

German and World Dogfish Markets and Catches Reviewed

The market for dogfish products in the Federal Republic of Germany (FRG) is fairly static at about 2,000 metric tons (t) per year. Approximately 80 percent of the 2,000 t consists of belly flaps and the remaining 20 percent consists of backs. Since domestic FRG landings supplies of domestic FRG landings of dogfish are estimated at only a few hundred tons per year, practically all supplies of dogfish products are imported. In 1977, Norway supplied about 45 percent of the FRG's dogfish needs, the United Kingdom about 28 percent, the United States about 15 percent, and Canada almost 8 percent. The remaining approximately 4 percent is of unknown origin.

In the first 4 months of 1978, the above pattern of FRG dogfish imports showed significant changes: Purchases from Norway and the United Kingdom were nearly halved, while imports from Canada tripled, and Japan and the Republic of South Africa were significant suppliers for the first time with about 6 percent of the import market each. Dogfish of United States origin held its market share at about 16 percent.

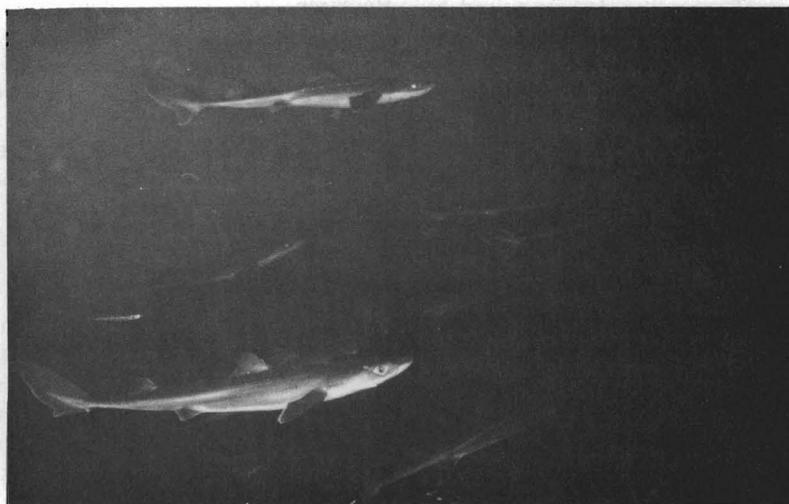
Dogfish belly flaps are currently priced at about US\$0.90 per pound (\$2.00/kg) CIF FRG port of entry. The average weight of the belly flap is

about 4 ounces (0.11 kg), and the average length 11 inches (0.32 m); the average width is 3 inches (0.09 m). The flaps are imported deep frozen, poly-wrapped in wax-lined cartons containing 40-45 pounds (18-20 kg). The CIF price of the dogfish backs is about half of the flap price, or US\$0.45 per pound (\$1.00/kg). The U.S. Consulate General in Bremen has noted the significant difference between the above CIF prices offered by FRG importers for dogfish products and the average of about US\$0.10 per pound (\$0.22/kg) paid by U.S. dealers to fishermen for gutted dogfish. In part this is due to the fact that dogfish processing is highly labor-intensive and that the fillet yield is only about one-third of the round weight. About one-fourth of the fillet yield is in flaps and about three-fourths

in the lower priced backs, for which there are good markets in France and the United Kingdom. In addition, the Soviet bloc countries, especially the Soviet Union and Poland, are said to be interested in developing dogfish fisheries. The U.S. Consulate General, Bremen, feels that, in light of the wide differential between U.S. ex-vessel and FRG CIF prices for dogfish, U.S. fishermen may want to examine closely the commercial potential of a dogfish fishery for export. It might be possible, for example, to establish a marketing cooperative for the export of dogfish along the lines of the cooperative founded by the North Carolina eel producers. FRG importers have expressed a willingness to provide instruction to U.S. fishermen in processing and quality control standards and to assist them in developing markets for dogfish backs outside of the FRG.

According to the NMFS Office of International Affairs, world dogfish catches have declined in recent years on all major fishing grounds. The FAO Yearbook of Fishery Statistics indicates that world dogfish catches declined from 43,600 t in 1973 to 31,331 t in 1976. More important, the dogfish fisheries in the northeast Pacific (conducted by Canada and Poland) and the northwest Atlantic (conducted

Dogfish. Photo by William High, Northwest and Alaska Fisheries Center, NMFS, NOAA, Seattle, Wash.



The NMFS Division of Foreign Fisheries Analysis, Office of International Fisheries Affairs, has prepared this report based on data supplied by the U.S. Consulate General in Bremen, Federal Republic of Germany (FRG), on the market for dogfish, *Squalus acanthias*, and dogfish products.

by Norway, Poland, Romania, and Canada) have virtually disappeared, leaving only the traditional European fishery in the northeast Atlantic as a major source of supply. As a result, about 96 percent of the world's dogfish catch was taken in the northeast Atlantic in 1976, compared with only 75 percent in 1973. From 1973 to 1976, Norway and the United Kingdom together produced almost 80 percent of Europe's dogfish products (Table 1).

Statistics on trade in dogfish products for other European countries are not available, but the above catch figures suggest strongly that the United Kingdom and Norway were the major suppliers to the principal European dogfish markets other than the FRG. In addition, there are no figures on the total value of international trade in dogfish products, but using the figures in the above text and Table 1, the Division believes that approximately \$10 million of dogfish products are produced annually.

In the FRG the flaps are smoked and sold as "See-Aal" and "Schiller-Locken," and all reference to their origin from a shark-like species is avoided. In the United Kingdom, dogfish was called "rock salmon" until a few years ago when the legal nomenclature became "huss."

Finally, in recent years there has been some sporadic concern among consumers, especially in the United Kingdom, over the mercury content of dogfish but this does not appear to be a major problem at present in any of the major European markets. In the FRG,

Table 1.—Dogfish catches in the northeast Atlantic, by country and quantity, 1973-76.¹

Country	Catch (t)			
	1973	1974	1975	1976
Belgium	1,900	1,135	1,037	589
Denmark	2,400	2,141	2,705	1,758
Faroe Isl.	100	0	41	—
FRG	400	316	218	309
Iceland	—	16	10	15
Ireland	—	—	—	17
Netherlands	600	697	342	214
Norway	19,600	17,739	15,447	16,264
Poland	—	—	—	—
Romania	—	—	—	—
Sweden	300	277	236	384
UK (Scotland)	9,200	9,484	10,227	11,179
Total	34,500	31,805	30,266	30,729

¹Source: FAO, "Yearbook of Fishery Statistics," 1976.

the maximum legal mercury content is one part per million (ppm)¹. (Source: IFR-78/150.)

Chilean Abalone Wins Popularity in Japan

Chilean abalone reportedly has established itself as a popular commodity in the Japanese seafood market. Since its first introduction to Japan several years ago, imports of Chilean abalone rose rapidly year after year, from a mere 119 metric tons (t) worth ¥60 million (US\$0.3 million at ¥196=US\$1) in 1975 to 513 t worth ¥290 million (\$1.5 million) in 1976 and to as much as 2,369 t worth ¥1,640 million (\$8.4 million) in 1977.

Chilean abalone is being used not only for processing into gourmet food items, but also for serving as "sashimi." Informed sources attribute the success of Chilean abalone chiefly to its price which, at around ¥620-650/kg (\$1.44-1.51/lb), is less than half that of Australian abalone.

In contrast to the soaring popularity of Chilean abalone, imports of Australian abalone have declined sharply, namely to 714 t worth ¥1,400 million in 1976 and to 515 t worth ¥950 million in 1977. (Source: FFIR 79-1.)

¹On 25 May 1978 the U.S. Food and Drug Administration (HEW) informed NMFS that they had decided to increase the maximum legal mercury content for certain fishery products from 0.5 ppm to 1.0 ppm.

Japan's South Pacific Skipjack Catch Jumps

The skipjack fishery by three Japanese joint venture firms in the South Pacific was reportedly good for 1978. Combined catches by Solomon Taiyo, New Britain Fishing Industry, and Gollin Kyokuyo for 1978 totaled 48,679 metric tons (t), up 62 percent from the 1977 total of 29,986 t. Solomon Taiyo, based in the Solomons, led the two other firms with a total catch of 18,221 t during 1978, up 84 percent over 1977. Solomon Taiyo's catches between March 1978 and January 1979, totaling 19,010 t, marked an all-time high for the firm. New Britain Fishing Industry came in second with a 1978 total of 16,916 t in waters off Papua New Guinea, up 117 percent from the 7,795 t for 1977, followed by Gollin Kyokuyo, also based in Papua New Guinea, which caught 13,542 t for 1978, up around 10 percent from the 1977 total of 12,313 t. (Source: FFIR 79-2).

NEW ZEALAND AIDS FISHING INDUSTRY

The Government of New Zealand provides substantial incentives to the country's fishing industry. During the 1977-78 fiscal year 1 April 1977 - 31 March 1978) incentives included the following five items: 1) Extension until 31 March 1979 of the provisions allowing the importation of foreign fishing vessels; 2) loans of up to 40 percent of the approved cost of construction of certain New Zealand-built vessels; 3) a fishing vessel ownership savings scheme; 4) loans of up to 80 percent of the value of the vessel, gear, and equipment; and 5) establishment of a fisheries development grant fund with an initial allocation of \$205,170¹ (Source: IFR-79/4.)

¹NZ\$200,000 at 30 June 1978 exchange rate of US\$1.00=NZ\$0.9748.

Note: Unless otherwise credited, material in this section is from either the Foreign Fishery Information releases (FFIR) compiled by Sune C. Sonu, Foreign Reporting Branch, Fishery Development Division, Southwest Region, National Marine Fisheries Service, NOAA, Terminal Island, CA 90731, or the International Fishery Releases (IFR) or Language Services Daily (LSD) reports produced by the Office of International Fisheries Affairs, National Marine Fisheries Service, NOAA, Washington, DC 20235.

Peruvian Fishing Law Modified to Attract Investment Capital

The Peruvian Government modified its general fishing law late in 1978 to make private capital investment in the industry more attractive. Decree Law 22329 changes the operation of the "fishing communities" established by the previous Government which allowed workers to participate in company ownership, management, and profits. The new law restricts that participation.

As originally established, employees of Peruvian fishing companies, in addition to receiving individually a certain percentage of the company's profits, also obtained equity in the firm through company payments of a percentage of the profits to the firm's "community of employees." The percentage paid by all fishing companies was 12 percent of the profits. In theory, a firm's "community" accumulated this collective share of profits each year until it eventually held 50 percent of equity in the firm. The workers, through the community, were entitled to vote in the firm's stockholders' meetings and in each firm's board of directors in direct proportion to the community's equity in the firm.

After General Morales Bermudez became the President of Peru in 1975, he adopted a more moderate attitude toward the private sector. Serious lobbying began to modify the "worker community" concept in the fishery and other economic sectors. The above change in the fishing law parallels modifications in the industrial sector which occurred in 1977 and 1978.

These changes include: 1) Workers no longer obtain equity in their companies; instead they will receive preferred stock as part of their share of profits; 2) workers lose their right to participate in stockholders' meetings; 3) the stock is no longer collectively held by the "community"; it is issued to each worker individually; 4) workers are free to sell their shares; and 5) workers, through the community, retain representation on the board of directors, but only up to a maximum of

33 1/3 percent of the board compared with 50 percent under the old law.

The new law also dissolves the "fishing compensation community." This compensation community, which did not exist in the industrial sector, was primarily a scheme for distributing the profits generated by all fishing companies to all the workers in the fishing industry. A certain percentage of each firm's profits entered a central pool. The accumulated funds were then distributed to all fishing companies according to the labor force employed by each firm, and subsequently divided equally among all workers in each firm. Although egalitarian in principle, the compensation community in effect penalized the efficient companies. Moreover, critics complained that the fishing compensation communities had become sluggish bureaucracies, paying their own officials undeservedly high salaries and delaying distribution to the workers.

Initial Peruvian reaction to the new law has been favorable, although somewhat restrained, since the measure had been expected for some time. It is difficult to determine what direct effect this law will have in attracting new investment in the fishing industry. Experience with similar modifications in other industries almost 2 years ago has not demonstrated any dramatic rise in investment. Rather, the reduction of worker participation is seen as a necessary step to promote investment, but may not be sufficient in itself.

Within the fishing sector there had been growing private sector investor interest prior to passage of the new laws. This is due in part to the profit reported by companies processing fish for human consumption and the fact that large investments are not required. While the new law in isolation is not expected to bring about a major shift in investment in Peru, it is viewed positively in Peru as evidence of the Government's desire to create a more favorable climate for private investors.

Other Government actions have helped to restore the confidence of private investors in the fishing industry. In 1976, the Government returned the fleet of anchovy seiners, operated by the state-owned fish meal company

(Pesca Peru), to private ownership. While anchovy fishing has been restricted, the Government has authorized the vessel owners to catch sardines, horse and jack mackerel, and other species for reduction. At a meeting held in a suburb of Lima in September 1978, the vessel owners expressed approval of many of the major fishery policies of the Government, especially the reservation of fishery resources to Peruvian fishermen. The Peruvian Government recently declined to renew the agreement with Cuba under which Cuban trawlers were allowed to operate off Peru. Recommendations by the vessel owners, including possible organizational changes in Pesca Peru and Epchap (the state-owned fish meal marketing company) and modifications of the repayment schedules for the anchovy seiners, are under active consideration by the Ministry of Fisheries.

The Government has also decided to return state-owned fishing companies to private ownership. Private investors have purchased the Challpesa plant in Paita for nearly \$3 million. Challpesa was an unsuccessful joint venture between three Japanese companies and the state-owned food fish company Epsep. The Government has also decided to dismantle Epsep and sell most of the company's plants and vessels to private investors. The company reportedly lost nearly \$5.0 million in 1976. The Government is also selling 80 percent of Pepesca (Peruana de Pesca, S.A.) which has amassed a debt of over \$15 million. (Source: IFR-79/3.)

Tuvalu Sets 200-Mile Economic Zone

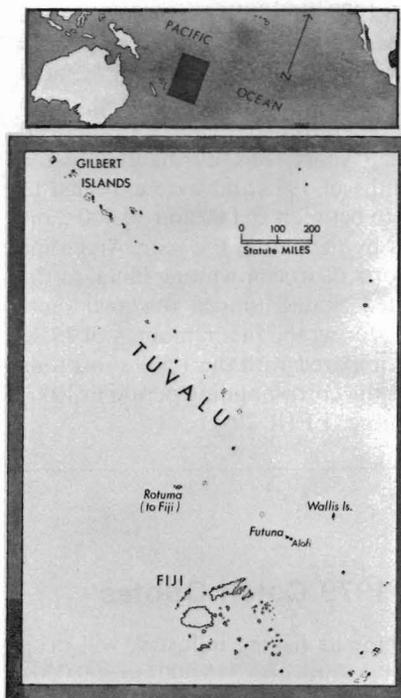
Tuvalu, a cluster of nine atolls northeast of Australia (see map) became independent from the United Kingdom on 1 October 1978. The islands, formerly known as the Ellice Islands, have a population of 9,000. Their total area is only 10 square miles but the nine atolls are scattered over more than 500,000 square miles of the southwest Pacific.

As its first legislative act since independence, the Government of Tuvalu, on 26 October, declared a 200-mile economic zone. The Government declared that, as of 1 January 1979, any foreign-based vessel fishing commercially within the 200-mile zone would require a license from the Ministry of Commerce and Natural Resources. The Government is not aware of any nations presently fishing Tuvalu waters, but knows that U.S. tuna companies have shown an interest in fishing the waters of the South and Central Pacific.

The text of the Government's 200-mile zone proclamation states that fishery limits shall be a "line drawn so that each point thereon is two hundred nautical miles measured from the low-water mark of the seaward side of the reef fronting the coast of any islands in Tuvalu or bounding any lagoon waters adjacent to such coast or, when a reef is not present, from the low-water mark of the coast itself."

In the event that Tuvalu's line intersects a line drawn similarly by any other state or territory, "the fishery limits of Tuvalu shall be a median line or such other line (as may be agreed between the Government of Tuvalu and such state or territory) drawn between the limits of the territorial waters of Tuvalu and the territorial waters of such a state or territory." The proclamation states that Tuvalu will exercise the same exclusive fisheries rights within this limit as it does in its 3-mile territorial waters. Tuvalu's economic zone will intersect those of the Gilberts, Wallis, Futuna, and Fiji.

Tuvalu law provides that any foreign fishing vessel which fishes, loads/unloads fish, or loads/unloads fuel and supplies within the 200-mile economic zone without a license shall be liable on conviction to a fine of \$100,000 (US\$119,076). Foreign fishing vessels may enter the zone for a "purpose recognized by international law" without a permit, but must return outside the limits as soon as that purpose has been fulfilled and must stow gear or be liable for a \$25,000 (US\$29,769) fine. Tuvalu law also details the search and seizure powers of



authorized officers and sets fines for using explosives and other noxious substances. The Minister is empowered to authorize exemptions for sports fishermen or for scientific investigation. The Minister is also authorized to make regulations for the enforcement of the law as well as for the conservation and commercial development of marine resources. (Source: IFR-79/5.)

Japanese Imports of U.S. and Canadian Salmon Roe May Hit Historical High

Japanese imports of salmon roe, "sujiko" from the United States and Canada totaled 6,533 metric tons (t) during the first 10 months of 1978, and were expected to reach an historical high of about 7,200 t by the end of the year. In spite of the large amount of imports, domestic sales kept pace with shipments and the prices remained stable. This was attributed to the early arrival of shipments by air and the little competition from the domestic fall "sujiko" which was short in production.

The cold storage holdings of salmon roe, reportedly around 2,800 t at the end of October, were predicted to drop to 1,500 t by the end of the year and far below 1,000 t by the end of January. Wholesale prices of imported salmon roe during the yule season of 1978 were reported to be ¥5,700-5,800/kg (US \$13.22-13.45/lb at ¥196=US\$1) for Grade No. 1 chum salmon roe, and ¥4,500-4,700/kg (\$10.44-10.90/lb) for Grade No. 1 pink salmon roe. Estimated imports of U.S. and Canadian salmon roe into Japan during January through November 1978 on a customs clearance basis are given in Table 1. (Source: FFIR 79-1.)

Table 1.—Estimated imports of U.S. and Canadian salmon roe (sujiko) by Japan, January-November, 1978.

Species	Metric tons	Species	Metric tons
Pink	3,220	Silver	330
Red	1,520	King	280
Chum	1,450	Others	50

ROK TUNA VESSELS MAY LEAVE ATLANTIC

South Korean tuna vessels fishing for yellowfin tuna in the Atlantic Ocean are reportedly planning to move to the vicinity of Samoa and Fiji later this year and the next year, where there are already approximately 80 South Korean tuna vessels. The move reportedly would involve most of the around 100 vessels in the Atlantic Ocean which have difficulty in maintaining a profitable operation due to severe fluctuations in prices in Italy, a major buyer of their catches. (Source: FFIR 79-2.)

South Korea, Argentina Lead Fish Block Exports

Japanese exports of frozen fish block suffered a major setback in 1978 due to the steep rise in the value of the yen. Her exports of frozen fish block to the United States to November 1978 only amounted to 2,796 metric tons. (t), less than half of the 6,299 t recorded for the same period in 1977.

On the other hand, Japanese exports of frozen fish fillet to the United States to November 1978 totaled 15,828 t, an amount comparable to the 15,615 t for the same 1977 period, but this reportedly was accomplished by means of cut-rate export prices for the purpose of clearing the inventories. Japanese exports of frozen fish block and fillet, particularly the former were expected to worsen in the future unless the exchange rate of the yen against the U.S. dollar would improve to around ¥220=US\$1, according to informed sources in Japan.

In 1978, South Korea and Argentina surpassed Japan as leading exporters of frozen fish block to the United States. South Korean exports of frozen fish block to the United States totaled 12,255 short tons during the first 6 months of 1978 and were expected to rise to between 25,000 and 30,000 short tons by the end of the year. Argentine exports of frozen whiting block to the United States jumped to 7,600 short tons during the first 6 months of 1978, as compared with the 1,500 short tons over the corresponding period in 1977. (Source: FFIR 79-1).

Herring, Tanner Crab Prices Rise for Japan

Strong buying interest among Japanese importers early this year reportedly pushed up the prices of roe-bearing herring caught off San Francisco. February prices being charged by fishermen were reportedly as high as \$1,600/short ton, sharply up from the season-opening price of around \$1,200/short ton. With an estimated \$450/short ton to be added by the packers, the import price into Japan may top FOB \$2,000/short ton, according to an informed source in Japan.

Wholesale prices for size "L" shrink-packed tanner crab caught in Bristol Bay rose sharply since the end of last year in the western provinces of Japan due to unusually strong speculative buying among the buyers concerned over future supply. February prices were reported to be around ¥6,600/6 kg (\$2.50/lb at ¥200=US\$1), up from ¥5,900/6 kg (\$2.23/lb) at the end of 1978 and ¥6,200-6,300/6 kg (\$2.35-2.39/lb) early this year. Sizes above "2L" and below "M" were sold out by the end of last year. (Source: FFIR 79-2.)

Soviet-Japan Fish Pact Sets 1979 Catch Quotas

The Soviet and Japanese government representatives in Tokyo on 15 December 1978 signed a protocol extending for another year the bilateral interim fishing agreements between the two nations. Fishery officials of both governments also exchanged notes on 1979 catch quotas in their respective 200-mile zones.

According to the new agreements, Japan will be allowed to catch a total 750,000 metric tons (t) in the Soviet 200-mile zone in 1979, down 100,000 t from 1978, whereas the Soviet's catch quota in Japan's 200-mile zone will remain unchanged from 1978 at 650,000 t.

Japan's catch quota for Alaska pollock, one of the most important spe-

cies for its fishing industry, will drop from the previous 345,000 t to 300,000 t in 1979. Other significant cuts to Japan's catch quotas in the Soviet zone occurred for such species as flounder (cut from 30,300 to 20,900 t), rockfish (from 22,000 to 14,700 t), Pacific cod (from 44,700 to 30,100 t), and sand lance (from 65,200 to 43,800 t). The Soviet Union made a significant gain in the catch quota for sardine and Pacific mackerel in the Japanese zone for 1979, which is now set at 450,000 t as compared with the previous 318,000 t. A breakdown of 1979 catch quotas for the Soviet Union (Table 1) and Japan (Table 2) is shown in comparison with their respective 1978 figures. (Source: FFIR 79-1).

Table 1.—Soviet catch quotas in Japanese zone, 1979 vs. 1978, in metric tons.

Species	1979	1978	Species	1979	1978
Sardine and mackerel	45,000	318,000	Saury	10,000	20,000
Alaska pollock	70,000	80,000	Sand lance	10,000	30,000
Itohidara (Remonema)	90,000	138,000	Others	20,000	64,000
			Total	650,000	650,000

Table 2.—Japanese catch quotas in Soviet zone, 1979 vs. 1978, in metric tons.

Species	1979	1978	Species	1979	1978
Alaska pollock	300,000	345,000	Squid	142,900	146,400
Flounder	20,900	30,300	Octopus	3,600	3,500
Pacific cod	30,100	44,700	Tanner crab	2,500	2,500
Wachna cod	15,500	15,500	Red Tanner crab	2,500	2,300
Saury	68,600	68,600	Korean hair crab	800	800
Atka mackerel	11,300	11,000	Spiny crab	800	800
Sand lance	43,800	65,200	Shrimp	500	500
Shark	1,200	1,200	Snail	3,000	2,500
Tuna	6,400	6,400	Others	80,900	80,800
Rockfish	14,700	22,000	Total	750,000	850,000

Mexico-Japan Blackcod Fishery Gets Slow Start

Mexican-Japanese fishery joint venture "Abisal" is reportedly having a slow start in its blackcod fishery due to unfavorable oceanographic conditions at the fishing ground. Abisal's catch target of blackcod for 1979 is said to be 1,500 t.

A strong demand for blackcod in Japan has pushed the wholesale price for the fish caught in home waters to nearly ¥800/kg (\$1.82/lb at ¥200=US\$1). The price for imported blackcod would fall below this figure by approximately ¥105/kg (0.34/lb), according to an informed source. Annual demand for blackcod in Japan is believed to be between 40,000 and 50,000 t.