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## TRENDS IN TOTAL MARINE FISH PRODUCTION IN INDIA—1980†

The estimates of total marine fish production in India during 1980 were arrived at 12,49,837 tonnes as compared to 13,88,380 tonnes during 1979, showing a decline of about 10%. Excepting Andhra Pradesh, Gujarat and Andamans, all the maritime states of India recorded lower landings. The statewise total marine fish landings in India during the years 1979 and 1980 are shown in Table 1.

Table 1. Statewise total marine fish landings in India during the years 1979 and 1980 (in tonnes)

Sl. No.	State	1980	1979
1.	West Bengal (Contai coast)	6,097	10,744
2.	Orissa	39,375	51,808
3.	Andhra Pradesh	116,013	91,426
4.	Tamil Nadu	217,394	235,008
5.	Pondicherry*	9,390	10,068
6.	Kerala	279,543	330,509
7.	Karnataka	115,322	126,384
8.	Goa**	24,490	25,388
9.	Maharashtra	231,763	293,326
10.	Gujarat	203,494	191,312
11.	Andamans	1,803	1,721
12.	Lakshadweep	2,909	3,846
13.	Private trawlers +	2,244	16,840
		12,49,837	13,88,380

\* Excluding Mahe and Yenam which are included in Kerala and Andhra respectively.

\*\*Excluding Daman and Diu which are included in Gujarat.

+Partial coverage of larger trawlers.

### Pelagic and demersal group of fishes

The specieswise composition of total marine fish landings in India is shown in Table 2. The pelagic group of species comprises of *Chirocentrus*, oil sardine, other sardines, *Hilsa ilisha*, other *Hilsa*, *Stolephorus*, *Thrisocles*, other clupeids, *Harpodon nehereus*, *Hemiramphus* & *Belone*, flying fish, ribbon fish, carangids, mackerel, seer fish, tunnies, *Sphyraena*, *Mugil* and *Bregmaceros*. The elasmobranchs, eels, cat fishes, lizard fishes, perches, red mullets, polynemids, scia-

enids, silver bellies, *Lactarius*, pomfrets, soles, prawns lobsters and cephalopods form the demersal group. The statewise break-up of pelagic and demersal group of fishes is shown in Table 3 and Fig. 1.

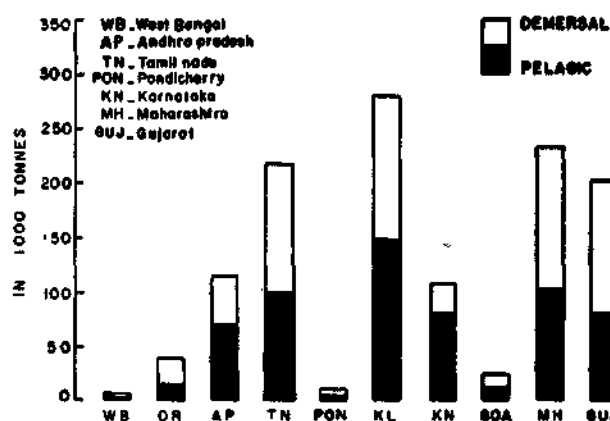


Fig. 1. Distribution pattern of pelagic and demersal group of fishes in different maritime States of India.

From Table 3, it is seen that Kerala accounted for the highest catch of pelagic fishes during 1980, followed by Maharashtra, Tamil Nadu, Karnataka, Gujarat and Andhra Pradesh in the order of abundance. In respect of demersal fishes also Kerala contributed the maximum catch, followed by Maharashtra, Gujarat, Tamil Nadu and Andhra Pradesh.

### Statewise marine fish production

#### West Bengal (Contai coast)

In West Bengal, the total landings declined by about 4,600 tonnes during 1980 as compared to 1979 (Table 1). Lesser landings of other clupeids, Bombay duck, sciaenids and prawns contributed to the decline, the decrease in their landings being about 840, 800, 560 and 270 t. respectively. The landings of catfishes, however, showed an increase of about 580 tonnes.

#### Orissa

In Orissa also, there was a decline of about 12,400 t. in the total landings during 1980 as compared to 1979.

† Prepared by the Fishery Resources Assessment Division.

Table 2. Estimated marine fish landings in India during 1980 (in tonnes)

Sl. No.	Name of fish	West Bengal	Orissa	Andhra Pradesh	Tamil Nadu	Pondicherry	Kerala	Karnataka	Goa	Maharashtra	Gujarat	Andamans	Lakshadweep	Private* Trawlers	Total
1.	Elasmobranchs	114	3,772	4,842	15,442	435	6,803	2,910	894	7,752	14,558	56	284	—	57,862
2.	Eels	—	—	289	85	8	6	131	6	3,154	8,403	—	—	—	12,082
3.	Catfishes	723	2,198	2,338	4,047	78	13,936	5,354	1,151	8,653	5,235	32	—	—	43,745
4.	<i>Chirocentrus</i>	276	1,460	1,123	2,695	98	1,002	171	124	2,039	3,792	25	—	—	12,805
5.	a) Oil sardine	—	—	—	320	—	69,667	42,727	2,367	663	—	—	—	—	1,15,744
	b) Lesser sardines	—	1,891	13,930	29,940	2,736	11,017	4,135	1,798	1,363	—	243	—	—	67,053
	c) <i>Hilsailisha</i>	644	5,091	96	37	25	14	8	8	1,017	56	—	—	—	6,996
	d) Other <i>Hilsa</i>	20	46	1,267	3,084	53	21	25	14	607	3,965	25	—	—	9,127
	e) <i>Anchoviella</i>	—	270	6,182	13,126	287	7,772	5,621	249	78	—	99	—	—	33,684
	f) <i>Thrissocles</i>	194	333	7,326	5,048	387	2,241	850	779	1,271	913	—	—	—	19,342
	g) Other clupeids	674	2,576	5,486	1,833	273	574	1,088	302	16,897	8,538	29	—	—	38,270
6.	a) <i>Harpodon nehereus</i>	419	378	611	6	—	—	15	12	57,393	36,671	—	—	—	95,505
	b) <i>Saurida &amp; Saurus</i>	—	189	931	1,123	160	7,080	508	199	1,057	85	—	—	—	11,332
7.	<i>Hemirhamphus &amp; Belone</i>	—	46	97	749	26	361	180	6	42	6	41	99	—	1,653
8.	Flying fish	—	17	43	1,106	3	—	55	2	—	—	—	29	—	1,255
9.	Perches	13	341	4,639	6,886	666	17,814	1,069	269	3,712	2,454	302	376	—	38,541
10.	Red mullets	—	296	349	1,079	150	1	38	15	461	—	—	27	—	2,416
11.	Polynemids	186	1,126	1,448	629	6	8	—	10	1,976	667	—	—	—	6,056
12.	Sciaenids	358	2,864	9,496	19,547	320	6,164	3,500	1,530	13,956	31,625	—	—	—	89,360
13.	Ribbon fish	142	928	15,646	7,862	179	12,937	1,499	1,089	11,550	10,858	—	—	—	62,690
14.	a) <i>Caranx</i>	—	607	5,981	5,405	479	4,399	4,507	884	1,315	461	147	80	—	24,265
	b) <i>Chorinemus</i>	130	567	710	1,111	2	145	67	71	357	1,022	—	—	—	4,182
	c) <i>Trachynotus</i>	—	—	—	38	2	—	—	—	—	—	—	—	—	40
	d) Other carangids	—	—	97	188	—	59	232	—	369	—	—	—	—	945
	e) <i>Coryphaena</i>	—	—	3	141	—	138	—	—	20	—	—	—	—	302
	f) <i>Elacate</i>	—	—	19	148	—	19	3	190	—	—	—	—	—	379
15.	a) <i>Leiognathus</i>	34	704	3,775	38,153	681	4,147	4,671	1,727	406	—	102	—	—	54,400
	b) <i>Gazza</i>	—	3	56	84	—	1	42	—	—	—	—	—	—	186
16.	<i>Lactarius</i>	—	65	940	938	29	861	998	614	450	2,520	—	—	—	7,415
17.	Pomfrets	921	9,072	2,201	1,306	188	907	696	257	10,081	12,587	15	—	—	38,231
18.	Mackerel	—	265	6,203	7,229	445	18,474	19,634	2,446	288	112	183	—	—	55,279
19.	Seer fish	234	1,542	2,970	7,179	85	3,763	1,941	735	3,219	4,180	117	21	—	25,986
20.	Tunnies	—	34	419	4,233	—	10,611	952	356	1,674	277	55	1,760	—	20,371
21.	<i>Sphyraena</i>	—	8	88	932	55	330	84	171	33	—	67	14	—	1,782
22.	<i>Mugil</i>	—	1	27	577	49	151	39	11	24	1,034	117	—	—	2,030
23.	<i>Bregmaceros</i>	—	—	—	—	—	—	—	—	159	757	—	—	—	916
24.	Soles	3	69	573	2,094	151	4,394	782	1,311	1,797	2,459	—	—	—	13,633
25.	a) Penaeid prawns	152	1,074	5,660	9,082	485	52,633	3,098	1,853	23,433	14,481	54	—	32	1,12,037
	b) Non-penaeid prawns	48	30	4,346	946	42	1,742	128	—	47,309	4,109	—	—	—	58,700
	c) Lobsters	—	—	10	90	4	18	110	18	225	204	—	—	—	679
	d) Other crustaceans	20	359	1,413	6,174	172	7,286	2,765	1,933	297	4,967	—	—	—	25,386
26.	Cephalopods	4	98	470	1,472	40	4,244	122	210	1,191	3,471	—	13	—	11,335
27.	Miscellaneous	788	1,055	3,913	15,230	591	7,803	4,567	879	5,475	23,027	94	206	2,212	65,840
TOTAL		6,097	39,375	1,16,013	2,17,394	9,390	2,79,543	1,15,322	24,490	2,31,763	2,03,494	1,803	2,909	2,244	12,49,837

\*Partial coverage of larger trawlers

**Table 3. Statewise break-up of the landings of pelagic and demersal group of fishes during 1980 (in tonnes)**

Sl. No.	State	Pelagic	Demersal	Total
1.	West Bengal	3,139	2,958	6,097
2.	Orissa	16,502	22,873	39,375
3.	Andhra Pradesh	70,709	45,304	116,013
4.	Tamil Nadu	99,992	117,402	217,394
5.	Pondicherry	5,532	3,858	9,390
6.	Kerala	147,821	131,722	279,543
7.	Karnataka	87,290	28,032	115,322
8.	Goa	12,046	12,444	24,490
9.	Maharashtra	102,806	128,957	231,763
10.	Gujarat	81,911	121,583	203,494
11.	Andamans	1,211	592	1,803
12.	Lakshadweep	2,156	753	2,909
13.	Private trawlers	—	2,244	2,244
<b>Total</b>		<b>631,115</b>	<b>618,722</b>	<b>12,49,837</b>

The fall was mainly due to lower landings of *Hilsa ilisha*, sciaenids, prawns, pomfrets, seer fish and elasmobranchs, the decline in their landings being about 4,900, 2,500, 1,900, 1,000, 900 and 600t. respectively. An increase of about 1,100 and 900t. in the landings of other clupeids and cat fishes respectively was also noticed during 1980.

#### Andhra Pradesh

The estimates of total marine fish production in Andhra Pradesh showed an increase of about 24,600t. (27%) as compared to 1979. An increase in the landings of ribbon fish, lesser sardines, *Thrissoles* and mackerel to the tune of about 9,300, 7,800, 3,900 and 3,600t. respectively was mainly responsible for the higher landings. A decline in the catch of penaeid prawns, seer fish and elasmobranchs to the extent of 3,000, 2,600 and 2,200t. however, was noted.

#### Tamil Nadu

In Tamil Nadu, the total landings showed a decline of about 17,600t (7.5%). This decrease was due to reduced landings of ribbon fish, *Leiognathus*, lesser sardines and penaeid prawns, the decline being 13,200, 4,700, 3,300 and 1,100 respectively. The landings of mackerel, *Anchoviella* and sciaenids, however, showed an increase of about 3,700, 2,100 and 600t. respectively.

#### Pondicherry

The total catch in Pondicherry recorded a decrease of about 700t. (6.7%). Flying fish and perches showed a decline of about 850 and 340t. respectively in their catch. The landings of lesser sardines, however, showed an increase of about 740t.

#### Kerala

In Kerala, the total landings decreased by about 51,000t. (15.4%). The decline was mainly due to reduced landings of oil sardine, ribbon fish, *Caranx*, lesser sardines, tunnies, seer fish and perches, the decrease in their landings being 47,200, 12,800, 7,900, 4,900, 4,800, 2,500 and 2,400t. respectively. Penaeid prawns, cat fishes and non-penaeid prawns, however, showed an increase of about 23,100, 2,600 and 1,700t. respectively in their landings.

A scrutiny of the catch of oil sardine showed that there was a substantial fall in the Alleppey-Ponnani and Quilandy-Manjeswar coastal belts. The significant increase of about 23,100t. in the landings of penaeid prawns was mainly due to higher catches by mechanised fishing crafts in the Sakthikulangara area.

#### Karnataka

The total landings in Karnataka declined by about 11,100t. (8.8%) as compared to 1979. This was mainly due to decreased landings of mackerel, cat fishes and penaeid prawns, the decline in their landings being about 20,500, 4,600 and 1,600t. respectively. Oil sardine, *Anchoviella* and *Leiognathus*, however, showed an increase to the tune of about 9,600, 3,900 and 3,100t. respectively in their catch.

#### Goa

In Goa, the total catch showed a marginal decrease of about 900t. (3.5%). While the landings of mackerel and oil sardine showed a decline of about 1,900 and 700t. respectively, *Leiognathus* catch showed an increase of about 800t.

#### Maharashtra

The total estimates of marine fish production during 1980 were 231,763t. The broad indications are that the landings of penaeid prawns, non-penaeid prawns and *Harpodon nehereus* showed a decline of about 22,000; 9,000 and 2,000t. respectively.

## Gujarat

An increase of about 12,200t. (6.4%) in the total landings was noticed in Gujarat over that of 1979. The landings of elasmobranchs, ribbon fish, penaeid prawns, eels, sciaenids and pomfrets showed an increase of about 9,600, 6,400, 5,900, 5,800, 3,400 and 3,300t. respectively. *Harpodon nehereus*, however, showed a decline of about 27,300t. in the catch.

## Andamans

The total catch in Andamans during 1980 as well as the species composition did not show much variation as compared to 1979.

## Lakshadweep

A decline of about 940t. in the total landings was noticed in Lakshadweep. This was mainly due to decreased landings of tunnies to the extent of about 1,030t.

## Major group of fishes

From Table 2 it is seen that oil sardine accounted for 115,744t. forming about 9.3% of the total all India landings during 1980. The other major groups of species in the order of abundance are penaeid prawns (112,037t-9.0%), *Harpodon nehereus* (95,505t-7.6%), sciaenids (89,360t-7.2%), lesser sardines (67,053t-5.4%), ribbon fish (62,690t-5.0%), non-penaeid prawns (58,700t-4.7%), elasmobranchs (57,862t-4.7%), mackerel (55,279t-4.4%) and silver bellies (54,586t-4.4%).

### 1. Oil sardine

The landings of oil sardine declined by about 38,000t. during 1980 as compared to 1979, the respective figures being 115,744 and 153,971t. This was mainly due to reduced landings in the states of Kerala, Tamil Nadu and Goa. Fig. 2 shows the landings of oil sardine during the years 1971 to 1980.

### 2. Penaeid prawns

The catch of penaeid prawns during 1980 showed a marginal decline of about 1,600t. as compared to 1979, the corresponding figures for the two years being 112,037 and 113,665t. respectively. Except in Kerala and Gujarat, the landings of penaeid prawns declined in all the maritime States of India. In Kerala, the landings showed a significant increase of about

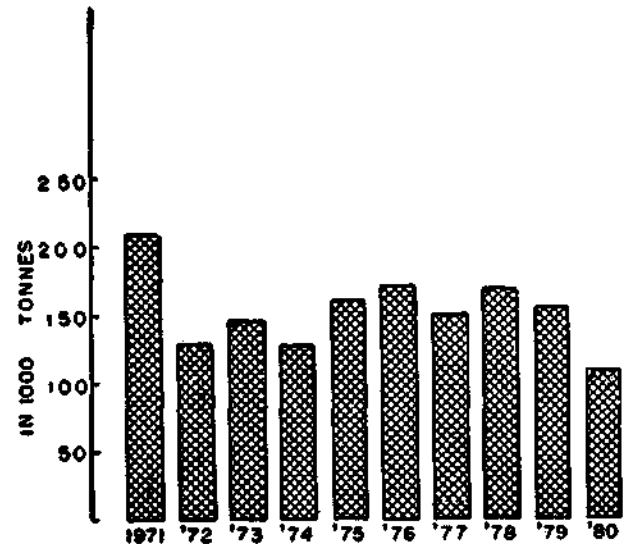


Fig. 2. Landings of oil sardine during 1971 to 1980.

23,000t. The catch trends of penaeid prawns for the years 1971 to 1980 are shown in Fig. 3.

### 3. *Harpodon nehereus*

The yield of *Harpodon nehereus* showed a decline of about 31,000t. during 1980 as compared to 1979. Both Maharashtra and Gujarat recorded lower landings. The catch trends of *Harpodon nehereus* for the years 1971 to 1980 are shown in Fig. 4.

### 4. Sciaenids

A decrease of about 3,700t. in the landings of sciaenids was noticed during 1980 as compared to

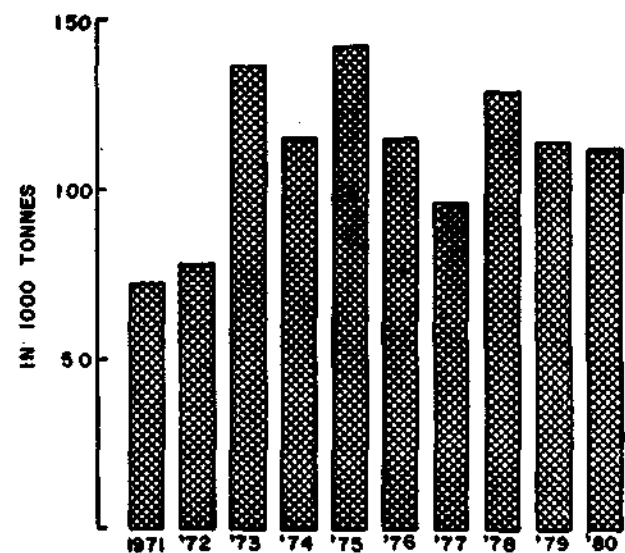


Fig. 3. Landings of penaeid prawns during 1971 to 1980.

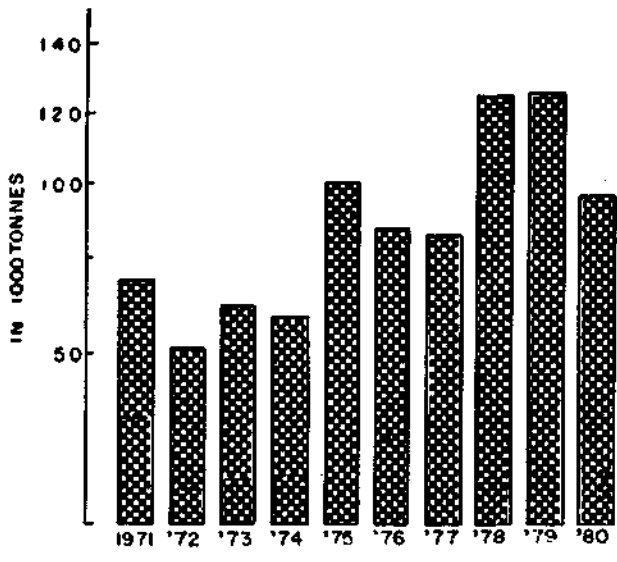


Fig. 4. Landings of *Harpodon nehereus* during 1971 to 1980.

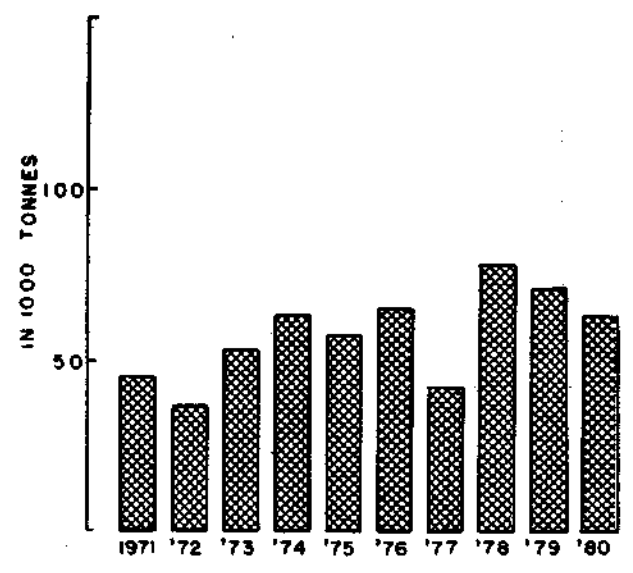


Fig. 7. Landings of ribbon fish during 1971 to 1980.

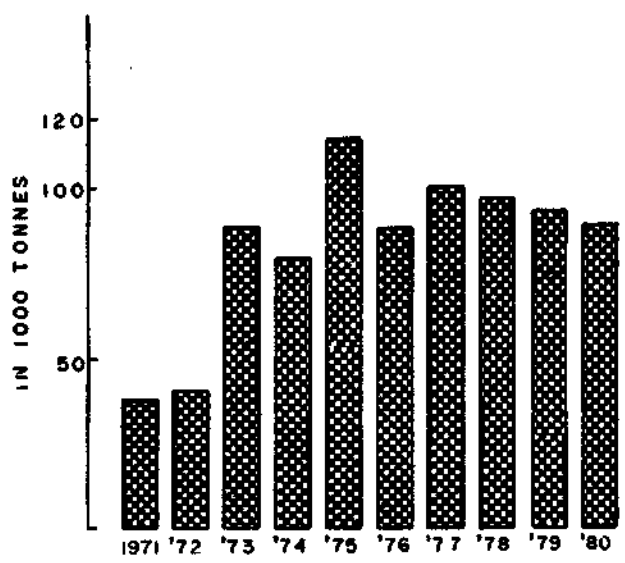


Fig. 5. Landings of sciaenids during 1971 to 1980.

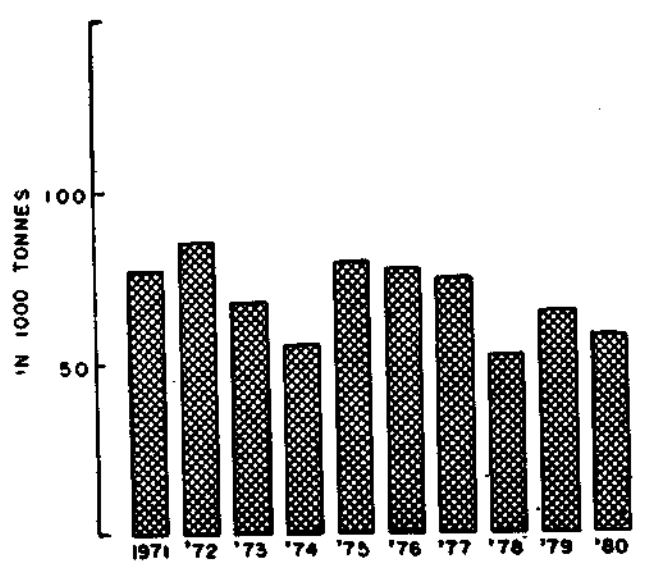


Fig. 8. Landings of non-penaeid prawns during 1971 to 1980.

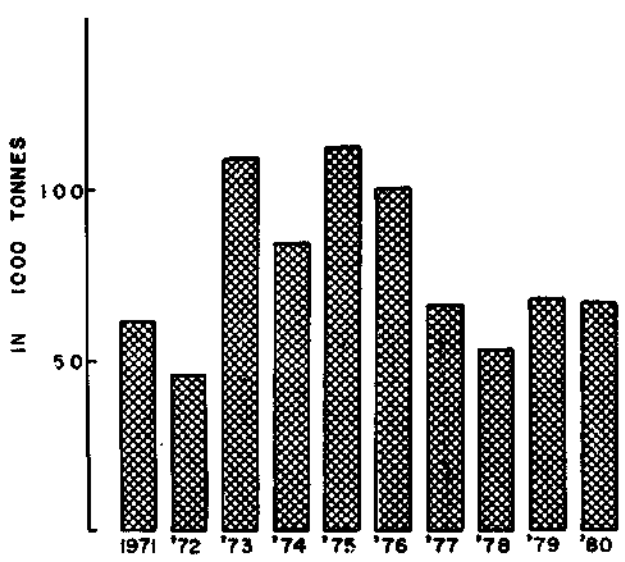


Fig. 6. Landings of lesser sardines during 1971 to 1980.

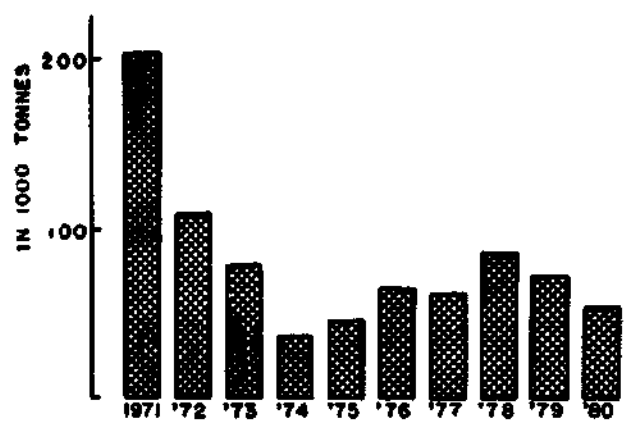


Fig. 9. Landings of mackerel during 1971 to 1980.

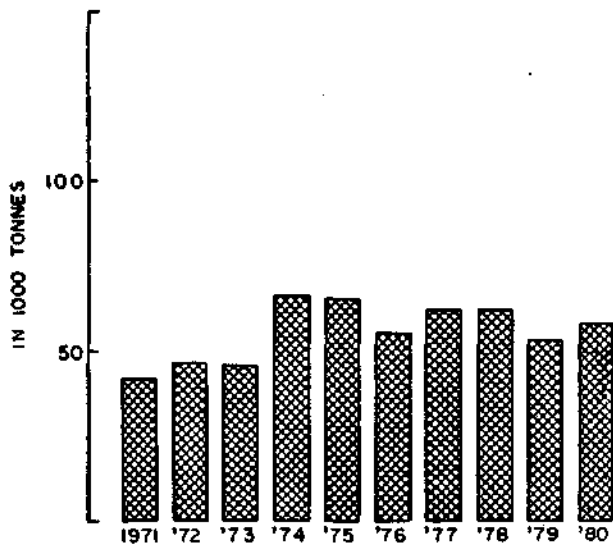


Fig. 10. Landings of elasmobranchs during 1971 to 1980.

1979. While Maharashtra, West Bengal and Orissa recorded comparatively lower catch of sciaenids, Andhra Pradesh, Tamil Nadu, Pondicherry, Kerala, Karnataka and Goa recorded higher landings. Fig. 5 shows the trends in the catch of sciaenids during the ten year period 1971 to 1980.

#### 5. Lesser sardines

A marginal increase of about 1,300t. in the landings of lesser sardines was seen during 1980 as compared to 1979. While landings in Andhra Pradesh, Pondicherry and Maharashtra were higher, Tamil Nadu, Kerala and Karnataka recorded lower landings. The production trends in the catch of lesser sardines for the years 1971 to 1980 are shown in Fig. 6.

#### 6. Ribbon fish

The catch of ribbon fish showed a decline of about 8,700t. during 1980 in comparison to 1979. This was mainly due to reduced landings in the states of Tamil Nadu and Kerala. Andhra Pradesh and Gujarat, however, recorded comparatively higher landings. Fig. 7 shows the landings of ribbon fish during the ten year period 1971 to 1980.

#### 7. Non-penaeid prawns

A decline to the extent of about 5,200t. was noticed in the landings of non-penaeid prawns during 1980 in comparison to 1979. This was mainly due to decreased

landings in Maharashtra. Fig. 8 shows the trends in the yield of non-penaeid prawns for the years 1971 to 1980.

#### 8. Mackerel

A decline to the extent of about 16,000t. in the catch of mackerel was noticed during 1980 as compared to 1979, the corresponding landings during the two years respectively being 55,279, and 71,514t. Lower landings in the States of Karnataka and Goa accounted for the decline in the catch of mackerel. Fig. 9 shows the landings of mackerel during the years 1971 to 1980.

#### 9. Elasmobranchs

The landings of elasmobranchs, during 1980 increased by about 5,000t. While the catch increased in the states of Tamil Nadu, Gujarat, Karnataka and Pondicherry, reduced landings were seen in the States of Maharashtra, Andhra Pradesh, Orissa, Goa, Kerala and West Bengal. The catch trends of elasmobranchs for the years 1971 to 1980 are shown in Fig. 10.

#### 10. Silver bellies

The landings of silver bellies showed a minor decline of about 900t. during 1980. While Tamil Nadu, Maharashtra and Orissa recorded reduced landings of silver bellies, Karnataka, Goa, Kerala and Andhra Pradesh accounted comparatively higher landings. The catch trends of silver bellies for the years 1971 to 1980 are shown in Fig. 11.

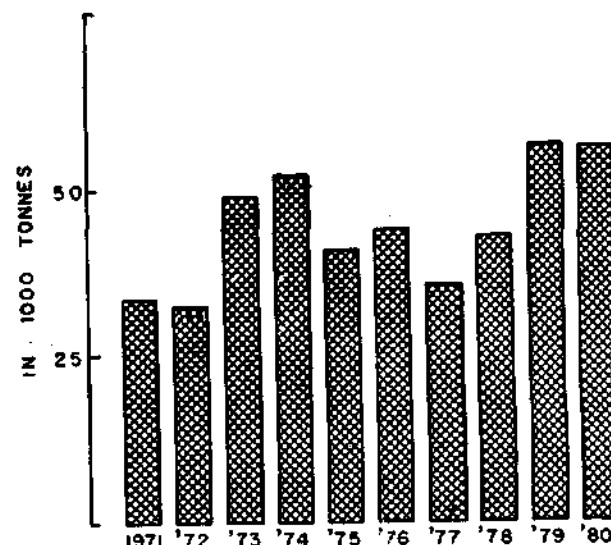


Fig. 11. Landings of silver bellies during 1971 to 1980.

