

ICELANDIC GROUND FISH PROSPECTS TOLD

The Government of Iceland is reviewing its groundfish industry to develop measures to preserve demersal stocks and stabilize this important segment of the national economy. Demersal fish are species dwelling near the ocean floor, such as cod, haddock, saithe, redfish (ocean perch), and others and have been the main sources of supply for Iceland's export-oriented fishing industry for years.

A recent study by the Directorate of Fisheries underlines trends in foreign and Icelandic groundfish catches from 1971-76 (see table).

Foreign and Icelandic groundfish catches in Iceland's waters, 1971-76.

	Catch in metric tons						Percent change 1971-76
	1971	1972	1973	1974	1975	1976	
Foreign	390	314	279	253	197	152	-61.0
Icelandic	417	377	390	408	430	437	+ 4.8
Total	807	691	669	661	627	589	-25.7

The table reveals two dominant trends. First, the foreign groundfish catch has been declining steadily while the Icelandic catch has been increasing irregularly and by modest quantities. In 1971, foreign trawlers caught almost as many groundfish as native fishermen, but by 1976 the Icelandic groundfish catch was about three times larger than that of foreign vessels. Second, the total demersal catch from Icelandic waters declined steadily over the 5-year period, and by 1976 it was 218,000 t less than in 1971, a decrease of 25.7 percent. The decline in foreign fishing for groundfish will continue through 1977. With British trawlers no longer fishing in Iceland's economic zone, the foreign groundfish catch will probably be about half as large as it was in 1976.

On the other hand, Iceland's 1977 groundfish catch is more difficult to estimate. During the first quarter of 1977, groundfish landings totaled 141,000 t, a considerable increase over the 113,000 t landed during the corresponding period in 1976. The cod catch alone increased to 95,000 t for the first 3

months of 1977 from 82,000 t for 1976. Icelandic groundfish landings for the remainder of the year will depend, however, on how far the Government is willing to go to establish and enforce catch quotas for the overfished groundfish stocks.

The Ministry of Fisheries will emphasize fishery conservation as a major policy goal. Fisheries Minister Matthias Bjarnason stated that the 1977 total cod catch should not exceed 275,000 t and asked the leaders of the Icelandic Cutter Owners' Organization to comply with the Government's cod allocation

program. Under the Government's plan, 260,000 t of the total cod allocation would be reserved for Icelandic fishermen; the rest would be allocated (as specified in bilateral agreements) to the Faroe Islands, Belgium, West Ger-

many, and Norway. (The foreign allocation breakdown is: Faroe Islands 8,000 t; West Germany, 5,000 t; Belgium, 1,500 t; Norway, 500 t.) When Icelandic fishermen have caught 240,000 t of cod, the remaining 20,000 t of their quota will be divided among all the vessels on a per trip basis. The Cutter Owners' Organization has apparently accepted the plan, agreeing that drastic measures had to be taken to permit the recovery of the cod stocks, especially in the waters off the northwest coast of Iceland.

From 1971 to 1976 Iceland's cod catch has varied from a low of almost 230,000 t in 1972 to a high of 282,000 t in 1976. A cod quota of 260,000 t for Icelandic vessels would, if enforced, result in a loss of more than 20,000 t of the most valuable of all groundfish species landed in Iceland. As the table indicates, Iceland's total groundfish catch has not increased a great deal since 1971, and there is little hope that the cod trawlers will be able to compensate for decreased cod catches by increasing significantly their catch of other groundfish. According to Icelandic sources, any increase in the 1977 fisheries catch will probably result from higher catches of pelagic species, such as capelin and the underexploited Norway pout (Source: IFR-77/109.)

Norway's International Fishery Agreements Noted

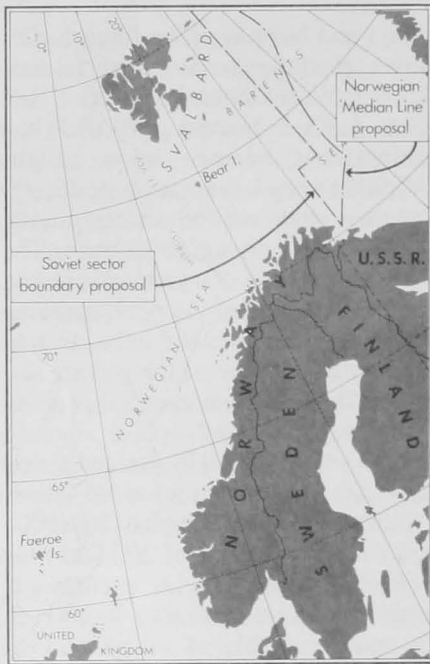
The Government of Norway concluded a number of agreements on fishing by foreign countries within Norway's new 200-mile fishery zone by mid-1977. Negotiations with the Soviet Union on the delimitation of the respective fishing zones in the Barents Sea were continuing.

The NMFS International Fisheries Analysis Branch has followed these negotiations closely. Although some of the agreements were incomplete and certain details on the accords had not been released, the Branch has prepared this report on the status of foreign fishing inside Norway's 200-mile zone. The report's three parts describe the talks with: 1) the European Economic

Community countries (EEC), 2) non-EEC countries (Spain, Portugal, and the Faroe Islands), and 3) Communist countries (the Soviet Union, East Germany, and Poland).

EUROPEAN ECONOMIC COMMUNITY COUNTRIES

Fishery relations between Norway and the EEC countries have generally been good; many problems, however, held up the conclusion of negotiations until an agreement on catch quotas was finally made. Prominent among the problems were Norway's insistence on reducing substantially the fishing activities of all foreign countries by the



Norwegian and Soviet proposals for fishing limits in the Barents Sea.

end of 1980, and the Norwegian unwillingness to give up full jurisdiction over fishery resources inside its 200-mile zone by submitting disputes to independent arbitrators. In addition, Norway claimed that fishery stocks in its zone were being depleted faster than fishery resources in the EEC zone and demanded a reduction of EEC fishing which has increased rapidly in recent years (especially by West German fishermen).

Norway has also sought to define "balanced reciprocal fishing" in the two zones by proposing that quotas be "weighted" to allow for the value as well as the quantity of fish caught in EEC and Norwegian waters. Such a formula would be beneficial to the Norwegians since a large share of their catch in EEC waters consists of relatively low-value fish used for reduction, while most of the EEC catch in the Norwegian zone is higher-valued cod and other groundfish species. Finally, Norway has insisted on the right to continue fishing up to 12 miles of the United Kingdom coastline, while the British fishing industry is engaged in a campaign to win EEC approval for an exclusive 50-mile fishing zone.

Norway and the EEC arrived at a partial agreement on fishing quotas in their respective zones. Details on Norwegian fishing rights in the EEC's 200-mile zone are not available at this writing, and, significantly, Norway granted an overall fishing quota to the Community rather than breaking it down among the different EEC member-states which have traditionally fished in Norwegian-claimed waters. The 1977 EEC catch allocations represent an overall reduction of about 33 percent from 1976. The details are: 1) For Arctic cod, the EEC allocation is 36,300 t for the 1 January-31 August 1977 period. (The EEC cod fishery in Norway's zone is limited to the waters north of lat. 62°N and represents a 25 percent reduction from the 1976 NEAFC allocation.); 2) The saithe (or Atlantic pollock) EEC allocation is 25,000 t for all of 1977; 3) The quota for the Greenland halibut fishery, conducted exclusively around Bear Island, is 700 t for 1 January-31 August; 4) Norway has prohibited directed fisheries for haddock. The haddock by-catch may not exceed 13.3 percent of the cod catch; 5) For redfish (ocean perch), North of lat. 62°N and west of long. 20°E, EEC countries can catch 7,500 t of redfish in 1977.

The EEC countries may continue to fish all other species at the 1976 catch levels. Catches taken before the agreement went into effect will be deducted from the total 1977 allocation. According to British reports, for example, there will be no fishing for redfish since the 7,500 t quota had already been taken when the agreement was made. The agreement became Norwegian law on 20 May 1977.

SPAIN, PORTUGAL, AND THE FAEROE ISLANDS

Spain and Portugal, which are relative newcomers to the Arctic cod fishery in Norway's waters, had to accept the sharpest reductions in their fishing quotas. Both countries will be permitted to fish only north of lat. 62°N and only beyond 50 miles of the Norwegian coast. The catch allocations are as follows.

For Spain, the Arctic cod fishery in

the Norwegian zone has been reduced from an actual 1976 catch of about 7,000 t to a 1977 quota of 3,000 t. No directed haddock fishery is permitted, and only 400 t of haddock may be caught as a by-catch in the cod fishery. The saithe and redfish quotas are 4,100 t and 2,500 t, respectively. The total 1977 allocation is 10,000 t.

Portugal's Arctic cod quota is 2,800 t, and the haddock quota, permitted only as a by-catch in the cod fishery, is 375 t. The saithe and redfish allocations are both 1,000 t and the total is 5,175 t.

Norway and the Faeroe Islands agreed previously on 1977 fishing quotas in their respective zones. The Faeroese fishermen are permitted a catch of 10,000 t of demersal (groundfish) species in the Norwegian zone north of lat. 62°N of which 7,500 t can be Arctic cod. In return, the Norwegians can take 10,000 t of demersal fish inside the Faeroese 200-mile zone. Faeroese fishermen will, in addition, be permitted to catch 15,000 t of mackerel in the North Sea sector of the Norwegian 200-mile zone, while their sand eel, great weaver, and sprat fisheries will remain at 1976 levels. About 15-20 Norwegian fishing vessels will be allowed to fish for hake in Faeroese waters.

SOVIET UNION, EAST GERMANY, AND POLAND

Both East Germany and Poland have agreed to reduce their 1977 fisheries catch in Norwegian waters by about 25-30 percent below the NEAFC quotas for 1976. On the other hand, Norway has allowed some increase in the East German and Polish catches in the waters around the Svalbard Islands. East German and Polish fishing vessels will be permitted to operate up to 12 miles off the Norwegian coast until the end of 1979, and in the zone between 50 and 200 miles until the end of 1981. Beginning in 1982 they will have to fish outside Norway's 200-mile zone. Following are East German, Polish, and Soviet allocations in the Norwegian zone for 1977.

For East Germany, an Arctic cod catch of 3,000 t will be permitted north of lat. 62°N. The haddock catch will be restricted to a 400 t by-catch in the cod

fishery. The saithe quota is 12,500 t and the allocation for blue whiting is 2,000 t. In the sector of the Norwegian zone north of lat. 62°N and west of long. 20°E, the East German quotas are 18,000 t of redfish, 3,000 t of saithe in the directed fishery, and 600 t of saithe as a by-catch; the total allowed is 39,500 t.

Poland is permitted an Arctic cod catch of 1,400 t north of lat. 62°N. The haddock catch will be restricted to 185 t as a by-catch in the cod fishery. The saithe quota is 2,200 t and the allocation for blue whiting is 2,000 t. North of lat. 62°N and west of long. 20°E, Polish fishermen may catch 3,200 t of redfish, south of lat. 62°N, the Poles may catch 10,000 t of saithe and 1,500 t of other demersal fish as a by-catch in the saithe fishery. Norway has also granted the Poles 500 t of mackerel and other pelagic fish south of lat. 62°N. The total catch will be 20,985 t.

Fishery negotiations between the Soviet Union and Norway have been delayed and prolonged by a number of issues which are not directly related to

fishing, such as the nature of Norwegian administrative rights in the Svalbard Islands, naval-strategic questions, and disagreements over future access to offshore energy resources in the Barents Sea. The fishery talks have dealt primarily with the delimitation of fishery zones in the Barents Sea (see map). On 25 May, the Soviet Union put into force a 200-mile zone in the Barents Sea, and the Government of Norway declared a 200-mile zone around the Svalbard Islands on 3 June, to become effective on 15 June. The mutual extensions of zones have not, however, solved the problem of agreeing on a line of demarcation. The current talks probably have better prospects of producing an accord on the so-called "grey zone" where Soviet and Norwegian claims overlap.

As far as fishing quotas are concerned, the major issue in the Barents Sea is the division of the Arctic cod allocation. Norway and the Soviet Union have already agreed on an overall cod quota in the Barents Sea of 810,000 t, the same as in 1976. Norway

and the Soviet Union will each take 330,000 t, plus 40,000 t of so-called coastal cod, while the remaining 150,000 t will be divided up among foreign countries with fishing rights in the Norwegian and Soviet zones. Common management of the Barents Sea Arctic cod is necessary because the stock spawns in the Norwegian zone, migrates and spends adolescence in Soviet waters, and finally returns as fully grown fish to the Norwegian zone. An excessive cod fishery in either of the two zones would, therefore, ultimately result in declining cod catches in the other. (Source: IFR-77/123.)

Spain Seeks Bilateral Pacts, Joint Ventures

Spain has been conducting a series of bilateral fishery negotiations and establishing joint ventures with countries in whose waters it has traditionally fished, and which recently extended their fishery jurisdictions. Fishing agreements have been signed with the United States, Canada, the European Community (EC), Norway, Mauritania, and Morocco.

Despite these agreements, the Spanish distant-water fleet is likely to be severely hampered by the new fishing restrictions accompanying the extensions of fishery zones. Although Spanish distant-water fishery landings totaled only 17 percent of the 1.5 million metric tons (t) landed in 1975, they accounted for 29 percent of the total value of such landings, which was US\$106 million. Within the Spanish fishing fleet, which is the third largest in the world, the distant-water fleet has been the most rapidly expanding, but its future has now become uncertain. Important species caught by the distant-water fleet are cod, hake, tuna, and cephalopods.

Under the bilateral agreements already concluded, Spain will receive less fish than it has traditionally caught inside 200 miles of foreign coasts. The Spanish-United States agreement, for example, will reduce the 1977 Spanish catch to 14,400 t from the 20,700 t allocated in 1976. The main species

Norway Wants to Boost Shellfish Cultivation

Norway is giving more consideration to the rich shellfish life which abounds along her coasts, according to the Norwegian Information Service. A recent international survey shows that a small country such as Holland has a yearly production of 158,000 tons of mussels while Norway with its long coastline, 250,000 islands, bays, and rocks only produces 30,000 kg. Indifference and lack of information appear to be the primary reasons why mussels, etc., are so little eaten in Norway, not to mention being cultivated.

Many countries in Europe have a thriving shellfish cultivation industry, not least in Denmark, Ireland, Holland, and France. Norway, with its long coastline, has the natural resources to be able to produce at least 10 times the crop which Holland now produces, reports Norinform.

Present Norwegian production reveals not only a major disparity be-

tween Norway and her European neighbors but a tremendous indifference so far as utilization of natural resources and potentialies are concerned. Intensified cultivation in Norway would mean an increase in international food production, assist Norwegian self-sufficiency, and create new jobs. There are many coastal communities who would welcome more jobs in a new and non-polluting industry.

Without question, shellfish represent good and nourishing food with a high protein, vitamin, and mineral content. Norwegian conditions are just right for shellfish cultivation with its plankton-rich and pollution-free waters.

To rectify the present situation, the Norwegian Government has given financial support to a film on shellfish cultivation in Norway in the hope that it will stimulate interest in the utilization of the vast latent resources along the country's lengthy coastline.

which the Spanish vessels will be allowed to catch are 9,300 t of long-*(Loligo)* and short-finned (*Illex*) squid, and 1,500 t of butterflyfish; the remaining 3,600 t are other finfish.

The 2-year agreement with Canada will also substantially reduce the Spanish catch. In 1977, Spain will be permitted to catch only 29,400 t of cod, compared to the 90,000 t allocated in 1976.

Due to its probably entry into the EC, Spain was not treated as a "third country" during the EC-Spanish negotiations. Consequently, Spain will not be phased out of Community waters like the East European countries (German Democratic Republic, Poland, and the Soviet Union) and may receive an allocation based on the average catch taken from EC waters in the past.

Under the terms of the Spanish-Norwegian agreement, Spain's distant-water fleet will be permitted to fish in Norwegian waters until 1980. Cod allocations, however, will not surpass 7,000 t per year.

West African waters, particularly on the Saharan Bank, have been important grounds for the Spanish fishing industry. The Saharan Bank is a coastal shelf where North Atlantic, Mediterranean, and equatorial currents converge to form an area rich in marine life. Spanish vessels have traditionally fished this area for cuttlefish, hake, octopus, sardine, squid, and tuna. Conflicts have arisen, however, with Morocco and Mauritania which recently extended their fishing zones to 70 and 150 miles, respectively.

Despite these difficulties, Spain has concluded agreements with both countries. The Moroccan agreement will allow Spain to catch only 50,000 t of fish per year, although the agreement will remain in force for 5 years. The terms of the Mauritanian agreement, however, are much harsher. A maximum tax of US\$200 per gross registered ton will be imposed on Spanish vessels, while no more than 290 vessels will be allowed to operate in Mauritanian waters. In addition, Spanish vessels must land at least 25,000 t of fish annually in the port of Nouadhibou and sell it to Mauritanian companies at local

prices. The Spanish government is currently trying to revise this agreement to obtain better terms.

To ensure a continued supply of fish, particularly hake and tuna, Spanish officials have begun negotiations to obtain fishing rights in Latin America. Fishing agreements have recently been signed with Chile and Costa Rica, and negotiations will soon be concluded with Venezuela and Argentina.

In addition, Spanish companies have organized a series of joint fishery ventures with Argentina, Ireland, Libya, Morocco, and Mauritania. As these joint ventures are generally subject to fewer restrictions than bilateral agreements, Spanish processors are hopeful that the supply of fish to their plants will be maintained. For instance, the Argentine joint venture is expected to provide

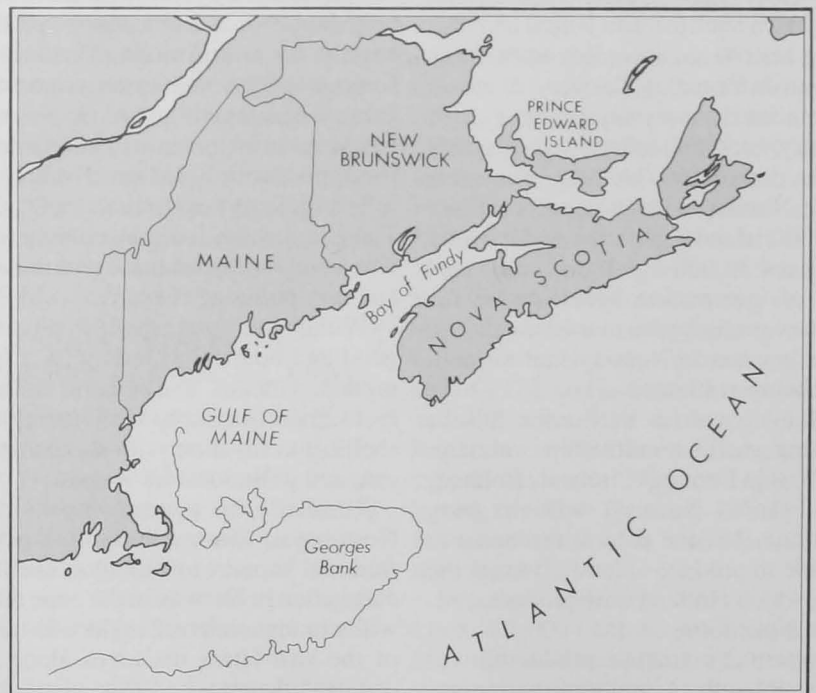
40,000 t of fish annually to the Spanish market.

Despite the fishery agreements concluded with Canada, the EC, and Norway, as well as the joint fishery ventures, Spain is unlikely to obtain adequate supplies of fish, particularly of cod. Consequently, the Spanish distant-water fleet is threatened with obsolescence and will probably be converted to medium-water operations in the near future. In addition to crippling the distant-water fleet, Spain's loss of its traditional fishing grounds has also had political repercussions. Growing criticism of Spanish fishery policy has resulted in the resignation of the Director-General for Fisheries, D. Victor Moro, who has been replaced by Felix Gragado Mayol. (Source: IFR-77/102.)

Bay of Fundy Herring Fishery Value Rising

Canada's Bay of Fundy herring fishery by purse seiners in 1977 should reach more than double its value of 2 years ago, Roméo LeBlanc, Minister of Fisheries and the Environment, has predicted. Federal initiatives will also increase the value of the weir and gillnet fisheries, he said.

Conversion of the purse-seine fishery from animal meal to higher-value food production forms part of a new \$1.4 million program involving improved ice facilities, close planning of catches to match market capacity, and several other measures. Led in development by Fisheries and Marine Service officials



Fernand J. Doucet (Special Adviser to the Minister), T. Derrick Iles, and Peter M. Jangaard, the new program is a major step in the rehabilitation of the entire Bay of Fundy herring fishery.

The conversion begun last year in the purse-seine fishery for large herring already raised the value of its 1976 landings over 1975 from \$2.8 million to \$4 million, for 20,000 tons less fish caught. The proportion of landings used for food went from 20 percent to 66 percent, the average price went from about \$33 to \$66 per metric ton, and the fishing and shore-worker season lasted 2 months longer. In 1977, shore employment should double again over 1976 and landed value of the fish should reach \$7 million, strengthening the economy on both sides of the Bay of Fundy, LeBlanc said.

"We managed this change-over through intensive consultations with fishermen, who in turn organized themselves to help run this fishery better," LeBlanc said. "I have preached organization to fishermen, I have preached consultation to my officials, and this shows what we can gain: more money, and a better working partnership between fishermen, processors, and government."

The key to increasing the purse-seine fishery's value was a system of individual boat quotas. In previous years, fishermen raced each other to catch the biggest share of the overall herring quota. The large catches far exceeded the daily capacity of the developing food industry and went mainly into fish meal, a low-price and low-employment use of herring.

"We had a fleet of expert fishermen fishing each other to death," LeBlanc said. "The season would start in mid-June and they'd catch up the quota by mid-August. To make matters worse, fish meal demand fluctuates markedly. A 1975 drop in price forced us to pay a \$750,000 subsidy to keep the fleet going. At that point, we started a major effort to make the fishery work better."

With government support, the purse-seine fishermen formed a marketing cooperative, now including 90 percent of the purse-seine fleet. The

cooperative and Fisheries and Marine Service officials worked out individual boat quotas, guaranteeing each boat a share of the catch to take at a slower rate. Weekly catch limits improved the match of catching to processing rates. Enforcement of existing regulations restricted fish meal production. Canadian processors increased their efforts in food processing, some with assistance from the federal Department of Regional Economic Expansion, so that nearly double the 1975 tonnage of large herring went into food in 1976.

Processing of large herring for food will again increase in 1977. Bay of Fundy plants expect to increase capacity from 30,000 metric tons (t) to 50,000 t, eastern Nova Scotia and northern New Brunswick plants will truck in an estimated 5,000 t, and Polish transport and processing vessels will buy some 15,000 t from Canadian seiners. The Minister of Fisheries and the Environment permitted the fishermen's cooperative to negotiate the Polish contract because Canadian processing capacity remained insufficient for the 72,000-t herring quota. In addition, the Polish company has contracted to buy processed herring from Canadian companies.

Prices to Canadian fishermen and processors for Bay of Fundy herring should rise in 1977. Extension of coastal-state jurisdiction and depleted herring stocks have created shortages in many herring markets. As a result, the demand for Canadian herring is expected to exceed available supplies of food quality herring in 1977. In addition, world prices for fish meal and oil, which remain by-products of the Bay of Fundy herring fishery, have risen substantially over the past year.

New aspects in 1977 of the federal program for the Bay of Fundy herring fishery are:

- 1) Authorized expenditure of up to \$750,000 over 2 years to provide ice-making facilities ashore; additional assistance to convert vessels to carry ice and bring in better-quality fish to the plants; investigation of future aid for installation of cold storage facilities.

- 2) Development of an up-to-the-

moment information system to enable constant matching of catch rates to processing capacity.

- 3) Increased effort in herring and mackerel fishing by large seiners in the Gulf of Maine and on George's Bank, to take available quotas and divert fishing pressure from the near-shore fishery.

- 4) Research studies related to food herring production by processing plants and fishermen's cooperatives.

- 5) Work on a catch insurance scheme for the herring weir fishery, to compensate for extreme catch variations in this fixed-gear fishery mainly for juvenile "sardine" herring; also, planned assistance for weir fishermen to build pounds to hold fish live until markets open, and special attention to marketing problems in the weir fishery in New Brunswick and Nova Scotia.

- 6) Development studies on a herring-roe fishery with special reference to the gillnet fleet, and measures to link this fleet into the overall information and management system for herring marketing, plus examination of other means of improving the gillnet fishery.

- 7) New arrangements to avoid over-catches of herring that result in dumping.

"I congratulate the fishermen, processors, and my own officials who have transformed the Bay of Fundy purse-seine fishery," Mr. LeBlanc said. "When I met with the fishermen several times last year, I warned them we were taking a risk together. We met some obstacles; we could meet more. But so far, we have made the fish yield better value, we are changing an unreliable fishery to a reliable one, and we have seen a fisherman's organization emerge that should be able to stand on its own feet."

Japan, Russia Sign New Fish Agreement

Japan and the Soviet Union signed a new bilateral fisheries agreement in Moscow on 26 May 1977. The new agreement sets the rules for Japanese fishing in the Soviet 200-mile fishery

zone which became effective on 1 March 1977. Japan caught 1.4 million metric tons (t) of fish and shellfish in this zone in 1975.

In the new agreement, Japan recognized Soviet sovereignty over fishery resources inside the Soviet zone. From now on, the Soviet Union will issue

permits and charge permit fees for Japanese fishing in this zone. Soviet inspectors will board Japanese fishing vessels to insure that they have permits on board and keep detailed logs of their catches. Every 10 days the Japanese catch data must be communicated to Soviet authorities.

The Soviet Union and Japan agreed on a quota of 62,000 t for the 1977 Japanese highseas salmon fishery. No salmon may be caught inside the new Soviet fishery zone. For more details on the agreement, request IFR-77/99 from any NMFS Statistics and Market News office.

Sweden and Russia Discuss Baltic Fishing

The Government of Sweden is attempting to conclude negotiations with the Soviet Union and other neighboring states on fishing limits in the Baltic Sea. The Soviet Fisheries Minister arrived in Stockholm on 13 May 1977, immediately after the conclusion of bilateral fishery negotiations with Japan, and was to stay in Sweden for 1 week. The Swedish Minister of Agriculture and fishery officials scheduled talks with the Russian official from 31 May to 2 June. Immediately after, on 3 and 4 June, the Parliament (Riksdag) began to debate the Government's bill to extend Sweden's Baltic fishing limit according to the median-line principle.

Within the Government of Sweden there has been a debate over the best means of proceeding toward the extension of fishery limits. Prime Minister Falldin's cabinet has sought from the beginning the broadest possible domestic support to counter expected foreign opposition. For this reason, the Swedish government carefully discussed the zonal proposal with the Soviet Union and submitted a bill to the Parliament which only asked for authorization to extend the Swedish Baltic fishing limits sometime in the future rather than requesting that a bill be passed to extend the fishing limits immediately. This approach met with opposition from the Social Democrats who favor an immediate extension of Swedish jurisdiction in the Baltic, perhaps even without negotiations with the other Baltic states. A meeting of the Foreign Relations Council of the Riksdag on 24 May failed to resolve this issue, and the Foreign Minister's later statements made evident that the Government was still unsure about the timing and the details of the move. There was reason

to believe that the Swedes would not actually declare the extended fishing limits until they held consultations, not only with the Soviet Union, but also with Denmark, Poland, Finland, and East Germany.

The original Baltic fishing limits proposal was submitted to the Swedish Parliament in early 1977¹. Using the island of Gotland as the baseline, it would give about 45 percent of the Baltic to Sweden. The Soviet Union, on the other hand, has consistently maintained that, if Baltic zones are to be drawn, Sweden must use the Swedish mainland as its base-line instead of Gotland. Following the Soviet proposal, the line of demarcation between the Soviet and Swedish Baltic fishing zones would run just east of Gotland. The significance of the claim to economic rights in the area around Gotland is heightened by the fact that, in addition to fishing, there are reportedly sizeable oil and natural gas deposits near Gotland. According to the Swedish press, the Soviet Fisheries Minister raised the issue of exploitation of energy resources in his June talks with the Swedes.

According to the NMFS Branch of International Fisheries Analysis, the Swedish move represents an effort to prop up a sagging fishing industry by asserting jurisdiction over a large Baltic zone and shifting the emphasis from long-distance Atlantic trawling to the inshore and medium-distance Baltic fishing.

At present barely 10 percent of the Baltic fishery catch is made by Swedish vessels. In addition, over the past dozen years Sweden's fisheries catch de-

creased by almost one-half. Between 1964 and 1976, the annual catch declined from 387,000 t to just under 200,000 t, and most of the decrease was due to the virtual collapse of Sweden's North Sea herring fishery.

Sweden's decision, however cautiously taken, to solve the fisheries question through the Baltic zone has caused a protracted diplomatic conflict with the Soviet Union and Denmark. The Soviets and the Danes not only disagree with Sweden over jurisdiction in the waters around Gotland and Bornholm Islands, but they also dispute Sweden's right to establish a large fishing zone in a basically inland sea in which five different countries have significant fishing operations. Consequently, the Soviet Union has insisted, with Danish support, that the Baltic fisheries dispute be resolved through agreements on fishing quotas rather than through the introduction of zones.

The Swedes are in a strong position on this question, however, since both the Soviet Union and Denmark, have recently extended their fishery jurisdictions. Also, as far as the disagreement over how to draw the baseline is concerned, the Swedes can claim that using the eastern coast of Gotland as the baseline is justified since the Soviet Union recently made the same claim for the islands north of Hokkaido in their fishery negotiations with Japan. The thrust of the Swedish bargaining position is that their proposal is not a radical departure from, but a logical extension of, international trends.

The final bill authorizing the government to extend the Swedish fisheries jurisdiction was submitted to the Riksdag on 28 March. The first round of negotiations with the USSR followed on 18 April and continued for 5 days

¹See "Sweden to extend its Baltic Fishing Zone," *Mar. Fish. Rev.* 39(5): 38-39.

without producing an agreement. Since the Soviet Union had recently arrived at an interim fisheries accord with Japan, there was some reason to believe that it would make greater efforts to resolve European fisheries matters by negotiation with Sweden, Norway, and the European Economic Community.

Japanese Whale Meat Imports Rise in 1976

Japan, the world's largest consumer of whale products, imports large quantities of whale meat, which substitutes for other forms of meat in the Japanese diet. Japan balances these imports with exports of domestically produced whale oil.

Japan's whale meat imports increased by almost 13 percent in 1976,

from 28,800 metric tons (t) to 32,400 t (Table 1). The value of these imports, however, rose almost 48 percent from \$19.7 million in 1975 to \$29.2 million in 1976. Imports from the Soviet Union in 1976 were about 70 percent of the total whale meat imports, while imports from Iceland amounted to about 10 percent.

Whale oil exports declined significantly in 1976 when a total of 12,170 t, valued at about \$5 million, was exported, or 48 percent by quantity and 26 percent by value less than in 1975. Almost all whale oil is exported to the Netherlands; only small quantities were exported to the Republic of Korea, Taiwan, and a few other countries (Table 2).

The NMFS International Fisheries Analysis Branch has recently prepared a report on the Japanese whaling industry. The report describes Japan's catch and utilization of whales, including sections on production, trade, consumption, processing, and the structure of the industry. If interested in obtaining a copy, please request IFR 77-105 from: International Fisheries Analysis Branch, F411, National Marine Fisheries Service, NOAA, U.S. Department of Commerce, Washington, DC 20235.

Table 1.—Japanese imports of fresh, chilled, or frozen whale meat, 1975-76.

Country	Quantity (t)		Value (US\$1,000)	
	1976	1975	1976	1975
Brazil	48	115	53	107
Chile	88	6	50	3
Iceland	3,703	2,269	4,052	2,530
Korea, North	38	158	23	61
Korea, Rep. of	1,195	612	2,292	1,182
Peru	1,492	1,989	1,060	1,056
Somalia	1,478	1,510	2,162	1,667
South Africa	207	313	272	251
Soviet Union	22,853	21,293	18,387	12,362
Spain	1,374	556	826	456
Total	32,476	28,821	29,177	19,675

Source: Japan Marine Products Importers Association. "Imports of Marine Products by Country," 1975 and 1976.

Table 2.—Quantity (in metric tons) and value (in US\$1,000) of Japanese whale oil exports, 1975-76.

Country	Quantity		Value	
	1976	1975	1976	1975
Nonbaleen oil				
India	2	1	3	1
Iraq	10	—	5	—
Korea, Rep. of	215	168	102	91
Netherlands	2,932	9,856	1,824	2,864
Philippines	1	23	1	16
Salvador	5	15	4	12
Taiwan	194	108	122	67
Thailand	6	5	5	4
Total	3,365	10,176	2,066	3,055
Baleen oil				
Korea, Rep. of	1	—	1	—
Netherlands	8,793	13,146	2,815	3,563
Philippines	10	—	6	—
Taiwan	1	—	3	—
Total	8,805	13,146	2,824	3,563
Grand total	12,170	23,322	4,890	6,618

¹Less than \$500.

Source: Japanese Ministry of Finance, "Exports and Imports: Commodity by Country," and "Exports and Imports: Country by Commodity," published by the Japan Tariff Association.

Ministers that the ban against North Sea herring fishing be extended until 31 December 1977, and that catch quotas be determined for the herring fishery off Scotland, in which the United Kingdom would receive the largest share.

Only the United Kingdom supported the Commission's proposal for a ban until the end of 1977. The Irish supported the Commission on the North Sea ban, but not for the waters off Scotland. The remaining member states preferred small quotas for both areas. The Agriculture Ministers also suggested that the special council of the Fishery Ministers scheduled for 27 June to discuss the EEC's internal fisheries regime should reexamine the question of herring conservation. (Source: U.S. EEC Mission, Brussels, IFR-77/94.)

According to the NMFS Office of International Fisheries, proposals for conserving the depleted herring stocks have been a major bone of contention within the EEC and the Northeast Atlantic Fisheries Commission (NEAFC). The chief difficulty is the large Danish fish reduction industry which requires, among other species, steady supplies of herring and sprat to keep the reduction plants active throughout the year. The Danish reduction fishery has developed in the last 10 years and, as recently as 1973, Denmark caught almost 400,000 t of herring in the northeast Atlantic (including the North Sea). Despite the ban against directed fishing for herring in the North Sea, the Danes are still catching some because they are allowed a 10 percent herring by-catch in their North Sea sprat fishery. Unconfirmed reports indicate that, because of the difficulty of monitoring by-catches precisely, the Danish North Sea herring by-catch is actually considerably higher than 10 percent of the sprat catch.

Scientific studies clearly reveal the need for a total herring fishing ban in the North Sea. According to a recent report submitted to the EEC Commission, the North Sea herring stock will be depleted in 5 years unless the fishery is closed to permit stocks to recover. The herring breeding stock is estimated to have declined to about 10 percent of the minimum scientists feel is necessary for the stock to maintain itself. As

EEC Extends Ban on Herring Fishing

Meeting in Brussels, Belgium, the Agriculture Ministers of the European Economic Community (EEC) decided on 16 May to extend the regulation of the herring fishery in the North Sea and in the waters off the western coast of Scotland. The decision was a temporary measure and was taken after a marathon session lasting into the morning hours.

The compromise extended the current (31 May 1977) ban against fishing for herring in the North Sea and off western Scotland until the end of June. The only exception was that the Netherlands was permitted to catch up to 1,500 metric tons (t) of herring in the North Sea for its "Maatjes" festival.

The European Commission had originally proposed to the EEC Agriculture

early as 1971, an OECD study by Norwegian marine biologists concluded that the herring stocks in the northeast Atlantic had declined from an estimated 14 million t in 1955 to less than 1 million t in 1970.

Nonetheless, the herring catch in the northeast Atlantic, although declining, continues to be significant. Between 1970 and 1975 catches decreased from about 1.5 million t to a little more than 1

million t, and the total allowable North Sea herring catch for the June 1974-July 1975 season was 488,000 tons. In 1976, the North Sea herring quota was set at 160,000 t and Denmark's share, by far the largest, was 43,000 t.

In recent EEC discussions, the European Commission and the United Kingdom have stood most consistently for a permanent ban against the herring fishery, and Denmark has found itself

increasingly isolated on this issue. The Federal Republic of Germany and the Netherlands, both importing large quantities of herring, have been reluctant to oppose the Danish point of view. It appears that, either as a result of a permanent ban imposed this summer, or through repeated extensions of temporary bans, the North Sea herring fishery may be closed for the remainder of 1977.

FRENCH FISH IMPORTS INCREASE IN 1976

French imports of fishery products continued to increase during 1976. Preliminary statistics indicate that 317,756 metric tons (t) of fishery products were imported worth US\$560 million (Table 1). This represents a 2.5 percent increase over 1975 figures, when 309,800 t were imported at a value of US\$447 million. French fisheries exports in 1976 were 103,784 t worth \$140 million. This resulted in a trade deficit of \$420 million for 1976.

Principal French fishery imports were cod, herring, mackerel, sardines, and shrimp (Table 2). Salmon imports declined 18 percent compared to 1975, even though the French are supplied with salmon entirely by imports. U.S. salmon exports to France accounted for 83 percent of the total U.S. fishery exports to France in 1976 and were valued at \$29.4 million, an increase of almost \$7 million since 1975. U.S. fishery exports to France in 1976 totaled 8,241 t and were valued at \$33.5 million (Table 3). U.S. imports of French fishery products during 1976 were minimal and consisted mainly of skipjack and yellowfin tuna (Table 4).

There has always been a tendency in France to import highly priced species such as salmon and sole. This is due not only to the relatively high income levels of the French consumer but also to their culinary habits which have favored expensive fish. U.S. fish exporters have yet to take full advantage of the French market; U.S. exports of fishery products represent only 6 percent of the total value of French fishery imports. Species which U.S. exporters might more effectively market in France would include herring, squid, and various shellfish.

Table 1.—French trade balance of fishery products, by quantity and value, 1976.

Product	Quantity (t)			Value (million US\$)		
	Imports	Exports	Balance	Imports	Exports	Balance
Fish						
Fresh and frozen	167,438	81,162	-86,276	251	79	-172
Salted, dried, and smoked	15,158	3,747	-11,411	25	9	-16
Canned	47,239	3,305	-43,934	89	8	-81
Total	229,835	88,214	-141,621	365	96	-269
Shellfish						
Fresh, frozen, salted, dried, and smoked	73,601	13,459	-60,142	143	31	-112
Canned	14,320	2,111	-12,209	52	13	-39
Total	87,921	15,570	-72,351	195	44	-151
Grand total	317,756	103,784	-213,972	560	140	-420

Source: La Pêche Maritime.

Table 2.—French imports of principal species in metric tons, 1975-76.

Species	Quantity (t)	
	1976	1975
Fish, fresh		
Anchovy	1,608	845
Blackfish	1,054	1,756
Cod	22,440	21,972
Cod fillets	3,552	3,142
Herring	5,004	7,755
Mackerel	11,202	10,058
Sardine	9,148	8,662
Sole	5,343	5,991
Whiting	2,155	2,622
Fish, frozen		
Anchovy	195	90
Blackfish fillets	2,179	2,337
Cod fillets	5,864	5,249
Haddock	175	398
Herring	5,319	5,338
Mackerel	5,172	7,954
Salmon	11,186	13,693
Sardine	16,206	14,368
Fish, cured or salted		
Anchovy	3,369	1,548
Cod, salted	4,029	3,455
Cod, dried	3,584	2,752
Herring	2,809	3,125
Shellfish		
Lobster	718	694
Spiny lobster	1,884	1,911
Grey shrimp ¹	4,152	2,987
Other shrimp	11,242	9,926
Squid	4,746	5,357

¹ Given in French as "crevette grise."
Source: La Pêche Maritime.

Table 3.—U.S. fishery product exports to France by principal species, 1976.

Species	Quantity (t)	Value (US\$)
Fresh, frozen		
Cod, cusk, haddock, hake, pollock	190	327,342
Salmon	6,396	27,368,351
Salmon fillets	433	1,983,508
King crab	32	229,313
Shellfish	310	494,754
Total, fresh and frozen	7,361	30,403,268
Canned		
Salmon	67	268,260
Shrimp	55	60,453
Total, canned	122	328,713
Grand total	7,483	30,731,981

Source: United States Census Bureau, "U.S. Exports, 1976."

Table 4.—U.S. fishery product imports by principal species from France, 1976.

Species	Quantity (t)	Value (US\$)
Fresh, frozen		
Cod blocks	307	443,958
Cusk, haddock, hake, pollock	36	41,968
Skipjack tuna	9,793	3,547,586
Yellowfin tuna	812	454,855
Rock lobster tails	96	1,187,607
Total	11,044	5,675,974

Source: National Marine Fisheries Service, "Foreign Trade (Imports), 1976."