

HD  
9464  
C2A25  
annex  
v. 14h

ANNEX TO THE  
**WORLDWIDE FISHERIES  
MARKETING STUDY:**  
PROSPECTS TO 1985

AUSTRALIA



Government  
of Canada

Gouvernement  
du Canada

Fisheries  
and Oceans

Pêches  
et Océans

(This Report is one of a series of country and species annexes to the main study - entitled the Overview).



D R A F T

Annex to the  
Worldwide Fisheries Marketing Study:  
Prospects to 1985

AUSTRALIA

STUDY TEAM

D.B. McEachern  
Department of Fisheries and Oceans

M.R. Comeau  
Comeau Seafoods, Nova Scotia

E.B. Dunne  
Department of Fisheries and Oceans

J.G. Kloschinsky  
Lions Gate Fisheries, British Columbia

Author submitted: June, 1980

Marketing Directorate release: September, 1981

## ACKNOWLEDGEMENT

The preparation of the Worldwide Fisheries Marketing Study, of which this Report is a part, embodies many hours of work not only by the authors but also and more importantly by those who generously provided us with market information and advice.

Specifically, this Report would not have been possible without the cooperation and assistance of fishermen, processors, brokers, wholesalers, distributors, retailers, consumers and their organizations as well as government officials with whom we visited and interviewed. Though too numerous to mention separately, we would like to extend our sincere gratitude and appreciation.

The views expressed in this Study, however, are ours alone and reflect the Canadian perception of worldwide markets.

With regard to the overall Study, we would like to acknowledge:

- the encouragement and guidance of G.C. Vernon and D.S. Puccini, Department of Fisheries and Oceans (DFO);
- the advice of K. Campbell, Fisheries Council of Canada; and J. Spitz, Fisheries Association of B.C.; and R. Bulmer, Canadian Association of Fish Exporters;
- the liaison work of C. Paquette, DFO;
- the cooperation of the Department of Industry, Trade and Commerce (IT&C);
- the dedication of the participants from various parts of the industry and government including officers at our diplomatic posts who formed the study teams;
- the analytical and editorial assistance of K. Hay and his staff at Economix International;
- the general assistance within DFO provided by the graphical services of the Communications Branch and the support services of A. Letellier and G. Routhier of the Marketing Services Branch.

To all of the above, we extend our thanks.

E. Wong  
September, 1981

## FOREWORD

As a consequence of global extension of fisheries jurisdictions, a radical shift has taken place in the pattern of worldwide fish supply and demand. This change is still going on and will continue for many years before a new dynamic equilibrium situation is reached. However, in the midst of this re-adjustment, a new trade pattern is emerging -- some net exporting countries are now importing and vice versa. In the longer term, some countries will experience shortages of supply and others will have a surplus. Fortunately, Canada is amongst the latter group.

The implications for the marketing of Canadian fisheries products arising from the worldwide introduction of the 200-mile limit are extensive. With our vastly improved supply position relative to world demand, government and industry are understandably concerned about ensuring that the bright promise of increased market opportunities are real and can be fulfilled. One of the steps in this process is the publication of the Worldwide Fisheries Marketing Study which assesses the global potential on a country and species basis.

Specifically, the purpose of the Study is to identify the longer term market opportunities for selected traditional and non-traditional species in existing and prospective markets and to identify factors which may hinder or help Canadian fisheries trade in world markets. To date, over 40 country markets and 8 species groups have been analyzed. It should be noted that while the information contained in the Reports was up-to-date when collected, some information may now be dated given the speed with which changes are occurring in the marketplace. In this same vein, the market projections should be viewed with caution given the present and still evolving re-alignment in the pattern of international fisheries trade, keeping in mind the variability of key factors such as foreign exchange rates, energy costs, bilateral fisheries arrangements and GATT agreements which have a direct effect on trade flows.

Notwithstanding, the findings contained in these Reports represent an important consolidation of knowledge regarding market potential and implications for improvements in our existing marketing and production practices. The results of the Study should, therefore, usefully serve as a basis for planning fisheries development and marketing activities by both government and industry in order to capitalize on the identified market opportunities.

This draft report is published for discussion purposes and as such we invite your critical comments.

Ed Wong

Marketing Services Branch  
Marketing Directorate  
Fisheries Economic Development and Marketing  
Department of Fisheries and Oceans  
September 1981  
Ottawa

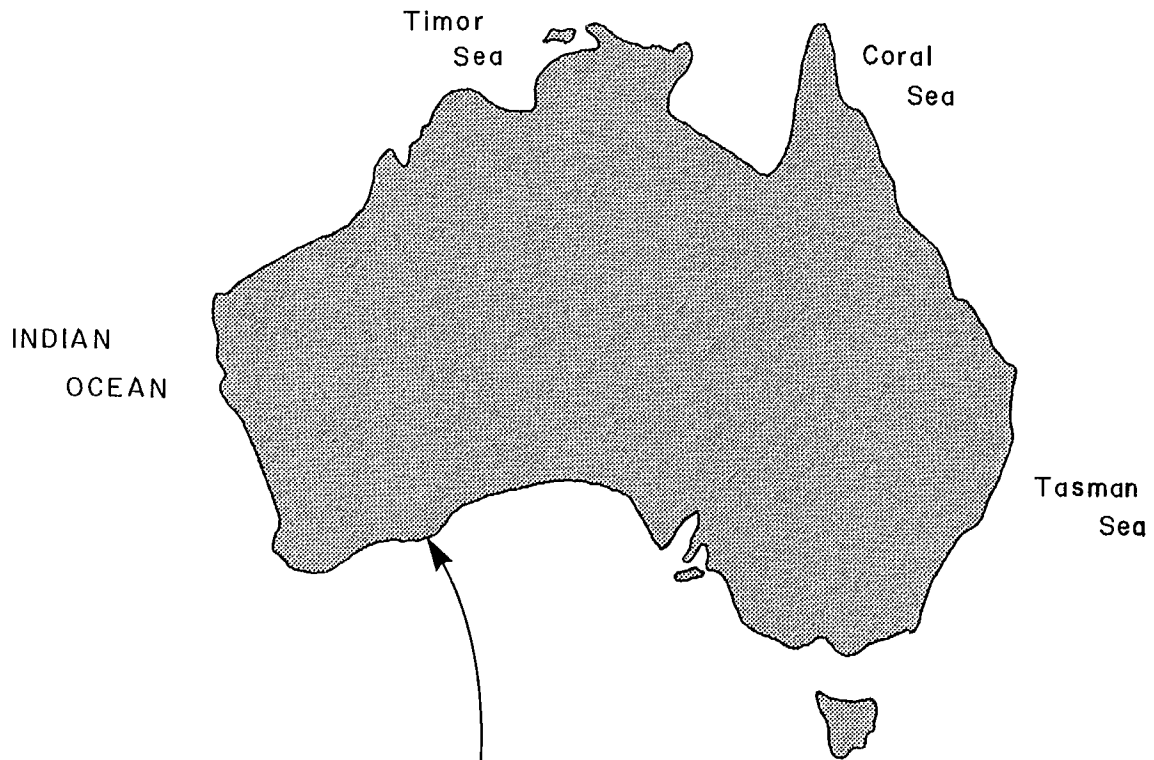
# FISHERIES WORLDWIDE MARKETING STUDY

## AUSTRALIA

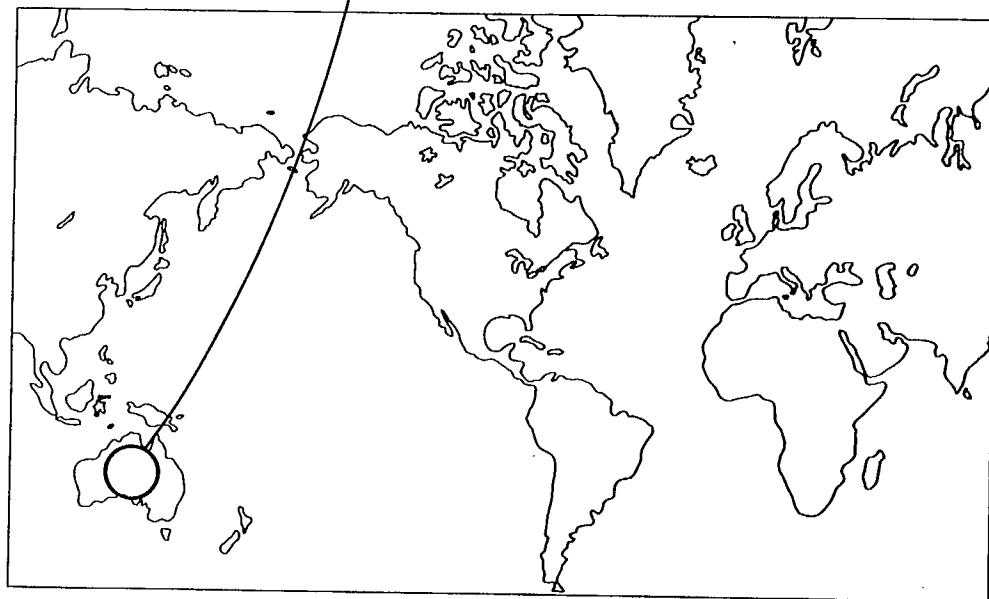
### Table of Contents

<u>Section</u>	<u>Page</u>
A. INTRODUCTION .....	1
B. DEMAND .....	2
1. Present Consumption of Fish.....	2
2. Trends in Consumption of Fish Products to 1985.....	5
C. SUPPLY.....	9
1. Domestic Harvest.....	9
2. The Fishing Fleet and Fish Processing Industry.....	14
3. Imports.....	16
4. Exports.....	19
5. The Australian Fishing Zone.....	21
6. Projected Resource Availability.....	23
D. DEMAND - SUPPLY BALANCE.....	27
E. POTENTIAL TRADE.....	28
1. Market Potential for Canadian Exports.....	28
2. Market Entry Requirements and Barriers.....	32
F. IMPACT OF THE AUSTRALIAN FISHING ZONE ON CANADIAN TRADE.....	33
1. Import Replacement by Australia.....	33
2. Exportable Surplus.....	33
3. Allocations.....	34
G. CONCLUSIONS.....	35
APPENDICES:.....	37
I Key Institutions Influencing Policy.....	38
II Fisheries Development Policy.....	39
III The Domestic Fishing Industry.....	40
IV Australian Customs Tariff - Marine Products.....	43
V Canadian Fish Products Exported to Australia 1975-1980...	49

# AUSTRALIA



INDEX MAP





A. INTRODUCTION

Australia has a population of 14.2 million, of whom 27% are younger than 15 and 71% are under 45 years of age. The population is growing at 1.3% per annum, and is concentrated in cities and major towns (70%) mainly on the south and east coasts. The cities of Sydney and Melbourne are the main centres of financial and industrial activity.

The country is one of the world's most affluent, with per capita income equal to that of northwestern Europe. Since World War II, the industrial sector has experienced rapid growth, particularly in heavy industries such as steel, metals and machinery, chemicals, and consumer durables. Mining has become a vital part of the economic base.

The gross domestic product increased by 115% from \$41.9 billion\* in 1973 to \$90.2 billion in 1978. In constant dollars, rate of growth was 3.2% per year. The average weekly earnings per employed male increased from \$102 in 1973 to \$226 in 1979, while the consumer price index (for all groups) increased from 129.8 in 1973 to 241.0 in 1978.

In 1977 and 1978 fish prices rose by some 37% as against 23% for all foods and 22% for household items.<sup>1</sup>

There is no balance of payments problem in this country because Australia is 70% self sufficient in oil and a substantial net exporter of primary products, and there are no exchange controls.

International trade makes up for about one-quarter of Australia's gross national product. Japan is the most important trade partner accounting for 34% of total exports and supplying more than 20% of the imports. In 1978, Canada exported C\$412.4 million worth of commodities to Australia while imports from Australia were valued at C\$356 million.

---

\* All dollar amounts stated in this report are in Australian dollars unless otherwise specified. The Australian dollar in 1980 was equivalent to C\$1.33.

<sup>1</sup> Source: Fisheries Division, Department of Primary Industry, Australian Fisheries, February, 1979, Canberra, P. 53.



B. DEMAND

1. Present Consumption of Fish

The latest official statistics estimate the consumption of edible fish products at 6.9 kilograms per person (1977-78) compared with 6.2 kilograms in 1972-73 and 7.7 kilograms in 1973-74. By product category consumption per annum is 3.2 kilograms of fresh and frozen fish, 0.9 kilograms of fresh or frozen shellfish and 2.8 kilograms of all other seafoods, including canned and cured products.

A recent survey in Canberra and the six state capitals\* found that fish consumption per person annually was 10.1 kilograms. Methods of calculation could account for some of the difference between this and official estimates. But the higher figure could also be due to the fact that the survey was limited to major cities, where residents are known to eat more seafood than in rural areas.

The actual national consumption level is thought to be somewhere in between the official and capital city survey figures. The figures in Table 1 were calculated on the assumption of total per capita consumption of 8.5 kilograms per annum.

On the average, each person eats about 70% (5.9 kilograms) of fish and shellfish at home, of which canned fish account for over a quarter, the remainder being frozen, smoked and fish preparations such as fish fingers. Over 10% of the total consumption is bought from takeaway outlets and the remaining 20% is consumed in restaurants.

---

\* P.A. Consulting Services, A Consumer Survey - 1976-77, Department of Primary Industry, Canberra, March 1978.

TABLE 1

Annual per capita consumption of fish by form in Australia

<u>Fin fish</u>	<u>Kg.</u>	<u>% of total</u>
At home:		
Fresh	2.45	28.8
Fingers	0.55	6.5
Frozen (packaged)	0.25	3.0
Canned	1.54	18.1
Smoked	0.20	2.4
Other	<u>0.03</u>	<u>0.4</u>
Sub-total	5.02	59.2
from takeaway outlets	0.93	10.9
Eaten outside home	<u>0.62</u>	<u>7.3</u>
Total fin fish	6.57	77.4
<u>Shellfish</u>		
At home:		
Fresh	0.67	7.9
Frozen	0.08	0.9
Canned	0.10	1.2
Other	<u>0.12</u>	<u>0.2</u>
Sub-total	0.97	10.2
Total shellfish	1.91	22.5
Total fin fish and shellfish	8.5	100

Source: Calculated from: P.A. Consulting Services, A Consumer Survey - 1976-77, Department of Primary Industry, Canberra, March 1978.

The most important variables affecting fish consumption in Australia, apart from supply, are city of residence, income, occupation, household composition, age and educational level.\*

Although total consumption does not vary by ethnic origin some basic differences were noted: the fresh finger consumption was higher among British immigrants, while Greeks and Italians favoured fresh fish.

Although people between the ages of 15 and 39 ate more fish than older age groups it was also determined that there were more people under the age of 20 who never ate fish. In Sydney and Canberra the proportion of seafood consumed in restaurants was particularly high.

Canberra residents dined out more frequently, had higher incomes and a greater proportion of households with more than one income earner. In Sydney the amount eaten at home equalled that eaten when dining out.

For all fish and shellfish, consumption went from 8.39 kilograms per capita for persons earning under \$4 000 to 12.51 kilograms for those earning \$18 000 and more. For consumption outside the home and for canned shellfish and fresh and smoked fish, high incomes are associated with high consumption patterns. Fish fingers are eaten more by lower and middle income groups. (Table 2).

---

\* The information in this section is taken largely from : P.A. Consulting Services A Consumer Survey 1976-77, Department of Primary Industry, Canberra, March 1978.

Adult males eat considerably more fish and shellfish than other groups, a fact attributed to the frequency of eating out and buying from takeaway outlets. They also consumed more convenience food such as fish fingers and frozen packaged fish. The largest grouping of households, adult men and women with no children, were also relatively large consumers of fish and shellfish. Couples with children recorded relatively low average consumption except for fish fingers.

## 2. Trends in Consumption of Fish Products to 1985

The estimated consumption of fish in Australia rose by 8% between 1974-75 and 1975-76. Consumption per person rose another 6% in 1976-77 and trends in imports and market data suggest there was a further increase in 1977-78.\* Applying a rate of increase in per capita consumption of 6% per year it is estimated that consumption will reach 210 000 tonnes by 1985 - an increase of just over 90 000 tonnes in eight years (Table 3).

Consumption is increasing most rapidly in the institutional and catering sectors and in 1979 they used 15 000 tonnes of fish, 53% of which was imported.

---

\* Source: Fisheries Division, Department of Primary Industry, Australian Fisheries, February, 1979, p. 49 Canberra.

TABLE 2  
Australia Annual per capita consumption of fish and seafood: by total household income all capital cities.

	Not Known	Under \$4 000	\$4 000- \$5 999	\$6 000- \$7 999	\$8 000- \$9 999	\$10 000- \$11 999	\$12 000- \$14 999	\$15 000- \$17 999	\$18 000 and over
	kg	kg	kg	kg	kg	kg	kg	kg	kg
<u>Fin fish</u>									
Fresh	3.04	2.84	3.16	2.89	2.47	2.65	2.88	2.74	3.31
Fish fingers	0.64	0.43	0.73	0.76	0.82	0.74	0.57	0.51	0.61
Frozen packaged	0.36	0.34	0.15	0.16	0.29	0.37	0.31	0.29	0.36
Tinned	1.72	1.73	1.78	2.00	1.60	1.88	1.81	1.61	2.21
Smoked	0.30	0.29	0.18	0.15	0.25	0.28	0.14	0.19	0.34
Other	0.03	0.03	0.05	0.05	0.02	0.06	0.03	0.06	0.03
Sub-total	6.09	5.66	6.05	6.01	5.45	5.98	5.74	5.40	6.86
From takeaway outlets	0.95	0.80	0.68	1.05	1.13	1.26	1.43	1.50	1.12
Eaten when dining out	0.46	0.69	0.64	0.53	0.74	0.65	1.15	1.06	1.04
Total fin fish	7.50	7.15	7.37	7.59	7.32	7.89	8.32	7.96	9.02
<u>Shellfish</u>									
Fresh	0.81	0.52	1.11	0.71	0.79	0.72	0.56	1.03	1.13
Frozen	0.03	0.08	0.06	0.04	0.04	0.10	0.26	0.10	0.09
Tinned	0.08	0.04	0.16	0.08	0.15	0.12	0.12	0.13	0.23
Other	0.02	0.01	-	0.02	0.04	0.01	0.03	-	0.04
Sub-total	0.94	0.65	1.33	0.85	1.02	0.95	0.97	1.26	1.49
From takeaway outlets	0.59	0.33	0.61	0.21	0.90	0.66	0.35	0.51	0.64
Eaten when dining out	0.33	0.26	0.50	0.62	0.81	1.15	0.87	0.26	1.36
Total shellfish	1.86	1.24	2.44	1.68	2.73	2.76	2.19	2.03	3.49
Total fin fish and shellfish	9.36	8.39	9.81	9.27	10.05	10.65	10.51	9.99	12.51

Source: P. A. Consulting Services, A Consumer Survey - 1976-77, Department of Primary Industry, Canberra, March 1978.

The catering market comprises of restaurants, fast food chains, mass caterers, hotels and clubs, while the institutional market includes hospitals, canteens, educational establishments and social institutions. Cod and hake account for most of the fish used but flounder, gemfish, snapper and barramundi are important. Frozen imported fillets of hake or flounder are suitable for institutional needs. Use of Australian fish is limited, apparently because it is more expensive, and supply fluctuates considerably.\*

There has been a steady increase in the quantity and value of food eaten outside the home in past years. It is associated with greater affluence, changing lifestyles and greater mobility. Takeaway outlets are expanding rapidly but fish encounter increasing competition from poultry and meat, a factor that encourages use of cheaper imported fish. Imported fish is also reported to be more uniform in quality and supply. The more expensive restaurants appear to serve mainly fresh fish but imported fish dominate the lower end of the market for small cafes, self-service cafeterias, etc. Currently about 18% of food expenditures in Australia are for items prepared outside the home, while in the United States the proportion is one-third, suggesting that the trend will continue. In Australia as in the US, fast food outlets selling mainly fish are increasing sales because of marketing techniques coupled with consumer concern about nutrition and a desire for a change in diet.

There is also considerable scope for increasing consumption of fish in the home. Current levels are low, despite the fact that canned fish consumption has grown significantly in the past decade. Canned tuna consumption, the fastest growing item, has doubled because of rising incomes and promotion efforts such as demonstrations and distribution of recipes. Even so, there is still room for more intensive promotional activity.

---

\* Fisheries Division, Department of Primary Industry, Australian Fisheries, December, 1979, p. 34.

TABLE 3

Projected consumption of fish & shell fish products in Australia, 1977-85.

---

	<u>Population*</u> <u>(millions)</u>	<u>Projected</u> <u>Per Capita</u> <u>Consumption(Kg.)</u>	<u>Projected total</u> <u>Consumption(tonnes)</u>
1977	14.1	8.5	119 850
1978	14.3	9.0	128 700
1979	14.4	9.5	136 800
1980	14.6	10.1	147 460
1981	14.8	10.7	158 360
1982	14.9	11.3	168 370
1983	15.1	12.0	181 200
1984	15.3	12.7	194 310
1985	15.6	13.5	210 060

---

\* Source: Australian Bureau of Statistics, Projections of the Population of the States and Territories of Australia, 1978-2011, Catalogue No. 32140, Service C, P. 11.



## C. SUPPLY

### Current and Expected Supply Picture to 1985

#### 1. Domestic Harvest

The waters adjacent to Australia contain 2 000 or more species of fish but only about 10% of these have been of commercial importance. In 1977-78, 123 000 tonnes (live weight) of fish were landed, valued at \$217 million. In 1972-73 the quantity landed was nearly the same but the value was 56% less (Table 4). The 1978-79 value of fish landings increased by 16% from 1977-78.

##### a) Shellfish

Prawns and rock lobster are the two most important species harvested followed by oysters and scallops. The main types of prawns caught in Australian waters are the banana prawn, western king prawn, eastern king prawn, brown tiger prawn, school prawn and the green tail prawn. The banana prawn Penaeus is the most abundant. In 1978-79, the total prawn catch was reported at 21 500 tonnes (live weight) - 12% more than the previous year and worth \$97 million to fishermen - up 37%.

Australian rock lobster species are the western rock lobster, the southern rock lobster and the bay lobster. In 1978-79, the catch was reported to be a record 15 700 tonnes valued at \$77 million.

The two most common types of oysters are the Sydney rock oyster and the Pacific or Japanese oyster. The rock oyster is small, very tasty and found in the waters off New South Wales, Queensland and Victoria. Production has been enhanced significantly through farming techniques. Oysters are marketed alive and eaten mainly fresh on the

shell. The Pacific oyster was introduced to waters off Tasmania in 1947, and since then wild stock have spread and been moved to Victoria and South Australia. These oysters are not as tasty as Sydney rock oysters but are popular in prepared dishes. The oyster harvest was worth about \$10 million in 1978-79 - mostly from New South Wales.

The scallop fishery is made up of the species Pectenalba and Amusium Balloti found off Western Australia, South Australia, Victoria, Tasmania and New South Wales. The first variety called commercial scallop, attain a shell length of about 13 centimeters, while the second type (saucer scallop) grow to a maximum of 11.5 cm., although sizes of up to 18 cm. have been found. Scallop landings in 1978-79 were 8 500 tonnes valued at \$4.6 million.

Abalone species caught are made of greenlip and blacklip. The greenlip are found along the south coast of Australia and Tasmania. The blacklip are most prolific off Tasmania, Victoria and South Australia, extending into the waters of Western Australia and New South Wales. The meat from the foot is a delicacy in the Orient and used as an ingredient in soups and other dishes.

b) Wet Fish

Wet fish production in 1978-79 amounted to 47 400 tonnes. The highest landed value in this category was for shark, with the most important varieties being gummy shark and school shark. Gummy shark are found off South Australia, Queensland and Western Australia, and grow to about 160 centimeters. The flesh is boneless, flaky and of good texture, with a distinctive flavour. School shark are found in the same waters as gummy shark. They grow to 175 centimeters and 75 kilograms. Like gummy shark the flesh is boneless and is commonly consumed when battered and deep fried. Shark is marketed in fillet form as "flake."

In value terms, the next most important species are King George whiting Sillaginodes Punctatus and school whiting Sillago Bassensis found along the coast of New South Wales, Victoria, South Australia and Western Australia. The flesh is white and fine-textured.

A new fish to the Australian industry called gemfish Rexea Solandri is thought to be plentiful off the coast of New South Wales and Victoria. In 1979/80 landings of this species attained a record landing of 7 000 tonnes. It was first harvested commercially in 1973 and at that time was called hake, but the name was changed when it was confused with foreign hake, which is a different species. Gemfish produce thick white fillets and are consumed grilled, baked, smoked or fried. The meat is moderately fatty and firm enough for processing, with a yield in fillets of 60%. This fish sells at a relatively low price.

Another significant wet fish landing is mullet. Two varieties are common - the sea mullet and the yellow-eye mullet, which are widely distributed along the east and west coasts, off South Australia and Tasmania. The flesh of this fish is of reasonable quality and comparatively cheap. Smoked roe is considered a delicacy.

The snapper caught in Australian waters are the Chrysophrys Auratus species found off all of the states. These fish can grow to 125 centimeters and weigh as much as 20 kilograms. The flesh is white and firm but the larger fish tend to be coarse and dry. Another variety called morwong or silver bream is found off Western Australia, South Australia, Victoria and New South Wales.

Tiger flathead are caught along the coast of New South Wales, Victoria and Eastern Tasmania. These are popular white fleshed table fish which are marketed fresh and ungutted.

Australian salmon Arripis Trutta is not a true salmon but a variety of sea perch, found in waters around South Australia. A western sub-species feeds mainly on small fish such as pilchards and

grows to about 80 centimeters and 8.5 kilograms while the eastern variety feeds mainly on plankton (such as krill) and is seldom found to grow over 4 kilograms. Australian salmon is used primarily for canning. This product is low priced compared with tuna or Pacific salmon and is used mainly in preparing casseroles and salads.

A very popular variety of bottom fish in Australia is the john dory Zeus Faber found in Western Australian waters and those of New South Wales. These fish grow to 60 centimeters and 2.5 kilograms and have a white flesh.

There are many other varieties of fish landed commercially in Australia such as coral trout, trevally, flounder, mulloway, barramundi, and redfish. Australian waters support a very great variety of species but not in the extremely large quantities found in the temperate waters off North America and Europe.

c) Tuna

The major tuna resource in Australian waters is the southern bluefin, Thunnus Maccoyii which is found off South Australia. The fresh raw flesh is popular in Japan as sashimi but in Australia is used mostly for canning. These fish mature at about eight years and grow to as much as 350 kilograms in weight.

Skipjack tuna Katsowonus Pelamis also known as bonito, are thought to be present in substantial quantities, but have not been fished, to any extent, by Australian fishermen. Other tuna varieties (northern bluefin and yellowfin) are also present but not in significant quantities. Tuna landings increased in 1977-78 to more than 12 000 tonnes from 10 000 tonnes in 1976-77 but declined again in 1978-79 to the 11 000 tonne level valued at \$5.3 million.

The Australian fishing industry, by state, is described in Appendix III. Appendix I explains the key institutions affecting fishery policy.

TABLE 4  
Quantity and value of recorded catch by principal types, Australia: 1971-72 to 1978-79

	(tonnes liveweight)								Value (\$'000)							
	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79
<b>Fish</b>																
Tuna	10 237	13 422	9 700	11 082	10 674	9 941	12 291	11 266	3 111	4 736	3 608	3 349	3 244	4 404	5 564	5 316
Mullet	4 705	5 316	6 071	5 999	6 255	5 776	5 991	5 600	1 399	1 686	1 792	2 076	2 791	2 798	3 001	3 396
Australian salmon	5 246	3 482	4 513	5 178	3 510	4 028	3 098	2 390	795	584	798	1 065	1 020	1 232	1 149	993
Snapper	1 770	1 678	1 691	2 190	1 842	2 123	2 075	2 045	1 160	1 317	1 431	2 860	2 669	3 425	3 511	3 939
Morwong	1 179	1 330	1 342	1 415	1 815	1 599	1 593	1 447	388	498	605	941	1 416	1 380	1 373	1 356
Flathead	2 390	1 707	1 645	2 848	2 117	2 018	1 958	2 169	994	796	778	1 630	1 584	1 555	1 579	1 896
Shark	7 310	2 897	4 232	4 773	6 320	6 718	7 899	7 452	2 597	787	1 459	2 640	3 820	6 466	8 599	8 465
Whiting	1 852	1 730	1 762	2 265	2 853	2 720	2 164	2 566	na	2 041	2 069	3 190	4 385	4 362	4 726	6 969
Gemfish	5	3	469	656	748	na	na	na	na	na	na	na	na	na	na	na
All other species	22 308	27 698	34 322	21 014	18 839	24 331	25 720	28 460	8 189	10 884	13 794	12 232	14 620	13 193	23 276	15 575
<b>Total fish</b>	<b>57 002</b>	<b>59 263</b>	<b>65 747</b>	<b>57 420</b>	<b>54 973</b>	<b>59 254</b>	<b>62 789</b>	<b>63 395</b>	<b>8 633b</b>	<b>23 329b</b>	<b>26 334b</b>	<b>29 983</b>	<b>35 549</b>	<b>38 815</b>	<b>52 778</b>	<b>47 905</b>
<b>Crustaceans</b>																
Prawns	17 915	16 757	24 491	16 327	19 478	23 039	19 166	21 479	19 800	23 122	29 757	24 682	39 964	66 065	71 256	100 648
Rock lobster	13 085	13 005	11 830	12 265	12 865	12 700	14 588	15 358	33 529	30 332	29 043	29 933	42 246	57 223	65 915	73 624
Crabs	573	647	702	712	700	821	854	782	543	682	821	1 037	1 261	1 673	1 991	2 051
Freshwater crayfish	136	113	295	184	131	83	33	21	95	95	288	302	215	175	71	68
<b>Total Crustaceans</b>	<b>31 709</b>	<b>30 522</b>	<b>37 318</b>	<b>29 488</b>	<b>33 174</b>	<b>36 643</b>	<b>34 641</b>	<b>37 640</b>	<b>53 967</b>	<b>54 231</b>	<b>59 909</b>	<b>55 954</b>	<b>83 685</b>	<b>125 139</b>	<b>139 237</b>	<b>176 391</b>
<b>Molluscs</b>																
Oysters	10 434	9 202	10 479	8 908	10 273	10 793	9 774	8 128	6 022	6 838	6 657	6 197	10 986	12 998	9 774	8 128
Scallops	10 148	16 953	12 425	6 062	4 642	4 431	9 307	10 548	3 096	5 728	3 245	1 884	1 792	1 990	9 367	10 548
Abalone	7 958	6 439	6 032	4 971	5 256	6 320	5 057	6 197	5 240	4 872	5 481	4 923	6 760	11 354	5 057	6 197
Other	939	494	425	1 444	1 648	998	1 379	1 794	223	174	170	334	543	705	1 379	1 794
<b>Total Molluscs</b>	<b>29 479</b>	<b>33 088</b>	<b>29 361</b>	<b>21 385</b>	<b>21 819</b>	<b>22 542</b>	<b>25 517</b>	<b>26 667</b>	<b>14 581</b>	<b>17 612</b>	<b>15 553</b>	<b>13 338</b>	<b>20 081</b>	<b>27 047</b>	<b>25 577</b>	<b>26 667</b>
<b>Total Fish, Crustaceans and Molluscs</b>									<b>77 181</b>	<b>95 172</b>	<b>101 796</b>	<b>99 275</b>	<b>139 315</b>	<b>191 001</b>	<b>217 592</b>	<b>250 963</b>

(a) Prior to 1974/75 much of the data relating to individual fish types is incomplete. For example, in 1972/73 and 1973/74, data for Victoria are included in "Total" only. For some other types, data for some States are included in "All other species." Refer to ABS' "Fisheries", Reference 10.8 for average of these data.

(b) Includes value of seaweed harvested in Tasmania.

(c) Includes bay lobster.

n/a Not available separately. Included in "All other species."

SOURCE: ABS, "Fisheries", Catalogue No. 7603

## 2. The Fishing Fleet and Fish Processing Industry

### a) The Fishing Fleet

In 1977-78 there were 10 920 fishing vessels operating off Australia, half of which were under six metres in length. Only 6% were more than 26 metres long. Total value was more than \$250 million. However the number of operating vessels fluctuates each year: only 9 110 vessels were recorded in 1975-76. The most recent available statistics show that 19 000 people were employed on fishing vessels. The limited-entry fisheries<sup>1</sup> record 800 vessels licensed in Western Australia and 900 vessels in South Australia and Tasmania. These vessels catch mainly rock lobster. The northern prawn fishery has 280 vessels and there are a further 800 prawn trawlers in Queensland. Abalone diving licences are authorized for 200 vessels.

### b) Fish Processing Plants

A total of 150 fish processing plants are registered in Australia, of which 80% process less than 1 000 tonnes a year. Most plants employ casual labour and are engaged primarily in shellfish and prawn processing.

Other operations include canning tuna and Australian salmon and, to a lesser extent, the production of fresh and frozen fillets, smoked fish paste and fish meal.

Canned fish production has doubled since 1957-58. In that year, Australian salmon accounted for about two-thirds of the 3 563 tonnes of canned fish produced. By 1977-78, this proportion had declined to about one-fifth of the 8 077 tonnes produced (Table 5). Tuna is now the main fish canned.

---

1. It is reported that accurate statistics on the number of vessels are kept only for limited-entry fisheries.

TABLE 5  
Fish processing in Australia, 1975-76 to 1977-78 (a)

Product(c)	1975-76(b)	1976-77(b) (tonnes)	1977-78(b)	1978-79
Fish Preserving:				
Fish used-				
Shellfish	1 019	1 291	1 124	1 376
Other-				
Whole	16 121	11 230	14 797	12 791
Headed and/or gutted	451	954	789	725
Production -				
Smoked fish	609	708	767	701
Fish paste				
Canned or bottled shellfish	1 032	1 400	787	937
Australian salmon (canned)	1 591	1 477	1 560	1 459
Other canned fish (incl. fish loaf, cake, etc.)	5 833	4 715	6 517	5 989
Other fish processing:				
Fish meal production	894	1 200	1 047	937

- (a) Figures in this table include the production of only those establishments classified to the manufacturing sector. As a result, the production of bottled oysters, for example, has not been included.
- (b) All manufacturing establishments owned by multi-establishment enterprises and single establishment manufacturing enterprises with four or more persons employed.
- (c) Does not include fresh.

Source: Australian Bureau of Statistics, Fisheries 1977-78, Catalogue No. 7603, P. 21.



Processing of crustaceans and molluscs mainly involves freezing and/or cooking. Very little is canned (only 3 percent from 1970-71 to 1976-77). Rock lobsters are processed as frozen tails, whole cooked and frozen, and as cooked and frozen meat. Most is in the form of frozen tails for export. Prawns are processed into frozen, cutlets, whole cooked and cooked meat. The domestic market absorbs most of the cooked prawns, while most of the frozen headless prawns are exported. Abalone is the main type of canned mollusc and it is processed into frozen and dried forms. Most scallops are frozen.

The product table below does not include non processed production such as fresh fish and excludes the production by very small operations. When total fish production is calculated from consumption, the total product weight is 86 000 tonnes (1977-78). This processed weight could increase by about 60 000 tonnes by 1985, providing the underutilized resources in the Australian 200-mile zone, are exploited to a greater extent.

### 3. Imports

In 1978-79 Australia imported \$125 million worth of edible fish products including 24 067 tonnes of fresh chilled, frozen products, 4 713 tonnes of smoked, salted or dried products and 12 564 tonnes of canned products. The value of imports is up from \$69 million in 1975-76 to \$118.8 million in 1977-78 (Table 6).

Imports listed in order of value in 1978-79 were fillets at \$26 million, followed by prawns at \$15 million, canned salmon at \$14 million, fish fingers at \$10 million, canned sardine silds etc. at \$6 million.

It has been estimated that the quantity of fish imports increased at an annual rate of nearly 2%. The main countries supplying fish to Australia in 1978-79 were Japan at \$14.6 million, the US at \$14.4 million, Malaysia at \$11.4 million, New Zealand at \$11.0 million, the UK at \$10.9 million, Canada at \$10.4 million and Norway at \$8.1 million.

TABLE 6  
Australian imports of edible fisheries products, 1975-76 to 1977-78

	Quantity (tonnes)				Value (\$ 000 fob) <sup>1</sup>			
	1975/76	1976/77	1977/78	1978/79	1975/76	1976/77	1977/78	1978/79
<u>Fresh or frozen</u>								
Fish fillets/skinned/boned sliced/etc	17 097	17 255	17 406	16 643	16 423	21 419	25 829	25 893
Fish whole or headed	2 232	2 937	3 420	4 509	2 121	3 118	3 471	5 407
Prawns and shrimps	1 330	616	504	1 899	4 768	3 450	2 977	10 744
other shellfish	885	1 371	953	1 016	1 844	3 416	2 542	2 935
<u>Boiled</u>								
Lobster	220	328	165	101	769	1 515	1 022	581
Other crustaceans	139	141	105	276	487	800	496	1 452
<u>Prepared or preserved</u>								
Smoked fish	3 165	4 060	1 970	3 493	4 094	6 154	4 477	7 057
Fish fingers & sticks	5 428	6 939	5 338	5 118	6 310	9 929	9 919	10 164
Salted fish	301	493	405	1 022	397	896	1 009	2 234
Salted shellfish	116	95	187	61	208	312	389	165
Dried fish	44	100	87	70	153	387	401	364
Dried shellfish	17	33	55	67	77	258	491	593
<u>Canned</u>								
Herring	1 210	1 594	1 178	1 049	1 428	1 929	1 966	2 093
Salmon	3 279	5 980	6 726	4 016	7 726	19 498	22 203	13 812
Sardines, sild etc.	3 079	2 333	3 244	2 559	4 550	4 475	7 382	6 383
Tuna	213	655	1 529	1 520	343	1 399	3 507	3 013
Other fish	1 167	2 140	2 554	1 491	1 687	3 406	4 162	2 441
Shrimp & prawns	297	428	570	884	641	1 177	1 756	3 855
Crabs	127	225	224	231	491	1 020	949	1 100
Oysters	184	172	186	58	214	299	514	174
Other shellfish	821	1 222	1 277	756	1 807	3 083	3 802	2 293
<u>Potted or concentrated</u>								
Fish	126	111	106	90	338	380	458	452
Shellfish	16	48	35	38	52	382	404	425
<u>Other prepared or preserved</u>								
Fish	185	307	266	326	190	406	493	507
Shellfish	4 028	4 656	3 524	2 768	9 900	15 069	12 122	14 594
<b>Total</b>	<b>45 706</b>	<b>54 239</b>	<b>52 014</b>	<b>50 061</b>	<b>67 018</b>	<b>104 177</b>	<b>112 741</b>	<b>118 731</b>

1. The figures from 1976-77 and subsequent years may not be comparable with those for previous years.  
SOURCE: Australian Bureau of Statistics, Fisheries 1977-78, and 1978-79 Catalogue no. 7603, p. 30.

The main opportunities in this market for substituting Canadian fish for products imported from other countries appear to be presented by canned salmon, frozen fillets and fish fingers, shellfish along with smoked and cured products.

Canned imports are mainly salmon (more than 50%) sardines, tuna, and herring, which come principally from Japan, Canada, the US, the UK and Norway. Australian salmon and tuna provide some competition to canned imports but the domestic salmon catch is near the maximum. Tuna production could expand in the future - especially skipjack off Western Australia, and this could cause competition for imported tuna and pink salmon.

Canned salmon imports from Japan have declined sharply since 1977, with the near phase-out of production in that country. Japan's canning industry has encountered severe shortages of supply, resulting from reduction in salmon catches after the US and USSR extended their fishing jurisdictions. Australian imports of canned salmon from the US, USSR and Canada have increased sharply. Canada could supply a larger share of the market if a larger pack were produced.

All fish fingers consumed in Australia are imported, and the main suppliers are the UK, South Africa and Norway. South African fingers are mostly hake while the European are mainly cod. Imports of hake fingers are increasing. The ideal species for fish finger production is a large fish of white, not too oily flesh, with few bones, such as Northern Hemisphere codfish. Australian species are not used because of the incontinuity of supply and cost factors caused perhaps by the lack of large fish filleting plants and the bony nature of Australian fish. Furthermore most Australian species produce an inferior product for fish fingers. The flesh is dark coloured and of poor flavour (e.g. mullet).

In the frozen fish category, the largest import item is hake from Japan and South Africa. Other important species are turbot from Japan, whiting and bream from the UK and snapper and john dory from New Zealand. Hake and turbot have offered a reliable and cheaper alternative to Australian fish.

Cured fish imports are mainly of smoked fish with the larger packs consisting of such products as smoked cod, haddock, herring and salmon.

About two thirds of the crustaceans and molluscs imports are prawns or prawn meat, mainly from low cost producing countries such as India, Indonesia, Malaysia and Thailand. Other imports, such as rock lobster from Cuba and scallops from New Zealand, are generally seasonal, to supply unfilled local demand. Recently more higher priced shellfish such as crab and prawns are being imported (see Appendix V for Canadian exports to Australia).

#### 4. Exports

The main marine products exported from Australia are molluscs and crustaceans with frozen rock lobster tails and prawns the most important items, followed by canned and frozen abalone. Non shellfish exports are very insignificant consisting mainly of frozen and canned tuna (Table 7). The value of exports has increased markedly in recent years, from \$136.4 million in 1976-77 to \$194.1 million in 1978-1979. The quantities exported have remained stable at between 15 000 and 17 000 tonnes. Nearly 90% of the rock lobster catch is exported, mainly as frozen tails, and the major export market is the US. About 50% of the prawn catch is exported either in frozen or canned form, mainly to Japan. Abalone is exported to France and the US. Export markets absorb less than 5% of the value of oyster production. The major markets are Hong Kong, Papua New Guinea and Singapore.

TABLE 7  
Australia: Exports of edible fisheries products

	Quantity (tonnes)			Value (\$000 fob)		
	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79
AUSTRALIAN PRODUCE						
Fresh chilled or frozen-						
Fish whole or beheaded-						
Fresh or chilled excluding fillets			73			79
Frozen, excluding fillets						
Tuna			1 858			1 529
Whiting	5 568	2 868	464	4 092	2 692	418
Other			739			1 170
Fish fillets -						
Fresh or chilled			12			25
Frozen			86			451
Crustaceans and molluscs-						
Abalone	928	1 514	1 839	5 056	7 158	9 960
Oysters (a)	173	185	50	177	237	96
Rock lobster -						
whole	203	354	312	1 275	2 610	2 574
tails	4 982	4 604	4 649	56 580	55 728	56 787
Prawns and shrimps-						
Headless	4 540	4 822	4 779	34 303	38 529	49 496
Other-						
Whole	2 173	2 261	4 162	14 127	15 952	38 947
Other (incl. prawn cutlets, prawn meat)	1 046	406	386	4 413	2 738	3 722
Scallops	120	548	926	372	2 254	4 694
Other	1	5	57	5	22	102
Boiled in water-						
Crustaceans and molluscs-						
Rock lobster, whole	152	706	1 386	986	5 027	11 067
Prawns and shrimps-						
Headless	47	127	209	317	1 045	898
Other	21	21	45	114	106	304
Other	-	3	91	1	21	883
Prepared or preserved-						
Fish -						
Salmon	4	7	10	10	29	31
Tuna	67	15	18	92	38	46
Other	118	163	83	318	241	358
Crustaceans and molluscs-						
Abalone	1 836	1 305	1 109	12 776	8 457	7 045
Other	83	64	223	322	307	1 573
Total	--	--	--	135 336	143 191	192 255
RE-EXPORTS						
Total	--	--	--	1 111	1 275	1 874
TOTAL	--	--	--	136 447	144 466	194 129

(a) Quantity measured in thousand dozen  
Source: ABS, "Fisheries" Catalogue No. 7603

## 5. The Australian Fishing Zone

### a) Foreign Access

On November 1, 1979, the Fisheries Amendment Act 1978 came into effect, creating the 200 mile Australian Fishing zone (AFZ) within which foreign fishermen have to be licensed and comply with terms and conditions of access. It had been preceded by negotiations with nations whose own zone overlapped the proposed AFZ. Australia also with other South Pacific nations in the South Pacific Forum Fisheries Agency, established in September 1979. For more details see Appendix II. Australia determines total allowable catches, the amount of the allowable catch to be taken by Australians and the allocation to foreign countries of any available surplus. Allocations to foreigners will be reduced as Australians develop the necessary capacity to operate in those fisheries. Foreign boats allowed to fish in the zone do so under three types of arrangements - bilateral agreements, feasibility fishing, and commercial joint ventures.

It is expected that most foreign fishing will be under bilateral agreements. However, the Australian government has approved a number of feasibility fishing ventures involving Australian companies and interests from Japan, the Republic of Korea, the US and Poland. They are intended to assess the extent and commercial viability of harvesting unknown or little known resources in the AFZ and they are limited to two years with the participants not entitled to any exclusive rights in any fishery that may develop. The intention is to provide a relatively low cost means of evaluating offshore fishery resources. Feasibility projects have involved trawling, squid fishing and purse seining for tuna. Nine of these projects involving 68 foreign squid vessels, have been authorized to operate off South Australia, Victoria and Tasmania in 1980. Where appropriate, a certain percentage of the fish caught is available for sale to Australian interests to develop new products either for processing to replace imports or to develop new export products.

In view of the long established presence of Japanese fishing vessels in waters off Australia, negotiations on access commenced with the Japanese

government. An agreement is to be concluded (The Head Fisheries Co-operation Agreement) which will remain in force for a minimum of two years, providing the basis for future fisheries relations with Japan involving access for tuna longline vessels, and related matters. The Japanese have agreed to pay an access fee of \$1.4 million, which will include their vessels' licence fees, and to continue technical assistance that began in 1976 for the benefit of the Australian fishing industry. In addition, the Japanese government has provided certain assurances on access to the Japanese market for Australian fish and fish products. Details of the agreement are yet to be accepted by both governments.

The market access negotiations have not been intended to guarantee that Australian products will be sold in Japan, but to ensure that if products meet the country's standards, Australians will have the opportunity to compete equally with others and not be shut out by tariff or non tariff barriers. The two markets of importance to Australia are for tuna and squid.

Talks have also been held with Taiwanese commercial interests concerning access for trawlers and gillnetters to waters off the north and northwest of Australia. The Taiwanese represent the only other substantial foreign fishing presence within 200 miles of Australia. As Australia does not recognize Taiwan, discussions have been held with Taiwanese fishing interests and their Australian agents.

Altogether, 150 Taiwanese vessels - 120 pair trawlers and 30 gillnetters - were allowed to fish the Australian zone in 1980, with an allowable catch of 34 500 tonnes, and having a specific quota on each vessel. All pre-fishing inspections and issuing of licences is done in Darwin. Once a vessel has taken its quota, it must enter one of the four scheduled ports (Darwin, Port Hedland, Fremantle or Thursday Island) for a post-fishing inspection before leaving the AFZ.

Negotiations have also been held with the Republic of Korea concerning a head fisheries co-operation agreement and arrangements for access to fisheries not exploited by Australians.



By early 1980 joint feasibility fishing projects had been approved with a Korean company for two vessels to trawl off Western Australia and with an American company for one vessel to purse seine for tuna off the west coast. Two other Korean ventures involved six vessels for squid jigging off the western coast, and two Polish vessels had been approved for trawling off Victoria, South Australia and Tasmania.

The AFZ gives Australia control over a vast area of ocean equivalent in size to the country itself because of the 23 000 miles of coastline (see Figure 1). However, the zone has abundant fish resources only in specific areas, since Australian waters are not as conducive to massive single species resources as are the temperate waters of the Northern Hemisphere.

Existing Australian fisheries are nearly all conducted within the 12-mile zone on the continental shelf. Offshore stocks have only been exploited only by foreign fleets. Japanese fishermen have been harvesting southern bluefin tuna within and beyond the 200 mile zone with a fleet of up to 350 vessels. The catch within 200 miles is around 10 000 tonnes per year. Some marlin and sail fish are also taken.

Since the early 1970s, Taiwanese fishermen have been operating, mainly off northern and northwestern Australia, with pair trawlers and gillnetters. In 1976, 300 vessels were operating and it is estimated their total catch was 75 000 tonnes.

Indonesian fishermen have operated in a fairly restricted area in the northwest of Western Australia, with a negligible catch.

#### 6. Projected Resource Availability

In South Australian waters there are shelf areas supporting a mixture of fish species similar to those already exploited by Australian fishermen. They provide opportunity for additional exploitation in the great Australian Bight and the Bass Strait regions. Species include morwong, redfish and swallowtails. The resource potential there is perhaps 7 000 to 10 000 tonnes, according to recent estimates.

In the north of Australia where the Taiwanese have been fishing, recent surveys have indicated an abundance of pelagic and demersal fish. In the pelagic category, schools consist mainly of Indian mackerel, and northern pilchard Sardinella la Sirm, although several species of clupeod (herring-like) fish are also present. In the demersal category, 276 species have been tentatively identified, including gummy shark, john dory, murrion dory, ghost shark, star gazer and armoured gurnoid. Shelf catches were mainly sea perch, emperor threadfin, trevally, lizard fish, and goat fish. Most of these fish are generally unfamiliar to the Australian market but are good table fish.

There is little scope for increasing landings significantly from the AFZ off Queensland but the waters off New South Wales present limited opportunities for demersal species such as gemfish. Estimates of 10 000 tonnes per year have been made.

Stocks of southern bluefin tuna are found throughout Southern Australia waters but are thought to present little or no opportunity for expansion. Skipjack tuna is thought to be present, and it is believed an annual landing of over 25 000 tonnes could be possible. These species could be parts of one or more populations that may range over large areas of the Indian and Pacific oceans. Northern bluefin tuna is sporatically abundant across Northern Australian waters. The annual potential is probably not significantly above 5 000 tonnes. Yellowfin tuna (the largest component of the world tuna catch) are taken only in very small numbers off Australia and are not very abundant.

Jack mackerel Trachurus Declivis, found in waters to the south of Australia, remains a significantly underutilized species. A conservative estimate of possible yield is 50 000 tonnes per year.

Large resources of barramundi or smock are thought to exist in northern waters, perhaps up to 30 000 tonnes, but the Australian catch has not exceeded 4 000 tonnes.

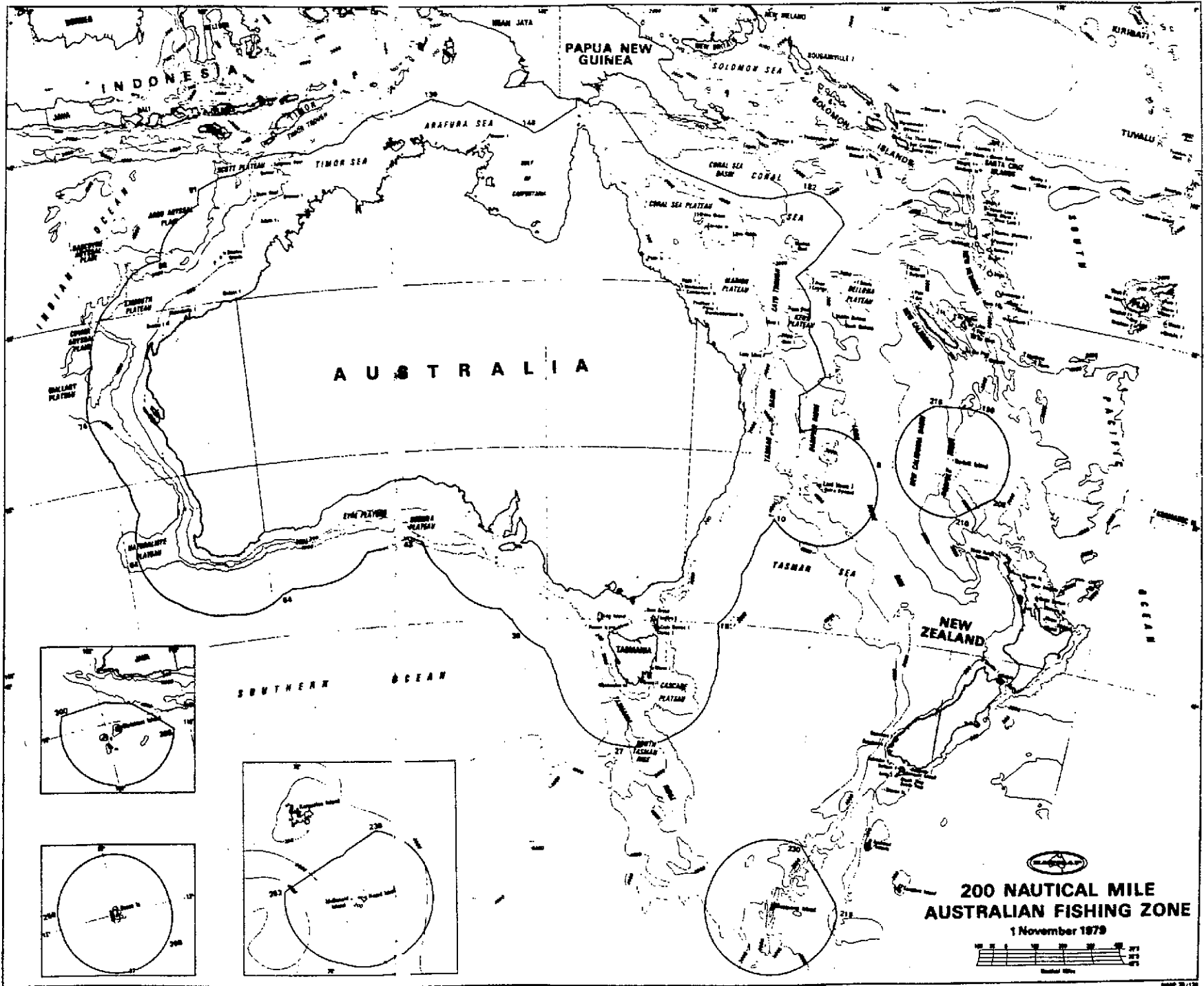
Pilchards and anchovies are seasonally abundant in some areas in the temperate and subtropical waters of the country, but it appears these species are unlikely to support a significantly larger industry.

Squid are thought to be plentiful in the Southeastern Australian (Basque Strait) waters and in the north in the Gulf of Carpentaria, but it is not certain what the size of these resources might be. Japanese vessels fishing in 1980 near Tasmania did not catch great quantities of the large (one kilogram) Notodarus Gouldi species. Another common variety of squid in shallower Australian waters is southern calamary Sepioteuthis Australis.

Lightfish and lanternfish are thought to be abundant off the southeast of Australia. This species, which can be caught by mid-water trawl, are taken in substantial quantities off South Africa and processed into fish meal.

There is also reported to be a sizeable stock of hake off Macquarie Island, which belongs to Australia but is 1 500 miles to the south. These fish could not be exploited by Australians with their existing fleet but could perhaps be fished by other countries with factory trawlers.

Figure 1



D. DEMAND-SUPPLY BALANCE

The production of fish (product weight) in Australia, based on the optimistic assumption that increased exploitation will take place on certain underutilized species in the AFZ, will be 146 000 tonnes by 1985-86. This is based on equal annual increments in production between 1977-78 and 1985-86 of 7 500 tonnes. It assumes that Australia will develop the fishing and processing capacity to harvest a sizeable quantity of the surplus identified in the waters off North and Northwestern Australia (currently fished by Taiwan) and that stocks in southern waters and those off New South Wales will be harvested. In addition a 12 000 tonne production of jack mackerel will be necessary along with a similar quantity of skipjack tuna. Furthermore the harvest of barramundi will have to expand significantly to meet this rate of production increase by 1985-86. These assumptions are perhaps overly optimistic, judging by the recent performance of the Australian fishing industry.

The consumption of fish in Australia based on a projection of the current annual increase of 6% will be 13.5 kilograms by 1985-86. The population at that time will have increased to 15.4 million, resulting in an apparent consumption of 210 000 tonnes.

The projected increase in production to 1985 will be made up of 50% products suitable for the domestic market and 50% for export. Therefore the import requirement can be expected to increase from 50 000 tonnes in 1977-78 to 108 000 tonnes by 1985-86 (Table 8).

TABLE 8  
Australian fisheries demand/supply balance, 1977-85 (000 tonnes)

<u>Year</u>	<u>Production</u>	<u>Imports</u>	<u>Total supply</u>	<u>Exports</u>	<u>Apparent consumption</u>	<u>Per capita consumption (Kg)</u>
77/78	86	50	136	16	120	8.5
78/79	93	55	148	19	129	9.0
79/80	101	59	160	23	137	9.5
80/81	108	66	174	27	147	10.1
81/82	116	73	189	31	158	10.7
82/83	123	79	202	34	168	11.3
83/84	131	88	219	38	181	12.0
84/85	138	97	235	41	194	12.7
85/86	146	108	254	49	210	13.5

Sources: ABS "Fisheries" Catalog No. 7603  
DFO Marketing Services.

## E. POTENTIAL TRADE

### 1. Market Potential for Canadian Exports

There is a trend apparent toward increasing Australian exports of higher valued shellfish, with a corresponding increase in imports of lower priced species. This trend could grow, as it appears that it would be easy to sell relatively cheaper shellfish such as squid and mussels on the Australian market.

Supply shortages are predicted for canned fish of Australian origin because of a diversion of tuna to overseas markets and insufficient resources of Australian salmon. Accordingly lower priced canned imports such as sardines and herring could find increased markets. Fresh and frozen fish offer a good potential for increased consumption but supply shortages have been cited as a problem for fresh fish. The increase in "one-stop" supermarket shopping augurs well for frozen packaged fish.

#### a) Pricing and Quality Considerations

The Australian market is receptive to imports of groundfish fillets - for small fish (skin on), and for large fish (skinless, bone-in). White fleshed fillets are required such as pollock, hake, whiting, cod, ocean perch and rockfish. Dogfish would be suitable, providing it met mercury tolerance requirements. The market is extremely price and quality conscious. For example, the hake currently imported is mostly frozen-at-sea from South Africa, priced at about US\$2.00 per kilogram. The market for the more expensive varieties is small. Groundfish block imports are normally in 7.5 kilogram or 8.11 kilogram packs with four in one master 30 kilogram carton. A 2 kilogram pack is desired for retail sales, while a 4.5 to 6.4 kilogram layer or shatter pack is desired for institutional use. A recent

joint venture between an Australian company and a Nova Scotian company involves the processing of fish fingers and battered fish portions, possibly from Canadian Atlantic pollock. Smoked products are in good demand in Australia. In the groundfish category, smoked cod, haddock and whiting are desired, packed in 6.8 kilogram boxes, interleaved.

Herring kippers are in demand providing they are smoked and dyed to UK specifications and colours since consumption has traditionally been of British products. Sardines and canned herring are also popular in Australia. Marinated herring could be sold in bulk - packed in 100 kilogram plastic barrels, or in small jars as rollmops or pickled herring packs.

In the shellfish category there is a potential for Canadian scallops and squid in 2.3 kilogram blocks. Squid consumption is increasing significantly in Australia. Lolligo squid has a good potential for restaurants and fish store outlets while illex is just starting to be used, for drying or for bait.

Sales of smoked salmon, mainly red spring, are significant. Reconstituted salmon was observed in a number of displays. Whole sides were packed in 13.6 kilogram cartons and sliced sides were packed in 11.3 kilogram cartons. Canned salmon is an important item ( both pinks and sockeye) in 112 gram cans, mediums and talls. Some salmon caviar (roe) was also being sold in small jars packed 40 to the carton. Frozen salmon would be a significant item if the ban on imports of this product were lifted. A promotional program would be of help to familiarize consumers with the product, after the ban is lifted.

Price quotations by a major Australian importer to wholesalers for various products are provided in Table 9. Importers commission would normally be from 3% to 5%.



TABLE 9  
Australia: Price offered to wholesalers for fish products  
imported, April 1980

<u>Product</u>	<u>Price</u> <u>\$/kg</u>
Whiting butterfly fillets (tail off) 8 x 2½ kg.	3.23
Whiting/haddock single fillet (2-4), (3-5), (5-8) ounce	4.25
Whiting fillet (I.Q.F.) (2-4) ounce	3.42
Haddock butterfly fillets (tail off)	3.23
Whiting fillets (breaded)	3.20
Flounder fillets (breaded)	3.12
Fish fingers 12 by 1 kg pack	3.82
Jumbo cod skinless 1½ 3 lb fillets I.Q.F. ind. wrapped 15 lb carton	4.57
Rock turbot skinless I.Q.F.	3.70
Smoked Shetland cod fillets 15 lb pack	4.04
Smoked green cod	4.57
Smoked haddock cutlets	4.42
Smoked golden whiting cutlets	3.52
Pollock I.Q.F.	3.81
Green cod I.Q.F.	4.08
Smoked skinless cod (Pacific) 1-2 lb, 15 lb carton	1.46
Smoked kipper fillets (Pacific) 10 lb pack.	1.35

Source: Fish Broker, Melbourne, Australia

b) Transportation Costs and Credit Arrangements

Freight costs from the west coast of Canada may be slightly more than from the east coast (Table 10) due to the number and volume of shipments to Australia from the east coast. Non-conference shipping lines have significantly lower rates but they present certain disadvantages such as non scheduled shipping times and last minute refusals. Freight rates from New Zealand, a major competing supplier are higher than from North America because one firm has a monopoly. Rates from the US are about 25% lower than from Western Canada.

Sight drafts are the primary form of payment used by Australian importers, except in dealings with Japan, when a letter of credit is normally used. A sight draft is a promissory note to pay for goods contracted for. The payment usually arrives at approximately the same time as the goods reach their destination. A letter of credit is basically a guarantee that the money will be paid providing all conditions of the letter are met.

TABLE 10  
Freight rates<sup>1</sup>: Canada to Australia (main ports), 1980

<u>Product</u>	<u>Base Rate</u>	<u>Currency Adj. Factor</u> (Canadian ¢ per pound)	<u>Bunker Sur Charge</u>	<u>Total Cost</u>
<u>Canada East<sup>2</sup></u>		7.34%	20%	
Canned (mackerel, pilchards, herring, sardines)	6.5	0.5	1.4	8.4
Salted, pickled in brine	10.8	0.8	2.3	13.9
Frozen herring	10.6	0.8	2.3	13.7
Fish fingers, fillets, sticks	11.7	0.9	2.5	15.1
<u>Canada West<sup>3</sup></u>				
Canned fish & seafood	9.3	none	1.6	10.9
Canned salmon & shrimp	8.5	none	1.4	9.9
Canned salmon special rate (Nov 15-Dec 31, 1980)	4.4	none	0.7	5.1
<u>Fish under Refrigeration:</u>				
VIS frozen squid	16.0	none	2.7	18.7
Fish/shell/N.E.S.	12.5	none	2.1	14.6
Fish/shell VIS:for crab	23.7	none	4.0	27.7
Fish/shell for shrimp	23.0	none	3.9	26.9
Fish container rate	20.9	none	3.5	24.4

<sup>1</sup> Does not include loading costs, insurance, terminal charges, reefer service or freight to and from plant to dock.

<sup>2</sup> Rates under the Eastern Canada/Australia/New Zealand Conference.

<sup>3</sup> a) Rates under the Pacific/Australia/New Zealand Conference

b) US \$ converted to Can \$ at 1.15.

Source: Freight tariffs filed with the Water Transport Committee, Canadian Transport Commission.

## 2. Market Entry Requirements and Barriers

Imports of fish products into Australia must comply with each state's legislation plus any quarantine or public health requirements of the Commonwealth Department of Health. The state regulations are not cumbersome in respect to quality or labelling and are similar to those of Canada. A certificate of health is the normal requirement. The mercury in fish remains a problem in some states. New South Wales enforces a 0.5 ppm along with Victoria, Western Australia, Tasmania and Queensland. South Australia has a limit of 1.0 ppm.<sup>1</sup>

A Commonwealth Government quarantine proclaimed in 1975 imposed strict controls over the import of live or dead salmonid fish and eggs, after an alleged incident of a disease (whirling disease) being imported into New Zealand with a salmonid. Despite a number of representations from Canadian officials to the Australian authorities explaining that the risks associated with importing dead fish or products are nearly non-existent (i.e. frozen or smoked salmon), the ban is still in place. There are indications that it may be lifted because the Australian Fisheries Council's committee on imports has been considering the technical position and a positive response is expected.

Trade between Canada and Australia is governed by mutual membership in the GATT and by the Canada-Australia Trade Agreement of 1960, which provides for the exchange of preferences on some goods. Nearly all fish products imported to Australia from Canada are duty free except for a level of 2% on fresh, frozen, salted, wine-d, dried or cooked shrimp and prawns. In addition there is a duty of 15% on canned tuna and 5% on fish balls, cakes, sausages and potted or concentrated crustaceans and molluscs. Australian customs tariffs on marine products are shown in Appendix IV.

---

1 South Australia first adopted this level in May 1975 following a National Health and Medical Research Council recommendation that the level enforced in Australia be reduced from 5.5 ppm to 0.5 ppm. The 0.5 ppm level was adopted by the Commonwealth Government and all Australian States except South Australia. South Australia, after a review, has confirmed the 1.0 ppm limits.

F. IMPACT OF THE AUSTRALIAN FISHING ZONE ON CANADIAN TRADE

1. Import Replacement by Australia

As explained previously, there is only a limited potential for further exploiting resources in the 200 mile zone of species similar to those consumed in Australia. The Australian Bight region and waters off the eastern coast offer resources suitable for the fast food business, but these are limited. The shark is limited in potential because of mercury content, while others such as gemfish, snapper, morwong and bream have low expected yields.

Although some Australian fish resources are considered sufficient to supply the market, catch and processing facilities are inadequate and not undergoing any significant development.

Australian caught species have not been used in fish finger production because continuity of supply is not reliable and the cost is relatively high. Production costs are high also, because the industry has not achieved economies of scale, and not enough of the species can be filleted mechanically. Also, Australian species tend to be very bony, and most of those in reasonable supply for finger production are inferior, with either a dark colour or a poor flavour.

If tuna catches by Australian boats increase as expected through expanded fishing for skipjack, there could be a substitution of domestic production for imported tuna (periodic and very small) and for canned salmon. However, it is thought more than likely that domestic and export demand would accommodate any increased production.

2. Exportable Surplus

The present exports of marine products from Australia are mainly frozen rock lobster tails, prawns, abalone and oysters. These exports

do not compete significantly with products from Canada and are not expected to expand substantially.

Species within the new Australian Fishing Zone (AFZ) which could be exploited more in future years are largely varieties not found in Canadian waters. These include various tropical species such as sea perch, threadfin, trevally and snoek.

There could be increasing competition in markets for Canadian products from unexploited quantities of jack mackerel and perhaps squid. Not enough is known about the size of the squid resource to predict the possible future impact on the marketing of Canadian products.

### 3. Allocations

The present allocations to foreign fishermen in the AFZ have not had a significant effect on Canadian fish marketing. Taiwanese fishermen are catching tropical species not found in Canadian waters while Japanese fishermen are exploiting southern bluefin tuna. This tuna is utilized in Japan mainly for sashimi (a raw fish preparation) and therefore may compete with Canadian caught blue fin tuna but quantities taken are low in relation to the total market.

The squid which is currently being fished (on an exploratory basis) in the AFZ by Japan is not the same as that variety caught in Canada's east coast - *Illex* or on Canada's west coast - *Lolligo opolescence* however it is a large squid *Nototodarus gouldi* which is used in the production of the same products as the *Illex*. The squid catch by Japan in the AFZ in 1980 was 8 908 tonnes - over double the quantity caught in 1979, but for the 1981 year Japanese squid fishermen have been excluded from the AFZ.

## G. CONCLUSIONS

1. Australian fish landings of 123 000 tonnes valued at \$217 million are stable in quantity but increasing in value. Prawns and rock lobster are the main species in value terms. Many other shellfish, demersal and pelagic fish are landed, the most significant being tuna and shark. The fish processing industry is small relative to most nations and involves mainly tuna canning, filleting, and freezing or cooking shellfish. The largest fish product category is fresh fish, because of demand in the major population centres.

In 1978-79, Australia imported \$125 million worth of seafoods. The main opportunities in the market for Canadian fish are for canned salmon, frozen fillets, fish fingers and smoked and cured products. Lower priced groundfish such as hake and pollock have a good potential for the expanding "takeaway" and institutional markets.

Within the newly declared 200 mile zone, the two major fisheries have been the Taiwanese trawl fishery in the north and a Japanese tuna fishery. These are now under Australian licence and have been cut back. The main unutilized fish species in the zone are jack mackerel, barramundi, skipjack tuna, and perhaps squid.

2. The Australian population is concentrated in cities and major towns, and is growing at 1.3% per year. The gross domestic product in constant dollars is growing at 3.2% per year while incomes in real terms are growing annually by 1.6%.

Fish consumption for 1977-78 is estimated at 8.5 kilograms per person per year and is growing at 6% annually. Exports in quantity terms are remaining stable but in value terms are growing rapidly. Rock lobster and prawns are the main items. Exports could expand significantly with new efforts to exploit underutilized species in the AFZ.

3. The total import requirement for marine products in Australia by 1985 is projected to be 108 000 tonnes - nearly double the present quantity.

4. The major potential for Canadian exporters in this market is for the lower priced varieties of groundfish fillets and blocks of white fleshed fish such as pollock, hake, whiting, cod, ocean perch and rockfish. Smoked products including salmon, groundfish and herring show potential along with Canadian scallops, canned salmon and sardines and canned herring. Freight costs from the west coast of Canada are slightly more than from the east coast but both rates are less than those from a major competitor, New Zealand.

There are no major problems with this market with respect to entry-requirements and barriers, except for the mercury content limits imposed by the various states and a ban on the import of frozen salmon. Fish imports from Canada are nearly all duty free.

5. The fish resources in the Australian fishing zone will not have any significant impact on current Canadian markets, except perhaps for squid. The size of the Australian squid resource is unknown but only limited quantities have been found to date and for 1981 Japanese experimental fishing for squid has been terminated in the AFZ.

APPENDICES



## APPENDIX I

### KEY INSTITUTIONS INFLUENCING POLICY

The state governments in Australia have jurisdiction over fisheries management within three miles of their coastlines, and they also have control of freshwater fisheries. The state governments control the use of most ports and the handling of most fish on shore, and they are responsible for issuing licences and administering national regulations. Beyond the three-mile area offshore, the Commonwealth government has jurisdictions over all fishing activities, including those of other countries.

The Australian Fishing Council (AFC) and its affiliates co-ordinate the administration of Australian fisheries that extend into more than one state or across state commonwealth boundaries. The AFC is made up of commonwealth and state ministers and is advised by the standing committee on fisheries, which is comprised of representatives of the commonwealth and state government departments directly involved in fisheries administration and by the southeastern, northern and western fisheries committees.

An organization of fishing industry representatives known as the Australian Fishing Industry Council (AFIC) is becoming increasingly involved in advising the standing committee on fisheries. Council members are elected from each State to represent fishing companies, co-operatives, and vessel owners' associations.

Fisheries research is carried out both by government institutions and by the fishing industry with funds from the commonwealth government, state governments and private sources. Projects include exploratory surveys, examination of fishing techniques, studies of fish disease, economic research and testing of new products.

## APPENDIX II

### FISHERIES DEVELOPMENT POLICY AND PROSPECTS

Legislation to establish the 200 mile fishing zone came into effect in November, 1979. Many countries have applied to fish in the zone, including Japan, the USSR, US, Taiwan, Korea, FRG, and Spain. The only countries granted significant rights thus far are Japan and Taiwan. The Australian government policy is to encourage Australian fishermen to exploit the expanded zone. In 1979-80 import controls were relaxed to allow up to 20 second hand vessels to be imported for use in fisheries development work. There is currently an extensive exploratory trawling operation. Good fishing grounds have been discovered and some fishermen are gearing up to fish these grounds. Research is being carried out to develop marketing strategies for Australian fish to compete with imports.

The AFZ does not present a vast potential for increasing fish supplies. The most productive fishing areas of the world are in temperate to sub-polar regions where extensive land masses provide nutrients for seas that are shallow for long distances from the coast. These conditions do not exist in many areas around Australia. In addition, Australia does not have the benefits of deep ocean upwellings. The major new fishing areas will be in the north - along the northwestern and northern coasts between the northwest cape and Torres Strait and off north-eastern Queensland. In the south significant new areas are in the Australian Bight and Bass Strait regions.

In the south the additional shelf areas support a mixture of fish and provide opportunities for development. In the north the new shelf areas have not been fished by Australia. Taiwan has provided the major fishing effort.

Japanese fishermen are currently catching about 10 000 tonnes of bluefin tuna in the AFZ. In addition stocks of skipjack tuna hold promise for expansion. Resource potential is also apparent for jack mackerel and squid.

Problems in developing under exploited resources in the AFZ are apparent because of a reluctance on the part of both fishermen and processors to commit investment.

## APPENDIX III

### THE DOMESTIC FISHING INDUSTRY

#### I Western Australia

The Western Australian fishing industry accounts for a higher value of production than any other state - \$85.9 million in 1977-78. The major fishery there is the western rock lobster. This is a limited entry fishery with 800 vessels licenced. Prawn, abalone and Australian salmon also are taken, in addition to bluefin tuna, spanish mackerel and scallops. Mullet, snapper, ruff, whitewing, and barramundi also account for some landings. Limited entry is also in effect in the prawn, abalone and Australian salmon fisheries.

#### II Victoria

The gross value of fish production in Victoria in 1977-78 was \$18 million, consisting of \$6.3 million for shellfish and \$11.6 million for other fish. Shark is the main non shellfish catch. There are at present about 85 boats in this fishery. There is no limit on licences but there is a minimum mesh size of 15 centimeters and maximum 0.5 ppm mercury level and 112 centimeters maximum length for school shark that can be landed in Victoria. There are 113 licences issued for the scallop fishery, 199 vessels licensed for southern rock lobster and 90 abalone divers licensed throughout the state.

#### III South Australia

Production valued at \$23.2 million was recorded for this state in 1977-78. Shellfish accounted for \$15.9 million while other fish accounted for \$7.3 million. In the shellfish category the major fisheries are for prawns, rock lobster, and abalone. There are 53 prawn vessels operating under an authority attached to the vessel in addition to five special permits for exploratory prawn trawling. In the rock lobster fishery there are 367 authorized vessels operating. For abalone 59 vessels are being operated by 35 permittees. Other fisheries include the Coorong, Lake

Alexandrina, Alberta and George fisheries, the southern bluefin tuna fishery, and a general fishery. The general fishery is composed of 763 licence holders operating 1 169 vessels. In addition there are three vessels operating as deep sea trawlers, one of which is also engaged in tuna fishing.

#### IV New South Wales

All fish sold in NSW must be delivered to the Fish Marketing Authority at Sydney or delivered to the local co-operative as set out in the Sydney Corporations Act 1932. The value of fish production in this state in 1977-78 was \$40 million, made up of \$14.5 million in the molluscs category, \$10.4 million in the crustacean category and \$16.7 million in the non shellfish category. The largest fishery in NSW is the trawl fishery with 108 other trawlers and eight Danish seiners. The deepwater trawl fishery is continuing to expand with tuna vessels converting to a multi-purpose role and catching redfish and gemfish in addition to tuna. There is also an inland commercial production of some 750 tonnes - mainly carp and golden perch, and a large farmed oyster production. There are also 40 NSW boats licenced to pole for southern bluefin tuna.

#### V Tasmania

Tasmania recorded a gross fish product value of \$12.6 million in 1977-78 consisting of \$10.1 million for shellfish and \$2.4 million for other fish. Abalone and rock lobster are the largest shellfish fisheries. Scallops are also taken there, as well as shark. Unutilized stocks of gemfish and grenadier are located to the west of Tasmania.

#### VI Queensland

Queensland recorded the second highest production value in 1977-78 at \$40.8 million. Crustaceans accounted for 77% of this value - mainly from the northern prawn fishery. Most of the 280 boats in this fishery hold Northern Territory and Queensland licences. Other fisheries include a reef fishery (hand-line

fishing) spanish mackerel (troll gear), crab and scallops. There is also a beach, estuarine fishery that produces barramundi, mullet, whiting and bream.

The Fish Supply Management Acts 1972-76 govern the sale of all fish sold in Queensland. Sales must be made through a fish board or the relevant district depot unless exemption permits have been granted.

## VII Northern Territory

Fish production was valued at \$10.3 million in 1978-79 with crustaceans (northern prawns) accounting for nearly 80% of this value. There are 193 vessels licensed for trawling prawns in territorial waters and 231 fishermen licensed for vessels. The other significant fishery is for barramundi for which there are 133 licences issued, of these 108 are to commercial fishermen and 25 are for aboriginal communities. In other fisheries there are about 58 licensed fishermen for mackerel and the general line fishery.

APPENDIX IV

AUSTRALIAN CUSTOMS TARIFF - MARINE PRODUCTS

CUSTOMS TARIFF  
(Consolidated Schedule)

Chapter 3  
FISH, CRUSTACEANS AND MOLLUSCS

---

Item	Goods in Chapter
03.01	* Fish, fresh (live or dead), chilled or frozen
03.02	* Fish, dried, salted or in brine; smoked fish, whether or not cooked before or during the smoking process
03.03	* Crustaceans and molluscs, whether in shell or not, fresh (live or dead), chilled, frozen, salted, in brine or dried; crustaceans, in shell, simply boiled in water

---

CHAPTER NOTES (CN)

The following goods do not fall within this Chapter:

- (a) marine mammals falling within 01.06, and meat thereof falling within 02.04 or 02.05;
- (b) dead fish (including livers and roes thereof) and dead crustaceans and molluscs, being goods falling within Ch 5, that are unfit or unsuitable for human consumption either by reason of their species or their condition;
- (c) caviar and caviar substitutes falling within 16.04.

DEPARTMENTAL RULINGS

Ch 3 covers fish (including livers and roes thereof), crustaceans and molluscs whether or not they have been cut, chopped, minced, ground, etc.

Provided the above products have not been prepared or preserved otherwise than as provided for in this Chapter they remain classified here even if put up in airtight packs (e.g., smoked salmon in cans).

EXCLUSIONS:

Goods unfit or unsuitable for human consumption - Ch 1(b)

Prepared or preserved fish, crustaceans or molluscs (Ch 16)

CUSTOMS TARIFF  
CONSOLIDATED SCHEDULES

Item	Goods	Rates of Duty		Statistical Key		
		G.T.	P.T.	Code	Unit	Description
03.01.000	*FISH, FRESH (ALIVE OR DEAD), CHILLED OR FROZEN	Free	Free	67	No	LIVE FISH
						DEAD FISH:
						<u>Trout (i.e. brown trout (salmo</u>
						<u>trutta), brook trout</u>
						<u>(salvelinas fontinalis).</u>
						<u>Rainbow trout (salmo</u>
						<u>gairdnerii)):</u>
						+ Fillets:
				78	kg	.Fresh or chilled
						.Frozen
				89	kg	..In packs not exceeding 1 kg
				9X	kg	..In packs exceeding 1 kg
						+ Other:
				103	kg	.Fresh or chilled
				114	kg	.Frozen
						<u>Salmon:</u>
						+ Fillets:
				17X	kg	.Fresh or chilled
						.Frozen
				180	kg	..In packs not exceeding 1 kg
				191	kg	..In packs exceeding 1 kg
						+ Other
				205	kg	.Fresh or chilled
				216	kg	.Frozen
						<u>Other:</u>
						+ Fillets:
				227	kg	.Fresh or chilled:
						.Frozen
						..In packs not exceeding 1kg:
				238	kg	...Hake
				249	kg	...Other
						..In packs exceeding 1 kg:
				25X	kg	...Hake
				260	kg	...Other
						+ Other:
				271	kg	.Fresh or chilled
						.Frozen
				282	kg	..Hake
				293	kg	..Other

Includes fish slightly sugared or packed with a few bay leaves or a small quantity of other garnishes

"Chilled" means reduced in temperature to around 0°C without being frozen "Frozen" means cooled to below the product's freezing point until it is frozen throughout

EXCLUSIONS:

Marine mammals (01.06) and meat thereof (02.04, 02.06) - CN 1(a)

Fish waste (05.05) - CN 1(b)

Fish fillets, raw, deep frozen, coated with batter based on flour, whether or not seasoned with other ingredients and whether or not covered with breadcrumbs (16.4)

RESTRICTIONS:

Commerce Marketing

Prohibited Imports

Quarantine (Animals)



CUSTOMS TARIFF  
CONSOLIDATED SCHEDULES

Item	Goods	Rates of Duty		Statistical Key		
		G.T.	P.T.	Code	Unit	Description
03.02.000	*FISH, DRIED, SALTED OR IN BRINE; SMOKED FISH WHETHER OR NOT COOKED BEFORE OR DURING THE SMOKING PROCESS	Free	Free	19	kg	FISH MEAL FOR HUMAN CONSUMPTION
				2X	kg	COD(NOT IN FILLETS), DRIED, WHETHER OR NOT SALTED
				121	kg	SHARK FINS OTHER: <u>Packed in air-tight cans, bottles, jars or similar containers:</u>
				30	kg	+ Dried
				10X	kg	+ Salted or in brine
				52	kg	+ Smoked
						Other:
				132	kg	+ Dried
				110	kg	+ Salted or in brine + Smoked
				63	kg	.In packs not exceeding 1 kg
				74	kg	.In packs exceeding 1 kg

EXCLUSIONS:

Marine mammals (01.06) and meat thereof (02.04, 02.06) - CN 1(a)  
Fish waste (05.0.5) - CN 1(b)  
Caviar and caviar substitutes, cooked, fish, fish preserved in oil or vinegar or in a marinate (16.04) - CN 1(c)  
Fish soups (21.05)

RESTRICTIONS:

Commerce Marketing  
Prohibited Imports

03.03.000	*CRUSTACEANS AND MOLLUSCS, WHETHER IN SHELL OR NOT, FRESH (LIVE OR DEAD), CHILLED, FROZEN, SALTED, IN BRINE OR DRIED; CRUSTACEANS, IN SHELL, SIMPLY BOILED IN WATER					CRUSTACEANS, IN SHELL, SIMPLY BOILED IN WATER:
	(01) Goods, not being shrimps and prawns	Free	Free	59	kg	<u>Lobster</u>
	(02) Remainder	Free	Free	6X	kg	<u>Other</u>
		and 2% DC:Free	and 2% PNG:Free	15	kg	OTHER: <u>Fresh, chilled or frozen:</u> + Prawns and shrimps prawn meat and shrimp meat
				70	kg	+ Squid and calamary
				81	kg	+ Other
				37	kg	<u>Dried, but not salted</u>
				43	kg	<u>Salted or in brine</u>

"Chilled" means reduced in temperature to around 0°C without being frozen  
"Frozen" means cooled to below the product's freezing point until it is frozen throughout

EXCLUSIONS:

Sea-urchins and other Echinodermata, if live (01.06)  
Molluscs simply boiled in water (16.05)

RESTRICTIONS:

Commerce Marketing  
Prohibited Imports  
Quarantine (Animals)

CUSTOMS TARIFF  
CONSOLIDATED SCHEDULES

Item	Goods	Rates of Duty		Statistical Key		Description
		G.T.	P.T.	Code	Unit	
16.04	*PREPARED OR PRESERVED FISH, INCLUDING CAVIAR AND CAVIAR SUBSTITUTES:					
	Includes caviar when preeced (i.e., reduced to a homogenous paste, sometimes shaped into small elender cylindere or packed in emall containers) may be put up in airtight containers.					
	EXCLUSIONS:					
	Fish, falling within Ch 3 - CN 1					
	Smoked fish, cooked before or during smoking (03.02)					
	Fieh flour (03.01, 23.01)					
	Fish soups and homogenised composite food preparations (21.05)					
	Prepared animal foods put up in airtight containere and clearly identifiable by labelling as being intended solely for animal feeding, e.g., "Pal", "Whiekae", "Jets" (23.07)					
	Medicaments (30.03)					
	RESTRICTIONS:					
	Commerce Marketing					
	Prohibited Imports					
16.04.100	-Goods, as follows:	5%	5%	10	kg	FISH BALLS, CAKES, SAUSAGES AND THE LIKE
	(a) caviar and caviar substitutes;					
	(b) fish balls, cakes, sausages and the like;	DC:Free	PNG:Free	32	kg	OTHER
	(c) fish pastes;					
	(d) fish roe;					
	(e) potted or concentrated fish					
16.04.200	-Tuna, packed in metal cans, NSA	15%	15%	16	kg	
		DC:15%	PNG:Free			
	Definition of "tuna" - CN 2					
16.04.900	-Other					FILLED, SKIMMED, BONED, SLICED DIVIDED AND THE LIKE:
	(01) Sardines, sild, brisling and similar small immature fish	Free	Free			
				7X	kg	<u>In packs not exceeding 1 kg:</u> + Fish fingers or fish eticks
	(02) Remsinder	Free, and 2%	Free, and 2%	80	kg	+ Other
		DC:Free	PNG:Free	91	kg	<u>In packs exceeding 1 kg:</u> + Fish fingers or fish sticks
				105	kg	+ Other
	CANADA:					
	(01) Goods, as follows:	CAN:Free				OTHER:
	(a) ealmon;					
	(b) sardines, sild, brisling and similar small immature fish			116	kg	<u>Packed in air tight cane, bottles, jars or eimilar containers:</u> + Anchovies
				127	kg	+ Herrings (including Kipper snacks)
	(02) Remainder	Free, and 2%		138	kg	+ Mackerel
				149	kg	+ Salmon
				15X	kg	+ Sardines, eild, brisling and similar immature fish
				160	kg	+ Other
				171	kg	Other

CUSTOMS TARIFF  
CONSOLIDATED SCHEDULES

Item	Goods	Rates of Duty		Statistical Key		Description
		G.T.	P.T.	Code	Unit	
16.05	*CRUSTACEANS AND MOLLUSCS, PREPARED OR PRESERVED:					
						Includes crayfish, lobsters, crabs, shrimps, prawns mussels and snails. Molluscs simply boiled in water remain in this item
	EXCLUSIONS:					
	Crustaceans or molluscs falling within Ch 2 or 3 - CN 1					
	Crustaceans, in shell, merely boiled in water (whether or not with small quantities of boric acid or other provisional preservative agents) (03.03)					
	Crustacean flour (03.03, 23.01)					
	RESTRICTIONS:					
	Commerce Marketing					
16.05.100	-Goods, as follows:	5%	5%	17	kg	
	(a) extracts;					
	(b) pastes;	DC:Free	PNG:Free			
	(c) potted or concentrated					
16.05.900	-Other	Free	Free			CRUSTACEANS:
						<u>Packed in airtight cans, bottles, jars or similar containers:</u>
				10	kg	+ Crab
				32	kg	+ Shrimps; Prawns
				112	kg	+ Other
						<u>Other:</u>
				65	kg	+ Crab
				98	kg	+ Shrimps; Prawns; Shrimp meat; Prawn meat;
				123	kg	+ Other
						MOLLUSCS:
						<u>Packed in airtight cans, bottles, jars or similar containers:</u>
				43	kg	+ Smoked
						+ Other
				21	kg	+ .Oysters
				134	kg	.Other
				145	kg	<u>Other</u>

APPENDIX V

CANADIAN FISH PRODUCTS  
EXPORTED TO AUSTRALIA, 1975-1980

APPENDIX V  
CANADIAN FISH PRODUCTS EXPORTED TO AUSTRALIA 1975-1980

	1975		1976		1977		1978		1979		1980	
	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)
<u>CANNED</u>												
Salmon, coho	--	--	7	23	81	402	--	--	--	--	--	--
Salmon, chum	--	--	--	--	1	3	0	2	--	--	--	--
Salmon, pink	19	59	191	613	1 776	6 451	722	2 783	420	2 210	621	3 391
Salmon, sockeye	135	581	270	1 535	745	4 044	717	,403	387	2 779	603	4 819
Salmon, NES	53	275	21	102	55	213	1	11	176	1 185	53	298
Herring kipper- snacks	79	165	204	231	72	173	113	286	90	265	157	608
Herring, NES	65	100	151	235	233	455	178	386	271	748	221	707
Sardine	370	639	407	745	488	981	328	887	472	1 376	550	1 861
Fish and fish products, canned NES--	--	--	--	--	--	--	--	--	--	--	--	--
Crabs	--	--	--	--	--	--	3	26	58	406	53	418
Lobster & products	--	--	--	--	--	--	1	4	1	4	1	14
Sub-Total	721	1 819	1 251	3 484	3 451	12 722	2 963	8 788	1 890	9 011	2 259	12 116
<u>FRESH AND FROZEN</u>												
<u>A. Pelagic</u>												
Salmon, fresh, whole or dressed, NES	--	--	--	4	--	--	--	--	--	--	--	--
Salmon coho, frozen, whole, dressed	--	--	--	--	--	--	--	--	--	--	--	4
Salmon, chum, frozen, whole, dressed	18	40	--	--	--	--	--	--	1	7	--	4
Salmon sockeye frozen	--	--	--	--	--	--	--	--	25	124	--	2
Salmon spring, frozen whole dressed	20	143	9	76	38	277	10	57	9	114	57	390
Salmon, frozen, whole or dressed NES	13	85	3	24	1	14	--	--	21	75	1	17
Herring, frozen, whole or dressed	--	--	--	--	77	18	2	3	1	1	--	--

APPENDIX V  
CANADIAN FISH PRODUCTS EXPORTED TO AUSTRALIA 1975-1980 (CONT'D)

	1975		1976		1977		1978		1979		1980	
	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)
<u>FRESH AND FROZEN (CONT'D)</u>												
Herring fillets												
frozen	--	--	--	--	--	--	--	--	18	41	10	25
Sea fish, frozen,												
whole dressed, NES	17	23	22	31	73	114	--	--	0	1	41	94
Sea fish fillets,												
frozen, NES	28	68	219	402	6	67	22	251	31	277	14	114
Sea fish, block etc.,												
fresh, frozen, NES	124	157	171	241	158	241	207	395	8	26	36	76
<u>B. Groundfish</u>												
Cod fillets, Atlantic												
frozen	8	21	12	18	--	--	--	--	2	14	19	52
Cod blocks & slabs,												
frozen	10	11	--	--	--	--	--	--	--	--	159	417
Cod Atlantic, frozen,												
whole, dressed	--	--	--	--	--	--	--	--	--	--	1	6
Haddock, Hake, frozen												
whole, dressed	--	--	22	37	112	175	118	240	297	672	35	82
Hake cusk, pollock												
fillets, frozen	--	--	--	--	--	--	--	--	14	35	16	37
Sole, Flounder												
fillets, frozen	--	--	2	7	--	--	--	--	--	--	--	--
Ocean perch fillets,												
frozen	--	--	--	--	--	--	--	--	--	--	--	1
Turbot, blocks &												
slabs, frozen	--	--	--	--	--	1	--	--	--	--	--	--
Pollock blocks,												
frozen	--	--	--	--	--	--	--	--	--	--	355	648
<u>C. Shellfish</u>												
Crabs, fresh or												
frozen	--	--	2	15	13	98	14	136	15	160	18	183
Scallops, frozen	--	--	15	74	198	886	--	1	14	104	52	440
Shrimps & prawn												
fresh & frozen	--	--	--	--	--	--	--	--	10	76	--	--
Sub-Total	238	548	477	929	676	1 891	373	1 083	466	1 727	814	2 592

APPENDIX V  
CANADIAN FISH PRODUCTS EXPORTED TO AUSTRALIA 1975-1980 (CONT'D)

	1975		1976		1977		1978		1979		1980	
	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)	M.T.	Value (\$000)
<b>PICKELED AND CURED</b>												
Salmon, smoked	15	110	21	202	19	206	21	281	23	275	52	772
Fish, smoked	--	--	--	--	--	--	--	--	--	--	4	12
Herring, bloaters	--	--	--	--	--	--	--	--	--	--	--	1
Herring, w/d, pickl. NES	--	--	--	--	--	--	8	15	--	--	9	17
Fish, salted and/or dried Nes	--	--	--	--	--	--	--	--	--	--	11	25
Herring, bonel. smok.	--	--	1	2	--	--	--	--	3	8	7	19
Herring, fillets, pickled NES	--	--	--	--	--	--	--	--	70	140	75	173
Herring, fillets, vinegar cured	--	--	--	--	--	--	14	24	27	54	11	25
Herring, split pick.	--	--	--	--	--	--	--	--	15	19	4	7
Cod fillets, smok.	--	--	75	127	1	1	--	--	21	75	9	26
Cod, heavy salt. 46-50PC moisture	--	--	--	--	--	--	--	--	--	--	26	71
Cod, bonel. salted	4	12	--	--	--	--	10	47	40	181	48	218
Cod, green salt. wet salted NES	--	--	--	--	--	--	--	--	5	11	--	--
Cod, heavy salt, 43PC or less moist	--	--	--	--	--	--	5	19	7	17	23	73
Hake, dried, salt. pickled & cured	--	--	--	--	--	--	--	--	0	--	--	--
Sub-Total	19	122	97	331	20	207	58	386	211	781	279	1 439
<b>MISCELLANEOUS</b>												
Fishery foods & feeds NES	43	6	92	15	496	171	52	19	--	--	--	--
Pre-cooked, frozen fish, Shellfish	132	141	202	291	297	501	756	1 536	454	1,060	50	115
Salmon roe	--	--	--	--	--	--	--	--	--	--	--	6
Fish roe NES	--	--	--	--	--	--	--	--	--	--	--	1
Sub-Total, Misc.	175	147	294	306	793	672	808	1 555	454	1 060	50	122
<b>TOTAL</b>	<b>1 474</b>	<b>2 636</b>	<b>2 119</b>	<b>5 050</b>	<b>4 940</b>	<b>15 492</b>	<b>3 302</b>	<b>11 812</b>	<b>3 021</b>	<b>12 579</b>	<b>3 402</b>	<b>16 269</b>

Source: Statistics Canada, Exports by Commodities

