

Japan's Fisheries Catch Sets New Record in 1982

Japan's 1982 fisheries catch totaled a record 11,414,000 metric tons (t), according to preliminary statistics released by the Japanese Ministry of Agriculture, Forestry, and Fisheries. The harvest was the largest in the world and represented a 1 percent increase over the 1981 catch of 11,319,000 t (Table 1).

Japan has successfully maintained its fisheries catch above 10 million t since 1979, when many other distant-water fishing countries were reporting declining catches. The primary reason for Japan's success has been its rapidly expanding sardine fishery. While this has enabled Japanese fishermen to report increases in the quantity of fish caught, the relatively low value of sardines has affected the value of Japan's fisheries catch.

Marine Fisheries

Japan's marine fisheries catch increased by about 1 percent to 11.2 million t and accounted for about 98 percent of the total 1982 catch. This increase in the marine fisheries catch was achieved despite decreases in the catch from distant-water fisheries and marine aquaculture. Increased catches from the offshore and coastal fisheries easily offset the losses in the other two sectors of marine fishing.

The decreasing distant-water catch reflects the continued effect of the establishment of the 200-mile fishery zones by many countries and the imposition of catch quotas on Japanese fishermen. Japan, however, appears to have at least slowed the rapid decline of its distant-water fisheries catch. The rate of decline in the distant-water catch, as high as 20 percent in 1978, was only 4 percent in 1982 when distant-water catch was actually slightly higher than in 1979.

Inland Fisheries

Japan's inland fisheries catch comprises only about 2 percent of the total catch. The total inland catch increased by 1 percent in 1982 despite a 2 percent

decrease in the freshwater catch. A 4 percent increase in freshwater aquaculture offset the decline.

Catch by Species

The three major species landed by Japanese fishermen in 1982 were sardine, pollock, and mackerel. The sardine catch reached 3.3 million t, 8 percent more than in 1981. Sardine, currently the single most important species taken by Japanese fishermen, is of relatively low value and is used mostly for fish meal and fish feed. In the past, the Japanese sardine catch has tended to be cyclical. Japanese biologists disagree on how stable future sardine catches will be and whether the current high catch can be maintained. The mackerel catch declined by 21 percent in 1982 to 0.7 million t. The pollock catch decreased slightly (2 percent) to 1.6 million (Table 2). The Japanese harvest of whales increased by 2 percent in 1982. The 1982 increase partially offsets a 6 percent decrease in the whale harvest in 1981.

Table 1.—Japan's fisheries catch, 1979-82, by major fisheries.

Fishery	Harvest (1,000 t)				Percent chg. ¹
	1979	1980	1981	1982	
Marine					
Distant water	2,066	2,167	2,165	2,087	-4
Offshore	5,458	5,705	5,939	8,169 ²	N.A.
Coastal	1,953	2,037	2,038		
Aqua-culture	883	992	960	940	-2
Subtotal	10,359	10,901	11,103	11,196	+1
Inland					
Aqua-culture	95	94	92	96	+4
Other	136	128	124	122	-2
Subtotal	231	221	216	218	+1
Grand total	10,590	11,122	11,319	11,414	+1

¹Percentage of change from 1981 to 1982. N.A. = Not available.

²Separate data for offshore and coastal fisheries is not available. Source: U.S. Regional Fisheries Attache, U.S. Embassy, Tokyo.

Table 2.—Japan's fisheries catch by species, 1979-82.

Species	Catch (1,000 t)				Percent chg. ¹
	1979	1980	1981	1982	
Sardine	1,817	2,198	3,089	3,321	+8
Pollock	1,551	1,552	1,595	1,570	-2
Mackerel	1,414	1,301	908	718	-21
Squid	529	687	517	548	+6
Tunas ²	363	378	360	374	+4
Skipjack	347	377	305	303	-1
Salmon	131	123	150	136	-9
Other	4,438	4,506	4,395	4,444	-1
Total	10,590	11,122	11,319	11,414	+1
--Number of individuals--					%
Whales	4,918	5,191	4,887	4,967	+2

¹Percentage of change from 1981 to 1982.

²Except skipjack.

Source: U.S. Regional Fisheries Attache, U.S. Embassy, Tokyo.

EEC Tariff Duty on Eels Suspended

Due to a shortfall in eel production requirements, the EEC (European Economic Community) has suspended Customs tariff duties on the import of fresh (live or frozen) and chilled or frozen eels. The suspension in the eel tariff duty is effective from 1 July 1983 to 30 June 1984. A first installment for this tariff duty suspension on eel product is 4,050 metric tons.

Brazilian Shrimp Farms Growing

Brazil has eight operating shrimp farms and several new ones are under construction. Only about 1,000 metric tons of shrimp was cultured in 1982, but some observers believe that there will be a spectacular increase in coming years as more and more farms come into production. Some observers also believe that Brazil has the capacity to become the world leader in shrimp culture.

Latin American Markets and U.S. Fisheries Products

Latin America is not yet a major market for U.S. fishery exports. The United States shipped only 20,100 metric tons (t) of fishery products to Latin American countries, worth \$46 million, in 1982 (Table 1, Fig. 1). These shipments represented only 5 percent of the 403,400 t exported by the United States worldwide. Many Latin American countries are aggressively expanding their fishing industries and have established high tariffs and other trade barriers to discourage fishery imports. In addition, U.S. companies have not been able to supply the most important product imported by Latin American countries, dried-salted cod.

U.S. fishery exports to Latin America declined in both quantity (Table 2) and value (Table 3) during 1982. The quantity of exports fell by 27 percent and the value by 19 percent. Shipments to the region were adversely affected by the

deteriorating economic conditions in Latin America and the strength of the U.S. dollar.

The major reason for the reduced quantity of 1982 exports, however, was developments in two of the most important importing countries, Peru and Mexico. U.S. exports to Peru declined because improved 1982 catches allowed Peruvian companies to increase domestic fish oil production so that imports from the United States were not needed. Peruvian fishermen not only caught more fish in 1982, but the oil content of the anchovies, the most important species, was unusually high.

The Peruvian situation, however, altered sharply beginning in September 1982 when the sea temperature off northern Peru began to rise as part of the 1982-83 El Niño phenomenon. As a result, both catch and oil content began to decline in the last quarter of 1982. Exports to Mexico declined sharply because a smaller quantity of U.S. shrimp was trucked across the border for processing in Mexican packing plants. (The

U.S. Census Bureau counts these shipments as exports even though the shrimp is shipped back to the United States.)

The reduced value of export shipments in 1982 was caused by declining purchases in several different countries. The single most important decline was in frozen shellfish which fell from \$22.9 million in 1981 to only \$16.4 million in 1982 or by 28 percent. Important but smaller declines were reported in frozen and canned fish.

Latin America imports primarily frozen fish and shellfish from the United States. These two commodities in 1982 totaled \$33.9 million or over 70 percent of the total \$45.9 million worth of U.S. fishery products shipped to the region (Tables 4 and 5, Fig. 2). In terms of quantity, frozen fish was the leading export commodity, but in terms of value frozen fish was only slightly more important than frozen shellfish. Other products with export shipments exceeding \$1 million were fish oil, canned fish, and cured fish.

Latin American imports of U.S. fishery products are about evenly divided by area among South American, Central American, and the Caribbean countries (Fig. 1). Only a small number of countries, however, were statistically significant. In South America the only important market for U.S. fishery products was Venezuela. In Central America it was Mexico, and in the Caribbean it was the Netherlands Antilles and Bermuda (Fig. 3).

Venezuela

Venezuela was the most active importer of U.S. fisheries products. U.S. shipments totaled 8,500 t valued at \$15.3 million in 1982. Venezuela imported a

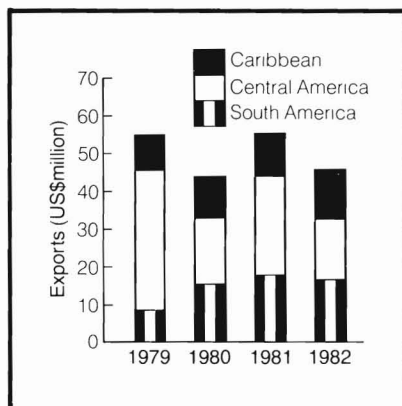


Figure 1.—Latin American fishery imports from the United States, by region and value, 1979-82.

Table 1.—U.S. fishery exports by continental region, quantity, and value, 1981-82.

Region	Quantity (1,000 t)		Value (US\$10 ⁶)	
	1981	1982	1981	1982
Asia	153.4	189.3	596.1	637.8
Western Europe	189.0	146.5	286.9	198.3
North America	52.0	35.9	147.3	117.3
Latin America	27.7	20.1	56.7	46.0
Oceania	5.6	4.0	24.5	14.2
Africa	24.4	6.1	17.9	4.2
Middle East	1.9	1.5	5.0	6.7
Total ¹	454.3	403.4	1,134.4	1,024.6

¹Totals may not agree due to rounding. The data in this table has been computed for comparative purposes to correspond to the fishery commodity data compiled by FAO. It included edible fishery products, fishmeal, and fish oil. Source: Bureau of the Census, U.S. Department of Commerce.

Table 2.—Latin America's fishery imports from the United States, by quantity, 1979-82.

Country or dependency	Imports (1,000 t)				Major commodity
	1979	1980	1981	1982	
Caribbean					
Bahamas ¹	0.5	0.4	0.5	0.3	Canned fish
Barbados	0.1	Negl.	0.1	0.1	Frozen fish
Bermuda ¹	0.4	0.8	0.5	0.6	Frozen fish
British Virgin Isl.	0.2	0.3	0.2	0.5	Other fish
Cayman Isl.	Negl.	Negl.	Negl.	0.1	
Dominican Rep.	1.3	1.9	1.8	1.6	Fishmeal
Fr. West Indies	0.2	0.2	0.3	0.3	Frozen fish
Haiti	Negl.	Negl.	Negl.	0.1	
Jamaica	Negl.	0.1	0.1	0.7	Frozen fish
Neth. Antilles	0.9	0.8	0.7	1.0	Frozen fish
Trinidad-Tobago	Negl.	0.1	0.3	0.5	Canned fish
Turks & Caicos	Negl.	Negl.	Negl.	Negl.	
Subtotal ²	3.6	4.6	4.5	5.8	
Central America					
Belize	Negl.	Negl.	Negl.	Negl.	
Costa Rica	Negl.	Negl.	0.1	Negl.	Fishmeal
El Salvador	0.1	Negl.	Negl.	Negl.	
Guatemala	Negl.	0.2	0.2	Negl.	Sardines
Honduras	Negl.	Negl.	0.2	0.1	Sardines
Mexico ³	7.2	5.4	6.6	4.4	Shrimp
Panama	0.2	0.8	Negl.	0.4	Canned fish
Subtotal ²	7.5	6.4	7.1	4.9	
South America					
Argentina	0.1	Negl.	Negl.	Negl.	
Bolivia	Negl.	Negl.	Negl.	Negl.	
Brazil	Negl.	Negl.	Negl.	0.1	
Chile	Negl.	Negl.	Negl.	0.1	
Colombia	9.8	2.1	0.1	0.2	
Ecuador	Negl.	0.1	Negl.	0.4	
Paraguay	Negl.	Negl.	Negl.	Negl.	
Peru	0.1	12.3	4.9	Negl.	Frozen squid
Suriname	0.1	Negl.	0.1	Negl.	Sardines
Uruguay	Negl.	Negl.	Negl.	Negl.	
Venezuela	3.4	5.4	10.0	8.5	Frozen fish
Subtotal ²	13.5	19.9	15.1	9.4	
Grand total ²	24.6	30.9	26.7	20.1	

¹These islands are not physically located in the Caribbean, but are included in the Caribbean totals for organizational simplicity.

²Totals may not agree due to rounding.

³Most of the U.S. shrimp "exported" to Mexico is trucked across the border for processing and then shipped back to the United States.

Note: The data in this table has been computed for comparative purposes to correspond to the fishery commodity data compiled by FAO. It includes edible fishery products, fishmeal, and fish oil.

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

Table 3.—Value of Latin America's fishery imports from the United States, 1979-82.

Country or dependency	Year				Major commodity
	1979	1980	1981	1982	
Caribbean					
Bahamas ¹	1.5	1.3	1.5	0.8	Canned fish
Barbados	0.3	0.2	0.2	0.2	Frozen fish
Bermuda ¹	1.9	2.7	2.7	3.0	Frozen fish
British Virgin Isl.	0.5	0.6	0.6	0.8	Other fish
Cayman Isl.	0.2	0.3	0.3	0.2	Shellfish
Dominican Rep.	1.2	1.5	1.6	1.0	Fishmeal
Fr. West Indies	0.4	0.4	0.7	0.6	Frozen fish
Haiti	Negl.	Negl.	Negl.	0.2	Canned fish
Jamaica	0.1	0.3	0.2	1.1	Frozen fish
Neth. Antilles	3.3	3.3	2.9	4.0	Frozen fish
Trinidad-Tobago	0.3	0.4	1.0	1.4	Canned fish
Turks & Caicos	Negl.	Negl.	Negl.	Negl.	
Subtotal ²	9.7	11.1	11.8	13.3	
Central America					
Belize	0.2	0.1	Negl.	Negl.	Canned fish
Costa Rica	0.1	Negl.	Negl.	Negl.	Fishmeal
El Salvador	0.1	Negl.	Negl.	Negl.	
Guatemala	0.1	0.3	0.5	0.1	Sardines
Honduras	0.1	Negl.	0.3	0.2	Sardines
Mexico ³	35.7	16.1	24.3	14.8	Shrimp
Nicaragua	Negl.	Negl.	Negl.	Negl.	
Panama	0.7	1.0	0.9	0.9	Canned fish
Subtotal ²	37.0	17.5	26.0	16.0	
South America					
Argentina	0.2	Negl.	Negl.	Negl.	
Bolivia	Negl.	Negl.	Negl.	Negl.	
Brazil	Negl.	0.1	Negl.	0.5	
Chile	Negl.	0.1	0.1	0.5	Fish roe
Colombia	4.1	1.1	0.2	0.2	Frozen squid
Ecuador	Negl.	Negl.	Negl.	Negl.	
Paraguay	Negl.	Negl.	Negl.	Negl.	
Peru	Negl.	5.3	2.1	Negl.	Frozen squid
Suriname	0.1	0.1	0.2	0.2	Sardines
Uruguay	Negl.	Negl.	Negl.	Negl.	
Venezuela	4.1	7.9	15.3	15.3	Frozen fish
Subtotal ²	8.5	15.5	17.9	16.7	
Grand total ²	55.1	44.1	55.7	46.0	

¹These islands are not physically located in the Caribbean, but are included in the Caribbean totals for organizational simplicity.

²Totals may not agree due to rounding.

³Most of the U.S. shrimp "exported" to Mexico is trucked across the border for processing and then shipped back to the United States.

Note: The data in this table has been computed for comparative purposes to correspond to the fishery commodity data compiled by FAO. It includes edible fishery products, fishmeal, and fish oil.

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

Table 4.—U.S. fishery exports to Latin America by commodity and value, 1978-82.

Commodity	Exports (US\$10 ⁶)				
	1978	1979	1980	1981	1982
Fish					
Live				Negl.	
Frozen ¹	4.9	7.8	12.7	20.2	17.5
Canned	3.0	3.5	4.4	5.5	3.9
Cured	0.6	0.9	1.2	1.6	2.0
Roe	0.1	0.1	0.1	0.5	0.5
Other	0.3	0.4	0.4	0.9	0.3
Shellfish					
Frozen ¹	25.5	37.8	16.5	22.9	16.4
Canned	1.0	0.2	0.9	0.5	0.3
Other	0.1	0.1	0.2	0.2	0.2
Fishmeal	0.4	0.4	0.7	0.7	0.7
Fish oil	3.7	4.3	6.5	3.9	4.1
Total ²	39.6	55.5	43.6	56.9	45.9

¹May contain small quantities of fresh product.

²Totals may not agree due to rounding.

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

Table 5.—U.S. fishery exports to Latin America by commodity and quantity, 1978-82.

Commodity	Exports (t)				
	1978	1979	1980	1981	1982
Fish					
Live				4	
Frozen ¹	2,784	4,805	6,995	11,447	9,169
Canned	1,167	1,452	1,662	1,972	1,509
Cured	246	353	362	473	615
Roe	26	33	22	119	65
Other	104	187	170	364	89
Shellfish					
Frozen ¹	5,631	6,514	3,546	4,465	3,108
Canned	225	61	404	257	102
Other	57	47	77	109	54
Fishmeal	1,463	1,570	3,105	2,674	3,286
Fish oil	8,945	10,042	14,873	5,811	2,038
Total ²	20,648	25,064	31,216	27,695	20,035

¹May contain small quantities of fresh product.

²Totals may not agree due to rounding.

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

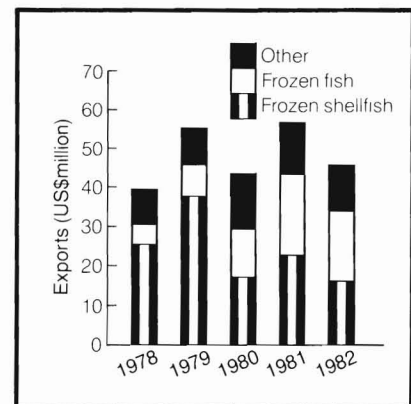


Figure 2.—U.S. fishery exports to Latin America by commodity, 1978-82.

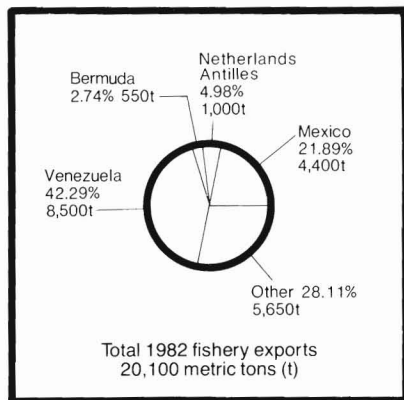


Figure 3.—U.S. fishery exports to Latin America by country, 1982.

variety of different products, the most important being \$9.4 million worth of frozen fish (unidentified) and \$3.4 million worth of fish oil. Venezuela has sharply increased its imports from the United States since 1978. Beginning in 1982, however, Venezuela experienced increasingly serious financial problems because of a decline in the price of oil, the country's primary export commodity. The value of the Bolivar, once Latin America's strongest currency, fell by more than 50 percent in less than a year. The Government, because of balance of payments problems, then was forced to curtail imports. As a result, the quantity of fish that the U.S. exported to Venezuela declined in 1982, from the record 10,000 t imported in 1981. The value, however, was constant. The Venezuelan Government may be forced to further curtail imports in 1983 and as a result the future market for U.S. exports is unknown.

Mexico

Mexico is the second leading Latin American importer of U.S. fishery products, according to U.S. Customs Bureau data. Shipments in 1982 totaled 4,400 t worth \$14.8 million, a decline of 33 percent from 1981 shipments of 6,600 tons. This data is misleading, however, as it includes nearly \$11 million worth of shrimp, almost all of which is processed and reexported back to the United States. The remaining \$3.8 million worth of

fishery products imported from the United States are a variety of products including frozen fish, frozen crab and other shellfish, canned mackerel and sardine, and frozen squid.

Even though Mexico has sharply increased fisheries production in recent years, many observers believe that U.S. exporters could sell substantially larger quantities of seafood if the Mexican Government did not restrict imports. Mexico is already a major market for U.S. agricultural products. Mexico's serious economic crisis, however, will make it difficult to expand exports in the near future.

Netherlands Antilles

The Netherlands Antilles is the third leading Latin American importer of U.S. fishery products. Shipments in 1982 totaled 1,000 t worth \$4 million. The most important commodities were fresh and frozen shellfish, but frozen fillets (unidentified) were also important. Unconfirmed reports suggest that some of the imported seafood is not consumed in the Netherlands Antilles, but is reexported to other Caribbean countries.

Bermuda

Bermuda was the fourth leading Latin American importer of U.S. fishery products in 1982. Seafood is imported both for the local population and for tourist hotels and restaurants. Shipments in 1982 totaled 550 t worth \$3 million. The most important commodities were frozen fish, shrimp, and other shellfish. (Source: IFR-83/68.)

Peruvian Fisheries Begin to Drop

The Peruvian Ministry of Fisheries reports that the country's fisheries catch totaled only 500,000 metric tons (t) during the first 3 months of 1983, a decline of 28 percent from the 693,000 t taken during the same period of 1982 (Table 1). The decline is almost entirely due to reduced anchovy catches which have been sharply affected by the 1982-83 El Niño phenomenon in the Eastern Pacific. The Peruvian Instituto del Mar

also reports that the 1982-83 El Niño is one of the most severe ever reported. The long-term impact on the anchovy stocks is yet to be determined, but some observers believe that the impact on the stocks will be felt for several years. The catch of other species, however, has actually increased.

Most of the Peruvian catch, and almost all of the anchovy is reduced to fish meal and oil. The production of both of these commodities has dropped sharply in early 1983 (Table 1). The particularly steep decline in fish oil production is due not only to the declining anchovy catch, but also to the reduced fat content of the fish which are being caught. Unconfirmed reports from Peru suggest that fish meal and fish oil production in April and May continued to decline.

The reduced fish oil production has created domestic shortages in Peru. The Government has been forced to increase imports of vegetable oils. On 18 May 1983, the import quota for soy oil was almost doubled from 70,000 t to 130,000 tons. The Government is studying an additional request to permit the duty-free importation of 60,000 t of fish oil.

Several U.S. companies experienced stiff competition in 1982 from Peruvian fish oil exporters. During most of 1982 Peruvian fishermen reported excellent anchovy catches of fish with an unusually high fat content. The resulting increased fish oil production enabled Peruvian exporters to compete in markets which had been supplied by U.S. exporters. Declining 1983 production in Peru, however, may enable U.S. exporters to regain lost markets or to export fish oil to Peru itself. (Source: IFR-83/66.)

Table 1.—Peru's fish production statistics, January-March 1982 and 1983.

Item	Amt. (1,000 t)		Percent change
	1982	1983	
Catch			
Anchovy	414.9	118.2	-72
Other	278.5	381.6	+37
Total	693.4	499.8	-28
Production			
Fish meal	165.2	104.2	-37
Fish oil	41.7	10.1	-76

Source: Peruvian Ministry of Fisheries.

Japan Increases Fishery Imports From U.S. Firms

The U.S. Regional Fisheries Attache for Asia stationed at the U.S. Embassy in Tokyo, Robert Iversen, has prepared a preliminary assessment of Japanese fishery imports from the United States using data published by the Japanese Government. Japan reports importing over 190,000 metric tons (t) of fishery products from the United States in 1982, an increase of 39 percent over 1981 imports. The value of the 1982 shipments was \$0.7 billion, only a 6 percent increase over 1981 imports. The United States retained its position as the most important supplier of fishery products to Japan by providing 17 percent of the \$4.2 billion worth of fishery products imported worldwide in 1982.

The major commodities which Japan imported from the United States were salmon, and salmon roe, and crab. Frozen salmon and salted salmon roe accounted for nearly 102,000 t worth \$465 million, or 65 percent of the total 1982 value of U.S. fishery imports. Japanese salmon imports may decrease slightly in the next 5 years as the Japanese plan to catch 150,000 t off Japan by 1987. This would be a slight increase over the 1982 salmon catch.

Pollock, herring, and squid imports are restricted by Japanese import quotas, but Japan substantially increased imports of all three species in 1982. Ongoing U.S.-Japanese trade negotiations have helped open the Japanese market to U.S. exporters. Japanese 1982 purchases of U.S. frozen pollock nearly reached 16,000 t, a 478 percent increase, valued at \$14.8 million. Japanese purchases of frozen squid from the United States totaled about 4,000 t, a 69 percent increase, worth \$5.1 million. Japanese 1982 purchases of frozen herring totaled 31,000 t, a 39 percent increase, worth \$4.7 million.

Mexican Shrimp Exports to U.S. Increase in '83

The U.S. Regional Fisheries Attache in Mexico City reported that Mexican shrimp exports to the United States were

at record levels by mid-summer. Mexican Government statistics indicate that during January-June 1983 Mexican companies exported over \$200 million worth of shrimp to the United States, or 25 percent more than during January-June 1982.

The latest U.S. import statistics supported this claim. During January-April 1983, the United States imported \$134 million worth of shrimp from Mexico, compared with only \$94 million for the same period in 1982. During the entire year of 1982, the U.S. imported 36,365 t of shrimp products from Mexico valued at \$375 million.

Ecuadorean Shrimp Exports Increase

Ecuador exported 6,270 metric tons (t) of shrimp to the United States, valued at nearly \$60 million during the first 4 months of 1983, an increase of over 50 percent from the 3,970 t exported during the same period of 1982. Reports from Ecuador had suggested that heavy rains, as much as 14 feet in one area, damaged some ponds. Even so, gradually improving yields and the sharply higher trawler catch in the Gulf of Guayaquil kept production at record levels. Some importers, however, reported that much of Ecuador's increased production was smaller-sized shrimp.

Atlantic Mackerel Market Tightens

A shortfall in world supplies of Atlantic mackerel has been forecast by Canada's Department of Fisheries and Oceans, and major exporters of North Sea mackerel (i.e., Norway, Britain, The Netherlands, and the Faroe Islands) are expected to experience a substantial decrease in exports (or possibly none at all) in 1983. Their principal markets for frozen mackerel are Nigeria, Ivory Coast, and Gabon.

Due to a predicted lack of exports of North Sea herring, an extreme shortage of Atlantic herring was also expected to occur during the second half of 1983. France and West Germany are the principal EEC Atlantic herring importers.

Both countries are major producers of smoked and canned mackerel. The smoking industries of these countries will be looking for large mackerel, approximately 1-3 pieces/kg to fill their demands. France and West Germany will also require between 20,000 and 30,000 metric tons of frozen round herring. A 10 percent increase in price was expected before the year's end and U.S. salted mackerel fillet prices were expected to remain attractive to foreign importers.

Norway Sees Pollution Problems in North Sea For Important Fisheries

Large amounts of industrial pollutants, oil, and nutritive salts from agriculture and sewage are constantly flowing into the North Sea. In addition, the Norwegian coastal current also receives massive amounts of pollution from the Øresund/Kattegat area, from the east coast of England, the Channel, and the Helgoland Bight. Non-migrating stocks of fish, demersal fauna, and shellfish, as well as fish and mussel farms receive large amounts of polluted water which they cannot escape. In this manner, environmental poisons are brought into circulation in Norwegian food and the whole Norwegian environment, according to Norwegian researcher Morten Laake.

Laake holds that it is high time to initiate an "acid rain" project for the ocean areas too, similar to the ones which have been carried out for Norwegian land areas. Laake believes that the extensive algae growth observed in recent years should be taken as a serious warning. Although this growth is not in itself the result of pollution, it is an indication that nature's own controlling mechanism has been put out of function.

Morten Laake indicated that the North Sea can experience the same problems as those registered in the Mediterranean and the Baltic Seas, if developments in these areas are not heeded. He stated that the time has come for an international plan of action for the battle against pollution in the North Sea. (Source: Norwegian Information Service.)