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***Consultancy Report: Market Prospects for Peruvian Fishery Products
in Asia***

***Peru: Export Trade and Development Project
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By: Fatima Ferdouse

Prepared for:
Agricultural Cooperative Development International
50 F Street, NW, Suite 900
Washington, DC 20001
Phone: 202/638-4661
Fax: 202/626-8726

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FOR PERUVIAN FISHERY PRODUCTS
IN ASIA**

by

**Ms Fatima Ferdouse
Chief
Trade Promotion Division
INFOFISH
Kuala Lumpur
Malaysia**

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MARKET PROSPECTS FOR PERUVIAN FISHERY PRODUCTS IN ASIA

INTRODUCTION

The total fishery landings in Peru have been in the region of 6.6 million tons to 6.8 million tons during the last 5 years. Available information on catches and abundance reveal sharp fluctuations in stocks and landings. Small pelagic species account for most of Peru's seafish biomass. Amongst the most important are, anchoveta (*Engraulis ringens*), sardine (*Sardinops sagax*), horse mackerel (*Trachurus murphyi*) and chub mackerel (*Scomber japonicus*).

According to the FAO landings statistics, sardine and anchoveta are the major species caught in Peruvian waters. However, some government reports indicate that hake and chub mackerel stocks are still underexploited. Besides, other pelagic species of commercial importance identified are Spanish mackerel (*Scomberomorus sierra*) yellowfin tuna, skipjack, bonito (*Sarda chiliensis*), some shark species and swordfish (*Xiphias gladius*). Hake has been the important ground fish species. In cephalopods and molluscs, giant squid (*Dosidicus gigas*) and scallops landings are significant for export markets.

Table 1: Peru: Nominal Catches by Species, 1985-90 (in tons)

Species		1985	1986	1987	1988	1989	1990
Common carp	<i>Cyprinus carpio</i>	-	-	-	-	-	35
Tilapia nei	<i>Oreochromis (Tilapia) spp</i>	52	36	89	230	230	186
	<i>Colossoma macropomum</i>	-	-	30	30	30	85
	<i>Colossoma bidens</i>	-	-	-	-	-	77
	<i>Osteichthyes</i>	27 791	32 589	36 456	39 507	33 859	29 328
Freshwater fishes nei							
Rainbow trout	<i>Oncorhynchus mykiss</i>	607	506	661	850	1 000	1 608
Flatfishes nei	<i>Pleuronectiformes</i>	896	1 482	1 724	1 545	1 697	2 132
South Pacific hake	<i>Merluccius gayi</i>	18 373	38 952	32 026	78 869	88 004	127 291
Groupers nei	<i>Epinephelus spp</i>	293	393	206	279	921	182
Peruvian rock seabass	<i>Paralabrax humeralis</i>	7 519	6 007	4 323	5 770	3 694	3 543
Tilfishes	<i>Branchiostegidae</i>	875	516	419	337	205	326
Snappers, jobfishes, nei	<i>Lutjanidae</i>	241	93	80	106	222	158
Southeast Pacific grunt	<i>Isacia conceptionis</i>	610	309	289	1 123	1 635	1 359
Drums	<i>Sciaena spp</i>	11 711	7 538	3 500	10 730	9 351	6 764
Peruvian weakfish	<i>Cynoscion analis</i>	4 567	4 462	5 187	4 384	4 027	5 078
Croakers nei	<i>Micropogonias spp</i>	850	1 536	2 601	1 406	2 149	1 529
Peruvian drum	<i>Paralonchurus peruanus</i>	24 588	12 143	10 640	11 229	7 532	8 704
Pintadilla	<i>Cheilodactylus variegatus</i>	348	478	274	257	324	270
Cusk-eels nei	<i>Genypterus spp</i>	1 229	2 445	2 634	3 957	2 563	1 652
South Pacific breams	<i>Seriotelella spp</i>	11 161	35 551	43 358	21 514	11 457	10 065
Flyingfishes nei	<i>Exocoetidae</i>	1 450	6 720	2 983	616	1 204	382
Mulletts nei	<i>Mugilidae</i>	15 269	17 004	24 475	16 827	29 252	21 110
Silversides (Sand smelts)	<i>Atherinidae</i>	1 015	3 930	3 953	5 620	10 276	10 258
Pelagic percomorphs nei	<i>Perciformes</i>	106	912	551	151	247	392
Chilean jack mackerel	<i>Trachurus murphyi</i>	87 466	49 863	46 304	118 076	140 720	191 139
Pompanos	<i>Trachinotus spp</i>	684	858	949	807	1 031	921

Species		1985	1986	1987	1988	1989	1990
South American pilchard	<i>Sardinops sagax</i>	2 903 728	1 720 905	2 469 202	3 470 422	2 568 910	3 265 297
Pacific menhaden	<i>Ethmidium maculatum</i>	1 397	1 790	943	1 770	7 128	6 454
Anchoveta (Peruvian anchovy)	<i>Engraulis ringen</i>	844 255	3 481 869	1 764 635	2 701 369	3 720 713	2 926 408
Eastern Pacific bonito	<i>Sarda chiliensis</i>	2 349	3 318	18 032	33 986	26 218	40 142
Pacific sierra	<i>Scomberomorus sierra</i>	702	1 713	1 229	1 576	1 726	731
Skipjack	<i>Katsuwonus pelamis</i>	-	371	2 417	1 433	185	99
Yellowfin tuna	<i>Thunnus albacares</i>	267	724	435	2 930	1 437	613
Swordfish	<i>Xiphias gladius</i>	92	33	62	129	83	2
Chub mackerel	<i>Scomber japonicus</i>	57 069	38 709	24 072	25 554	32 042	60 776
Smoothhounds	<i>Mustelus spp</i>	8 764	10 239	11 137	13 160	12 589	6 458
Angelsharks, sand devils	<i>Squatinae</i>	563	1 731	1 432	576	313	190
Peruvian guitarfish	<i>Rhinobatos planiceps</i>	1 413	2 046	1 161	3 033	715	539
Skates and rays nei	<i>Rajiformes</i>	5 496	7 276	7 922	8 251	9 849	4 311
Sharks, rays, skates, etc	<i>Elasmobranchii</i>	546	1 959	1 465	1 615	1 579	1 061
Marine fishes nei	<i>Osteichthyes</i>	23 354	65 672	18 101	8 880	62 206	70 447
Marine crabs nei	<i>Reptantia</i>	794	1 764	1 497	1 372	1 931	3 971
Tropical spiny lobsters nei	<i>Panulirus spp</i>	46	24	49	18	44	11
Whiteleg shrimp	<i>Penaeus vannamei</i>	1 468	1 644	3 062	3 500	3 353	3 000
Penaeus shrimps nei	<i>Penaeus spp</i>	3 673	3 443	5 859	4 383	5 501	6 855
Gastropods nei	<i>Gastropoda</i>	4 314	8 271	7 702	11 109	10 694	4 658
Magellan mussel	<i>Aulacomya ater</i>	4 676	8 714	9 421	9 083	12 784	16 460
Peruvian calico scallop	<i>Argopecten purpuratus</i>	50 118	16 021	5 294	6 862	3 351	6 235
Common squids	<i>Loligo spp</i>	1 141	1 120	869	606	1 861	6 448
Octopuses	<i>Octopodidae</i>	840	869	1 858	1 183	1 384	1 223
Squids nei	<i>Loliginidae, Ommastrephidae</i>	206	870	84	852	2 992	7 441
Marine molluscs nei	<i>Mollusca</i>	3 045	10 736	5 485	3 812	13 084	10 567
Marine turtles nei	<i>Testudinata</i>	36	9	305	32	79	101
Total		4 138 053	5 616 163	4 587 442	6 641 716	6 853 841	6 875 072

Source: FAO Statistical Year Book, vol. 70

Peruvian seafood exports reached US\$491 million in 1991. However, fishmeal remains the major export item taking 91 percent share of the total exports in volume. To broaden the export market for other species of commercial importance it is imperative to launch product and market diversification programmes and to upgrade the present status of the Peruvian fishery industry. Currently hake, giant squids and scallops are the main items exported to Europe, Japan and the USA, respectively.

		1988	1989	1990	1991 (f)	% to total (1991)
Fish, fresh, chilled or frozen	Q	22 897	15 502	14 060	10 780	2.1%
	V	16 221	12 398	11 911	7 900	
Fish, dried, salted or smoked	Q	185	175	143	150	-
	V	1 078	1 143	821	897	
Crustaceans and molluscs	Q	3 697	3 855	4 797	4 120	3.9%
	V	18 815	20 705	21 135	19 385	
Fish, canned	Q	23 839	20 945	11 742	9 500	1.7%
	V	17 921	19 673	11 262	8 317	
Crustaceans and molluscs, canned	Q	257	645	654	700	0.4%
	V	1 293	3 393	3 511	2 017	
Oils	Q	1 533	96 032	26 482	22 000	0.7%
	V	165	15 173	4 341	3 610	
Meals	Q	797 786	1 117 086	1 113 859	1 132 000	91%
	V	346 907	406 512	346 737	448 950	
Total	V	402 400	478 997	399 718	491 076	

Source: FAO Fishery Statistics, vol. 73
(f) = FAO estimate

MARKET PROSPECTS IN ASIA

On global scale about 18 percent of the total average intake of animal protein has been attributed to fish and fishery products. Although overall world imports are on the increase in industrialised countries, fish still plays a less central role in developed countries with the exception of Japan. A recent study shows that fish supplies 29 percent of total animal protein to the diets of Asians, 18.6 percent to Africans and 7.6 percent in Latin America. However, in North America it contributes only 6.6 percent and in Europe, including former USSR, it is about 12 percent.

Per capita seafood consumption in Japan is 70 kg. In Korea Rep, Taiwan, Hong Kong, Singapore, Malaysia and Thailand, it is as high as 35-45 kg.

To find 'niche' markets in Asia for Peruvian products, it is important to identify the species presently being consumed in that part of the world. So far Japan and Korea have been the only outlets for Peruvian hake and squid through joint-venture fishing agreements with these two countries. However, the current economic boom in Southeast Asian countries like Thailand, Malaysia, Hong Kong, China, Taiwan and Singapore provides opportunities to market Peruvian fishery products in these countries.

Following economic indicators on the developing Asian countries which could be used as a barometer to identify market potentials for fishery products other than Japan, which is the leading seafood importer in the world, the prospects of market expansion in other Southeast Asian countries is getting brighter these days. To meet demand for fishery products in domestic and export markets, most of these countries are in the process to liberalise their import policies on seafood. However, it is necessary to examine each market area separately to understand the tradition, food habit and use of seafood in various countries. Although inter regional trading of seafood is very strong in Southeast Asia some products from Latin America have already made their way to these markets.

Country	Population in million	Population growth	GNP per capita	GDP growth
Japan	124.9	0.4%	\$29,750	2.7%
Hong Kong	5.9	0.9%	\$16,382	5.3%
Singapore	3.1	2.0%	\$15,200	10.1%
Taiwan	20.9	1.2%	\$10,215	6.2%
Korea, PR	44.1	0.9%	\$ 6,740	3.9%
Malaysia	18.8	2.6%	\$ 2,965	8.1%
Thailand	58.7	1.4%	\$ 1,795	7.4%
Philippines	64.3	2.3%	\$ 835	-0.2%
Indonesia	188.7	1.7%	\$ 645	5.8%
China	1 183.2	1.4%	\$ 385	13.9%

Japan

Imports of fishery products average 2.8 million tons a year worth US\$10.5 billion which makes Japan the number one importer of fishery products in the world. The first twelve suppliers to this market are: the USA, Korea RP, Taiwan, Thailand, China, Indonesia, Canada, Australia, Russia, Norway, India and Chile. Peru took the 44th place in 1991. In 1992, the Peruvian share was only 0.2 percent of total imports. Of this, over 70 percent is comprised of fishmeal at an average price of US\$0.60/kg. Last year Japan bought just 277 tons of squid from Peru at an average price of ¥217/kg (US\$ 2.00/kg).

Japan is the highest seafood consuming country in the world. Once a major fishing nation, Japan is gradually losing fishing grounds outside its own territorial waters as many countries have implemented the EEZ and are curbing Japanese fishing quotas as well. As a result import has become the only alternative to cater to their huge domestic market demand.

Processing seafood overseas is also another activity which is showing an increasing trend due to the high labour and raw material costs in Japan. Sales of seafood at the supermarket level have gone up recently. Supermarkets entered seafood business in late 1980's to cut middlemen out, to get high profit margin, and consumer attraction. As a

result direct purchases by supermarket chains from foreign suppliers have also increased. Through joint-venture arrangements value-added seafood processing by producing countries have become important for Japanese importers. Most of the high value items coming from the Asian region are shrimp and cephalopod based products.

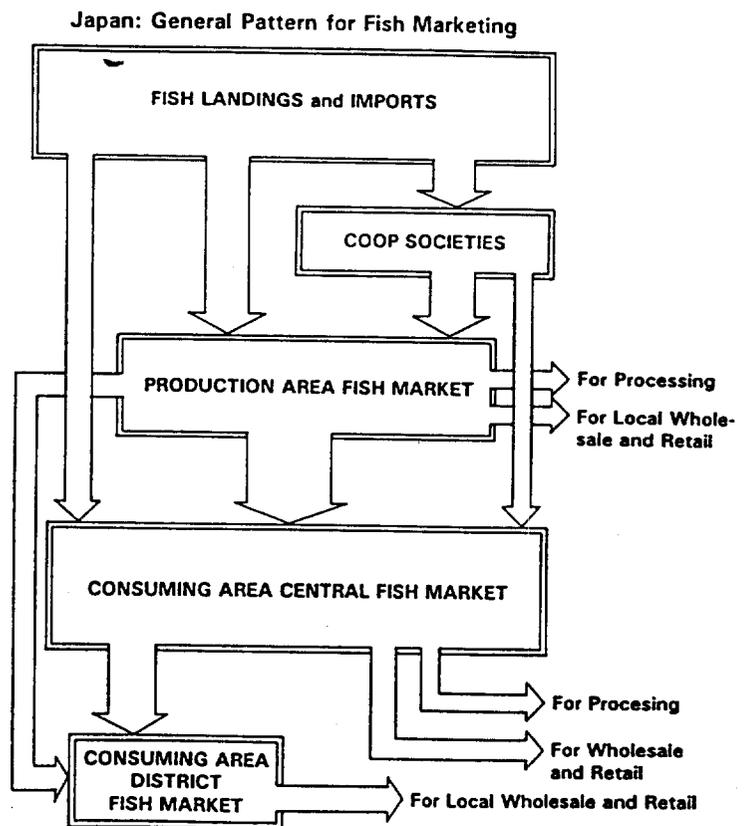
Imports of processed seafoods are being facilitated by transfer of technologies to the overseas packers where raw materials and low cost labour are readily available with one condition that the processed products be supplied to the Japanese market. The market share of processed products in Japan is as high as 60 percent and the fishery products supply 42 percent of a person's daily animal protein intake in Japan.

The Japanese distribution channel is long and complicated. Catches are usually sold to district production wholesalers. From there it goes to consumer district wholesalers in fresh, frozen or processed form. There are about 760 district production wholesale markets and 600 consumer district markets in Japan. The Tokyo Central Wholesale Market, which is the biggest, handles about 882 000 tons of fishery products annually.

Imported products are being channelled through consumer district wholesale markets. Food in the consumer district wholesale market is traded by auction or negotiated transaction between wholesalers, markets dealers and processors. Market dealers sell their products directly to the retailers. Recent changes in the distribution system indicated that only 40 percent of the imported fishery products are being transacted through open auction in the fish markets, whereas the rest are sold directly to consumers by importers. The share of the imported fishery products is 30 percent at the Tokyo Central Market and 50 percent at Osaka Central Fish Market. The growth of restaurant business and supermarkets play an important role in the expansion of imported products.

Japanese spend 17 percent of their household food expenditure for eating out compared to 25 percent by the Americans. This percentage is expected to increase in future. Nevertheless they prepare more fish at home.

Imports of air-flown products are also increasing which include sashimi tuna, live lobster, live red snapper and other fresh/chilled fishery products.



Products entering into Japanese market must meet their high quality standards. Uniformity of quality and good appearance are the major criterias for this highly sophisticated seafood market. The market is also very much price elastic for certain high value seafoods such as shrimp, lobster and tuna.

Japanese imports of frozen squid and cuttlefish vary between 28-30 000 tons a year. This does not include "mongo ika" (cuttlefish) from the Saharian fishing grounds off Morocco, Mauritania and Senegal. The species imported are mostly soft textured *loligo* and *illex* which are very different from the Peruvian giant squid (*Dosidicu gigas*). Due to the very thick and tough texture of *dosidicus gigas*, its use is limited to *Daruma*, *saki-ika* and fried squid. The explanatory notes for these terms are:

- 'Ika' : Japanese term for both squid and cuttlefish.
- 'Daruma' : intermediate processed products from which *saki-ika* is made. It is flat and flexible.
- 'Saki-ika': Flavoured, roasted squid, shredded into thin strips.

Giant squid are also used for making chinmi (seafood titbits).

There is an import quota for squid, which was 53 000 tons for live, fresh, frozen or salted products and 4 500 tons for dried squid for the fiscal year 1992-93 (March-April). The quota is allocated on the basis of domestic landings. Only when domestic landings are low, the Japanese will import less attractive squid like giant squid. It is considered as a cheap alternative as the meat is hard and not easy to process. Giant squid is certainly not suitable for the high grade sashimi although the thickness of the meat mantle is higher than the usual squid species.

Tariff rates: There are 10 percent (general) and 5 percent (GATT) tariffs for live, fresh and frozen squids. For dried/salted squid it is 15 percent.

Sanitary regulation: There is no special sanitary regulation for squid. The general import regulation for food items applies to squid and other seafood. It must be mentioned that the Japanese follow a stringent health regulation as far as seafood is concerned.

Table 4: Japanese Imports of Squid and Cuttlefish (other than Mongo Ika & 307.49-190), 1988-92 (in tons)

Origin	1988	1989	1990	1991	1992
Korea, RP	690	819	1 449	220	206
China	1	-	98	719	576
Taiwan	1 422	2 645	307	647	931
Vietnam	-	-	-	4	14
Thailand	41	73	270	104	187
Philippines	153	129	340	182	249
Indonesia	-	-	-	-	10
India	-	-	48	542	326
Polland	16 402	13 130	11 879	3 353	3 848
Bulgaria	6 713	8 844	10 543	10 514	7 221
USA	508	15	3	154	13
New Zealand	-	2 235	408	50	172
Peru	-	-	-	-	277
Chile	-	-	-	-	1475
Uruguay	-	-	-	-	418
Argentina	1 090	3 209	4 353	9 202	12 870
Panama	54	283	21	-	-
Total	28 575	34 692	33 682	26 779	28 815

Japanese annual imports of frozen hake fluctuated between 2 000 - 4 000 tons. Initially, Chile was the major supplier and later taken over by Argentina. There has been no direct import of hake from Peru so far.

Hake is usually used for making lower grade surimi when the price of Alaska pollack is high. Otherwise hake meat has very limited use in the Japanese cuisine. Occassionally it is used for fried fish. Japanese consumers generally like red meat fish such as tuna, skipjack, mackerel and white meat fish such as sole, plaice and red seabream which can be eaten as sashimi. Hake and cod species are rather soft with some odour which are considered to be cheap substitutes for high-priced fish like salmon. Therefore, the market potential for hake is limited in Japan.

There is a 10 percent tariff duty for fresh/frozen hake and the duty is 15 percent for salted fish.

Hake is also subject to an import quota but in combined quantity with cod, sardine, mackerel, jack mackerel, etc. The quota for this category of fish was US\$359.4 million for the 1992-93 fiscal year.

Origin	1988	1989	1990	1991	1992
Korea, RP	210	383	266	405	793
Spain	-	-	-	-	30
Chile	2 049	1 398	122	60	100
Argentina	300	1 495	1 591	2 634	2 903
South Africa	-	-	-	-	111
New Zealand	19	8	265	120	85
USA	-	-	1	57	-
Uruguay	-	-	-	31	-
Panama	-	6	-	-	-
Total (including others)	2 578	3 291	2 246	3 310	4 000

Imports of various mackerel species into Japan are quite substantial. However, most of the mackerel species are from the North Sea and the Atlantic supplied by Norway, the Netherlands and Republic of Korea. The main suppliers of Spanish mackerel are China (80 percent) and Korea Rep.

	1988	1989	1990	1991	1992
Mackerel	39 328	60 678	70 752	199 053	137 269
Horse mackerel	45 103	55 362	34 712	38 552	50 356
Spanish mackerel	19 035	10 481	11 584	10 850	11 779

Japan has been the leading importer of the most expensive pelagics, ie. tuna and skipjack. Sashimi grade tuna imported in fresh or frozen form fetches very high price in Japanese market. The most preferred catching methods are trapfishing, long-lining and pole-and-line which ensure the highest quality of these fish.

Consumption and demand of frozen tuna increased during recent years - from 184 000 tons in 1987 to 275 000 tons in 1992. Yellowfin enjoyed the biggest share in the market whereas the most expensive bluefin and bigeye imports declined due to low landings in major fishing areas. Taiwan and Korea have been the major suppliers of frozen tuna to Japanese market.

Table 7: Japanese Imports of Frozen tuna, 1987-92 (in 1000 tons)

	1987	1988	1989	1990	1991	1992
Skipjack	3.9	3.4	3.2	25.6	29.7	29.3
Albacore	3.0	3.1	2.9	1.8	4.2	9.4
Yellowfin	98.0	120.1	110.2	134.4	115.0	133.7
Bluefin	5.1	5.8	6.8	7.0	6.5	4.9
Bigeye	74.7	77.4	83.3	88.7	109.9	98.6
Total	184.7	209.8	206.4	257.5	265.3	275.9

Imports of fresh/chilled sashimi tuna is also on the rise in Japan. Indonesia topped the list of chilled yellowfin suppliers in 1992 followed by Taiwan and Malaysia. The latter has become a major centre of transshipment for Taiwanese caught sashimi tuna. Indonesian exports of fresh/chilled yellowfin increased by 141 percent in the three year period 1990-92. Bigeye exports have also doubled during 1990-92 from 2 377 MT to 4 799 MT, making Indonesia the number one exporter of fresh/chilled bigeye to the Japanese market.

Table 8: Japanese Fresh/Chilled Tuna Imports, 1990-92 (in MT)

	1990	1991	1992
Yellowfin	26 658	33 102	35 066
Bluefin	2 998	3 502	3 008
Bigeye	11 819	10 266	15 455

There is a distinction in tuna utilization by species. Fish like bluefin, bigeye and yellowfin go exclusively to sashimi market. High quality oily skipjack is now a days also being used for sashimi. Small skipjack are imported for making seasoned/dried Katsuo-bushi and Ara-bushi. Albacore is traditionally used for canning, but now albacore is also making in-roads in the sashimi market, and is particularly preferred by supermarkets.

The 1992 unit prices of imported tuna were as follows:

Fresh bluefin	¥2814/kg	US\$ 26.05
Frozen bluefin	¥1694/kg	US\$ 15.70
Tuna fillet (frozen)	¥1429/kg	US\$ 13.25
Fresh bigeye	¥1008/kg	US\$ 9.35
Fresh yellowfin	¥841/kg	US\$ 7.80
Frozen yellowfin	¥363/kg	US\$ 3.85
Frozen bigeye	¥674/kg	US\$ 6.25
Boiled/dried skipjack	¥522/kg	US\$ 4.85
Canned tuna	¥340/kg	US\$ 3.15
Frozen albacore	¥208/kg	US\$ 1.90
Frozen skipjack	¥114/kg	US\$ 1.05

The demand for seafood in Japan is expected to remain at the present level as the market has reached the saturation point for all kinds of seafood. Japanese population has stabilized at about 125 million with an annual growth rate of 0.4 percent. Therefore, no significant change is expected in import volume. However, seafood importers will buy more value-added products in future as processing fishery products in Japan has become very expensive these days. Therefore, total import value, in future, will probably exceed the current US\$10 billion. Japanese economy, at the moment is in a severe recession, although it is not that obvious in the economic indicators. Nevertheless, the latest drop of Yen against the US dollar will not be a plus point for more imports of seafood into Japan.

Republic of Korea

Korea is well established as a major fishing nation in the fishery world. Valuedwise it is also the seventh largest exporter of seafood in international market. Imports of seafoods into Korea are comparatively low but growing at an increasing rate. The import value escalated from US\$314.9 million in 1988 to US\$568.2 million in 1991. Korea has a large seafood reprocessing industry that exports high value products, particularly to Japan. To cater for that industry a substantial volume of fish such as cod, Alaska pollack, rock fish, pollack surimi and squid are being imported. Species like cod, plaice and herring are also used for domestic consumption.

Traditionally fish consumption has been high in Korea. Per capita consumption increased remarkably from 13.3 kg in 1961 to 50 kg in 1986. A slight drop was registered in 1988 to 48.8 kg due to low landings by Korean vessels from foreign waters.

		Imports				Exports			
Product form		1988	1989	1990	1991	1988	1989	1990	1991
Fish, fresh, chilled or frozen	Q	306 671	242 966	180 938	228 412	324 989	280 526	266 231	310 749
	V	246 485	239 328	248 101	396 702	843 678	778 522	659 347	745 954
Fish, dried, salted or smoked	Q	286	1 088	587	52	4 992	5 144	4 015	3 327
	V	1 208	1 545	852	516	33 977	30 932	29 447	21 551
Crustaceans and molluscs	Q	37 571	21 773	39 195	61 772	114 447	81 140	68 669	61 148
	V	44 789	49 216	85 198	116 550	537 358	423 921	366 003	410 695
Fish, canned	Q	107	67	94	54	55 068	45 158	52 099	41 767
	V	633	320	665	400	175 277	166 058	188 399	168 716
Crustaceans and molluscs, canned	Q	270	314	849	3 705	30 847	17 034	18 486	17 463
	V	1 579	1 504	3 340	14 671	190 308	136 901	116 481	137 674
Oils	Q	9 931	20 484	25 113	23 846	460	31	3	378
	V	4 561	7 035	9 416	14 969	168	56	2	251
Meals	Q	24 059	28 788	35 399	40 673	4 883	3 402	4 996	22 606
	V	15 712	18 143	17 193	24 393	3 302	2 018	3 617	5 775
Total	V	314 967	317 091	364 738	568 201	1 784 068	1 538 408	1 363 296	1 490 616

Dominant suppliers to Korea have been the USA (36 percent by value in 1990) and Japan (10 percent), although their combined share has declined significantly from 68 percent in 1981 to 46 percent in 1989 as the number of suppliers increased. Canada, Chile and New Zealand are traditional suppliers whose combined share has declined from 81 percent by value in 1981 to 53 percent in 1990. On the other hand, increasing amounts are arriving from Taiwan (2.6 percent in 1990), Peru (2.1 percent in 1990), Malaysia (2.1 percent), Indonesia (1.9 percent), the Philippines (1.3 percent) and Thailand (1.1 percent). The total number of suppliers has also expanded to some 45 countries at present.

This rapid import growth may be attributed to:

- 1) raw material shortage for the Korean seafood re-processing industry as well as for domestic market in general due to stagnant catches by the domestic fleet;
- 2) increased consumption of seafoods due to higher income and a growing population; and
- 3) appreciation of the Korean Won, especially during the second half of the 1980s.

Import Liberalisation

For a long time Korea used a closed-door policy for fisheries imports to protect the domestic industry, which has been a major foreign currency earner since the 1960s. From early 1980s a government plan for import liberalisation has slowly been implemented, product by product. In general, Korea has made substantial progress towards opening the domestic market to foreign products. The import liberalisation ratio for fishery products has increased from 48.5 percent in 1989 to 68.7 percent in 1991, while the liberalisation ratio for the manufacturing sector now stands at 97.7 percent.

In the area of fishery products, the government announced a three-year (1992-94) liberalisation schedule in March 1991. Over the three - year period, 61 fishery products are scheduled to be liberalised. By 1994, the import liberalisation ratio of fishery products will rise from the present level of 68.7 percent to 86.6 percent. However, frozen squid and mackerel will remain on the non-liberalised list until at least end-1997. With restrictions lifted, imports will increase rapidly provided:

- 1) there is corresponding domestic demand for seafoods and the consumer price of the imported product is reasonable;
- 2) if the tariff is kept at or reduced from the present level of 10-20 percent following liberalisation.

Korea: Import Liberalisation for Major Fisheries Items	
Items	status year liberalised
Frozen Pacific salmon	1981
Frozen trout	1984
Frozen Atlantic salmon	1981
Frozen halibut	1993 (planned)
Frozen sole	1994
Frozen albacore	1990
Frozen yellowfin	1990
Frozen skipjack	no plans yet
Frozen bigeye	1990
Frozen herring	1981
Frozen cod	1981
Frozen sardine	1994
Frozen mackerel	no plans yet
Frozen Alaska pollack	no plans yet
Frozen horse mackerel	1994
Frozen horse mackerel	no plans yet
Frozen Alaska pollack surimi	1994
Frozen other fish surimi	1992
Frozen rock lobster/crawfish	1984
Frozen lobster	1990
Frozen peeled shrimp	no plans yet
Frozen shrimp	1994
Frozen crab meat	1991
Frozen crabs other than king crab	1994
Live/fresh/chilled cuttlefish	1993
Live/fresh/chilled squid	1994
Frozen cuttlefish	no plans yet
Frozen squid	no plans yet
Salted/in brine cuttlefish and squid	1993
Dried cuttlefish and squid	no plans yet
Live/fresh/chilled octopus	1992 (partly 1983)
Frozen octopus	1994
Dried octopus	1993
Canned sardine	1992
Canned tuna/skipjack	no plans yet
Canned Atlantic bonito	1991
Canned mackerel	no plans yet
Canned anchovies	1988
Canned shrimp	1982
Canned oyster	1982
Canned squid	1986

Source: National Fisheries Administration, Republic of Korea, 1991

Under the on-going import restriction in order to support the Korean distant-water squid industry, frozen squid is imported on a quota basis and processed for the domestic market. Total import in 1990 was 24 981 MT valued at US\$30.2 million. The major suppliers were Argentina (8 361 tons in 1990), Taiwan (4 429 tons) and Japan (2 739 tons). Import quantities in future will depend upon the catch by Korean vessels, ie. lower catches will induce more imports since domestic demand is expected to continue growing as income rises. When imports are liberalised, a large increase in consumption is being anticipated provided imports push domestic retail prices down. Unlike frozen shrimp, frozen squid is not listed in the current liberalisation plan (1992-94).

Tariff rate for frozen fish, up to 1994 is 10 percent, crustaceans 20 percent, molluscs 20 percent, cuttlefish and squid 10 percent, octopus 20 percent and canned products 20 percent.

The demand for hake is limited in Korea, although, unlike Japan, there is a market for white fish fillets such as cod and Alaska pollack. Hake is being considered as a substitute to pollack. As the pollack supply is getting restricted since the introduction of EEZ the restructuring of former USSR and seasonal closure of major fishery, areas, Korean processors are showing more interest in hake products particularly in hake surimi.

Importation of squid is not allowed for domestic use. However, Peruvian giant squid are used as raw materials to make 'Daruma' for the Japanese market. Due to Korean sophisticated processing technique and relatively cheap labour, Japanese traders prefer to get the squid processed in Korea. At the moment 29 Korean flag vessels received the first quota of 50 000 tons and second quota for 18 000 tons to catch squid in Peruvian waters.

Outlook

Korea is poised to become a major market for imports this decade. Domestic demand is growing consistently, domestic landings are slackening whilst exports are growing - the growing gap in supply will have to be filled by imports.

The following projections indicate the growing need for imports:

- 1) domestic production will grow at an annual rate of 3 percent (based on recent average);
- 2) non-food uses will grow at an annual rate of 10 percent;
- 3) exports will grow at an annual rate of 6 percent;
- 4) fishery stocks will remain stagnant;
- 5) population will continue to grow at an annual rate of 1 percent; and
- 6) per capita consumption will grow at an annual rate of 1.5%.

Based upon the above projections total domestic supply, excluding imports, will be 1 476 000 tons and total demand will be 2 444 000 tons - the resulting gap will have to be filled with imports of some 968 000 tons. Therefore, a further 0.5 million tons more than the 1988 base volume will be needed to meet demand in 1995 (based on an annual growth rate of 13 percent).

In terms of species, the most promising are products which are relatively expensive in the domestic market but

supply from domestic sources is limited. The price gap between domestic and international market will be the other influencing factor. The best product in this context will be shrimp, squid and hake surimi.

Besides imports for re-processing, the Korean domestic market for seafoods is expected to rise further rivalling the the neighbourhood of Japan (72.7 kg/capita) as their dietary habits are similar to the Japanese. Along with the import liberalisation programme Korean seafood consumption will also be influenced by the increasing per capita and disposable incomes. The current high seafood prices in Korean market can be attributed to high demand and comparatively low supply of fishery products. Availability of more seafood from overseas sources will probably make seafood more affordable to domestic consumers. It is also likely that the industry will be setting-up more joint-ventures overseas for fishing and processing of seafood. The offer will certainly go to Latin America and Asia.

Southeast Asia

In Southeast Asia five countries have emerged as leading importers of fishery products. They are Thailand, Hong Kong, Singapore, Taiwan and Malaysia. Imports into these countries totalled US\$3.37 billion in 1991 compared to US\$1.84 billion in 1987. This 83 percent growth in imports could be attributed to two factors: 1) the fast growing seafood processing industry in the region; and 2) high consumption of fishery products in these countries.

Country	1987	1988	1989	1990	1991
Thailand	267 149	537 791	726 846	794 442	1 049 962
Hong Kong	794 280	1 030 058	988 063	1 111 193	1 236 587
Singapore	312 955	370 031	366 129	361 158	460 545
Taiwan	308 247	403 322	452 004	425 527	459 566
Malaysia	157 502	146 698	164 552	145 583	170 478

A high level of gross domestic product in Southeast Asia indicates a booming economy which will allow more disposable income to the population to spend on food consumption.

One must recognise the fact that Thailand, Taiwan and Malaysia are also the major producers and exporters of fishery products. Among them the most aggressive nation is Thailand which exports US\$2.9 billion worth of seafoods annually. Thailand has set up the major tuna canning industry in the region. Thai canners import about 70 percent of their tuna raw materials from overseas.

Besides the trading nations of Singapore and Hong Kong, Thailand could be considered as a major importer of fishery raw materials. Almost 95 percent of imported materials go through further processing for export markets. Although yellowfin, tuna and skipjack have been the main import items, Thai processors also buy white fish, cephalopods like cuttlefish and squid of *loligo* and *illex* species, sardine and mackerel for canning, scallops and non-pollack surimi. Thailand has set up a high profile seafood industry that produces high value seafoods for institutional buyers and supermarkets in Japan and the western world. To supplement the domestic supply of raw materials,

fishery products are imported from Asia, Australia and even from Latin America.

The import duty for fishery products is as high as 50 percent if it is meant for local consumption. But the processing industry enjoys a zero tariff rate for imported raw materials for re-export. This is an extra incentive for the exporters to expand the business.

Products	1989	1990	1991	1992
Pacific salmon	5 348	1 562	404	4 899
Albacore	36 339	51 509	11 321	11 377
Skipjack/bonito	226 599	240 208	388 862	317 966
Yellowfin	59 078	330 895	74 724	78 320
Sardines	7 190	589	339	1 870
Mackerel	5 010	7 236	11 970	11 898 - (from Norway/Malaysia)
Cuttlefish	1 935	405	1 750	4 881
Squid	1 363	1 987	3 276	3 624

Thailand imports about US\$1 billion worth of raw materials for its seafood processing industry.

High value products like scallops and abalone have ready markets in Hong Kong, Singapore and Taiwan.

Unlike Thailand, Malaysia imports fishery products mostly for local consumption. Most of the products are brought in from the neighbouring Thailand, Indonesia, Vietnam and even from as far as India and Bangladesh. Pelagic fish like Spanish mackerel has a ready market in Malaysia as long as they are price competitive. Sardines and mackerels are imported for canning. The Malaysian canning industry caters for the domestic and international markets. Japanese sardine has been the preferred species for the local market. Nevertheless, packers always look for alternative sources particularly in view of a strong Yen that makes the Japanese raw materials expensive.

Southeast Asia is a home for a huge ethnic Chinese community. Traditionally they like high value fish and molluscs. The current economic boom is contributing positively to the food sector including seafood. Therefore, imports of live fish, shellfish and fresh/chilled or frozen or dried molluscs are consumed in increasing volumes. Abalone, scallops, sharkfins, beche-de-mer fall in this category. However, distance is a barrier for Latin Americans to sell live fish to these markets. Hong Kong, Singapore, Taiwan and even China import fishery products from all over the world to meet the increasing seafood demand in these countries. Singapore and Hong Kong not only cater for the domestic markets, a huge volume of seafoods from neighbouring countries is also traded through these countries. China used to import only cheap seafoods, and exports high value products. However, the trend is changing. Many high value fishery products such as abalone, beche-de-mer, sharkfins are now imported into China through the major trading centre-Hong Kong.

Singapore and Hong Kong, are main trading centres. Hong Kong has also become a major intermediary for those

who want to sell their products to China. Nevertheless local seafood consumption in these two countries is also high (35-40 kg/per capita). Being a non-producers of seafood they depend entirely on imported products which in general come from other Asian countries.

CONCLUSION

There is one important feature that makes this market place unique. Here one can sell anything from low value sardines to high value live fish provided the quality and price is right. For good quality and preferred species consumers are ready to pay a very high price.

Asia has become the centre point of economic development these days. Unlike the EEC and the USA, non-tariff barriers do not play a big role in this market area, particularly for seafood.

By the year 2000, Asia will have at least 3.2 billion people living in its area. A significant percentage of this population will enjoy higher disposable income. Therefore the total demand for fish food is bound to increase as seafood has been recognised as a healthy source of animal protein particularly among the affluent nations.

Fisheries Association

1. Hong Kong Chinese Importers
and Export Association
Campion Building
287, Des Voeux Raod, Central
Hong Kong
2. Hong Kong Trade Development Council
38/F, Office Tower
Convention Plaza
1 Harbour Road, Wanchai
Hong Kong
3. Japan Marine Products Importers Association
Kamakurabashi Building, 1F
7-1, 1-chome Uchikanda
Chiyoda-ku, Tokyo 101
Japan
Fax: 81-03-5280 2892
4. Malaysia Food Canners Association
c/o Metal Box
Petaling Jaya
Selangor
Malaysia
5. Singapore Fisheries Federation
Attn: Dr Stephen Lee
413 Fish Merchants Office Building
35 Fishery Port Road
Singapore 2261
Fax: (65) 2662885
6. Thai Food Processors' Association
888/114, Ploenchit Road
Mahatun Plaza, 11th Floor
Banglong 10500
Thailand
Fax: 66-2-2551479
7. Korea Fishereis Association
Attn: Mr Lee Hee Soo
355, Junglim-Dong, Jung-ku
Seoul
Fax: 02-393 2765

Importers List

JAPAN

1. Co-Optrade Japan Ltd
(Export & Import Organ of Japanese
Consumer's Co-Operative Union)
35-1, 1-chome Komagome, Toshima-ku
Tokyo 170
Fax: 03-3942 6040
Horse mackerel, Mackerel
2. Happy World Inc
Marue Building, 19-10
1-chome Jinnan, Shibuya-ku
Tokyo 105
Fax: 03-5458 8258
Horse mackerel
3. Hohsui Corporation
7-3, 3-chome Tsukiji, Chuo-ku
Tokyo 104
Fax: 03-3542 6808
Horse mackerel, Surimi
4. Itochu Corporation
Marine Products Department
5-1, 2-chome Kitaaooyama, Minato-ku
Tokyo 107-77
Fax: 03-3497 6186
Skipjack, Yellowfin
5. Kaioh Suisan Co Ltd
6-7, 2-chome Tsukiji, Chuo-ku
Tokyo 104
Fax: 03-3545 1689
Horse mackerel, Mackerel
6. K K Ryosui
(Diamond Seafoods Co Ltd)
1-17, 4-chome Tsukiji, Chuo-ku
Tokyo 104
Fax: 03-3546 1789
Merluza, Squid
7. Marubeni Reizo Co Ltd
8F MS Shibaura Building, 13-23
4-chome Shibaura, Minato-ku
Tokyo 108
Fax: 03-3769 0043
Horse mackerel, Mackerel, Abalone

8. Mitsui & Co Ltd
Marine Products Division
2-1, 1-chome Ohtemachi, Chiyoda-ku
Tokyo 100
Fax: 03-3285 9909
9. Taiyo Fishery Co Ltd
1-2, 1-chome Ohtemachi, Chiyoda-ku
Tokyo 100
Fax: 03-3216 0316
10. Tyota Tsusho Corporation
Foodstuff Department
3-18, 2-chome Kudaminami, Chiyoda-ku
Tokyo 102
Fax: 03-3230 8042

Hake, Horse mackerel, Skipjack, Squid

Mackerel, Tuna

KOREA

1. Doosan Corporation
Attn: Mr Steven Han
648-14, Deung Chon Dong
Kong Seo Ku
Seoul
Fax: 02-607 6494
2. Sunkyong Limited
Food Department
C P O Box 1780
Seoul
Fax: 02-754 9414

Hake, Hake surimi, Giant squid

Mackerel, Hake surimi, Scallops

MALAYSIA

1. A Clouet & Co (KL) Sdn Bhd
549 Jalan Sultan
46760 Petaling Jaya
Fax: 603-511 1988
2. Kumpulan Fima
Attn: Mr Megal Joha
Level 2, Cycle & Carriage Complex
Lot 19, Jalan 51A/219
46100 Petaling Jaya
Fax: 603-775 8376

Mackerel, Sardine

Mackerel

THAILAND

1. Frionor (Thailand) Ltd
Attn: Mr Malcolm Mulhern
1 Soi Kluaynamtai, Prakanong
Bangkok 10110
Fax: 66-2-249 7902
Scallop, Frozen fish

2. Kingfisher Holdings Limited
Attn: Mr N J Hardy
135 Ard-Narong Road
Klong Toey
Bangkok 10110
Fax: 66-2-249 5640
Tuna, Scallops

3. Pan Asia (1981) Co Ltd
Attn: Mrs Vilai Kiatsrichart
814, Sukhumvit 50
Bangkok 10250
Fax: 66-2-331 1971-2
Sardine, Mackerel

4. Thai Union Frozen Products Co Ltd
Attn: Mr Kraisor Chansiri
28-32 Yukol 1 Road, Suanmali
Bangkok 10100
Fax: 66-2-226 5902
Tuna, Sardine, Mackerel

5. Unicord Co Ltd
Attn: Mr Dumri Konuntakiet/Chitra Kanuntakiet
404 Phayathai Road, Patumwan
Bangkok 10330
Fax: 66-2-216 1468
Tuna, Sardine, Mackerel

6. V I International Co Ltd
Attn: mr Somchai Iamimjit
1793/3 Rajvithi-Nakornchaisri Road
Tambol Bangplad, Amphur Bangplad
Bangkok 10700
Fax: 66-2-435 6512
Frozen fish

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