

CHAPTER XXIII.

FISHERIES.

§ 1. General.

1. **Fish Stocks.**—Australia possesses a varied native fauna of freshwater and marine fish, including tropical and temperate species. In addition, certain exotic species have become acclimatized in the freshwater streams. The commercial fisheries exploit on-shore, demersal (bottom) and pelagic (surface) stocks. The on-shore stocks are at present of greatest importance.

The Australian marine fauna includes also a number of mollusca (oysters, scallops) and crustacea (crabs, prawns, crayfish) groups which are commercially exploited.

In winter whales of various species, of which the humpback is the most common, appear off the western and eastern coasts.

2. **Fishing Areas.**—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. There are interruptions of variable size; for the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(a) the reefs from which cod, snapper, etc. are taken; and (b) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from Crowdy Head to south of Cape Everard and further off the east Tasmanian coast from Babel Island southwards to Storm Bay. Other demersal grounds exist in the Great Australian Bight but would require large modern trawlers for commercial exploitation. The demersal shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Jack mackerel is found in the waters of eastern Tasmania, the south-east coast of New South Wales, and Western Australia. Tuna is now being taken in commercial quantities on the New South Wales and South Australian coasts.

Pearlshell is fished from Cooktown in Northern Queensland (and from Thursday Island) round the north coast of Australia to Exmouth Gulf in Western Australia. Trochus shell is obtained from Mackay in Queensland round the north coast to King Sound in Western Australia.

Edible oysters are found in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland, but the principal cultivation grounds are found in New South Wales. The scallop is taken commercially only in Tasmanian waters.

Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales. Crayfish are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia. Considerable development has taken place in the crayfish fisheries, particularly in South Australian and Western Australian waters, owing to the opening up of markets in the United States of America for frozen crayfish tails.

Whales emigrating from Antarctic waters to their breeding grounds in the warmer waters of low latitudes pass up both the western and eastern coasts of Australia, returning to the Antarctic in the spring. Three whaling stations operate in Western Australia (Pt. Cloates, Babbage Island near Carnarvon and Cheynes Beach near Albany), one in New South Wales (Byron Bay) and one in Queensland (Moreton Bay).

3. **Fishing Boats and Equipment.**—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef-fishery

is worked with traps, hand lines and long lines. The demersal flathead-fishery is worked by both otter trawl (with V.-D. gear) and Danish seine; in addition some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel-fishery employs trolling gear with lures of various types, while the pelagic barracouta fishery employs principally barbless jigs. Tuna is taken by trolling and more recently, by pole fishing with live bait.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, and the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length.

4. **Administration.**—The fisheries are administered by State Departments implementing State laws. This administration includes licensing of men and boats, and restrictions of fishing by prohibitions against fishing at certain times and places and by certain methods. The States also prescribe the gear that may be used and for some fishes the legal minimum size at which they may be landed.

In October, 1946 the Commonwealth Government established the Commonwealth Fisheries Office to co-ordinate fisheries administration and develop the fisheries of Australia. It is a division of the Department of Commerce and Agriculture.

Following the revocation of Commonwealth war-time powers, an interstate conference in 1947 considered the Commonwealth and State spheres of responsibility. Following the passing of the Commonwealth Fisheries Act 1952 and Pearling Act 1952 a further conference was held in 1952. At this conference all States, except Western Australia, agreed on procedure for implementing through the States some of the provisions of the Fisheries and Pearling Acts. These Acts were passed to enable the Commonwealth to conserve and develop fisheries in Australian waters outside the States' 3-mile territorial limit. As a first result of the July conference, the conservation of the school shark and tiger flathead fisheries was taken in hand by the Commonwealth in co-operation with the States concerned.

The Commonwealth Scientific and Industrial Research Organization, through its Fisheries Division, is responsible for fishery research (*see* § 4, para. 2 hereafter).

§ 2. Development and Present Condition of the Fishery.

1. **Fisheries Proper.**—(i) *General.* The earliest Australian fishery was on-shore. To this was soon added the demersal reef fishery using lines. At each centre of population this sequence has almost invariably been followed, and expansion of the industry up to about the year 1900 consisted chiefly of the extension of these operations into hitherto unworked areas. The taking of barracouta in Tasmanian waters was begun at least by 1880, if not earlier, but the main development of this fishery occurred between 1915 and 1925.

The first major development of the fishery came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government. The State enterprise failed, but the fishery was found very profitable by private enterprise. In 1936 the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, and in 1946 (after the return of vessels requisitioned in war-time) a peak was reached and thirteen steam trawlers and 120 Danish seine vessels were licensed. The total catch of trawled fish in 1946-47 was 16,000,000 lb. Of the species taken by the trawl fishery, tiger flathead, morwong and nannygai are the most important, and of these flathead may be regarded as the prime fish and commands a higher price. Since 1947 the composition of the catch has changed, because of depletion of the flathead stocks, and the lower priced fish have become a larger proportion of the catch. In 1953-54 ten steam trawlers (all based at Sydney but fishing right down the coast to Bass Strait) and a considerably larger number of Danish seine vessels in New South Wales and Victoria were engaged in the trawl fishery.

In Queensland waters the Spanish mackerel is taken by line fishermen, operating in off-shore waters out to the Barrier Reef between Gladstone and Cairns, with Townsville as the centre. This fishery started in 1930 and by 1942 production had risen to about 1,000,000 lb. The catch decreased considerably during the war and early post-war years, but subsequently increased and by 1952-53 it had reached more than 1,500,000 lb.

In 1930 fishing for snapper shark commenced in south-eastern waters, particularly off the Victorian and Tasmanian coasts. This fishery extended rapidly its area of operations, particularly in the Bass Strait area and the south-east coast of South Australia, and by 1952-53 the catch of edible sharks had reached 4,850,000 lb. Great impetus was given to the fishery during war years by the demand for livers for fish oil production for medicinal purposes. This demand has eased with the return of cod-liver oil, and the production overseas of synthetic vitamin "A". However shark is still fished for the flesh, which is sold as "flake", mainly in the Melbourne Fish Markets.

Pilchards occur in the southern waters of Australia from Port Stephens to the south-west of Western Australia. Commercial catches have been made with lampara nets and to a less extent with purse seines at Jervis Bay on the New South Wales coast, in Port Phillip Bay in Victoria, at Coffin Bay in South Australia and at Albany in Western Australia. Anchovies in Port Phillip Bay and sprats in Tasmanian waters are caught in payable quantities, though there is usually some difficulty in finding a market for them. Jack mackerel have been caught in commercial quantities off the east coast of Tasmania and off Eden in New South Wales.

The tuna fishery was established on the New South Wales coast during the second half of 1949, when fishermen, using improvised trolling gear, caught 1,000 tons of southern blue-fin tuna. The catch was canned at Narooma and Eden, and samples of both canned and frozen tuna were sent to California where they met with approval. The American-owned tuna clipper *Senibua*, whose operations were subsidized by the Commonwealth, proved that Australian tunas could be caught by pole fishing with live bait, but less than a dozen boats were so operating in 1953.

(ii) *Production.* The total recorded catch of fresh fish during 1952-53 amounted to more than 73,000,000 lb., compared with 64,000,000 lb. in the previous year. This is still below the peak production of 79,000,000 lb. reached in 1947-48.

Production for the years 1938-39 and 1948-49 to 1952-53 is shown by States in the following table:—

RECORDED PRODUCTION OF FRESH FISH.
(’000 lb.)

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales ..	(a) 29,382	29,506	27,985	24,206	25,473	30,486
Victoria (b) ..	12,840	(c) 12,634	(c) 11,581	(c) 10,741	11,328	11,339
Queensland ..	9,182	10,129	10,125	8,897	9,020	10,501
South Australia ..	(a) 8,960	(a) 5,264	(a) 5,799	(a) 6,502	6,950	7,255
Western Australia ..	(a) 5,841	(a) 9,254	(a) 8,911	(a) 7,659	6,765	8,425
Tasmania (b) ..	(a) 2,393	11,295	7,363	5,934	4,029	5,195
Northern Territory ..	28	52	52	56	62	88
Total ..	68,626	78,134	71,816	63,995	63,627	73,289

(a) Year ended previous December. (b) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (c) No details available of amount caught by Victorian Fishermen in Tasmanian waters.

2. *Oysters and Shell Fisheries.*—Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. This is carried on mainly in New South Wales where there has been constant improvement

in methods, and the present technique in certain areas is highly efficient. The production for Australia in 1952-53 was 8,399,000 lb. (in shell). Scallops are taken by dredge in the D'Entrecasteaux Channel in Tasmania.

Cray fisheries have developed greatly since the War to take advantage of the market in the United States of America for frozen crayfish tails. Details of production by States for the years 1938-39 and 1948-49 to 1952-53 are shown in the following table :—

RECORDED PRODUCTION OF CRAYFISH.
(*000 lb.)

State.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
New South Wales ..	420	687	595	487	688	549
Victoria (a) ..	965	(c) 532	(c) 947	(c) 491	930	940
Queensland ..	..	..	..	..	..	2
South Australia ..	(b) 686	(b) 870	(b) 1,671	(b) 2,089	2,750	3,500
Western Australia ..	(b) 1,349	(b) 2,805	(b) 5,121	(b) 6,550	8,343	8,100
Tasmania (a) ..	1,576	3,241	3,016	1,689	1,879	2,694
Australia ..	4,996	8,135	11,350	11,306	14,590	15,785

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (b) Year ended previous December. (c) No details available of amount caught by Victorian fishermen in Tasmanian waters.

3. Pearl-shell and Trochus.—The industry, which ceased operations on Japan's entry into the war in December, 1941, did not resume on a commercial basis at Queensland centres until late in 1945, and at Western Australian centres until 1946, while operations off the Northern Territory coast were not resumed until 1948.

Before the war a large proportion of the key men were Japanese ; the others included Malays, Chinese, Koepangers, Filipinos, Papuans and Torres Straits Islanders. On the resumption of operations without the Japanese, the labour available was, with few exceptions, inefficient. Queensland with a more ready source of labour from the Torres Strait Islands and mainland was able to expand its fishing more rapidly, and in the 1949 season, achieved its second highest pearl shell production on record. The expansion of the industry at Darwin has been retarded by the fact that the key men lack the local knowledge acquired by the Japanese. Western Australian centres also suffered from lack of skilled labour. In 1953 the Commonwealth permitted the employment at Broome, under certain conditions, of 35 Japanese divers, tenders and engine-drivers.

In 1953 a Japanese fleet, which had been pearling in the Arafura Sea while a Japanese Mission in Canberra was discussing a fisheries agreement with the Australian Government, moved into an area in which they had been asked not to fish. Their action was regarded as having broken off the negotiations, and proclamations were issued in September 1953 declaring Australia's sovereign rights over the natural resources of the sea bed and sub-soil of the Continental Shelf adjoining Australia, its territories and the Trust Territory of New Guinea. In September the Pearl Fisheries Act 1952-53, providing for licensing and control of pearling, was brought into operation.

Japan disputed Australia's right to apply this legislation to foreign ships, and Australia agreed to refer the dispute to the International Court of Justice on condition that meantime Japanese pearling in Australian waters would be conducted in conformity with the Australian Government's policy of regulation and conservation, and that Japan would abide by the Court's decision. On these conditions, a Japanese pearling fleet operated in prescribed waters in 1954.

Tables showing the principal statistics relating to pearl-shell and trochus are shown in § 5, para. 1 (iii) hereafter.

Reference to inquiries into the pearl-shell fishing industry by a Royal Commission in 1912, and by the Tariff Board in 1935, appears on page 1031 of Official Year Book No. 37.

§ 3. Marketing and Distribution.

1. **Marketing.**—The greater portion of Australian fish is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers and consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at fourteen centres along the coast. The organization ensures that all fish is marketed through these channels, and the board has encouraged to a very marked extent the steadily increasing annual fish production of the State. The fish marketing methods in this State have proved successful. In New South Wales the central market in Sydney is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute some of their fish to local centres and to inland country districts, and send the balance to the central market in Sydney. In Victoria, South Australia, and Western Australia fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate export of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.

2. **Consumption of Fish.**—Prior to the 1939-45 War, Australians consumed annually the fresh and canned equivalent of about 131 million lb. of round fish, or 19.0 lb. per person. About 70 million lb. was produced locally and the remainder was imported. Total consumption (including canned and cured) during 1952-53 is estimated at 67.9 million lb. edible weight (7.8 lb. per head) as compared with 88.3 million lb. edible weight (10.3 lb. per head) in the previous year. This is equivalent to approximately 138.9 million lb. fresh round weight (15.9 lb. per head) and 166.2 million lb. fresh round weight (19.5 lb. per head) respectively. Fish is not, as in many countries, a staple item in the diet of Australians and, away from the seaboard, is still regarded as rather a luxury.

3. **Processing, including Canning.**—The equipment for handling fish has in the past been rather inadequate, but in most States in recent years cold storage facilities have been improved and increased. In Queensland and New South Wales particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States there has been a development of establishments equipped for snap freezing of fish, in particular the freezing of crayfish tails for export. A number of vessels have been equipped with freezing plants to process crayfish at sea.

In all States there has been a development of facilities for light processing of fish.

Reference to the production of processed fish and number of factories operating will be found in § 5, para. 3, page 851. Considerable expansion has taken place in the industry, particularly since 1945-46. In 1938-39, three factories processed 2,180,371 lb. of fish valued at £33,637, whereas in 1952-53 thirteen factories processed 12,409,735 lb., valued at £371,346.

4. **By-products.**—Processing of offal for fish-meals, etc., has been established in certain States. The processing of livers for vitamin-rich oils has been undertaken in several States and oil-production has been favourably developed.

§ 4. Inquiries and Research.

1. **General.**—The Australian fishing industry has been the subject of a number of official inquiries seeking an explanation of the very slow rate of development and the unfortunate conditions prevailing within the industry as well as the paucity of supplies available to the public. Details of the inquiries undertaken, the recommendations arising from them and subsequent developments will be found in Official Year Book No. 38, page 1082.

2. **Commonwealth Scientific and Industrial Research Organization, Division of Fisheries.**—Details of the establishment, organization and functions of the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization will be found in Official Year Book No. 38, page 1083.

Since the establishment of the Division in 1937, its work has extended, and there are field stations at Melbourne, Perth, Hobart and Thursday Island. The Division has two research vessels, F.R.V. *Derwent Hunter*, working in South Australian waters, and a ketch, F.R.V. *Gahleru*, working as a pearling lugger in the Thursday Island area.

As a result of the exploratory investigations and the research of the Division, together with the collaboration of commercial fishermen, it has been shown that important species of pelagic fish can be taken in commercial quantities in Australia. On the other hand, it has been shown that certain stocks of trawl fish, edible shark and whitebait need the protection of regulations to preserve them; and whale, crayfish and pearl oyster stocks are being closely studied in case they need similar protection in future. Proposals are made to trade and administrative bodies whenever action appears to be necessary to exploit or conserve stocks.

Research on oysters has been aimed at cultivation methods, including the fertilization of mud to increase the output. It has been determined that the Pacific oyster from Japan can be established and grown satisfactorily in Tasmanian waters. Experiments are being carried out with Australian species of pearl-shell in the Thursday Island area to appraise the possibilities of cultivating the oysters and culturing pearls.

Oceanographic studies are being pursued to demonstrate the properties of different water masses in south-eastern waters (west Tasman Sea and Bass Strait) and seasonal and annual changes in the distribution of the water masses; this work is expected to reveal the areas of greatest productivity of pelagic fishes such as tunas.

3. **Commonwealth Fisheries Office.**—The Commonwealth Fisheries Office, a division of the Department of Commerce and Agriculture, arose out of a Tariff Board recommendation in 1941, following a public inquiry into the fishing industry, that a Commonwealth developmental authority should be established. Details of the establishment, organization and functions of the office will be found in Official Year Book No. 38, page 1084.

In accordance with the Tariff Board report, scientific research, as distinct from developmental and administrative functions, was left to the Commonwealth Scientific and Industrial Research Organization which had established a Division of Fisheries for this purpose in 1937.

The Commonwealth is responsible for extra-territorial waters, whaling, pearling, rehabilitation of ex-servicemen in the fishing industry, fishery training schools, commercial development of fisheries, promotion of uniform conditions governing catches of various species of fish, statistics, information and publications.

4. **North Australia Development Committee.**—In 1946 the North Australia Development Committee gave considerable attention to the fisheries resources of North Australia and recommended that a hydrological and oceanographical survey should be made of the area. It also suggested that a biological survey should be made of pearl-shell with particular reference to the possibility of instituting pearl-shell culture. It recommended that all information regarding the area should be compiled and made available for scientific workers. It also recommended that an economic survey of the fisheries resources should be made, comparing them particularly with those of the Netherlands East Indies.

5. **Whaling.**—The Commonwealth Fisheries Office carried out extensive investigational and preparatory work for the establishment of an Australian whaling industry. In 1949 a privately-owned station began operating at Pt. Cloates, Western Australia. The same year a Commonwealth Whaling Commission was established, which built a station at Babbage Island, near Carnarvon, Western Australia, but it did not begin operating until almost the end of the 1950 season. There is also a smaller station in

Western Australia at Cheynes Beach near Albany. In 1952 a large station began operating at Moreton Island (Queensland). In 1953 these four stations produced 17,058 tons of whale oil, making Australia the largest producer of baleen whale oil outside the Antarctic. In 1954 another small station began operating at Byron Bay (New South Wales).

The Director of Fisheries represents Australia on the International Whaling Commission, which controls whaling throughout the world.

§ 5. The Fishing Industry.

1. Boats and Men Engaged, and Take.—(i) *General Fisheries.* The statistics have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts are shown in the following table.

GENERAL FISHERIES.

Year and State or Territory.	Boats Engaged. No.	Value of Boats and Equip- ment. £'000.	Men Engaged. (a) No.	Fish Taken.		Crustaceans Taken.			
				Quan- tity. '000 lb.	Gross Value. £'000.	Cray- fish. '000 lb.	Prawns. '000 lb.	Crabs. '000 lb.	Gross Value. £'000.
1952-53—									
New South Wales ..	2,236	1,631	2,079	30,486	1,751	549	2,825	83	572
Victoria ..	695	622	988	11,339	841	940	..	..	(b) 96
Queensland ..	7,717	994	7,575	10,501	596	2	488	459	95
South Australia ..	1,490	520	4,297	7,255	644	3,500	..	..	316
Western Australia ..	544	795	996	8,425	462	8,100	23	38	817
Tasmania ..	708	(c) 460	1,239	(b) 5,195	303	(b) 2,694	..	..	(b) 214
N. Territory	18	6	32	88	9	..	..	..	..
Australia	9,408	5,028	17,206	73,289	4,606	15,785	3,336	580	2,110
1951-52 ..	9,095	4,613	16,602	63,627	3,827	14,500	2,204	466	1,833
1950-51 ..	8,628	4,149	14,870	63,995	3,555	11,306	4,620	576	1,227
1949-50 ..	9,329	4,104	15,637	71,816	2,877	11,350	3,119	599	914
1948-49 ..	10,160	3,668	17,440	78,134	3,160	8,135	2,622	771	664
1938-39 ..	5,462	649	9,081	68,626	1,385	4,996	1,069	383	152

(a) For New South Wales, number of fishermen's licences issued; licences are issued only to persons deriving a substantial proportion of their income from personal exertion from the capture and sale of fish. (b) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (c) Includes oyster fisheries.

(ii) *Edible Oyster Fisheries.* Edible oyster fisheries are of small dimensions outside New South Wales and Queensland. The available returns show the following takes during 1952-53 in these States:—New South Wales, 7.8 million lb., value £380,480; Queensland, 504,000 lb., value £16,256. In Tasmania the scallop is far more important than the oyster, and in 1952-53 the take was valued at £88,800.

Figures for Australia for the years 1938-39 and 1948-49 to 1952-53 are shown in the following table:—

EDIBLE OYSTER FISHERIES: AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
No. of boats engaged	754	833	1,132	1,020	1,114	1,079
No. of men engaged ..	850	768	878	664	901	871
Oysters obtained—						
Quantity (a) '000 lb.	9,677	6,223	8,672	6,805	8,121	8,399
Gross value (b) £	132,201	291,470	425,745	398,995	435,513	487,327

(a) Excludes scallops in Tasmania; 29,845 cwt. (in shell) in 1948-49; 21,055 cwt. in 1949-50; 16,095 cwt. in 1950-51; 14,540 cwt. in 1951-52; and 28,830 cwt. in 1952-53; 1938-39 weight not available. (b) Includes scallops in Tasmania, valued at £14,500 in 1938-39; £26,460 in 1948-49; £23,580 in 1949-50; £31,540 in 1950-51; £38,650 in 1951-52; and £88,800 in 1952-53.

(iii) *Pearl and Pearl-shell Fisheries.* The following table shows particulars of equipment used in the pearling industry, men engaged and production for the years 1938-39 and 1948-49 to 1952-53, while particulars by States are shown for 1952-53.

PEARL AND PEARL-SHELL FISHERIES.

Year and State or Territory.	Boats Engaged. No.	Value of Boats and Equipment. £	Men Engaged. No.	Pearl-shell.		Gross Value of Pearls obtained. (a) £	Trochus-shell.	
				Quantity Obtained. Tons.	Gross Value. £		Quantity Obtained. Tons.	Gross Value. £
1952-53—								
Queensland ..	86	322,550	(b) 918	495	250,643	..	995	145,993
W. Australia(c)	21	83,600	189	303	176,882	500	4	485
Nor. Territory	7	35,000	45	116	59,000	2,300	..	..
Australia ..	114	441,150	1,152	914	486,525	2,800	999	146,478
1951-52 ..	132	522,850	1,516	853	458,852	1,490	1,176	234,332
1950-51 ..	154	557,990	1,621	1,091	488,230	3,635	1,287	223,325
1949-50 ..	126	404,139	1,383	1,542	551,715	1,040	577	51,682
1948-49 ..	141	387,550	1,417	1,346	573,285	1,930	414	28,170
1938-39 ..	181	168,133	1,750	2,543	222,281	3,397	322	23,885

(a) Incomplete; as reported.
(c) Year ended December, 1952.

(b) Includes Torres Strait Islanders and Australian aboriginals

2. *Value of Production.*—(i) *Gross and Local Values, 1952-53.* Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently any defects which may occur in the collection must necessarily be reflected in the value of production. Particulars of the value of other materials used in the process of production are not available for all States, so the values can only be stated at the point of production and not on a net basis as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

GROSS AND LOCAL VALUE OF FISHERIES PRODUCTION, 1952-53.
(£'000.)

State.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.
New South Wales	2,704	471	2,233
Victoria	894	141	753
Queensland	1,104	260	844
South Australia	960	109	851
Western Australia	1,643	33	1,610
Tasmania	606	..	606
Total	7,911	1,014	6,897

(ii) *Local Values, 1934-35 to 1938-39 (Average) and 1948-49 to 1952-53.* In the following table the local value of fisheries production and the local value per head of population are shown by States for the average of years 1934-35 to 1938-39 and for each of the years 1948-49 to 1952-53. Local value is gross value less marketing costs and is the value at the place of production. Because the value of materials used in the course of production is not available for all States it is not possible to show a comparison of net values.

LOCAL VALUE OF FISHERIES PRODUCTION.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
LOCAL VALUE. (£'000.)							
Average, 1934-35 to 1938-39 ..	588	159	292	182	229	80	1,530
1948-49 ..	1,479	522	704	232	679	558	4,174
1949-50 ..	1,449	615	760	287	697	426	4,234
1950-51 ..	1,730	700	812	404	812	411	4,869
1951-52 ..	1,821	706	835	701	1,225	441	5,729
1952-53 ..	2,233	753	844	851	1,610	606	6,897

LOCAL VALUE PER HEAD OF POPULATION.
(s. d.)

Average, 1934-35 to 1938-39 ..	4 5	1 9	5 11	6 3	10 0	6 11	4 6
1948-49 ..	9 8	4 11	12 5	7 0	26 0	41 7	10 9
1949-50 ..	9 2	5 8	13 1	8 4	25 6	30 9	10 7
1950-51 ..	10 7	6 3	13 7	11 4	28 5	28 7	11 9
1951-52 ..	10 10	6 2	13 8	19 3	41 5	29 6	13 6
1952-53 ..	13 1	6 4	13 6	22 9	52 7	39 3	15 10

3. Fish Preserving.—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, continued to operate, but there was no marked development until about 1945-46 when the production of canned fish amounted to 1,700,000 lb. After that year production increased considerably and reached a peak of 10,900,000 lb. in 1948-49, but by 1951-52 it had declined to 6,800,000 lb. It increased again to 7,400,000 lb. in 1952-53.

In addition to the canning of fish other fish products are produced. In 1952-53 these included 409,000 lb. of smoked fish, 844,000 lb. of fish paste and a considerable quantity of frozen crayfish tails for export.

In 1939 New South Wales and Tasmania were the only States canning fish, but by 1941 the industry had been extended to South Australia and Western Australia. Details of production are given in the following table for the years 1938-39 and 1948-49 to 1952-53.

PRODUCTION OF CANNED FISH (a) : AUSTRALIA.

Particulars.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Number of factories operating ..	3	16	15	18	17	13
Quantity .. lb.	603,302	10,886,254	7,442,521	7,279,033	7,294,622	7,705,081
Value .. £	13,700	973,027	676,812	723,689	965,100	1,020,307

(a) Including the canning of fish loaf.

The varieties canned in the several States differ according to the catch available, but separate details for each variety are not collected. In New South Wales salmon is the principal variety. In South Australia the canned pack includes mullet, salmon, garfish, etc., in Western Australia herrings, crayfish and mullet, and in Tasmania, salmon and crayfish.

4. State Revenue from Fisheries.—The revenue from fisheries during the year 1952-53 was £63,552 compared with £59,769 in 1951-52 and £34,273 in 1938-39. Of the total of £63,552 in 1952-53, New South Wales collected £31,025, Victoria £4,386, Queensland £11,905, South Australia £4,363, Western Australia (year ended December, 1952) £7,362, Tasmania £4,430 and Northern Territory £81.

§ 6. Oversea Trade in Fishery Products.

NOTE.—Values of Australian oversea trade shown in this section are expressed in £A. l.o.b., port of shipment.

1. Imports of Fish.—The equivalent, in the round, of imported fish consumed in Australia in 1952-53 was 24 per cent. of the total consumption. Particulars of the imports of fish are shown below for the years 1948-49 to 1952-53 in comparison with 1938-39.

FISH (INCLUDING SHELL FISH) : IMPORTS INTO AUSTRALIA. (Cwt.)

Classification.	1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Fresh or preserved by cold process	84,028	100,902	59,152	103,926	150,972	86,397
Potted or concentrated	9,435	3,012	1,908	1,959	1,766	583
Preserved in Tins—						
Fish—						
Herrings	38,917	95,994	81,569	95,227	88,149	20,030
Pilchards	(a)	3,740	735	930	4,041	462
Salmon	166,695	2,544	14,848	14,923	20,387	24,855
Sardines (including Sild)	29,372	61,962	50,253	80,645	70,334	3,380
Other	14,306	8,682	5,974	4,535	15,455	916
Shell Fish—						
Crustaceans	6,829	1,623	2,386	6,194	3,308	2,150
Oysters	1,939	29	59	121	198	115
Other	(a)	100	201	74	225	113
Smoked or Dried (not salted)	8,122	32,331	70,524	64,099	56,235	55,929
Other (including salted)	7,987	3,319	8,577	8,655	11,911	6,878

(a) Not recorded separately.

The value of fish and fish products imported during 1952-53 amounted to £2,113,000, compared with £1,470,854 in 1938-39.

Canned fish (total imports of which in 1952-53 were valued at £954,905) constituted the largest proportion of the imports; salmon from the Soviet Union and Canada, herrings from the United Kingdom and Norway, pilchards from the Union of South Africa and sardines from Norway were the chief varieties imported. A considerable proportion of the fresh fish imported in 1952-53 came from the United Kingdom and New Zealand, and the potted fish came chiefly from the United Kingdom; the bulk of the remainder came from South Africa, the United Kingdom and New Zealand.

2. Exports of Fish.—During 1952-53 the exports of fish of Australian origin were as follows:—oysters in shell, 111 cwt., £560; other fresh or preserved by cold process, 40,027 cwt., £1,548,704; potted or concentrated, 264 cwt., £3,949; fish preserved in tins, 4,425 cwt., £105,767; shell fish in tins, 184 cwt., £7,306; smoked or dried, 104 cwt., £2,065; and other fish, 24 cwt., £624.

3. Exports of Pearl and other Shell.—The exports of pearl, trochus and other shell of Australian origin are shown hereunder for the years 1938-39 and 1948-49 to 1952-53.

PEARL, TROCHUS AND OTHER SHELL : EXPORTS FROM AUSTRALIA.

Article.		1938-39.	1948-49.	1949-50.	1950-51.	1951-52.	1952-53.
Pearl-shell	cwt.	52,532	27,885	33,840	22,877	14,473	24,714
	£	244,266	606,767	624,517	485,685	370,096	694,029
Trochus-shell	cwt.	9,108	15,547	10,765	27,460	42,815	34,751
	£	34,166	73,012	49,170	231,580	515,067	247,482
Other shell	cwt.	4	157	1,239	621	2,531	5,732
	£	151	1,599	16,225	6,517	35,933	58,713