Cat fishes, elasmobranchs, other clupeoids and pomfrets, however, recorded lower landings by 1,900, 1,700, 260 and 230 t. respectively.

### Andhra Pradesh

During 1982-83, the total marine fish landings in Andhra Pradesh was about 126,000 t as compared to about 108,000 t recorded in 1981-82, showing an increase of about 18,000 t (17%). This was due to higher landings of elasmobranchs, non-penaeid prawns, seer fishes, perches, penaeid prawns, croakers and ribbon fishes whose landings increased by about 3,600, 3,300, 2,500, 2,200, 2,000, 1,700 and 1,600 t respectively. The landings of anchovies, other sardines and silver bellies, however, declined by about 5,000, 1,500 and 500 t respectively.

### Tamil Nadu

The total landings in Tamil Nadu during 1982-83 did not show much variation as compared to 1981-82, the respective figures being about 236,000 and 235,400 t. Perches, other sardines and elasmobranchs recorded higher landings, the increase being 5,500, 2,500 and 2,300 t respectively. The landings of silver bellies, croakers, penaeid prawns and carangids, however, showed decline, the reduction in their landings being 7,000, 3,400, 2,500 and 1,700 t respectively.

### Pondicherry

An increase of about 2,500 t (24%) in the total landings was noticed in Pondicherry during 1982-83

as compared to 1981-82. Higher landings of crabs, perches, carangids, mackerel and other sardines were observed, the increase being about 760, 580, 560, 460 and 230 t respectively. The catch of anchovies, however, declined by about 60 t.

### Kerala

During 1982-83, the total marine fish landings increased to about 348,000 t from about 305,000 t recorded in 1981-82, the quantum of increase being about 43,000 t (14%). The landings of penaeid prawns, anchovies, flat fishes, carangids, silver bellies and ribbon fishes showed an increase of about 10,500, 9,700, 7,500, 6,500, 6,000 and 4,000 t respectively. The catch of oil sardine and mackerel, however, showed a decline of about 12,700 and 3,500 t respectively.

### Karnataka

The total landings in Karnataka during 1982-83 showed a substantial fall of about 35,000 t (21%) as compared to 1981-82. This was due to significant reduction in the catch of oil sardine and mackerel, the decrease in their landings being about 38,000 and 9,000 t respectively. Consequent to the failure of oil sardine and mackerel fisheries, reduction in the number of purse seine operations at Mangalore, Malpe, Ganguli and Bhatkal was observed. The landings of anchovies, seer fishes, penaeid prawns, cat fishes and thread fin breams, however, showed an increase of about 4,400, 3,000, 2,400, 1,600 and 1,500 t. respectively.

### Goa

During 1982-83, the total catch in Goa showed a marginal increase of about 900 t as compared to 1981-82. The salient feature of the fisheries of this state was that while mackerel and oil sardine recorded substantially lower catches, the reduction in their landings being about 5,500 and 4,200 t respectively, penaeid prawns, anchovies, croakers and catfishes recorded higher landings, the increase in their catch being about 3,400, 2,000, 1,000 and 600 t respectively.

### Maharashtra

The total landings in Maharashtra during 1982-83 increased to about 268,000 t from about 256,000 t. recorded in 1981-82. The landings of penaeid prawns, threadfin breams, ribbon fishes, non-penaeid prawns, croakers and catfishes showed an increase of about 12,900, 2,400, 1,900, 1,800, 700 and 500 t respectively. Bombay duck and pomfrets, however, recorded lower

landings, the reduction in their landings being about 22,700 and 2,300 t respectively.

### Gujarat

In Gujarat, the total landings during 1982-83 declined sharply by about 45,000 t (19%) as compared to 1981-82. This is mainly due to significant fall in the landings of Bombay duck, the reduction in the catch being about 21,000 t. Croakers, pomfrets, perches and ribbon fishes also recorded lesser landings by about 9,900, 9,300, 3,400 and 2,300 t. respectively. The landings of penaeid prawns, elasmobranchs, catfishes and non-penaeid prawns, however, showed an increase of about 1,100, 1,000, 800 and 600 t respectively.

### Andamans

A significant increase of about 2,400 t in the total catch was noticed in Andamans during 1982-83 as compared to 1981-82. This was due to higher landings of other sardines, silver bellies, perches and mackerel, the increase in their catch being about 1,000, 600, 260 and 210 t respectively.

### Lakshadweep

The total landings in Lakshadweep marginally declined by about 100 t during 1982-83 as compared to 1981-82. While the catch of tunnies and perches declined by about 300 and 30 t. respectively, the landings of carangids showed an increase of about 100 t.

### Major groups of fishes

From Table 2, it is seen that oil sardine landings accounted for about 2.02 lakh t forming about 14.2% of the total all India landings during 1982-83. The landings of other major groups of species in the order of abundance of their catch are penaeid prawns (117,000 t-8.3%), Bombay duck (90,000 t-6.4%), croakers (82,000 t-5.8%), anchovies, (78,000 t-5.5%), silver bellies (70,000 t - 5.0%), elasmobranchs (65,000 t - 4.6%), catfishes (61,000 t - 4.3%), other sardines (59,000 t-4.2%), non-penaeid prawns (56,000 t - 4.0%), perches (50,000 t - 3.5%), pomfrets (49,000 t - 3.5%), ribbonfishes (48,000 t - 3.4%) and mackerel (25,000 t - 1.8%).

### Pelagic group (Fig. 1)

#### 1. Oil sardine

During 1982-83, the landings of oil sardine declined by about 54,000 t (21%), the respective figures for 1982-

83 and 1981-82 being 2,02,000 and 2,56,000 t. This was due to reduced landings in the states of Karnataka, Kerala and Goa, the decrease in the catch of oil sardine in the above states being about 37,800, 12,700 and 4,200 t respectively. This was reflected in the poor catches of oil sardine in purse seiners in these states.

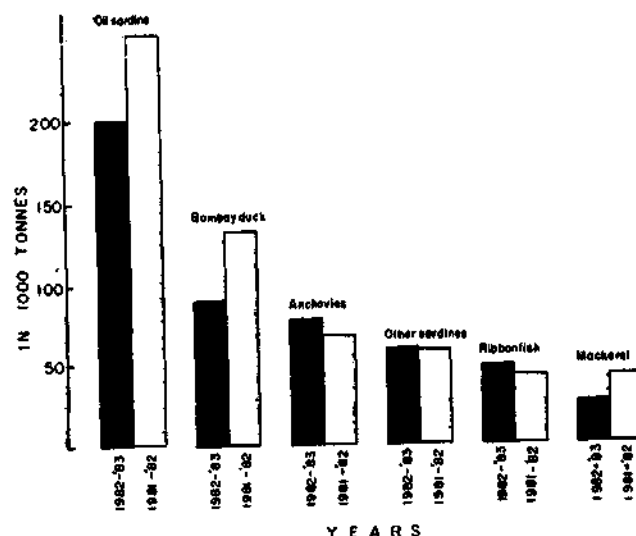


Fig. 1. Comparison of landings of major pelagic groups of fishes between 1981-82 and 1982-83.

#### 2. Bombay duck

A decline to the tune of about 42,000 t (32%) in the landings of Bombay duck was noticed during 1982-83 as compared to 1981-82 the respective yields being about 90,000 and 1,33,000 t. Both Maharashtra and Gujarat accounted for lower landings, the decrease in the landings in these states being about 23,000 and 20,000 t respectively.

#### 3. Anchovies

An increase of about 11,000 t (16%) was noticed in the catch of anchovies during 1982-83 as compared to 1981-82, the respective catch figures being about 78,000 and 67,000 t. An increase in the landings in the states of Kerala (9,700 t), Karnataka (4,400 t) and Goa (2,100 t) contributed to the total all India higher landings. In Andhra Pradesh, however, the yield of anchovies showed a substantial fall of about 5,000 t.

#### 4. Other sardines

The landings of other sardines showed a marginal increase of about 1,600 t during 1982-83 as compared

to 1981-82, the respective yields being about 59,100 and 57,000 t. While the catch increased in the states of Tamil Nadu (2,500 t), Orissa (300 t) and Pondicherry (200 t), Andhra Pradesh recorded a lower catch, the decline being about 1,500 t.

### 5. Ribbon fishes

There was an increase in the landings of ribbon fishes to the tune of about 5,400 t during 1982-83 as compared to that of 1981-82 the respective landings being 47,000 and 42,200 t. While an increase in the landings was observed in the states of Kerala (4,000 t), Maharashtra (1,900 t) and Andhra Pradesh (1,600 t), a decline in the catches to the tune of about 2,300 t was noticed in Gujarat.

### 6. Mackerel

The landings of mackerel (25,000 t) during the year was the lowest ever recorded in the last one decade, the reduction in the catch during 1982-83 as compared to 1981-82, being 17,300 t. Decline was observed in the states of Karnataka, Goa and Kerala wherein mackerel forms a major fishery, the reduction in the catch in those states being about 9,100 t, 5,500 and 3,500 t, respectively.

### Demersal group (Fig. 2)

#### Penaeid prawns

The landings of penaeid prawns during 1982-83 increased significantly by about 30,000 t (35%) as compared to 1981-82, the landings during the two years being about 117,000 and 87,000 t respectively. Higher landings were recorded in all the maritime states except West Bengal, Tamil Nadu and Pondicherry. A substantial increase in the catch was particularly noticed in the states of Maharashtra (13,000 t), Kerala (10,500 t), Goa (3,400 t), Karnataka (2,400 t), Andhra Pradesh (2,000 t) and Gujarat (1,100 t). In Tamil Nadu, however, there was a reduction in the landings to the tune of about 2,500 t.

#### Croakers

The landings of croakers declined to 82,200 t during 1982-83 from 86,700 t recorded during 1981-82, showing a marginal decline of about 4,500 t (5%). This was due to a decrease in the landings in the states of Gujarat (9,900 t) and Tamil Nadu (3,400 t). The yield, however, showed an increase in the states of Orissa (1,900 t),

Andhra Pradesh (1,700 t), Goa (960 t) and Maharashtra (710 t).

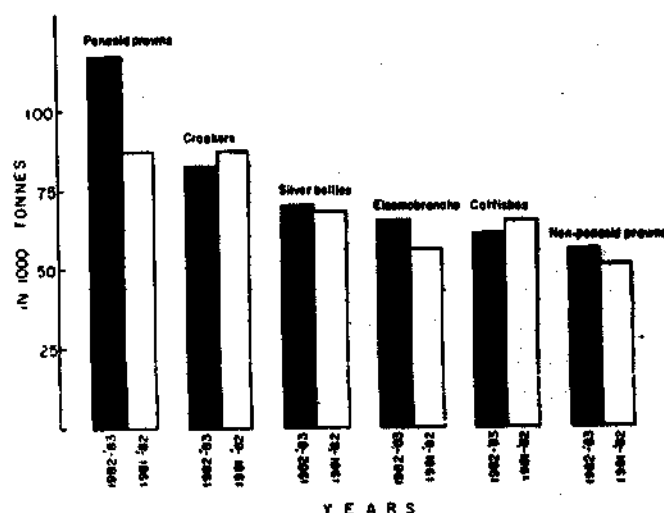


Fig. 2. Comparison of landings of major demersal groups between 1981-82 and 1982-83.

#### Silver bellies

An increase of about 2,100 t in the catch of silver bellies was observed during 1982-83 as compared to 1981-82, the yield for the two years being about 70,100 and 68,000 t respectively. While there was an increase in the catch in Kerala (6,000 t) and in Andamans (600 t) there was a decrease in the landings in Tamil Nadu (7,000 t) and Andhra Pradesh (500 t).

#### Elasmobranchs

The landings of elasmobranchs showed an increase of about 9,400 t (17%) during 1982-83 in comparison to 1981-82, the yield for the two years being about 65,100 and 55,700 t respectively. This was due to an increase in the catch in the states of Andhra Pradesh (3,600 t), Tamil Nadu (2,300 t) and Gujarat (1,000 t). In Orissa, however, the yield showed a decrease of about 1,700 t.

#### Cat fishes

A fall of about 4,100 t (6%) in the yield of cat fishes was noticed during 1982-83 as compared to 1981-82, the respective catch figures being about 60,800 and 64,900 t. A substantial reduction in the catch was noticed in the states of West Bengal (6,200 t) and Orissa (1,900 t). However, Karnataka (1,600 t), Gujarat (800 t), Kerala (600 t), Goa (600 t) and Maharashtra (500 t) showed an increase in the yield.

## Non-penaeid prawns

An increase of about 5,100 t in the landings of non-penaeid prawns was noticed during 1982-83 in comparison to 1981-82. This was due to enhanced landings in the states of Andhra Pradesh (3,300 t), Maharashtra (1,800 t) and Gujarat (550 t).

## Perches

A significant increase to the tune of about 14,000 t (40%) was observed in the landings of perches during 1982-83 as compared to 1981-82, the respective figures being about 50,000 and 36,000 t. The states that mainly contributed to this increase were Tamil Nadu (5,500 t), Maharashtra (4,100 t), Andhra Pradesh (2,200 t), Karnataka (1,800 t), Kerala (1,600 t) and Orissa (1,300 t). However, a decline of the order of 3,400 t was observed in Gujarat.

## Pomfrets

There was an over all decline of about 3,600 t in the landings of pomfrets during the period under review when compared to that of 1981-82, the respective figures being 48,900 and 52,500 t. While in the states of Gujarat and Maharashtra a decline in the landings of the order of 9,300 and 2,300 t respectively was observed, an increase

in the catch to the extent of about 3,000 t each was noted in the states of Kerala and Karnataka.

## All India mechanised and non-mechanised fish landings during 1982-83

Out of total landings of 14.15 lakh t, the contribution from mechanised fishing, comprising trawl net and purse seine was 41%. The same from mechanised propulsion, comprising dol net, drift/gillnet, hooks & lines and others was 22%, the contribution from indigenous sector being 37%.

The oil sardine landings during the year 1982-83 was to the tune of 2.02 lakh t of which 58% came from mechanised sector and the rest from non-mechanised sector. In the case of penaeid and non-penaeid prawns landings their shares in the mechanised sector were still higher, the respective percentages being 87 and 80. As much as 71% of the Bombay duck landings came from mechanised sector.

## Statewise mechanised and non-mechanised fish landings during 1982-83

Tables 6 (a-e) show the statewise total mechanised and non-mechanised landings and those of important species viz, oil sardine, mackerel, Bombay duck, scia-

Table 6. Estimated marine fish landings in India from mechanised and non-mechanised sectors during 1982-83 (in tonnes)

Name of fish	Mechanised						Total	Total (non-mechanised)	Grand total
	Mechanised fishing*		Power propulsion**						
	Trawl net	Purse seine	Drift/gill net	Dol net	Hooks & lines	Others			
Oil sardine	1,751	41,315	2	—	—	73,379	1,16,447	85,178	2,01,625
Mackerel	670	6,301	202	—	—	1,985	9,158	15,811	24,969
Bombay duck	1,326	—	17	62,158	—	328	63,829	26,593	90,422
Croakers	60,658	282	3,160	2,193	78	444	66,815	15,355	82,170
Perches	32,404	234	409	38	291	70	33,446	16,580	50,026
Pomfrets	4,493	1,427	18,686	7,258	—	1,360	33,224	15,657	48,881
Tunnies	1,381	971	3,890	—	6	174	6,422	12,993	19,415
Penaeid prawns	95,459	1,033	229	4,501	—	626	1,01,848	15,619	1,17,467
Non-penaeid prawns	4,417	—	13	40,165	—	214	44,809	11,285	56,094
Others	2,93,487	30,395	51,871	19,608	1,027	17,979	4,14,367	3,09,783	7,24,150
<b>TOTAL</b>	<b>4,96,046</b>	<b>81,958</b>	<b>78,479</b>	<b>1,35,921</b>	<b>1,402</b>	<b>96,559</b>	<b>8,90,365</b>	<b>5,24,854</b>	<b>14,15,219</b>
No. of operations of units	16,60,463	71,048	2,84,942	2,63,983	5,681	2,27,077		1,09,04,274	

\* Mechanisation used both in fishing operation and in propulsion

\*\* Mechanisation used only for propulsion

Table 6 (a). Statewise landings of marine fish by mechanised and non-mechanised fishing crafts in West Bengal & Orissa during 1982-83 (In tonnes)

Name of fish	WEST BENGAL				Grand Total	ORISSA				
	Mechanised Power propulsion		Total	Non-mechanised		Mecha-nised fishing Trawl net	Power propulsion		Non-mecha-nised	Grand Total
Drift/gill net	Others	Drift/gill net			Total		Others			
Oil sardine	—	—	—	—	—	—	—	—	—	—
Mackerel	—	—	—	2	2	2	—	2	972	974
Bombay duck	10	328	338	1,162	1,500	10	—	10	169	179
Croakers	46	364	410	775	1,185	2,663	21	2,684	1,319	4,003
Perches	—	—	—	51	51	—	—	—	1,662	1,662
Pomfrets	1,460	1,324	2,784	1,882	4,666	162	155	317	2,362	2,679
Tunnies	—	—	—	—	—	—	—	—	305	305
Penaeid prawns	—	20	20	268	288	1,606	—	1,606	425	2,031
Non-penaeid prawns	—	214	214	468	682	225	—	225	1	226
Others	2,122	5,467	7,589	6,481	14,070	6,752	253	7,005	14,426	21,431
<b>TOTAL</b>	<b>3,638</b>	<b>7,717</b>	<b>11,355</b>	<b>11,089</b>	<b>22,444</b>	<b>11,420</b>	<b>429</b>	<b>11,849</b>	<b>21,641</b>	<b>33,490</b>
No. of operations of units	25,837	15,288	41,125	1,48,419		70,234	11,947	82,181	7,86,391	

enids, perches, pomfrets, tunnies, penaeid and non-penaeid prawns and others during the financial year 1982-83. The salient features of fishing by mechanised units including power propulsion and non-mechanised boats in different maritime states of India are described below:

#### West Bengal

The landings from mechanised boats during 1982-'83 were 11,325 t constituting about 51% of the total landings in the state. (Table 6 (a)). Pomfrets formed the major catch with 25% of the total mechanised catch. In non-mechanised crafts, pomfrets, Bombay duck and sciaenids formed the major catches their individual share of the total non-mechanised catch being 17, 10, and 7 percent respectively.

#### Orissa

Thirtyfive per cent of the total landings in Orissa came from mechanised fishing crafts during 1982-83 (Table 6(a)). The species that landed in substantial quantities from mechanised crafts were sciaenids and penaeid prawns forming about 23 and 14 per cent respectively. In non-mechanised crafts, the landings of pomfrets, perches and sciaenids were in sizable quantities their share in the total catch being 10, 8 and 6 per cent respectively.

#### Andhra Pradesh

About 27% of the total catch in Andhra Pradesh came from mechanised boats almost the entire catch

being from trawlers (Table 6 (b)). Penaeid prawns, perches, sciaenids and non-penaeid prawns were landed in good quantities from trawlers, their share being 16, 13, 13 and 3% respectively of the total trawler catch. From non-mechanised crafts, sciaenids formed the major catch accounting for about 5% of the total catch, the other important species being mackerel (4%), non-penaeid prawns (4%), pomfrets (4%), perches (3%) and penaeid prawns (3%).

#### Tamil Nadu

In Tamil Nadu, mechanised boats landings during 1982-83 constituted about 51% of the total marine fish landings in the state (Table 6(b)). Trawlers contributed about 96% of the total landings from mechanised boats, the balance being from drift/gillnetters and hooks and lines. Sciaenids, penaeid prawns and perches formed the major catches from the mechanised boats, their individual share being 12, 9 and 4 per cent respectively of the total catch. In non-mechanised crafts perches, mackerel and sciaenids, were caught in substantial quantities, contributing about 7, 3 and 2 per cent respectively of the total catch from non-mechanised fishing crafts.

#### Pondicherry

The landings from mechanised boats in Pondicherry during 1982-83 formed about 35% of the total landings in the state. (Table 6 (b)). The share of trawler catch was about 88% of the total catch from mechanised

Table 6 (b). Statewise landings of marine fish from mechanised and non-mechanised fishing crafts in Andhra Pradesh, Tamil Nadu and Pondicherry during 1982-83 (in tonnes)

Name of fish	ANDHRA PRADESH					TAMIL NADU					PONDICHERRY				
	Mechanised fishing			Non-mechanised	Grand Total	Mechanised			Non-mechanised	Grand Total	Mechanised			Non-mechanised	Grand Total
	Purse seine	Trawl net	Total			Mechanised fishing	Power propulsion	Grand Total			Mechanised fishing	Power propulsion	Grand Total		
					Trawl net	Drift/gill net	Hooks & lines			Trawl net	Drift/gill net	Hooks & lines			
Oil sardine	—	—	—	—	—	—	—	—	1,094	1,094	—	—	—	—	—
Mackerel	—	205	205	3,977	4,182	59	39	—	98	3,646	3,744	5	—	5	733
Bombay duck	—	581	581	882	1,463	—	—	—	—	8	8	—	—	—	2
Croakers	—	4,311	4,311	4,319	8,630	14,028	—	—	14,028	2,594	16,622	407	—	407	559
Perches	—	4,442	4,442	3,187	7,629	5,060	22	284	5,366	8,322	13,688	1,227	1	1,228	260
Pomfrets	—	184	184	3,604	3,788	297	15	—	312	862	1,174	—	—	—	114
Tunnies	—	—	—	941	941	1	1,583	6	1,590	1,883	3,473	—	54	54	54
Penaeid prawns	—	5,598	5,598	3,108	8,706	11,415	—	—	11,415	1,634	13,049	230	—	230	35
Non-penaeid prawns	—	1,202	1,202	3,669	4,871	151	—	—	151	259	410	—	—	—	9
Others	6	17,784	17,790	68,004	85,794	84,273	2,504	541	87,318	95,373	1,82,691	2,158	487	3	2,648
<b>TOTAL</b>	<b>6</b>	<b>34,307</b>	<b>34,313</b>	<b>91,691</b>	<b>1,26,004</b>	<b>1,15,284</b>	<b>4,163</b>	<b>831</b>	<b>1,20,278</b>	<b>1,15,675</b>	<b>2,35,953</b>	<b>4,027</b>	<b>542</b>	<b>3</b>	<b>4,572</b>
No. of operations of units		1,10,879		2,599,163		4,97,137	18,058	3,150		38,78,326		33,285	2,636	120	2,60,833

Table 6 (c). Statewise landings of marine fish from mechanised and non-mechanised fishing crafts in Kerala and Karnataka during 1982-83 (in tonnes)

Name of fish	KERALA						KARNATAKA									
	Mechanised fishing			Power propulsion			Non-mechanised	Grand Total	Mechanised fishing			Power propulsion			Non-mechanised	Grand Total
	Trawl net	Purse seine	Total	Drift/Gill net	Others	Total			Purse seine	Trawl net	Total	Drift/Gill net	Others	Total		
Oil sardine	1,200	6,401	2	73,379	80,982	78,506	1,59,488	33,274	464	—	—	33,738	1,763	35,501		
Mackerel	10	1,949	154	1,982	4,095	5,175	9,270	4,300	325	5	—	4,630	674	5,304		
Bombay duck	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Croakers	2,550	2	32	80	2,664	1,187	3,851	239	1,257	1	—	1,497	1,279	2,776		
Perches	9,151	6	26	70	9,253	1,527	10,780	130	1,952	—	—	2,082	85	2,167		
Pomfrets	134	206	1,165	34	1,539	2,842	4,381	1,216	601	347	2	2,166	1,044	3,210		
Tunnies	1	43	1,327	174	1,545	4,760	6,305	928	—	273	—	1,201	1,042	2,243		
Penaeid prawns	26,507	290	—	606	27,403	4,885	32,288	736	6,676	—	—	7,412	320	7,732		
Non-penaeid prawns	—	—	—	—	—	33	33	—	—	—	—	—	—	—		
Others	31,960	661	7,867	11,267	51,755	70,292	1,22,047	25,634	28,598	1,297	1,173	56,702	12,333	69,035		
<b>TOTAL</b>	<b>71,513</b>	<b>9,558</b>	<b>10,573</b>	<b>87,592</b>	<b>1,79,236</b>	<b>1,69,207</b>	<b>3,48,443</b>	<b>66,457</b>	<b>39,873</b>	<b>1,923</b>	<b>1,175</b>	<b>1,09,428</b>	<b>18,540</b>	<b>1,27,968</b>		
No. of operations of units	3,63,556	8,123	76,779	2,08,497		22,79,293		55,326	2,01,104	8,746	3,202		2,41,544			

crafts. The landings of perches were the maximum accounting to about 30% of the total trawler catch.

#### Kerala

Mechanised boats of all categories, viz fully mechanised and power propelled recorded a catch of about 179,000 tonnes accounting for about 51% of the total marine fish catch in the state during 1982-83. (Table 6 (c)). While fully mechanised boats viz. trawlers and purse-seiners landed about 81,000 tonnes (45%), the balance came from power propelled boats viz drift/gillnetters and others. Oil sardine formed the major catch (81,000 t) from mechanised boats of all categories, its share being about 45% of the total catch from them. Penaeid prawns also were caught in good quantities (27,400 t- 15%) from the different types of mechanised boats.

In non-mechanised boats also oil sardine accounted for a maximum catch of about 79,000 t constituting about 46% of the total catch from them.

#### Karnataka

About 86% of the total marine fish catch in the state came from mechanised boats. (Table 6 (c)). Purse-seiners landed about 66,000 t forming about 61% of the total catch from mechanised units, the balance came from trawlers (36%), gillnetters (2%) and others (1%). Oil Sardine constituted the major catch (31%) from mechanised fishing crafts, the other important species being penaeid prawns (7%), mackerel (4%), pomfrets (2%) and perches (2%).

Oil sardine (10%), sciaenids (7%), pomfrets (6%) and tunnies (6%) were the important fishes from non-mechanised boats.

#### Goa

Out of total catch of about 36,000 t in Goa, mechanised boats contributed about 29,000 t forming about 81%, the bulk of the catch being from trawlers and purse-seiners (Table 6 (d)). While the trawlers accounted for about 77% of the total catch from mechanised units, purse-seiners landed about 20% and gillnetters and others about 3%. The important fin and shell fishes from mechanised boats were penaeid prawns, sciaenids, oil sardine and perches whose share being 20, 8, 6 and 5% respectively of the total catch from mechanised crafts. (Ref. page 6)

Oil sardine formed the major catch constituting about 3,600 t (54%) of the total catch from non-mechanised boats.

#### Maharashtra

In Maharashtra, the landings from mechanised boats were about 242,000 t accounting for 90% of the total landings in the state. (Table 6 (d)). Among the mechanised boats, the share of dol netters, trawlers and gillnetters was 48, 46 and 6% respectively of the total catch from mechanised boats. Bombay duck formed the major catch (47,600 t-20%) from mechanised fishing crafts. The other important species that landed from mechanised boats were non-penaeid prawns (40,000 t-17%), penaeid prawns (33,200 t-14%), croakers (14,500 t-6%) and pomfrets (14,000 t-6%). (Ref. page 6)

Table 6 (e). Landings of marine fish from mechanised and non-mechanised fishing crafts in Gujarat during 1982-83 (in tonnes)

GUJARAT							
Name of fish	Mechanised				Total	Non-Mechanised	Grand total
	Mechanised fishing Trawl net	Dol net	Power propulsion Drift/gillnet	Hooks & lines			
Bombay duck	464	14,792	—	—	15,256	23,040	38,296
Perches	1,992	—	343	—	2,335	419	2,754
Croakers	21,152	527	2,374	—	24,053	935	24,988
Pomfrets	1,269	131	10,357	—	11,757	1,036	12,793
Tunnies	22	—	264	—	286	4	290
Penaeid prawns	8,763	226	85	—	9,074	3,242	12,316
Non-penaeid prawns	2,360	681	13	—	3,054	2,010	5,064
Others	50,645	2,329	29,259	30	82,263	17,673	99,936
<b>TOTAL</b>	<b>86,667</b>	<b>18,686</b>	<b>42,695</b>	<b>30</b>	<b>1,48,078</b>	<b>48,359</b>	<b>1,96,437</b>
No. of operations of units	1,23,977	43,699	60,433	210		2,34,494	

Non-penaeid prawns (4,800 t-19%), croakers (2,500 t-10%), pomfrets (1,700 t-7%), penaeid prawns (1,600 t-6%), tunnies (1,400 t-5%) and Bombay duck (1,300 t-5%) were the important species caught in non-mechanised units.

### **Gujarat**

The landings from mechanised fishing crafts in Gujarat during 1982-83 were about 148,000 t constituting about 75% of the total marine fish landings in the state. (Table 6 (e)). Trawlers, gillnetters and dol netters contributed to 59, 29 and 12% respectively of the total landings from mechanised units. Sciaenids (24,000 t-16%), Bombay duck (15,300 t-10%), pomfrets (11,800 t-8%) and penaeid prawns (9,100 t-6%) were the important species from the mechanised boats.

In non-mechanised boats, Bombay duck (23,000 t-48%) formed the major catch.

### **Landings of mechanised boats at important centres.**

#### **Visakhapatnam outer harbour**

The total landings from trawlers during 1982-83 showed a decline of about 700 t (12%) as compared to 1981-82. (Table 7 (a)). The number of operations also likewise declined by about 900. The catch per unit effort (per operation) during 1982-83 and 1981-82 was 197 and 216 kg respectively. The decline in the total catch was mainly due to reduced landings of ribbon fishes, perches, croakers, crabs and carangids to the extent of about 530, 300, 190, 190 and 170 t respectively. The landings of lizard fishes, however, showed an increase of about 510 t.

#### **Kakinada fisheries harbour**

Both the catch and the number of operations of trawlers showed an increase during 1982-83 as compared to 1981-82 (Table 7 (a)). While the catch increased by about 4,300 t (36%), the number of operations increased by about 3,900. The catch per unit effort also increased to 384 kg from 311 kg recorded in 1981-82. The landings of non-penaeid prawns, penaeid prawns, anchovies, silver bellies, threadfin breams, Bombay duck and ribbon fishes showed an increase of about 650, 600, 510, 460, 460, 320 and 310 t respectively. Other sardines, however, accounted for lower landings by about 450 t.

#### **Pudumanaikuppam, Tamilnadu**

The total catch from trawlers and gill netters showed an increase of about 2,100 t (30%) during 1982-83 as

compared to 1981-82 (Table 7 (a)). While the landings from trawlers constituted about 98% of the total mechanised landings, gillnetters accounted for the rest. The catch per unit effort for trawlers was 263 kg and the same was 115 kg for gillnetter. While the total landings of cephalopods, threadfin breams, lizard fishes, carangids, ribbon fishes and penaeid prawns increased by about 390, 380, 160, 160, 150 and 120 t. silver bellies, croakers and elasmobranchs recorded a reduction in the landings by about 350, 240 and 220 t respectively.

#### **Cuddalore fisheries harbour**

An increase of about 2,800 t in the total catch from trawlers and gillnetters was noticed during 1982-83 in comparison to 1981-82. (Table 7 (a)). The trawlers landed about 57% of the total mechanised catch with 253 kg as the catch per unit effort, the corresponding figures for gillnetters being 43% and 412 kg. The landings from trawlers and gill netters showed an overall increase due to enhanced landings of seer fishes, silver bellies, elasmobranchs, tunnies, threadfin breams, crabs and penaeid prawns by about 660, 490, 410, 360, 220, 170 and 120 t respectively.

#### **Nagapattinam**

The landings of trawlers during 1982-83 increased by about 2,100 t (44%) as also the number of operations by about 2,900 (Table 7 (b)). The catch per unit effort likewise increased to 323 kg from 259 kg recorded in 1981-82. The fishes that mainly contributed to the higher catches were croakers, other clupeoids, threadfin breams, silver bellies and penaeid prawns whose landings increased by about 290, 260, 240, 230 and 150 t respectively.

#### **Mandapam**

Trawlers recorded an increase of about 1,700 t (35%) in their catch during 1982-83 as compared to 1981-82. (Table 7 (b)). There was also an increase in the number of operations by about 2,500. The catch per unit effort also increased to 140 kg from 110 kg recorded in 1981-82. The increase in the total catch of trawlers was mainly brought about by the significantly higher landings of silver bellies, the increase being about 1,000 t.

#### **Rameswaram**

The total catch from trawlers and gillnetters increased only marginally to about 22,800 t in 1982-83 from about 22,600 t recorded in 1981-82, almost the entire catch



Table 7(a). Composition of marine fish landings (in tonnes) from mechanised boats at major fish landing centres in the east coast of India

Sl.No.	Name of fish	Visakhapatnam outer harbour		Kakinada fisheries harbour		Pudumanikuppam		Cuddalore fisheries harbour					
		1982-83 Trawl net	1981-82	1982-83 Trawl net	1981-82	1982-83 Trawl net	Gill net	Total	1981-82 Total	1982-83 Trawl net	Gill net	Total	1981-82 Total
1.	Elasmobranchs												
	a. Sharks	15	7	38	52	31	26	57	156	—	482	482	96
	b. Skates	35	37	80	34	12	—	12	25	3	4	7	—
	c. Rays	79	65	192	296	94	10	104	216	—	24	24	11
2.	Eels	31	16	196	95	14	1	15	23	—	—	—	—
3.	Cat fishes	186	157	245	250	5	3	8	8	—	—	—	—
4.	Clupeoids												
	a. Wolf herring ( <i>Chirocentrus</i> )	6	5	1	—	2	—	2	2	—	—	—	—
	b. Oil sardine	—	—	—	—	—	—	—	—	—	—	—	—
	c. Other sardines	2	10	95	543	3	—	3	—	—	—	—	—
	d. Hilsa shad ( <i>Hilsa ilisha</i> )	—	—	—	—	—	—	—	—	—	—	—	—
	e. Other shads (Other <i>Hilsa</i> )	—	—	1	—	—	—	—	—	—	—	—	—
	f. Anchovies												
	<i>Coilia</i>	—	—	7	—	—	—	—	—	—	—	—	—
	<i>Setipinna</i>	—	—	—	—	—	—	—	—	—	—	—	—
	<i>Stolephorus</i> ( <i>Anchoviella</i> )	189	133	514	187	13	—	13	82	22	—	22	40
	<i>Thryssa</i> ( <i>Thryssocles</i> )	60	68	261	89	23	—	23	40	—	—	—	8
	g. Other clupeoids	8	39	386	263	15	5	20	3	—	37	37	26
5.	Bombay duck ( <i>Harpodon nehereus</i> )	8	—	357	34	—	—	—	—	—	—	—	—
6.	Lizard fishes ( <i>Saurida &amp; Saurus</i> )	966	456	238	195	729	—	729	566	225	—	225	140
7.	Half beaks & full beaks ( <i>Hemiramphus &amp; Belone</i> )	—	—	—	—	—	—	—	46	—	—	—	—
8.	Flying fishes	—	—	—	—	—	—	—	—	—	—	—	—
9.	Perches												
	a. Rock cods	2	4	—	—	—	—	—	—	—	6	6	—
	b. Snappers	1	1	7	3	—	—	—	—	—	—	—	—
	c. Pig-face breams	—	—	—	—	7	—	7	4	—	—	—	—
	d. Threadfin breams	532	783	1,087	626	1,524	—	1,524	1,148	328	—	328	106
	e. Other perches	457	503	1,643	1,437	728	—	728	404	57	—	57	30
10.	Goatfishes (Red mullets)	216	104	205	48	91	—	91	35	40	—	40	28
11.	Threadfins (Polynemids)	28	35	24	18	3	—	3	5	—	—	—	—
12.	Croakers (Sciaenids)	349	534	583	583	224	—	224	461	142	—	142	70
13.	Ribbon fishes	297	825	861	552	303	—	303	152	—	—	—	—
14.	Carangids												
	a. Horse mackerel	—	—	—	—	—	—	—	—	—	—	—	—
	b. Scads	68	268	2,696	2,546	203	—	203	13	—	—	—	—
	c. Leather-jackets ( <i>Chorinemus</i> )	—	—	—	—	—	1	1	3	—	9	9	11
	d. Other carangids	106	79	109	48	26	—	27	56	—	20	20	17
15.	Silver bellies ( <i>Leiognathus &amp; Gazza</i> )	368	348	947	485	1,336	—	1,336	1,690	826	—	826	334
16.	Big-jawed jumper ( <i>Lactarius</i> )	14	55	43	17	1	—	1	1	—	—	—	—
17.	Pomfrets												
	a. Black pomfret	8	7	11	1	4	1	5	3	—	—	—	—
	b. Silver pomfret	5	9	8	15	—	—	—	1	—	—	—	—
	c. Chinese pomfret	—	—	—	—	—	—	—	—	—	—	—	1
18.	Mackerels												
	a. Indian mackerel	13	28	112	291	8	—	8	7	—	—	—	—
	b. Other mackerels	—	—	—	—	—	—	—	—	—	—	—	—
19.	Seer fishes												
	a. <i>S. commerson</i>	—	—	—	—	2	38	40	75	—	701	701	44
	b. <i>S. guttatus</i>	2	1	—	—	1	18	19	30	—	—	—	—
	c. <i>S. lteolatus</i>	—	—	—	—	—	12	12	12	—	—	—	—
	d. <i>Acanthocybium</i> Sp.	—	—	—	—	—	—	—	—	—	—	—	—

Contd.

20. Tunnies												
a. <i>E. affinis</i>	—	—	—	—	1	8	9	19	—	408	408	51
b. <i>Auxis</i> spp.	—	—	—	—	—	1	1	15	—	—	—	—
c. <i>K. pelamis</i>	—	—	—	—	—	—	—	—	—	—	—	—
d. <i>T. tongol</i>	—	—	—	—	—	—	—	—	—	—	—	—
e. Other tunnies	—	—	—	—	—	—	—	2	—	—	—	—
21. Bill fishes	—	—	—	—	—	26	26	39	—	64	64	7
22. Barracudas ( <i>Sphyraena</i> )	14	18	74	44	65	—	65	11	—	23	23	23
23. Mulletts ( <i>Mugil</i> )	—	—	—	—	—	—	—	—	—	—	—	—
24. Unicorn Cod ( <i>Bregmaceros</i> )	—	—	—	—	—	—	—	—	—	—	—	—
25. Flatfishes												
a. Halibut ( <i>Psettodes erumei</i> )	12	7	2	—	4	—	4	—	—	—	—	—
b. Flounders	—	—	13	—	4	—	4	—	—	—	—	—
c. Soles	47	71	247	80	32	—	32	58	20	—	20	13
26. Crustaceans												
a. Penaeid prawns	673	663	2,671	2,067	1,181	—	1,181	1,062	234	—	234	114
b. Non penaeid prawns	5	1	1,029	381	—	—	—	—	—	—	—	—
c. Lobsters	3	—	—	—	30	—	30	5	—	—	—	—
d. Crabs	133	321	417	150	232	—	232	195	197	—	197	28
e. Stomatopods	9	10	375	184	28	—	28	31	—	—	—	—
27. Cephalopods	229	201	114	82	535	—	535	143	54	—	54	33
28. Miscellaneous	44	42	321	215	1,577	2	1,579	272	188	3	191	92
<b>TOTAL</b>	<b>5,220</b>	<b>5,911</b>	<b>16,210</b>	<b>11,911</b>	<b>9,091</b>	<b>153</b>	<b>9,244</b>	<b>7,119</b>	<b>2,336</b>	<b>1,781</b>	<b>4,117</b>	<b>1,323</b>
No. of operations of fishing units	26,492	27,402	42,228	38,300	34,567	1,331			9,232	4,327		

Table 7(b). Composition of marine fish landings from mechanised boats at major fish landing centres along the east coast of India (Fig. in tonnes)

Sl.No.	Name of fish	Nagapattinam		Mandapam		Rameswaram		Tuticorin fisheries harbour			
		1982-83	1981-82	1982-83	1981-82	1982-83	1981-82	1982-83		1981-82	
		Trawl net	Trawl net	Trawl net	Gill net	Total	Total	Trawl net	Gill net	Total	Total
1. Elasmobranchs											
a. Sharks		4	25		1		8	381		381	472
b. Skates		26									
c. Rays		295	198	236	243	2,330	2,330	3,319	512	512	548
2. Eels		37	26		3						2
3. Catfishes		175	98	48	124	202	202	200	40	40	71
4. Clupeoids											
a. Wolf herring ( <i>Chirocentrus</i> )			19	2			1	16	100	1	101
b. Oil sardine			2					4			
c. Other sardines				31	26	52	52	15	1	16	94
d. Hilsa shad ( <i>Hilsa ilisha</i> )				6		5	5	100			
e. Other shads (Other <i>Hilsa</i> )				5	8	6	6	56	7		7
f. Anchovies											
<i>Colia</i>		191	245			9	9				1
<i>Setipinna</i>			10								
<i>Stolephorus</i>		293	195					89		89	180
( <i>Anchoviella</i> )											
<i>Thrissina</i>			7		8						150
<i>Thryssa</i>		225	154	27	24	15	15	1,597		1,597	1,935
( <i>Thrissocles</i> )											
g. Other clupeids		545	288	117	77	351	351	328	820	820	370
5. Bombay duck ( <i>Harpodon nehereus</i> )											
6. Lizard fishes ( <i>Saurida &amp; Saurus</i> )		196	155	10	7	156	156	185	50	50	136
7. Half Beaks & Full Beaks ( <i>Hemirhamphus &amp; Belone</i> )											
8. Flying fishes											
9. Perches											
a. Rock cods		1		9	2	2		145	1	146	58
b. Snappers								11		11	36

Contd.

	c. Pig-face breams			20	5				9		9	36	
	d. Threadfin breams	525	290	2	2			446		446	103		
	e. Other perches	280	155	94	84	101	101	53	13		13	30	
10.	Goatfishes (Red mullets)	32	9	73	48	344	344	468	7		7	7	
11.	Threadfins (Polynemids)				1				1		1		
12.	Croakers (Sciaenids)	866	581	319	269	2,754	2,754	2,596	753		753	881	
13.	Ribbon fishes	235	115	7	16	3	3	1	35		35	97	
14.	Carangids												
	a. Horse Mackerel												
	b. Scads												
	c. Leather-jackets ( <i>Chorinemus</i> )			1	6				5		5		
	d. Other carangids	233	149	40	30	103	103	43	104		104	86	
15.	Silver bellies ( <i>Leiognathus &amp; Gazza</i> )	967	733	3,659	2,626	12,373	12,373	11,162	2,144		2,144	1,607	
16.	Big-jawed jumper ( <i>Lactarius</i> )	46	33	1	1				61	2	63	64	
17.	Pomfrets		1										
	a. Black pomfret	1	5	3	1								
	b. Silver pomfret	37	27	13	20	85	85	261	2		2	15	
	c. Chinese pomfret							1					
18.	Mackerels												
	a. Indian mackerel	2						4		2	2	5	
	b. Other mackerels												
19.	Seer fishes												
	a. <i>S. commerson</i>							3	1	2	3	9	
	b. <i>S. guttatus</i>							2				21	
	c. <i>S. lineolatus</i>												
	d. <i>Acanthocybium</i> Sp.												
20.	Tunnies												
	a. <i>E. affinis</i>											2	
	b. <i>Auxis</i> spp.												
	c. <i>K. pelamis</i>												
	d. <i>T. tonggol</i>												
	e. Other tunnies												
21.	Bill fishes												
22.	Barracudas ( <i>Sphyraena</i> )	95	26						61	1	62	45	
23.	Mulletts ( <i>Mugil</i> )	2	5									2	
24.	Unicorn cod ( <i>Bregmaceros</i> )												
25.	Flatfishes												
	a. Halibut	99	62			15	15	1					
	b. Flounders												
	c. Soles	193	123	42	58	160	160	186	44		44	124	
26.	Crustaceans												
	a. Penaeid prawns	748	600	681	729	1,905	1,905	2,092	730		730	3,692	
	b. Non-penaeid prawns	65	84										
	c. Lobsters	20	5			1	1		11		11		
	d. Crabs	202	144	198	205	696	696	679	16		16	47	
	e. Stomatopods	16	16	9	23			13	12		12		
27.	Cephalopods	77	29	79	30	202	202	170	10		10	5	
28.	Miscellaneous	253	225	640	16	943	943	628	1,209	1	1,210	3,492	
<b>TOTAL</b>		<b>6,982</b>	<b>4,839</b>	<b>6,363</b>	<b>4,700</b>	<b>22,813</b>	<b>1</b>	<b>22,814</b>	<b>22,579</b>	<b>9,441</b>	<b>11</b>	<b>9,452</b>	<b>14,544</b>
No. of operations of fishing units		21,614	18,698	45,392	42,903	94,627	4	1,07,211	24,702	62			

Table 7(c). Composition of marine fish landings from mechanised boats at major fish landing centres along the west coast of India (Fig in tonnes)

Sl.No.	Name of fish	Sakthikulangara			Cochin fisheries harbour			Total	Total		
		1982-83		1981-82	1982-83		1981-82				
		Trawl net	Gill net	Total	Total	Trawl net	D.Gill net	Purse seine	Hooks & lines	Total	Total
1.	Elasmobranchs										
	a. Sharks	13	602	615	367	9	454	—	—	463	412
	b. Skates	1	8	9	24	1	2	—	—	3	10
	c. Rays	451	16	467	335	47	39	—	—	86	89
2.	Eels	11	—	11	2	—	3	—	—	3	1
3.	Cat fishes	2,588	270	2,858	3,624	280	361	87	1	729	654
4.	Clupeoids										
	a. Wolf herring ( <i>Chirocentrus</i> )	—	—	—	2	4	1	—	—	5	3
	b. Oil sardine	762	2	764	30	262	—	6,285	—	6,547	14,358
	c. Other sardines	—	—	—	—	—	—	152	—	152	409
	d. Hilsa shad ( <i>Hilsa ilisha</i> )	—	—	—	—	1	—	—	—	1	—
	e. Other shads ( <i>Other Hilsa</i> )	—	—	—	—	—	—	—	—	—	—
	f. Anchovies										
	<i>Coilla</i>										
	<i>Setipinna</i>										
	<i>Stolephorus (Anchoviella)</i>	680	—	680	501	248	—	259	1	508	171
	<i>Thryssina</i>										
	<i>Thryssa (Thryssocles)</i>	—	—	—	—	22	—	—	—	22	42
	g. Other clupeoids	—	—	—	—	4	—	31	—	35	24
5.	Bombay duck ( <i>Harpadon nehereus</i> )	—	—	—	—	—	—	—	—	—	—
6.	Lizard fishes ( <i>Saurida &amp; Saurus</i> )	4,732	—	4,732	4,890	343	—	—	—	343	332
7.	Half beaks & full beaks ( <i>Hemiramphus &amp; Belone</i> )	—	3	3	2	—	—	—	—	—	3
8.	Flying fishes	—	—	—	—	—	4	—	—	4	—
9.	Perches										
	a. Rock cods	—	—	—	70	—	9	—	10	19	38
	b. Snappers	1	2	3	2	—	—	—	4	4	40
	c. Pig-face breams	—	—	—	—	—	—	—	—	—	—
	d. Threadfin breams	4,832	—	4,832	3,701	3,268	—	—	—	3,268	2,602
	e. Other perches	369	—	369	460	157	4	6	—	167	216
10.	Goatfishes (Red mullets)	—	—	—	3	2	—	—	—	2	—
11.	Threadfins (Polynemids)	—	—	—	—	—	4	3	—	7	—
12.	Croakers (Sciaenids)	1,325	8	1,333	1,243	394	—	2	—	396	232
13.	Ribbon fishes	54	23	77	38	77	1	2	—	80	16
14.	Carangids										
	a. Horse Mackerel	—	—	—	3	—	—	—	—	—	22
	b. Scads	22	3	25	73	—	—	1	—	1	2
	c. Leather-jackets ( <i>Chorinemus</i> )	—	19	19	2	—	93	10	—	103	21
	d. Other carangids	16	69	85	71	54	86	79	—	219	497
15.	Silver bellies ( <i>Leiognathus &amp; Gazza</i> )	702	—	702	500	72	—	4	—	76	41
16.	Big-jawed jumper ( <i>Lactarius</i> )	28	—	28	124	46	—	—	—	46	26
17.	Pomfrets										
	a. Black pomfret	—	64	64	24	—	98	204	—	302	156
	b. Silver pomfret	—	3	3	2	14	18	—	—	32	13
	c. Chinese pomfret	—	—	—	—	1	7	—	—	8	9
18.	Mackerels										
	a. Indian mackerel	6	70	76	25	2	46	1,901	—	1,949	1,889
	b. Other mackerels	—	—	—	—	—	—	—	—	—	—
19.	Seer fishes										
	a. <i>S. commerson</i>	—	38	38	23	—	280	—	—	280	227
	b. <i>S. guttatus</i>	—	167	167	66	—	46	1	—	47	13
	c. <i>S. lineolatus</i>	—	—	—	—	—	—	—	—	—	—
	d. <i>Acanthocyblum</i> Sp.	—	—	—	—	—	—	—	—	—	—
20.	Tunnies										
	a. <i>E. affinis</i>	—	329	329	250	—	401	43	—	444	613
	b. <i>Auxis</i> spp.	—	1	1	20	—	294	—	—	294	416
	c. <i>K. pelamis</i>	—	—	—	—	—	—	—	—	—	1
	d. <i>T. tonggol</i>	—	—	—	—	—	7	—	—	7	19
	e. Other tunnies	—	—	—	17	—	5	—	—	5	116

Contd.

21. Bill fishes	—	17	17	15	—	12	—	—	12	35
22. Barracudas ( <i>Sphyrnena</i> )	37	—	37	42	30	9	1	—	40	85
23. Mulletts ( <i>Mugil</i> )	—	—	—	—	—	—	22	—	22	67
24. Unicorn cod ( <i>Bregmaceros</i> )	—	—	—	—	—	—	—	—	—	—
25. Flatfishes										
a. Halibut ( <i>Psettodes erumei</i> )	28	—	28	61	—	—	—	—	—	12
b. Flounders	—	—	—	—	—	—	—	—	—	—
c. Soles	1,978	—	1,978	1,970	339	—	—	—	339	284
26. Crustaceans										
a. Penaeid prawns	9,425	—	9,425	9,631	2,957	—	289	—	3,246	2,521
b. Non penaeid prawns	—	—	—	—	—	—	—	—	—	—
c. Lobsters	11	—	11	3	—	—	—	—	—	—
d. Crabs	33	—	33	65	73	—	—	—	73	78
e. Stomatopods	2,068	—	2,068	1,859	326	—	—	—	326	172
27. Cephalopods	1,289	—	1,289	842	140	—	—	—	140	104
28. Miscellaneous	2,443	13	2,456	1,880	111	3	—	—	114	185
<b>TOTAL</b>	<b>33,905</b>	<b>1,727</b>	<b>35,632</b>	<b>32,862</b>	<b>9,284</b>	<b>2,287</b>	<b>9,382</b>	<b>16</b>	<b>20,969</b>	<b>27,276</b>
No. of operations of Fishing units	1,28,847	14,321		1,38,279	48,545	19,437	8,123	54		

Table 7 (d): Composition of marine fish landing from mechanised boats, at major fish landing centres along the west coast of India (Fig. in tonnes)

Sl. No.	Name of fish	Sassoon docks				Total	1981-82 Total	New Trawl net	Ferry Wharf		1981-82 Total
		Trawl net	Dol net	1982-83 Gill net	Hooks & lines				1982-83 Dol net	Total	
1. Elasmobranchs											
a. Sharks		1,020	3	212	70	1,305	1,166	1,120	—	1,120	543
b. Skates		306	—	38	—	344	96	1,508	—	1,508	127
c. Rays		444	—	72	4	520	545	1,854	—	1,854	388
2. Eels		154	—	35	132	321	204	3,466	—	3,466	2,180
3. Cat fishes		3,231	7	212	134	3,584	2,605	1,784	2	1,786	826
4. Clupeoids											
a. Wolf herring ( <i>chirocentrus</i> )		322	7	95	—	424	236	505	—	505	93
b. Oil sardine		87	—	—	—	87	96	—	—	—	27
c. Other sardines		49	1	—	—	50	5	—	—	—	5
d. Hilsa shad ( <i>Hilsa ilisha</i> )		—	—	—	—	—	—	—	—	—	—
e. Other shads ( <i>Other hilsa</i> )		151	—	149	—	300	124	—	—	—	1
f. Anchovies											
<i>Collia</i>		757	68	—	—	825	1230	394	2	396	825
<i>Setipinna</i>		—	—	—	—	—	—	—	—	—	—
<i>Stolephorus (Anchoviella)</i>		—	—	—	—	—	—	—	15	15	—
<i>Thryssa</i>		—	—	—	—	—	—	—	—	—	—
<i>Thryssa (Thryssocles)</i>		386	17	1	—	404	85	122	—	122	81
g. Other clupeoids		236	36	47	—	319	138	570	2	572	159
5. Bombay duck ( <i>Harpadon nehereus</i> )		3	220	—	—	223	458	200	5	205	182
6. Lizard fishes ( <i>Saurida &amp; Saurus</i> )		616	—	—	—	616	414	279	—	279	87
7. Half beaks & full beaks ( <i>Hemiramphus &amp; Belone</i> )		—	—	—	—	—	—	—	—	—	1
8. Flying fishes		—	—	—	—	—	—	—	—	—	—
9. Perches											
a. Rock cods		54	—	—	—	54	41	131	—	131	15
b. Snappers		—	—	—	—	—	6	5	—	5	50
c. Pig-face breams		—	—	—	—	—	—	—	—	—	—
d. Threadfin breams		3,139	1	—	—	3,140	1,623	1,061	—	1,061	424
e. Other perches		378	—	3	2	383	29	1,006	—	1,006	38
10. Goatfishes (Red mullets)		744	—	—	—	744	113	644	—	644	171
11. Threadfins (Polynemids)		335	—	28	7	370	106	45	—	45	157
12. Croakers (Sciaenids)		2,576	30	167	50	2,823	4,118	4,221	—	4,221	3,480
13. Ribbon fishes		2,074	71	—	—	2,145	1,667	1,622	—	1,622	1,698
14. Carangids											
a. Horse Mackerel		9	—	34	—	43	23	—	—	—	23
b. Scads		—	—	—	—	—	—	—	—	—	—
c. Leather-jackets ( <i>Chorinemus</i> )		9	—	30	—	39	36	129	—	129	88
d. Other carangids		361	3	7	—	371	63	895	—	895	39

Contd.

15. Silver bellies ( <i>Letognathus &amp; Gazza</i> )	9	—	—	—	9	—	—	—	—	2
16. Big-jawed jumper ( <i>Lactarius</i> )	522	—	2	—	524	34	711	—	711	—
17. Pomfrets										
a. Black pomfret	44	3	244	—	291	249	131	—	131	—
b. Silver pomfret	718	48	215	—	981	284	220	—	220	117
c. Chinese pomfret	1	12	—	—	13	5	—	—	—	—
18. Mackerels										
a. Indian mackerel	13	—	4	—	17	—	51	—	51	—
b. Other mackerels	—	—	—	—	—	—	—	—	—	—
19. Seer fishes	—	—	—	—	—	186	529	—	529	10
a. <i>S. commerson</i>	130	—	173	—	303	82	—	—	—	—
b. <i>S. guttatus</i>	84	—	48	—	132	12	—	—	—	128
c. <i>S. lineolatus</i>	—	—	—	—	—	—	—	—	—	—
d. <i>Acanthocyblum</i> sp.	—	—	—	—	—	—	—	—	—	—
20. Tunnies										
a. <i>E. affinis</i>	—	—	—	—	—	94	—	—	—	—
b. <i>Auxis</i> spp.	—	—	—	—	—	7	—	—	—	—
c. <i>K. pelamis</i>	—	—	—	—	—	—	—	—	—	—
d. <i>T. tonggol</i>	—	—	—	—	—	519	—	—	—	—
e. Other tunnies	95	—	314	—	409	—	1,257	—	1,257	419
21. Bill fishes	—	—	113	—	113	113	—	—	—	1
22. Barracudas ( <i>Sphyræna</i> )	79	—	—	—	79	—	—	—	—	—
23. Mulletts ( <i>Mugil</i> )	—	—	—	—	—	3	—	—	—	—
24. Unicorn cod ( <i>Bregmaceros</i> )	—	—	—	—	—	—	—	—	—	—
25. Flatfishes										
a. Halibut ( <i>Psettoodes erumet</i> )	122	—	—	—	122	1	477	—	477	9
b. Flounders	—	—	—	—	—	33	—	—	—	32
c. Soles	416	—	—	—	416	376	184	—	184	517
26. Crustaceans										
a. Penaeid prawns	12,829	168	—	—	12,997	6,968	8,886	1	8,887	5,848
b. Non penaeid prawns	185	1,144	—	—	1,329	1,496	9	35	44	494
c. Lobsters	295	1	4	—	300	97	211	—	211	232
d. Crabs	83	—	—	—	83	—	—	—	—	112
e. Stomatopods	—	—	—	—	—	1	164	1	165	—
27. Cephalopods	1,989	2	—	—	1,991	1,278	2,473	—	2,473	685
28. Miscellaneous	634	69	48	6	757	166	674	14	688	355

<b>TOTAL</b>	<b>35,689</b>	<b>1,911</b>	<b>2,295</b>	<b>405</b>	<b>40,300</b>	<b>27,260</b>	<b>37,538</b>	<b>77</b>	<b>37,615</b>	<b>20,669</b>
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No. of operations of Fishing units	<b>23,305</b>	<b>13,112</b>	<b>3,502</b>	<b>1,705</b>			<b>22,047</b>	<b>553</b>		
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being from trawlers (Table 7 (b)). The catch per unit effort from trawlers was 241 kg. While the catch of silver bellies and croakers increased significantly by about 1,200 and 160 t respectively in trawl catches, the landings of elasmobranchs showed a sharp decline of about 1,000 t. Penaeid prawns, pomfrets and goatfishes also recorded lower landings, the decrease being about 190, 180 and 120 t respectively.

#### **Tuticorin fisheries harbour**

A decline in the total catch from trawlers and gillnetters by about 5,100 t (35%) was noticed during 1982-83 as compared to 1981-82 (Table 7 (b)). The number of operations of both the mechanised units also declined by about 8,600. Almost the entire catch came from trawlers, the catch per unit effort from them being 382 kg. A sharp decrease of about 3,000 t in the catch of penaeid prawns from trawlers was seen during 1982-83 in comparison to 1981-82. The landings of anchovies also declined by about 580 tonnes. An increase of about 540, 450 and 340 t respectively in the catches of silver bellies, other clupeoids and threadfin breams was, however, noticed.

#### **Sakthikulangara, Kerala**

Both the total catch from trawlers and gillnetters and the number of operations showed an increase of about 2,800 t (8%) and about 4,900 respectively (Table 7 (c)). The catch from trawlers formed about 95% of the total mechanised landings, the catch per unit effort in trawlers and gillnetters being 263 and 121 kg respectively. While the landings of threadfin breams, oil sardines, cephalopods, elasmobranchs, stomatopods and silver bellies from trawlers and gill netters increased by about 1,130, 730, 450, 370, 210 and 200 t respectively, the catch of cat fishes and penaeid prawns showed a decline of about 770 and 210 t respectively.

#### **Cochin fisheries harbour**

The combined catch of trawlers, gillnetters, purse-seiners and in hooks and lines during 1982-83 declined to about 21,000 t from about 27,000 t recorded in 1981-82, the reduction being of the order of 6,000 t (Table 7 (c)). The share of various types of gears viz. trawls, gillnets and purse seines was 44%, 11% and 45% respectively of the total catch during 1982-83. The combined total

number of operations, however, showed an increase of about 3,600. The catch per unit effort for trawlers, gillnetters, purse-seiners and hooks & lines was 191, 118, 1153 and 296 kg respectively. The reduction in the total landings was mainly due to a fall in the catches of oil sardine to the tune of about 7,800 t., particularly in purse-seines during 1982-83 as compared to 1981-82. The catch of penaeid prawns and threadfin breams, however, showed an increase of about 720 and 670 t respectively.

#### **Sassoon docks, Bombay**

During 1982-83, the total catch obtained from trawlers, dol netters, gillnetters and in hooks & lines was about 40,000 tonnes in comparison to 27,000 t recorded during 1981-82, showing an increase of about 13,000 t (48%) (Table 7 (d)). While 88% of the total landings were by trawlers, the remaining were shared by gillnetters (6%), dol netters (5%) and hooks and lines (1%), the catch per unit effort for the four categories of gears being 1531, 146, 655 and 238 kg respectively. The enhanced catch of penaeid prawns (6,000 t), threadfin breams (1,520 t), cat fishes (980 t), cephalopods (710 t), silver pomfrets (700 t), goat fishes (630 t), big jawed jumper (490 t) and ribbon fishes (480 t) contributed to the higher landings in Sassoon docks during 1982-83 as compared to 1981-82. The landings of croakers, however, showed a decline of about 1,300 t.

#### **New ferry wharf, Bombay**

During 1982-83, trawlers and dol netters operated, the catch from them being about 37,600 t showing a significant increase of about 16,900 t (82%) as compared to 1981-82 when about 20,700 t were landed. (Table 7(d)). Almost the entire catch during 1982-83 was from trawlers (37,500 t). The number of operations of all the gears put together during the year was 22,600 as compared to 19,800 recorded last year showing an increase of about 2,800. While the catch per unit effort for trawlers was 1,703 kg, the same for dol netters was 139 kg. The higher catch during 1982-83 was due to increased landings of elasmobranchs (3,400 t), penaeid prawns (3,000 t), cephalopods (1,800 t), perches (1,700 t) eels (1,300 t), cat fishes (1,000 t), carangids (900 t), tunnies (800 t) and croakers (700 t). The landings of non-penaeid prawns and anchovies, however, showed a decline of about 500 and 400 t. respectively.