

## Japan's Use of Processed Fish Products Declines

Climbing retail prices of fresh seafood and reduced consumption of fish has resulted in a 2 percent decline in processed fishery foodstuffs from 1976 to 1979, according to a report by Japan's Food Industry Center.

The household yearly expenditure for processed foodstuffs in 1979 was ¥367,122 (\$1,671 @ US\$1 = ¥219.7) and was 45 percent of all food expenses. When restaurant expenditures were excluded, processed food expenses represented 52.8 percent of all food expenses. Of all processed foods, 16.8 percent was fish, and 18.2 percent was bread and confectionary goods. The 1979 fisheries foodstuff expenditure was ¥61,705 (\$281).

The lowest annual consumption of canned seafood per household (9.0 cans) occurred in 1970. The sales have since increased to 14.6 cans in 1979. Seaweed consumption showed a decrease in kelp (kombu) and an increase in wakame, which doubled from 1970 to 1979. The ingredient most liked in miso soup was wakame. Due to price increases and changes in tastes, there has been an actual decrease in dried seaweed consumption since 1975.

Consumption of all fish paste products (kneaded products) has decreased. In addition to the change in consumer tastes, there was a 50.4 percent and a 48.5 percent large-scale price increase during the 4-year period, for both fried fish balls (satsuma age) and broiled pollock (kikuwa). Compared with previous years, the import volume of fishery foodstuffs such as salted salmon and cod roe increased in 1979.

Such primary seasoning ingredients as the small dried sardines (since 1964) and dried skipjack (katsuo) seasoning (after 1977) have shown a decline in sales, but there are indications that this situation will not last. Consumption of eel/loach (kabayaki), in comparison with previous years, has had an actual increase of 8.4 percent. All eel consumption has shown large-scale actual increases. (Source: LSB 80-20.)

## Japanese Fishermen's Income Up 8.8 Percent

The average household income for Japanese fishermen in 1979 was ¥4,360,000 (US\$19,845 at US\$1 = ¥219.7) and was up 8.8 percent, according to Japan's Ministry of Agriculture, Forestry, and Fisheries. This increase resulted from a 5.7 percent increase in fishing industry revenues as well as a 14.8 percent salary increase (wages, pension, subsidies, and compensation money). The 8.8 percent increase exceeded the rate of increase of both farm household income of 5.5 percent and the national laborers' household income of 7 percent.

Fishing industry revenues have increased due to a climb in wholesale production prices. This increase, however, was offset by the rise of fuel and expenditures. Subsequently, the increase in revenues was only 5.7 percent. Fishing industry revenues showed a 4.1 percent decrease in 1978 due

to low fish prices as compared with previous years. In 1979, however, the 1977 fishing industry revenues were recovered.

Family household expenses were ¥2,890,000 (US\$13,154), a 6.2 percent increase over previous years. Per capita household actual expenses were ¥672,900 (US\$3,059), a 6.4 percent increase over the previous year. Subtracting household expenses from net income (fisherman income minus several taxes), the disposable income was ¥1,027,000 (US\$4,675) a 14.4 percent increase over the previous year. (Source: LSB 80-22.)

## Netherlands Antilles-U.S. Fisheries Trade Increases

Netherlands Antilles 1979 fishery exports to the United States totaled 11,800 t and were valued at US\$10.3 million, an increase of 53 percent in quantity and 30 percent in value over

Table 1.—Netherlands Antilles exports to the United States, 1978-79, in metric tons and US\$1,000.

Commodity	1978		1979	
	Quantity	Value	Quantity	Value
Edible				
Live lobster	10.7	45.9	7.5	32.3
Frozen				
Tuna				
Yellowfin				
Whole	2,663.3	2,301.9	5,354.4	4,821.1
Evisc.	—	—	2.7	2.7
Albacore	1,911.7	3,076.3	125.2	201.9
Skipjack	3,095.9	2,445.7	6,234.2	4,979.3
Other <sup>1</sup>	4.6	15.2	—	—
Shrimp	—	—	18.9	95.6
Other	—	—	—	—
Shellfish	—	—	1.1	4.1
Canned				
Tuna	—	—	37.5	67.5
Shrimp	—	—	3.0	37.5
Cured shark fin	5.7	29.4	Negl.	1.5
Total	7,691.9	7,914.5	11,784.5	10,243.5
Inedible				
Ornamental fish	—	3.2	—	14.8
Total	Negl.	3.2	Negl.	14.8
Grand total <sup>2</sup>	7,691.9	7,917.7	11,784.5	10,258.3

<sup>1</sup> Fillets.

<sup>2</sup> Totals may not agree due to rounding.

Source: Bureau of the Census, U.S. Department of Commerce.

the 1978 figures (Table 1). Tuna exports, however, mainly yellowfin and skipjack tuna, were 99 percent of the 1978 and 1979 total.

The NMFS Foreign Fisheries Analysis Division believes these shipments to be almost entirely tuna caught in the eastern Pacific by Netherlands Antilles-flag vessels and transhipped to the United States. It is unlikely that any of the tuna seiners registered in

the Netherlands Antilles actually landed their catch on the islands for processing. The Netherlands Antilles tuna fleet consists of 8 tuna seiners with a total carrying capacity of 8,500 t. Five of these vessels, however, have recently been sold to a Mexican-United States joint venture company, Pescatun.

Fishery imports from the United States also increased with 1979 imports totaling nearly 900 t valued at US\$3.2 million. This was a 13 percent increase in quantity and a 19 percent increase in value over 1978 imports (Table 2). The Netherlands Antilles is the third most important Latin American importer of U.S. fishery products; only Venezuela and Colombia imported more in 1979. The Division believes, however, that an unknown quantity of these imports are not consumed in the Netherlands Antilles, but were transhipped to other countries in the Caribbean. (Source: IFR-80/152.)

## Ecuador May Export Herring to Europe

Ecuadorean fishermen caught a record 615,000 metric tons (t) of fish and shellfish in 1979, most of which was reduced to fish meal. About 90 percent of this catch was small pelagic species, mostly Pacific thread herring, *Opisthonema libertate*<sup>1</sup>. The fishery is conducted primarily in the Gulf of Guayaquil.

The thread herring fishery developed rapidly during the 1970's. Ecuadorean fishermen only caught about 35,000 t of thread herring, known locally as "pinchagua," in 1970. Most of the catch is reduced to fish meal and the Government has expressed considerable concern about the rapid development of this fishery.

In late August 1980, the Ecuadorean

Government announced its first action to limit the expansion of the fishery. Government officials announced the closing of two fish meal reduction plants owned by DURAMINA and MARIMAR. The two plants were located on the Santa Elena Peninsula near the port of Chanduy. The companies were charged with expanding their reduction facilities without authorization of the Subsecretariat of Fisheries.

Some of the thread herring catch is canned for the domestic market and for export, principally to Colombia. The Subsecretariat of Fisheries would like to see a larger proportion of the catch canned to produce the more valuable edible product.

Fisheries economist Albert Elissat, from the European Economic Community, has reportedly studied Ecuador's thread herring fishery and has recommended sweeping changes. Elissat has informed Ecuadorean officials that canned products made from species similar to thread herring are popular in Europe. Declining stocks of similar species in European waters have made it impossible for European fishermen to adequately supply their domestic market. Elissat has recommended that Ecuador can more of the thread herring catch and attempt to market it in Western Europe. (Source: U.S. Consulate General, Guayaquil, and IFR-80/157.)

## Supermarkets Are Top Fish Retailers in Japan

While Japanese fresh fish retail store sales were more than ¥20 million (\$91,033 at \$1 = ¥219.7), supermarket sales were more than ¥100 million (\$455,166), according to a study commissioned by Japan's Ministry of Agriculture, Forestry, and Fisheries. They also found that the quality of fish sold at supermarkets was superior.

The research study (August-November 1979) compared 982 Tokyo and Osaka fresh fish retail stores and supermarkets. Other study

Table 2.—Netherlands Antilles fishery imports from the United States, 1978-79, in metric tons and US\$1,000.

Commodity	1978		1979	
	Quantity	Value	Quantity	Value
Edible				
Fresh or chilled				
Shellfish				
Shrimp				
Packaged	1.9	12.0	5.4	21.2
Unpackaged	0.8	8.5	—	—
Other	0.1	0.6	2.2	36.4
Frozen <sup>1</sup>				
Fish				
Salmon				
Whole and eviscerated	1.8	13.7	1.3	14.3
Fillets, Steaks, portions	1.2	8.0	2.0	24.2
Other				
Fillets	37.8	147.0	114.3	302.6
Sticks and portions	3.9	12.2	12.6	45.6
Other	524.1	1,310.4	496.8	1,705.8
Shellfish				
Shrimp	19.5	187.9	23.5	246.4
Crab				
King	3.9	41.7	2.6	40.3
Snow	1.6	16.4	0.3	3.3
Other	26.8	218.8	61.0	346.4
Canned				
Fish				
Salmon				
Cured	1.6	56.1	7.8	32.1
Other	21.7	66.6	22.0	65.5
Sardines	9.1	22.1	33.5	49.4
Mackerel	36.3	191.2	31.6	131.0
Other	10.7	25.5	4.2	6.8
Shellfish				
Shrimp	18.3	99.4	6.6	39.4
King crab	0.1	1.2	0.1	1.9
Cured				
Fish	7.3	39.2	17.9	95.3
Shellfish	6.7	42.2	1.2	6.9
Other				
Fish				
Airtight containers <sup>2</sup>	22.6	93.5	17.7	66.6
Roe	13.5	81.7	6.4	40.2
Other	0.4	1.9	0.9	3.6
Shellfish	3.9	17.8	5.8	29.9
Total	775.6	2,715.6	877.7	3,237.3
Inedible				
Ornamental fish	N/A	3.9	N/A	1.3
Other	N/A	3.9	N/A	1.2
Total	N/A	7.8	N/A	2.5
Grand total	775.6	2,723.4	877.7	3,239.8

N/A = Not available.

<sup>1</sup> May include small amounts of fresh and chilled fish.

<sup>2</sup> Other than canned.

<sup>1</sup> Additional information on this fishery can be obtained by requesting IFR-80/54 from your local NMFS Statistics and Market News Office, enclosing a self-addressed and stamped envelope.

results include the following items.

1) Supermarket fishery goods transactions have increased in each of the past 5 years.

2) Sixty-three percent of the Tokyo retail stores and 54 percent of Osaka stores could stock ¥2 million (\$9,103) worth of goods per month. On the other hand, half of the supermarkets could stock more than ¥10 million (\$45,517).

3) Most retail stores stock a variety of 20-30 items. Tokyo stores were able to stock more than Osaka ones. The majority of supermarkets (92 percent) can stock more than 50 items

and some (18 percent) can stock 200 items.

4) The majority (27 percent) of annual sales in retail stores was more than ¥10 million (\$45,517) but less than ¥20 million (\$91,033). Only 19 percent had a sales figure of ¥50 million (\$227,583). However, the supermarkets commonly had annual sales figures of more than ¥100 million (\$455,166).

5) The number of customers per day for the Tokyo retail stores was more than 50 but less than 100. Osaka stores had more than 100 but less than 200 customers daily. (No supermarket

figures were given.)

6) Frozen fish sales increased 47 percent in Tokyo and 34 percent in Osaka retail stores in the past 3 years and will continue to increase. Supermarket frozen fish sales were 30 percent and 33 percent, respectively, which are below the retail store sales.

7) Future retail store development, with the exception of frozen fish as a sideline item, may only increase 19 percent in Tokyo and 23 percent in Osaka. The problems for the retail stores include a decrease in sales, an increase in expenses, and a labor decline. (Source: LSB 80-22.)

## France Monitors Fishing in Indian Ocean EEZ

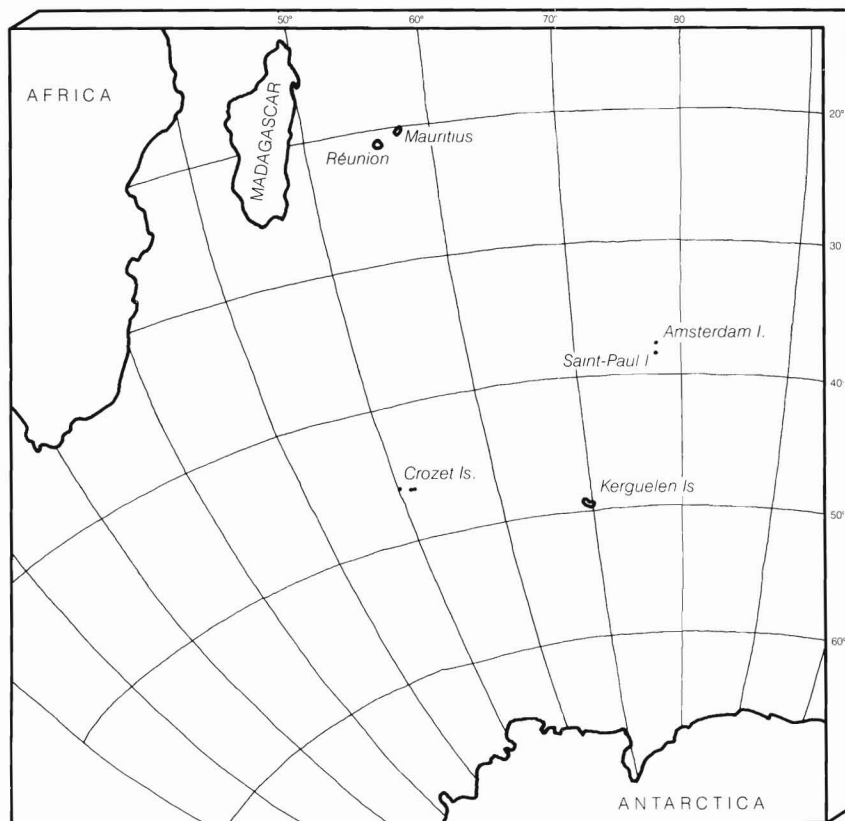
The primary economic interest France now has in the region of the Indian Ocean islands collectively called the French Southern and An-

tartic Lands (TAAF) lies in protecting her rights to its sea resources, now that she has declared it to be an exclusive economic zone (EEZ).

The TAAF is an immense region of the Indian Ocean (see map) comprising three island groupings: the Crozet

islands, the Kerguelen islands, and the islands of Saint-Paul and Amsterdam. The climate there does not permit the installation of strategic bases. While France herself has not yet systematically engaged in fishing there, other countries — especially the USSR — have done so for years, and agreements have been reached to regulate fishing.

Four French frigates based at Reunion Island take turns patrolling the region 2-3 times a year to see to it that the terms of those agreements are observed. The harshness of the region and the lack of port facilities usually make it impossible to obtain replenishment, so that these patrols have been limited to about 1 month. However, the patrol of the *Commandant Riviere*, monitoring the Soviet fishing expedition that ended on 29 February 1980, was extended to that date by a new arrangement: The ship received replenishment from the *Marion Dufresne*, owned by a French firm and chartered by the TAAF. The latter ship regularly provides supplies for the scientific bases in the TAAF. (Source: LSB 80-21.)



## Iceland Fish Product Exports to U.S. Soar

Icelandic exports of fishery products to the United States totaled \$210

million in 1979, an increase of 27 percent over the \$170 million exported in 1978 (Table 1). The value of Icelandic exports to the United States has been steadily increasing since 1977, about 20 percent annually. The quantity of these exports has also increased, from 70,400 metric tons (t) in 1977 to 86,100 t in 1979. The increase in exports is almost solely due to the larger quantity of whole and filleted frozen cod being exported to the United States.

Iceland has assumed complete control over its groundfish since the 1975-76 "Cod War" dispute with the United Kingdom and the introduction of a 200-mile fishing zone. With foreign cod catches off its shores virtually ended, Icelandic fisheries authorities imposed a complex conservation program which has allowed cod stocks to recover from overfishing. Consequently, Iceland's cod catches in the late 1970's increased modestly and in 1979 totaled an estimated 360,000 t, mainly because of the measures taken to protect the cod spawning stock. Improved cod fisheries have thus enabled Iceland to increase exports to the United States and, more noticeably to northern European countries and especially to the United Kingdom.

Iceland's most important seafood export is cod, which constituted 64 percent of the total value of all fishery exports to the United States in 1979. Exports of Icelandic cod increased about 11 percent from 1977 to 1979. The second largest component of Iceland's total fishery exports is fresh and frozen filleted cusk, which may include undetermined amounts of haddock, hake, and pollock. Exports of cusk totaled almost 12 percent of the value of Iceland's 1979 fishery shipments to the United States.

Frozen filleted Atlantic perch ranked third, about 6 percent of the value of all 1979 exports to the United States. Frozen whole pollock and haddock exports ranked fourth and fifth, composing about 4 percent and 3 percent of the value of 1979 shipments to the United States, respectively. (Source: IFR-80/149.)

Table 1.—Icelandic fishery exports to the United States by quantity and value, 1977-79.

Commodity	1977		1978		1979	
	Quantity (t)	Value (US\$1,000)	Quantity (t)	Value (US\$1,000)	Quantity (t)	Value (US\$1,000)
<b>Fresh or chilled</b>						
<b>Fish</b>						
Atlantic perch	7.0	9.3	946.0	1,666.2	1,494.8	2,686.4
Flatfish	175.7	378.9	204.4	459.4	129.0	304.2
Halibut	161.3	583.1	192.3	766.6	227.4	1,005.5
Rosefish	720.4	1,071.3	—	—	—	—
Shrimp	—	—	0.5	5.1	0.1	0.3
Trout	1.4	5.7	1.4	4.5	—	—
Whiting	6.0	11.1	1.0	3.6	95.1	180.1
Wolffish	—	—	—	—	16.6	54.1
<b>Fillets</b>						
Cod	1.5	3.6	0.2	0.7	2.2	8.4
Cusk <sup>1</sup>	209.9	418.6	125.3	303.5	89.4	238.5
Other	—	—	—	—	15.6	28.5
Other	1,403.1	2,372.5	1,386.8	2,450.2	1,318.7	2,510.8
<b>Total</b>	<b>2,686.3</b>	<b>4,854.1</b>	<b>2,858.8</b>	<b>5,659.8</b>	<b>3,388.9</b>	<b>7,016.8</b>
<b>Frozen</b>						
<b>Fish</b>						
Cod <sup>1</sup>	17,685.7	35,528.9	17,654.1	37,391.1	19,257.1	40,920.8
Flounders	395.7	479.3	138.8	209.9	396.3	680.6
Haddock	2,698.7	5,603.6	4,363.2	9,524.7	3,481.4	7,503.9
Halibut	21.0	24.1	3.1	3.9	34.0	177.1
Pollock	5,037.2	6,121.9	4,353.0	6,342.2	5,678.4	8,463.9
Scallops	693.4	2,488.0	640.6	2,882.7	936.4	5,280.1
Turbot	4.9	8.0	113.1	215.8	556.8	1,005.4
Wolffish	1,541.6	3,624.6	1,175.5	3,267.4	1,119.5	3,859.4
<b>Fillets</b>						
Atlantic perch	2,609.5	4,546.9	1,780.3	3,478.0	5,058.3	9,860.1
Cod	26,703.6	62,599.4	30,539.8	73,922.9	33,202.3	95,573.9
Cusk	7,494.5	14,580.7	7,877.5	17,381.2	10,690.3	26,398.2
Other	22.4	36.4	13.0	23.4	21.8	60.6
<b>Shellfish</b>						
<b>Lobster</b>						
Tails	383.0	3,040.2	266.5	2,394.3	206.6	2,670.4
Other	132.3	1,428.2	143.5	1,844.9	68.4	630.4
Other	97.5	234.0	68.8	176.9	—	—
<b>Total</b>	<b>65,521.0</b>	<b>140,344.2</b>	<b>69,130.8</b>	<b>159,059.3</b>	<b>80,707.6</b>	<b>203,084.8</b>
<b>Canned</b>						
<b>Fish</b>						
Herring	131.7	343.9	75.4	197.6	246.6	946.6
Salmon	—	—	0.1	1.2	—	—
Sardines	2.1	5.9	6.1	10.8	3.8	13.8
Other & fish roe	132.8	323.1	84.2	190.9	133.6	394.9
<b>Shellfish</b>						
<b>Shrimp</b>						
Peeled	10.7	36.9	0.1	0.3	8.1	50.5
Sauce	194.3	1,269.6	193.5	1,492.6	97.9	984.1
Other	18.5	58.7	Negl.	0.5	—	—
<b>Total</b>	<b>490.1</b>	<b>2,033.1</b>	<b>359.4</b>	<b>1,893.9</b>	<b>490.0</b>	<b>2,389.9</b>
<b>Cured and pickled</b>						
<b>Cod</b>						
Cod	6.8	16.0	—	—	4.5	18.6
Haddock	82.5	162.6	64.3	122.3	47.3	74.0
Hake	20.9	90.5	8.1	41.8	5.0	22.8
Herring	160.2	174.9	20.1	23.2	63.0	71.0
Salmon	Negl.	0.9	0.2	3.6	0.4	7.1
Sardines	10.8	29.3	3.0	8.4	18.1	59.6
<b>Other</b>						
Sauces	0.8	2.4	3.9	4.2	0.9	2.9
Other	1.6	8.2	3.6	15.6	18.7	97.4
<b>Total</b>	<b>283.6</b>	<b>484.8</b>	<b>103.2</b>	<b>219.1</b>	<b>157.9</b>	<b>353.4</b>
<b>Inedible</b>						
<b>Fish Oil<sup>2</sup></b>						
Fish Oil <sup>3</sup>	451.9	320.0	262.1	210.3	480.9	416.6
Seaweeds	0.9	0.3	13.0	3.8	34.8	15.5
Other	974.5	781.3	1,054.2	1,033.8	887.8	1,015.7
<b>Total</b>	<b>1,427.3</b>	<b>1,101.6</b>	<b>1,329.3</b>	<b>1,247.9</b>	<b>1,403.4</b>	<b>1,447.8</b>
<b>Grand total</b>	<b>70,408.3</b>	<b>148,322.8</b>	<b>73,781.5</b>	<b>168,080.0</b>	<b>36,147.8</b>	<b>214,292.7</b>

<sup>1</sup> Includes undetermined amounts of cusk, haddock, hake, and pollock.

<sup>2</sup> Includes mostly frozen, skinned, and boned cod in blocks.

<sup>3</sup> Includes cod liver oil.

Source: Bureau of the Census, U.S. Department of Commerce.