ANNEX TO THE WORLDWIDE FISHERIES MARKETING STUDY: PROSPECTS TO 1985

TAIWAN

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

TAIWAN

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

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E. Wong
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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

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WORLDWIDE FISHERIES MARKETING STUDY

TAIWAN

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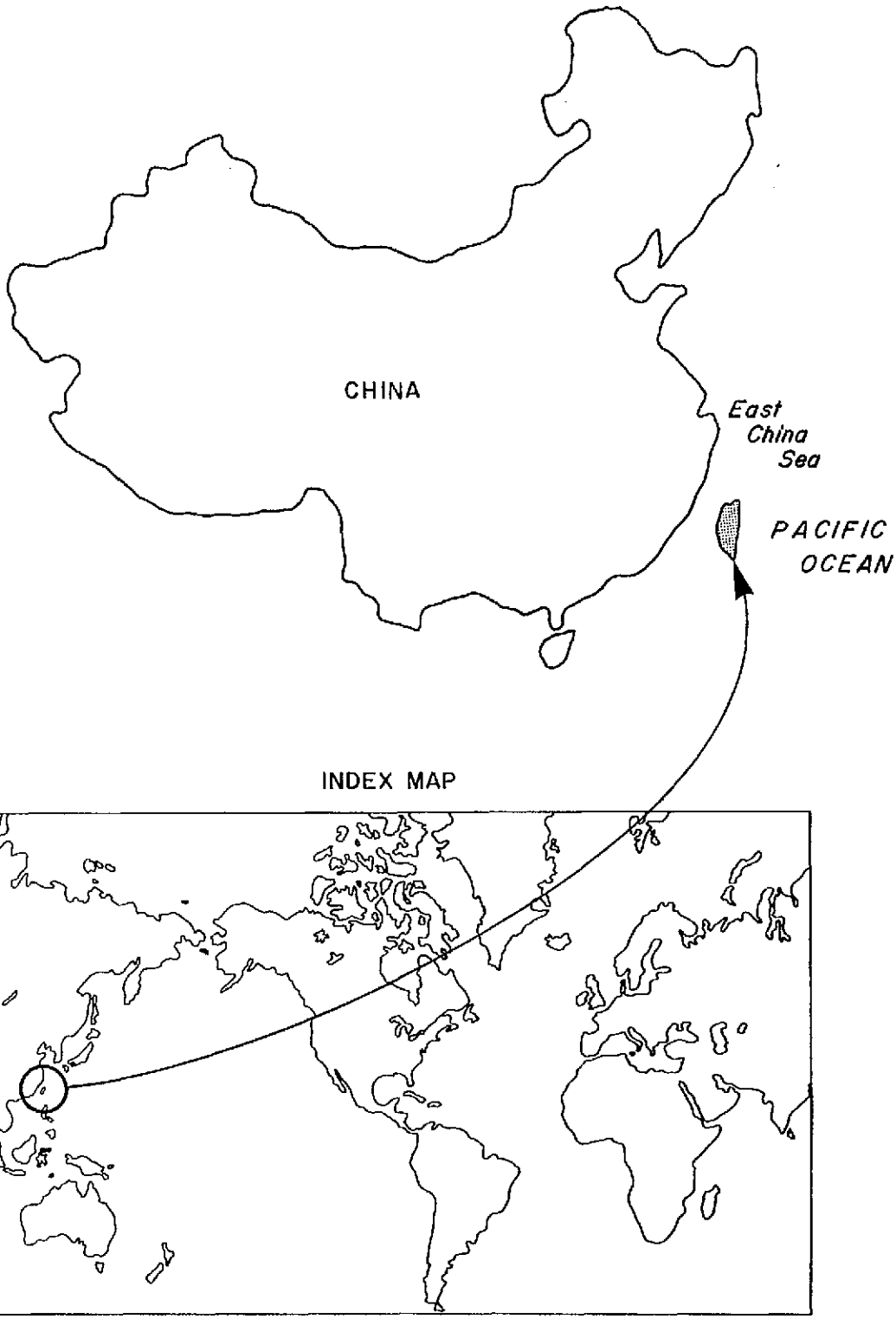


A. INTRODUCTION

Taiwan, which officially considers itself a province of the Republic of China, has a land area of 35 981 square kilometres. Its population at the end of 1979 was about 17 479 000. This population is growing at a fairly stable rate between 1.8% and 2% per year (see Table 1). Economic activities are mainly centered in the fertile western coastal zone. Three-fifths of the island is mountainous and its arable areas are among the most densely populated in the world, averaging 468 inhabitants per square kilometre.

The decade of the 1970's brought great economic growth and widening prosperity to Taiwan. By 1979, however, this growth rate had slowed down as a consequence of substantial increases in international oil prices, complicated by the instability of supply of vital fuels. Taiwan's real economic growth dropped from 13.9% in 1978 to 8.03% in 1979. This was still higher than most of its trading associates, such as the US (2.3%), Japan (6%), South Korea (7.1%) and West Germany (4.2%). By the end of the decade Taiwan's per capita GNP had reached NT $67 271, equivalent to US $1 869, and twice the 1970 level, at current prices.

The previous rapid upswing of Taiwan's exports moderated in 1979, under the impact of worldwide economic slowdown. Imports, on the other hand increased, thereby reducing the trade surplus from US $1.66 billion in 1978 to US $1.34 billion in 1979. Nevertheless total Taiwan two-way trade reached US $70.87 billion; an increase of 30% over 1978. However, this substantial growth in value was primarily due to oil price increases and did not reflect real gains in trade.

The US continued to be Taiwan's most important trading partner in 1979, with total trade between the two countries valued at $9.041 billion, with a bilateral balance of $2.379 billion in favour of Taiwan (see Table 3). Japan ranked second with two-way trade of $6.888 billion, but with an unfavourable $2.312 billion balance for Taiwan. Among Taiwan's top ten trading partners only Japan and Australia showed favourable trade balances in 1979. Canada ranked seventh as an importer of the island's goods. Total trade between the two, Canada and Taiwan, reached US $552 million in 1979, with a balance of $279 million in favour of Taiwan.

Canadian Fisheries statistics show that less than a million dollars out of Canada's $136 million in total exports to Taiwan were in the form of fishery products. Taiwan, on the other hand, exported $1.5 million worth of fishery products- mostly shellfish and canned tuna - to Canada.

Taiwan's fishing industry accounts for about a third of the output of their overall food sector in value terms. Taiwanese fisheries production has been growing at an average of 5.5% per annum over the last 10 years. A major factor in this growth has been the aquaculture sector with a 26.5% average growth which compensated for the mediocre growth in deep sea fisheries (3.3%) and coastal fisheries (2.7%). There is a definite trend for Taiwan to increase its capability as a net exporter of fishery products evidenced by its growing fisheries export processing industry.

However, shortage of raw materials is becoming a major concern. Some plants are operating at less than half capacity due to lack of raw materials and to some extent a decrease in the US and Japanese markets. On a medium to long-term basis, these plants will be in need of fish to process. Recent indications are that, in order to meet its expanding domestic needs, Taiwan will have to increase importation of fresh and frozen fish to replace quantities of the particular species exported. Marketing opportunities are, therefore, emerging and Canada should be in a position to take the fullest advantage of them.

TABLE 1

Taiwan: Population Growth

1970 - 1985

Year	000	% over previous year
1970	14 676	2.4
1971	14 995	2.2
1972	15 289	2.0
1973	15 565	1.8
1974	15 852	1.8
1975	16 150	1.9
1976	16 508	2.2
1977	16 813	1.8
1978	17 136	1.9
1979	17 479	2.0
1980[1]	17 794	1.8
1985[1] (Est.)	19 454	1.8

[1] Estimated 1980 population 1.8% growth over 1979, then growth rate of 1.8% annually applied up to 1985.

Source: Industry of Free China Vol. LIII No. 2, February 1980 published by the Council for Economic Planning and Development, Executive Yuan Republic of China.

TABLE 2

Top ten importers of Taiwan goods

1979

Country	Value ($000) NT$	Value ($000) US$	% Total
1. US	202 320 345	5 703 985	35.4
2. Japan	81 155 244	2 287 997	14.2
3. Saudi Arabia	76 479 100	2 156 163	13.4
4. Hong Kong	39 663 553	1 118 228	6.9
5. FRG	24 144 172	680 693	4.2
6. Malaysia-Singapore	19 512 042	550 100	3.4
7. Canada	14 738 300	415 514	2.6
8. UK	14 264 681	402 162	2.5
9. Australia	13 709 446	386 508	2.4
10. Netherlands	11 828 939	333 491	2.1

Average Exchange Rate: NT 35.47 = US $1.00

Source: Ibid.

TABLE 3

Taiwan: balance of trade with top ten importers

Country	Total Import-Export with Taiwan	Exports ($000)	Rank	Balance Favourable to Taiwan (in brackets)	Balance Unfavourable to Taiwan (no brackets)
1. US	9 040 802	3 330 817	(2)	(2 379 168)	
2. Japan	6 887 643	4 599 646	(1)		2 311 649
3. Saudi Arabia	3 032 858	876 695	(4)	(1 279 468)	
4. Hong Kong	1 326 466	208 232	(10)	(909 993)	
5. FRG	1 314 399	633 706	(5)	(46 987)	
6. Malaysia-Singapore	986 038	435 938	(7)	(114 162)	
7. Canada	551 530	136 016	(13)	(279 498)	
8. UK	702 072	299 910	(8)	(102 252)	
9. Australia	836 601	450 093	(6)		63 585
10. Netherlands	446 305	112 814	(15)	(220 677)	

Source: Ibid.

B. DEMAND

1. Consumption trends to 1985

Per capita consumption of protein in Taiwan has increased three-fold over the past ten years. Fish continues to be the foremost protein source. Per capita annual consumption was 45 kilograms in 1979, and is projected to reach 65 kilograms by 1985 (see Table 4). However this is likely to be restrained by rising prices. Pork is the substitute for fish protein which shows the highest percent growth rate in per capita consumption. Poultry consumption is expected to follow a similar trend to fish. There now appears to be a tendency towards greater consumption of more expensive species of fish, as real per capita income increases (see Tables 5 and 6). By 1985, Taiwanese projections indicate that real per capita income could reach US $2 114, or $3 539 at current prices. Given these population, consumption and income trends, Taiwanese fish demand is projected to reach 1 264 510 tonnes by 1985.

2. Changes in lifestyle

Some changes in taste patterns are considered likely to take place. Consumer acceptance of frozen and processed fish should increase, as the percentage of households owning refrigerators and freezers expands. Increased employment opportunities for housewives are also likely to influence taste patterns and needs for convenience foods.

Although projections indicate that pork consumption will continue to grow at a higher rate than fish, this growth is considered likely to slow down by 1985, due to growing awareness of the health hazards associated with too high a pork diet. Should this effect occur, demand for fish is likely to grow even more substantially.

TABLE 4

Taiwan: Protein food per capita consumption

(in Kilograms)

	1977	1978	1979	1985 (Est.)
Fish	38	41	45	65
Pork	16.1	24.7	30	60
Chicken	6.6	7.6	8.8	15
Eggs	3.4	3.7	4	6
Beef	2	2.2	2.3	3
Other	2	2.3	2.7	5
Total	68.1	81.5	92.8	154

Source: Ibid.

TABLE 5

Taiwan: GNP and per capita income

	National (Millions)		Per Capita	
	NT$	US$	NT$	US$
1970	499 055	14 070	34 259	966
1975	759 229	21 405	47 442	1 337
1976	861 568	24 290	52 756	1 487
1977	946 480	26 685	56 800	1 601
1978	1 077 571	30 380	63 474	1 789
1979	1 164 137	32 820	67 271	1 869
1985 (Est.)	2 442 110	68 850	125 564	3 540

Source: Industry of Free China, Vol. LIII No. 2, February 1980
Average exchange rate used: NT35.47 = US $1.00

TABLE 6

Taiwan: National and per capita real income based on 1976 prices

Based n 1976 Prices

	NATIONAL Real income at 1976 prices US$ (millions)	PER CAPITA Real income at 1976 prices US$
1971	12 079	805
1972	13 675	896
1973	15 321	984
1974	15 097	948
1975	15 517	961
1976	17 902	1 084
1977	19 515	1 161
1978	21 828	1 274
1979	23 529	1 346
1980	25 600	1 439
1985 (Est.)	37 615*	2 114**

* Equivalent to $68 850 million at current prices.

** Equivalent to $3 540 at current prices.

Source: Ibid.

C. SUPPLY

In 1979, Taiwan's total fish production reached 906 900 tonnes against estimated domestic consumption of 769 076 tonnes, providing a 17.9% surplus. Imports reached an estimated 122 000 tonnes, consisting mostly of fishmeal and fish fry, while exports were estimated at 260 000 tonnes. Therefore more than just the domestic supply/demand surplus was processed for export. Taiwan was exporting high value items while importing lower valued ones. Major species landed are shown in Table 7 and their prices are given in Table 8.

1. Dometic harvest from national sources

There are four principal sectors to the Taiwan fish industry. These are:

(a) Aquaculture
(b) Coastal fishery
c) Inshore fishery
d) Deep sea fishery

The quantities of fish harvested by these different sectors are shown in Table 9. These operations are now discussed in turn.

a. Aquaculture

Including the culture of fish and shellfish in brackish and freshwater as well as in shallow seas, aquaculture is the fastest growing fishery sector in Taiwan. Production rose by a factor of 2.5 from 72 725 tonnes in 1970 to 179 300 in 1979. It is estimated that it will reach, at least, 292 000 tonnes by 1985.

b. Coastal fishery

The coastal operation involves non-powered boats or is carried out with beach nets or sea traps. The most important species caught this way is sardines. Virtually all of the coastal fish catch goes directly to fresh fish markets. Total catch from this sector in 1979 amounted to 33 200 tonnes. This fishery is growing at only 2 to 3% per year and is not expected to accelerate its capacity in the 1980's.

TABLE 7

Taiwan: Major species landed by fishery, 1977
(tonnes)

Species	Deep Sea	Inshore	Coastal	Aquaculture	Total
Tuna	95 129	23 360	273	--	118 762
Shrimp & Lobster	10 502	50 984	2 151	1 403	65 040
Sharks	29 407	20 394	469	--	50 270
Skipjacks	1 798	32 515	3 196	--	37 509
Cuttlefish & Squid	17 600	13 354	784	--	31 738
Milkfish	--	--	--	26 361	26 361
Lizard Fish	16 004	8 020	22	--	24 046
Gugurnards	4 838	17 648	--	--	22 486
Sardines	246	16 181	5 923	--	22 350
Tilapia	--	--	518	21 727	22 245
Eel	--	--	23	22 000	22 023
Hairtail	11 091	7 178	1 445	--	19 714
Croakers	12 613	6 029	180	--	18 822
Carps	--	--	580	18 232	18 812
Horse Mackerel	5 856	7 682	618	--	14 156
Oysters	--	--	24	14 924	14 948
Spanish Mackerel	4 937	8 324	802	--	14 063
Hard Clam	--	--	101	12 876	12 977
Sea Bream	8 836	2 645	827	--	12 308

Source: Fisheries Yearbook, Taiwan Area, 1977

TABLE 8

Taiwan: Mean prices of fish, 1977

FISH MARKETS	US $ PER KILO
Average all Species	0.5125
Selected Species:	
1) Red Porgy	1.981
2) Mullet	1.568
3) Yellow Sea Bream	1.512
4) Tunas	1.089
5) Pomfrets	1.083
6) Squid	0.755
7) Mackerel	0.594
8) Bonitos, Skipjack	0.487
9) Sardines	0.331
10) Horse Mackerel	0.319

Source: Op cit.

TABLE 9

Taiwan: Fishery production
(tonnes)

	Deep Sea	Inshore	Coastal	Aquaculture	Total
1970	277 956	234 704	27 769	72 725	613 154
1975	326 707	295 920	29 746	127 577	779 950
1976	325 327	317 737	32 076	135 460	810 600
1977	339 411	342 753	33 109	139 640	854 913
1978	335 142	353 528	31 969	164 405	885 044
1979	350 200	344 200	33 200	179 300	906 900
1980 (Est.)	369 710	354 085	35 480	192 970	952 245
1985 (Proj.)	418 000*	423 680	42 320	292 000	1 176 000

* Unlikely to be achieved due to impact on deep sea fleet harvesting of implementation of 200-mile MEZ/s in Pacific zones.

Source: Industry of Free China, Council for Economic Planning and Development Executive Yuan, Taiwan.

c. Inshore fishery

The inshore fishery involves powered vessels of less than 50 tonnes. Inshore fishing, properly regulated and excluding freezer vessels from the 200-mile inshore zone, is expected to grow between 3% and 5% per year in the 1980's. Important inshore species include shrimps, of which 77% are taken inshore, skip jack (86%), gurnard (78%), sardines (72%), mackerel (90%), sharks (40%) and squid (42%).

Significant portions of the shrimp and squid catches are ultimately processed and exported. However, a domestic supply deficit is developing due to the ever expanding fish consumption patterns. Optimum exploitation of the inshore resource will not be sufficient to fill the demand for species traditionally caught inshore.

d. Deep sea fishery

The deep sea operation involves powered fishing vessels of over 50 tonnes, mainly trawlers and tuna longliners. Production by this fleet in 1979 amounted to 350 200 tonnes, 42.4% of which was caught by bull trawling, 40.8% by tuna long lining and 16.8% by other trawling methods. This fishery has been growing at a rate of around 3% per year.

The deep sea fleet, numbering over 1 500 vessels, harvested 350 200 tonnes in 1979, making deep sea fishing the largest and most efficient of the fishing categories. It is estimated that 27% of this catch was landed and sold abroad and is therefore classified as exports. The various types of tuna as a group made up the largest landings tonnage amounting to 118 762 tonnes (excluding skip jacks) in 1977. Four-fifths of this tuna was caught by the deep sea fishing fleet. Other important species caught by the deep sea fleet were sharks (58% of total shark catch), croakers (67%) and sea bream (71%).

Implementation of a 200-mile limit by most maritime nations has begun to have a limiting effect on the performance of Taiwan's deep sea fishing fleet. By 1981, deep sea fishing will, at best, be only a close second to inshore fishery in total Taiwan fish production.

2. Domestic harvest from distant waters

In 1977, Taiwan had 47 fishing ports or bases located in various parts of the world and had fishing agreements with a number of African countries, including South Africa. Agreements also existed with Argentina, the US and New Zealand. The status of these agreements cannot be officially determined at the time that this report was drawn up. Taiwan fishery operators are definitely interested, however, in negotiating for any form of fishing rights or access in order to recover its large investment in deep sea fishing equipment and to circumvent the current high duty and/or import ban on fish products.

Some US $45 million was invested in deep sea and inshore fisheries over the past four years and an additional $15 million is planned up to 1981. Investment in support facilities such as fishing ports, processing plants, refrigeration facilities and fresh markets amounted to US $26 million plus another $12 million expected by 1981. However these investments are no longer expected to overcome the projected supply deficit for the 1980's.

3. Projected landings to 1985

Fish production is projected to reach 1 176 000 tonnes in 1985. However, this is rather optimistic. It assumes continued growth in deep sea catch which may not be possible because of declining access to other nations 200 mile MEZ's. If the estimate is accepted, then deep sea fishing will contribute 35.5% to this total, second only to inshore fisheries, which will constitute 36% of landings. Coastal fishing will make up only 3.6%, while aquaculture is expected to increase its share to 24.9%.

4. Imports

It is significant that imports of fishery products, other than fish meal, increased from less than 1 000 tonnes in 1972 to more than 20 000 tonnes in 1977. Cuttle fish and squid increased from 710 tonnes to 3 059 tonnes while fresh fish purchases grew from nil to 6 029 tonnes. According to industry sources, some 10 000 tonnes squid was imported into the country in 1979 creating a temporary over-supply situation.

5. Exports

(a) Overseas landings by deep sea fleet

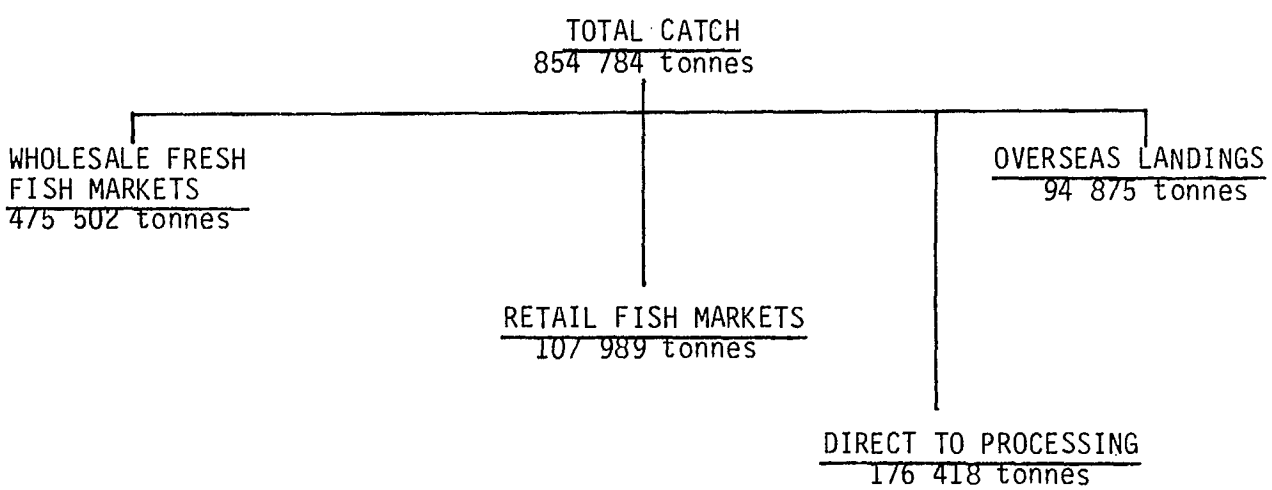
About 105 000 tonnes were landed and sold abroad by Taiwan's deep sea fishing fleet. The bulk of this quantity was tuna. Low priced species like mackerel, sharks (except fins), hair tail, and lizard fish were sold to markets nearest the fishing ports. The implications of this trade are not considered serious as a competitive threat to the potential Taiwanese import of Canadian export species.

(b) Dried squid

Taiwan has traditionally been a major exporter of dried squid to Hong Kong. The southern part of the island is ideally suited for drying squid. In 1979, 10 000 tonnes of squid from Argentina was imported primarily for drying in Southern Taiwan. Increased import activity in this species could seriously threaten the Canadian dried squid market in Hong Kong, since the Taiwan processed product is considered superior in quality. One obvious way to overcome this problem is to sell Canadian squid directly to the Taiwanese for drying.

TABLE 10

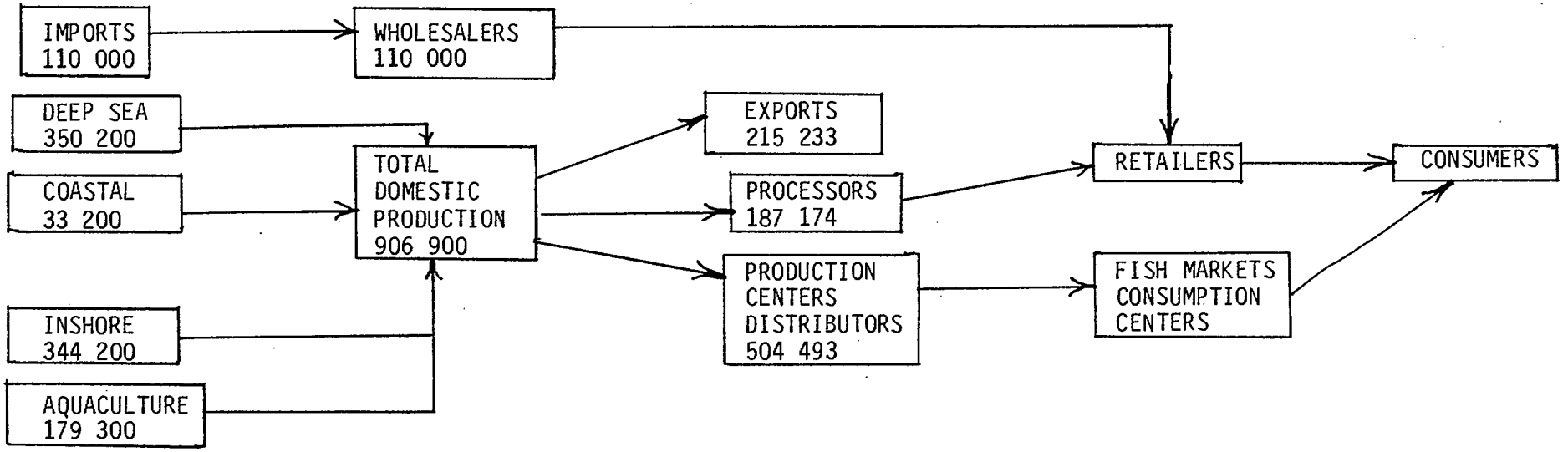
Taiwan: Utilization of 1977 fish production



Source: Fisheries Yearbook, Taiwan Area, 1977.

TABLE 11

Fish marketing system - Taiwan 1979
(tonnes)



Sources: Report on Cargo Handling in the Taiwan Area, Taiwan.
Wholesale Report, Taiwan
Fisheries Year Book, 1977, Taiwan

D. DEMAND/SUPPLY BALANCE

Table 10 and 11 show utilization of fish landings from Taiwan's various types of fisheries and imports from foreign countries. Production of deep sea (including foreign waters), inshore, coastal and aquaculture fisheries are recorded as domestic production. Over one-fourth of Taiwan's deep sea production is marketed abroad. The rest of the landings are processed for either export or domestic consumption and marketed as fresh (iced) fish through the production and consumption centres. Imports are handled by wholesalers who then sell though the retail market outlets.

Taiwan's domestic demand for fish products is projected to reach 1 264 510 tonnes by 1985. Domestic landings on the other hand could amount to only 1 176 000 tonnes creating a deficit of 88 510 tonnes. Lower domestic landings could easily raise this deficit to 200 000 tonnes. In 1979 an estimated 215 000 tonnes (round weight equivalent) was exported. Assuming a conservative yearly growth estimate of 5%, exports should reach 288 000 tonnes in 1985. If all the export requirements have to come out of domestic production, then a net deficit of 376 510 tonnes will develop. This could potentially be 500 000 tonnes, if deep sea production slows down or reverses. Possible sources of supply to cover this deficit are:

(i) Increased aquaculture production of highly exportable species such as eels, shrimps, clams, and oysters.

(ii) Increased imports of processable species such as squid and salmon.

(iii) Allowing a greater proportion of imports to replace quantities processed for export.

(iv) Negotiating for more fishing rights.

In the short term (1980), squid and cuttlefish exports to Japan will slow down due to high inventory from surplus landings in 1979. This could create a temporary glut in squid supply. Recovery of the Japanese squid market will, however, very quickly relieve the glut as Taiwan squid and cuttlefish command a high consumer preference in Japan.

On the basis of an increase in imported fish prices of 3.2 fold and export by 4.5 times between 1967 and 1977, it is realistic to project that the mean prices of fish will increase two-fold between 1977 and 1985. Prices of fresh fish should increase as demand for fresh fish outgrows supply. Prices of frozen fish should also increase as consumer acceptance of this product increases.

Taiwan's exports of fishery products have grown four times in tonnage over the past ten years and total value has increased twenty three times. It is not obvious that supply will allow for continued success rates of these magnitudes.

Imports, on the other hand, grew 3.2 times in value over the same period. In terms of quantity, fish imports grew from 40 080 tonnes up to 205 966 tonnes in 1977. Four-fifths of imports came in the form of fishmeal. A closer look at the statistics reveals that much of the growth in imports of fish products, other than fishmeal, occurred during the last five years. Unofficial sources report that 10 000 tonnes of squid were imported in 1979, a sharp increase over the 4 059 tonnes imported in 1977. Fresh fish imports reached 6 029 tonnes in 1977 and the trend was towards a substantial increase.

In order to slow down the rapid growth of imports, the government in 1979 increased import duty rates on fish products. At the start of 1980 it banned importation of fish products except fishmeal. As a result, the Taiwan processing industry is suffering from a shortage of raw materials and has strongly appealed to the government to allow importation of processable species and to reduce the tariff duties on these. The government may very well reconsider its position and permit importation in the very near future to prevent losses by the processing industry, to sustain the domestic and export fish markets. If such a reversal does not occur domestic fish prices will move up sharply, and production and consumption will, in part, be choked off.

TABLE 12

Taiwan: Foreign trade in fishery products
(1967-1977)

	IMPORT		EXPORT	
	Q (tonnes)	V (US$000)	Q (tonnes)	V (US$000)
1967	15 799	3 897	40 080	20 709
1968	16 209	3 352	86 658	37 632
1969	34 316	7 966	101 284	50 447
1970	31 635	10 336	104 527	76 761
1971	48 236	13 268	112 730	93 755
1972	49 217	14 771	127 870	134 369
1973	37 355	30 246	149 542	210 048
1974	54 087	29 504	132 043	199 288
1975	153 982	61 341	149 584	273 861
1976	100 204	68 028	167 404	365 318
1977	109 845	87 086	205 966	475 682

Source; Fisheries Year Book, Taiwan Area 1977, Released May 1978.

TABLE 13

Taiwan: Analysis of foreign trade in fishery products
(1967-1977)

	1967	1972	1977	10 Year Increase
Average Value per Ton:				
Import	$247	$300	$792	3.2
Export	$517	$1 051	$2 310	4.5
Net Export:				
Quantity (tonnes)	24 281	78 653	96 121	4
Value US$(000)	16 812	119 598	388 596	23
Top Imports (tonnes)				
Fish meal	13 302	47 796	89 791	6.7
Cuttle Fish/Squid	1 032	710	3 059	3
Fresh Fish	255		6 029	23.6
Top Exports (tonnes)				
Frozen Fish	38 165	116 323	170 676	4.5
Frozen Shrimp	1 412	9 717	7 663	5.4
Crustaceans	3	846	5 066	

Source: Fisheries Year Book, May 1978, Taiwan Fisheries Bureau

E. POTENTIAL TRADE

1. Market potential for Canadian exports

(a) Squid

In 1979, Taiwan imported 10 000 tonnes of Argentina (Illex) squid. Much of this squid was processed into various forms like dried and skinned tube. Based on the increase in squid imports over the past three years (3 000 tonnes in 1977, 6 000 tonnes in 1978, 10 000 tonnes in 1979), it is reasonable to project that squid import could reach 20 000 tonnes by 1985.

(b) Salmon

Smoked salmon is probably one of the most highly valued food specialties in Taiwan. In 1930, when the population was only 4 million, Taiwan imported 1 000 tonnes of smoked salmon. Today, the demand should be 4 500 tonnes but excessive import duties have kept import quantities down.

One large processor alone would be interested in 1 000 tonnes or more of sockeye salmon per year.

Salmon imported for processing and re-export of the finished product are exempt from the import tariff of 65% ad valorem.

(c) Groundfish

Ocean perch, black cod, Alaska pollock, turbot and dogfish should be offered to the Taiwan market. Specific inquiries were gathered from traders and processors. These indicate that Canadian producers should develop and implement marketing plans to tap opportunities in these species.

(d) Salt herring

A market for about 1 000 tonnes of small salt herring exists. Sales of Canadian salt herring suffered a set back when a Canadian company delivered bad quality products back on October 1977 resulting in a substantial loss to the importer. This business could be revived if good product quality can be guaranteed.

2. Market entry requirements and barriers

(a) Pricing considerations

Realistic pricing structures for all potentially exportable Canadian species must be established, taking into consideration major competition. For example, Canadian producers should know the production cost of squid in Argentina and New Zealand in order to develop competitive price offerings.

(b) Impact of transport cost

East coast exports to Taiwan will encounter grave price disadvantages due to additional freight costs. This will be aggravated further by future increases in oil price and bunker surcharges.

(c) Credit arrangements and financial practices

Payment of imports is regulated by the Central Bank which has the exclusive right to hold all foreign exchange instruments. However, over the last few years surplus trade resulted in a build up of foreign exchange reserves, to over US $7 billion by the middle of 1979. As a result, the Central Bank slightly relaxed foreign exchange controls by allowing designated commercial banks to purchase and sell foreign currencies. The most widely used payment instrument from foreign goods is by foreign letter of credit.

(d) Fishery products import ban

This measure is primarily intended to protect the market for domestic fish production. The ban is expected to be lifted shortly. Once it is lifted the immediate market requirements will be for squid, salmon, and redfish.

(e) Quality requirements

Quality requirements are not unlike Japanese standards. For squid large size, 400 grams and up would be required for drying. High degree of freshness is extremely important for fish intended for table. This will be required of ocean perch, black cod or turbot. Most preferred form is round whole to suit Chinese cooking but Headed and gutted (H&G) is tolerated for imported fish.

(f) Packaging and labelling

No special requirements on packaging and labelling have been specified but it would be safe to assume that specification requirements for the Japanese market should be followed, with due regard to Taiwanese language requirements.

(g) Customs import tariff

Chapter 3 of the Customs Import Tariff of the Republic of China (see Table A-1) deals with fish, crustaceans and molluscs. Tariff rates are based on either ad valorem or specific rate per unit weight (kilogram). Fishmeal is not included in this chapter. Tariff for this important raw material is 30%. Fish fry and spawns used for propagation are duty free. Tariffs on some Canadian species are salmon 65%, salt herring 65%, squid (frozen) NT$20 per kilogram, squid (dried) NT$220/kilogram, mackerel NT$14/kilogram and lobster 65%. Details are given in Appendix I.

F. IMPLICATIONS OF TAIWAN FISH EXPORTS TO EXISTING CANADIAN MARKETS

If anything, Taiwan will most likely see a decrease in its international fisheries production. A greater dependence on imports will likely occur in the 1980's.

(a) Trading arrangements between Taiwan and other countries

Japan, the US and Hong Kong continue to be Taiwan's top three trading partners in the 1980's. Fishery exports to Japan and the US consist of species like shrimp, prawns, and eels which pose no competitive threat to Canadian fish exports. These two countries in return sell small quantities of fishery product to Taiwan. Hong Kong, on the other hand, represents a common market for Canadian and Taiwanese dried squid. Canada could capture 30% of the Hong Kong dried squid market by offering lower prices with correspondingly lower quality products in the short term.

(b) Taiwan's quality control

Many of the processing plants process vegetables, meats and fish in the same lines and crop contamination has caused quality problems which damaged product image in important export markets, such as the US and Japan.

(c) Taiwan's transport costs

High cost of transportation to important markets like the US and Europe could impede growth of exportable species such as shrimps, prawns (US) and eels (Europe).

(d) Taiwan's international marketing

Taiwan's limited diplomatic relations limits its capacity to establish a strong international marketing network.

G. CONCLUSIONS

Taiwan represents a promising new potential market for selected Canadian fishery products in the immediate future. The standard of living of the 17.5 million population (1979) which is projected to reach 19.5 million by 1985, has apparently broken out of the subsistence level and consumer buying is shifting to higher value goods. Protein consumption has increased three-fold over the last 20 years with fish making up almost half of the protein food intake.

Despite the absence of diplomatic relations, trade between Canada and Taiwan has grown substantially, mostly in favour of Taiwan. In 1979, Canada was the 7th largest importer of Taiwan goods, worth US $415 415 000, but in return sold only US $136 016 000 to Taiwan, with negligible amounts in fishery products.

In 1979 Taiwan fish landings amounted to 907 000 tonnes. Domestic consumption was estimated at 769 100 tonnes leaving a balance of 137 900 tonnes for processing. Domestic demand should grow faster than domestic production while export markets are expected to continue their healthy growth pattern. The net effect would be a substantial shortage which would require increased imports.

Canadian species with immediate marketing prospects are squid, salmon, black cod, Alaska pollock, and ocean perch. Other species that should be developed are hake, halibut, and sole.

The members of the mission have no doubt that many marketing opportunities can be identified with a greater investment of time and effort in the field. However, it is felt that we have sufficient information to recommend the following immediate steps:

1. Encourage individual Canadian fishing companies to pursue exportation of fish to Taiwan.

2. Set up a fish trade post to liaise between Taiwan importers/processors and Canadian producers.

3. Ask the Canadian fishery organizations to organize a Taiwan committee to make an indepth study of the Taiwan fish market with a view of penetrating this market with Canadian fish products.

APPENDICES

APPENDIX I

TABLE A-1

TARIFF ON FISH, CRUSTACEANS AND MOLLUSCS

No.	Stat. No.	Description of Goods	Tariff Rate: Ad Valorem Rate	Tariff Rate: Specific Rate	Unit
0301		Fish, fresh (live or dead), chilled or frozen			
	010	(1) Fish fry	Free		KG
	020	(2) Aquarium or ornamental fish	30%		KG
	030	(3) Fish, sardine	75%		KG
		(4) Fish roe, edible			
	041	(a) Roe, mullet		NT$ 190/Kg	KG
	042	(b) Other	65%		KG
	050	(5) Fish heads, tails, lips, skins and bones, edible	100%		KG
	060	(6) Sharks' fins, edible	130%		KG
	070	(7) Fish maws, edible	100%		KG
	080	(8) Mullet		NT$ 40/Kg	KG
	090	(9) Mackerel		NT$ 14/Kg	KG
	100	(10) Other	65%		KG
0302		Fish, salted, in brine, dried or smoked			
	010	(1) Fish cod, dried (including boneless)	75%		KG
		(2) Fish, dried and smoked			
	021	(a) Small fish, dried		NT$ 30/Kg	KG
	022	(b) Other	65%		KG
	030	(3) Fish, herring, salt	65%		KG
	040	(4) Fish, salmon, salt	65%		KG
	050	(5) Sharks' fins	130%		KG
	060	(6) Fish, sardine	75%		KG
	070	(7) Fish maws, edible	100%		KG
	080	(8) Fish heads, tails, lips and skins, edible	100%		KG

APPENDIX I (cont'd)

No.	Stat. No.	Description of Goods	Tariff Rate: Ad Valorem Rate	Tariff Rate: Specific Rate	Unit
	090	(9) Fish roe, edible	65%		KG
	100	(10) Other	65%		KG
0303		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			
		(1) Fresh, (live or dead) chilled or frozen			
	110	(a) Shrimps, prawns, crabs lobsters	65%		KG
		(b) Awabi (abalone) small abalone			
	121	(i) Awabi (abalone)		NT$ 200/Kg	KG
	122	(ii) Small abalone		NT$ 100/Kg	KG
		(c) Cockles			
	131	(i) Hard clam	75%		KG
	132	(ii) Cockles (including live cockles)		NT$ 23/Kg	KG
	140	(d) Compoy		NT$ 160/Kg	KG
	150	(e) Squid, cuttle fish		NT$ 20/Kg	KG
	160	(f) Oysters, clams and mussels	75%		KG
	170	(g) Top shells		NT$ 100/Kg	KG
	180	(h) Bicho de mar	130%		KG
	190	(i) Sea blubber	65%		KG
	191	(j) Other	75%		KG

APPENDIX I (cont'd)

No.	Stat. No.	Description of Goods	Tariff Rate: Ad Valorem Rate	Tariff Rate: Specific Rate	Unit
		(2) Dried, salted, in brine or boiled			
	210	(a) Prawns and shrimps		NT$ 75/Kg	KG
	220	(b) Shrimp skin		NT$ 20/Kg	KG
	230	(c) Crabs' flesh, dried	75%		KG
	240	(d) Cockles	75%		KG
	250	(e) Compoy		NT$ 480/Kg	
		(f) Bicho de mar			
	261	(i) Spiked, dried		NT$ 300/Kg	KG
	262	(ii) Not spiked, dried		NT$ 160/Kg	KG
	263	(iii) Other		NT$ 80/Kg	KG
		(g) Awabi (abalone)			
	271	(i) Dried		NT$1500/Kg	KG
	272	(ii) Other	100%		KG
		(h) Squid, cuttle fish			
	281	(i) Squid, dried		NT$ 220/Kg	KG
	282	(ii) Cuttle fish	65%		KG
	283	(iii) Other		NT$ 140/Kg	KG
		(i) Oysters, clams and mussels			
	291	(i) Oysters, dried		NT$ 150/Kg	KG
	292	(ii) Clams	75%		KG
	293	(iii) Mussels, dried		NT$ 70/Kg	KG
	294	(iv) Other	75%		KG
	295	(j) Top shells	75%		KG
		(k) Sea blubber			
	296	(i) Dried		NT$ 35/Kg	KG
	297	(ii) Other		NT$ 15/Kg	KG
	298	(l) Other	75%		KG
	300	(3) Spawns intended for cultivation and improvement of variety	Free		

APPENDIX I (CONT'D)

NOTE:

This table does not cover:

(a) Marine mammals (heading No. 0106) or meat thereof (heading No. 0204 or 0206);

(b) Fish (including livers and roes thereof), crustaceans and molluscs, dead, unfit or unsuitable for human consumption by reason of either their species or their condition (Chapter 5); or

(c) Caviar or caviar substitutes (heading No. 1604).

Additional Note:

1. For mackerel pike (sanma) covered by a certificate issued by the Ministry of Economic Affairs that those imported will be used as bait for fishing, the tariff rate applicable will be 7.5% ad valorem.

APPENDIX II

TAIWAN FISHERIES DATA

PRINCIPAL GOVERNMENT AGENCY: TAIWAN FISHERIES BUREAU
DEPARTMENT OF AGRICULTURE AND FORESTRY
PROVINCIAL GOVERNMENT OF TAIWAN

FISHERIES ASSOCIATIONS:

1 PROVINCIAL ASSOCIATION
42 REGIONAL ASSOCIATIONS
166 331 MEMBERS
190 302 FULL-TIME FISHERMEN
111 216 PART-TIME FISHERMEN

FISHING FACILITIES:

10 500 POWERED FISHING VESSELS (LESS THAN 50 TONS)
1 500 50 TON AND UP DEEP SEA FISHING VESSELS
11 000 RAFTS FOR COASTER FISHERY
4 000 SAMPAN FOR INSHORE FISHERY

MARKETING

5 MAJOR PRODUCTION CENTERS:

KEELUNG
KAOHSIUNG
TAIWAN
SUAO
MAKUNG

5 MAJOR CONSUMPTION CENTERS:
(Fish Markets)

TAIPEI
TAICHUNG
CHANGHUA
CHIAYL
PINGTUNG

REFRIGERATION FACILITIES

611 Cold Storage and Refrigeration plants with

483 MT/DAY ICE MAKING CAPACITY
86 321 MT/FREEZING CAPACITY PER DAY

APPENDIX III

TABLE A-3

TAIWAN: FISHERIES INVESTMENT

(1977)
(US $ 000)

	Vessels	Gear	Others	Total
DEEP SEA	11 585	7 142	2 000	20 727
INSHORE	14 381	7 600	2 100	24 081
COASTAL	676	357	242	1 275
AQUACULTURE	--	--	8 082	8 082
FISHING HARBOURS	--	--	--	23 758
REFRIGERATION FACILITIES	--	--	--	959
FISH MARKETS	--	--	--	604
PROCESSING PLANTS AND OTHERS	--	--	--	702
GRAND TOTAL	--	--	--	$ 80 188

Source: Fisheries Yearbook, Taiwan Area, 1977.

APPENDIX IV

TABLE A-4

NUMBER AND TYPE OF FISH PROCESSING PLANTS

	BACK YARD	COMMERCIAL	TOTAL
PRODUCT TYPE			
FOOD			
CANNED	--	36	36
SMOKED	16	37	53
DRIED	176	46	222
COOKED & DRIED	980	153	1 133
DRY SALTED	269	17	286
SALTED	100	6	106
MINCED	339	211	550
OTHER FOOD PRODUCTS	282	107	389
SUB-TOTAL FOOD	2 162	613	2 775
NON-FOOD			
SHELL LINE	7	19	26
FISH MEAL	19	22	41
FISH OIL	9	--	9
FISH CAKE	8	3	11
FISH SOLUBLE	5	7	12
ORNAMENTALS	47	13	16
OTHER	6	1	7
SUB-TOTAL NON FOOD	101	65	122
GRAND TOTAL	2 263	678	2 897

Source: Ibid.

APPENDIX V

TABLE A-5

LIST OF TAIWAN AGENCIES AND COMPANIES VISITED
IN RELATION WITH THIS STUDY

DATE	COMPANY/AGENCY	LOCATION	CONTACT PERSONS AND TITLES
March 17/80	MARUBENI CORPORATION	TAIPEI	Sadanori Okamura, Deputy General Manager
			George L. C. Chu, Assistant Manager, Produce and Marine Section
	TAIWAN FISHERIES BUREAU	TAIPEI	Chen Ching Shyan, Senior Officer Su Ching-Fang, Section Chief, 4th Division
March 18/80	PEI TU FROZEN FOODS CORP.	KEELUNG	
	JENQ CHUEN TRADING CO.	TAIPEI	Wu Ying-Sen, Owner
March 19/80	GREAT INTERNATION CORP.	TAIPEI	C.T. Chueh, Senior Vice-President
	MARUBENI CORP.	KAOSHIUNG	Kin Tu Chan, Manager Heng Cheng, Assistant Manager Kazug N, Assistant Manager
	CHEN HSIANG FROZEN FOODS	KAASHIUNG	J.W. Sung, General Manager
	YOUNG-SUN FROZEN FOODS	KAOSHIUNG	Gue-Dung, Product Manager
March 20/80	TA MING FOOD INDUSTRY	KAOSHIUNG	K.S. Tsai, President C.M. Chen, Business Chief
	CHI MEI FROZEN FOOD CO.	TAINAN COUNTY	Y.T. Lin, Vice General Manager N.H. Huang, General Manager
	TAI YU PRODUCTS CORP.	TAINAN COUNTY	Chen Wu Lin, Manager Lee Ko Ping, Assistant Manager