



International

FOOD AND AGRICULTURE ORGANIZATION

NAVAL ARCHITECT REPORTS ON WORLD MARKETS FOR AND DESIGN OF FISHING BOATS AND ENGINES:

The "engine barrier" which existed among fishermen in the underdeveloped countries has been broken down, reported the Chief Naval Architect, Fisheries Division, Food and Agriculture Organization (FAO), Rome, Italy, on his return from an 80-day round-the-world trip. The purpose of the trip was to discuss with government officials and private individuals in various countries participation in the second World Fishing Boat Congress, which will be held at FAO headquarters, Rome, April 5 to 10, 1959.



Fishermen Eager to Mechanize Boats: "I was impressed by the developments in mechanization which are taking place in the underdeveloped countries of the Far East," he said. "It is quite clear that the fishermen now are convinced of the value of mechanization which enables them to catch 3 or 4 times more fish... but there is the problem of finding ways and means to supply the engines required by the fishermen. However, that is chiefly an economic problem, especially as it is often closely tied up with a system of government subsidies.

"Apart from this aspect, the main question now seems to be the introduction of an extension service which will help overcome the difficulties arising from lack of communication between fishing villages. It is surprising to realize that the news of the successful introduction of mechanized fishing craft in a village does not spread along the coast. The next village, perhaps 20 or 30 miles away, will hear nothing of it, chiefly because there is no road communication..."

Fisheries Departments Stimulating Production: A very noticeable change in the attitudes of governments towards fisheries has taken place, according to the Chief Naval Architect. Until recently fisheries departments seemed to approach fishery development work from the scientific and biological point of view and were mostly concerned with introducing fishing regulations. But now the fisheries departments are trying to stimulate production through the introduction of modern motors, mechanized gear, synthetic fibre nets, and so on.

Great Savings in Fuel Costs Possible: While in Japan the FAO Chief Naval Architect conferred with scientists of the Fisheries Agency, Tokyo, where FAO-sponsored tests of fishing vessel models are being carried out in the Agency's tank. "We have, for a long time past, been advocating the construction of fishing vessels with a low prismatic coefficient, because the results of tests sponsored by FAO have shown that such vessels would cut fuel costs by at least 15 percent while operating in calm water conditions," he stated.

A boat with a low prismatic coefficient has a hull designed to concentrate the main volume of water displacement around midships, he explained, but a boat with a high prismatic coefficient has a hull designed to carry the displacement of water more evenly along its whole length.

The tests in the Tokyo tank have been made in rough water conditions, and these have shown some remarkable results. In fact, the data obtained so far indicate that a traditional hull requires about 60 percent more fuel in rough-water conditions than a fishing boat with a low prismatic coefficient. Such a saving could be effected by all fishing vessels of 30 to 200 feet.

The effect of the prismatic coefficient was dramatically illustrated in the Tokyo tank during tests when a model with a high prismatic coefficient was so heavy in its movements in rough water that it broke the testing instruments. There are at least two other advantages in designing fishing boats with a low prismatic coefficient. The first is that such boats will be seakindlier, which means that they will provide much pleasanter conditions for the crew. The second is that they will be able to continue fishing in rougher water and higher wind force than is possible in the usual type of fishing boat of today.

Enclosed Working Deck for Long-Liners: In the course of his trip the FAO Architect visited the United States, Canada, and Newfoundland. While in Newfoundland he advised on the construction of some 30 long-liners.

"It had been proposed to build boats with the line-hauling operation on the open deck," he explained, "but I suggested a design to provide a completely enclosed working deck which would enable the crew to bait, set, and handle the fishing lines under cover and also split the catch. I proposed that the accommodation throughout should be heated by infrared rays. The Newfoundland naval architects are now working on this design and 20 boats of 60-70 feet and 10 boats of 90-100 feet will be constructed at a cost of about \$1,600,000."

(NORTH EUROPEAN) INTERNATIONAL FISHERIES CONVENTION

PERMANENT COMMISSION TO MEET IN DUBLIN:

A British Ministry of Agriculture, Fisheries and Food spokesman confirmed recently the news from Oslo that the Permanent Commission of the International Fisheries Convention of 1946 would hold their regular meeting in Dublin in November 1958, to discuss, among other things, the draft of a new convention.

The meeting is of prime importance because the Soviet Union joined the convention recently and so will take part in a meeting of the Permanent Commission for the first time. The Commission comprises representatives of all the 14 member countries.

The Commission regulates fishing in the Arctic and North Atlantic from the

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coast of Labrador to the western parts of the Barents Sea. The Baltic is, however, excluded from the convention area. Moreover, all Soviet sea areas are similarly exempted.

Note: Also see Commercial Fisheries Review, August 1958, p. 57.

INTERNATIONAL PACIFIC SALMON FISHERIES COMMISSION

PROSPECTS FOR 1958 RUN OF FRASER RIVER SOCKEYE:

The Early Stuart run, which has provided the entire catch of sockeye to date, is later than any previously recorded Early Stuart run. Catches in the Fraser River indicate that the peak is now appearing--at least a week later than normal, a July 16, 1958, "Information Bulletin" of the International Pacific Salmon Fisheries Commission points out.

Ocean temperatures are at a record high, and the Fraser sockeye may have moved further north than normal during their marine existence. Reports on other species indicate that a northern shift in ocean habitat has taken place during the current season.

A careful analysis, based on several factors, indicate that the size of the Early Stuart run is in accordance with pre-season anticipations. The 1958 runs up to July 20 were not expected to equal those of the brood cycle for the same period in 1954. The four-year-old Stuart fish, unselected by the gill-net fishery, averaged 5.3 pounds from July 1-7 and 5.6 pounds from July 8-14 as compared with an average weight of 5.7 and 6.1 pounds, respectively, for the same aged fish during the same weekly periods for the cycle from 1918 through 1954. The fish, therefore, are averaging smaller than normal as was anticipated in advance of the season.

General information provides justification for reasonable optimism on the prospects of the 1958 run. The only change in the anticipated character of the 1958 Fraser sockeye run is the tardy appearance of the Early Stuart run. If the runs to come, including the important Adams River population, follow the late

migrating character of the Stuart run the catch will not follow the expected pattern established by the 1942 run.

SEALING

NORWEGIAN-U. S. S. R. NORTH ATLANTIC AGREEMENT RATIFIED:

The instruments of ratification of the Norwegian-Soviet agreement concerning sealing in the North Atlantic, signed in Oslo on November 22, 1957, were exchanged in Moscow on June 27, 1958, states a U. S. Embassy dispatch from Oslo dated July 2, 1958. The treaty became effective immediately.

Note: Also see Commercial Fisheries Review, February 1958, p. 50.

TRADE AGREEMENTS

U. S. S. R. -WEST GERMAN TRADE AGREEMENT INCLUDES FISH:

A Long-Term Trade and Payments Agreement between the German Federal Republic and the U. S. S. R. was signed on April 25, 1958. The agreement took effect retroactively as of January 1, 1958, and is in force until December 31, 1960.

Among the commodity quotas established for imports from the U. S. S. R. into the German Federal Republic are the following for fishery products: canned crabs DM4 million (US\$956,000) for 1958, DM4.5 million (US\$1,075,500) for 1959, and DM5 million (US\$1,195,000) for 1960; caviar and canned fish during 1958 at DM2.5 million (US\$597,500), and for 1959 and 1960 DM3 million (US\$717,000).

Note: Values converted at rate of DM1 equals US\$0.239.

WHALING

ANTARCTIC WHALE LIMIT FOR 1958/59 SEASON:

At a meeting of the International Whaling Commission in The Hague, Netherlands, June 23-27, 1958, it was decided to set the Antarctic pelagic whale catch limit for the 1958/59 season at 14,500 blue-whale units, the same as for the previous 2 seasons. This limit is subject to approval of the member countries. (Foreign Crops and Markets, vol. 77, no. 3.)



Australia

TUNA CATCH FOR 1958 SEASON SETS RECORD:

The South Australian tuna catch this season (now ended) totaled 545 metric tons. This compares with 230 tons in 1957 and 150 tons in 1956. The 545-ton catch was taken by two boats--Fairtuna and Tacoma. Fairtuna caught 335 tons, which was believed to be a record for one boat in Australia.

Adding the New South Wales catch of approximately 950 tons, gives a record Australian tuna catch of 1,495 tons.



Belgium

PROPOSED EXTENSION OF FISHING LIMITS BY ICELAND CREATES PROBLEMS:

The recent announcement by Iceland of the extension of its fishing limits to 12 miles, has caused speculation on the problems that will arise in relation to the Belgian fishing industry, states a July 16 dispatch from the United States Consulate in Antwerp. As a result of declining yields and rising operating expenses, two of the last three years have been particularly unprofitable for the fishing industry, and the Belgian fishing fleet has tended to depend increasingly on the more productive fishing grounds off the Icelandic coast.

The growing importance of these fishing grounds is illustrated by the percentage of the Belgian catch in 1957 which was landed from Iceland. The total Belgian landings in 1957 amounted to 109.3 million pounds valued at US\$9.8 million. Of this total, the landings from off Iceland amounted to 36.6 million pounds valued at US\$3.1 million or 33.5 percent of the total quantity landed and 23.4 percent of the total value. The total landings of whitefish (mainly cod and haddock) in 1957 amounted to 29.3 million pounds, of which 18.1 million pounds or 61.8 percent was caught off Iceland.

The fishing grounds around Iceland are very narrow except on the west and northeast side of the island. The north-

eastern fishing grounds are fished mainly by German trawlers. The western shores of Iceland are mainly fished by the Icelanders. The Belgians operate off the southeast coast between Ingolsholdi and the Vestmaens islands, where the continental shelf is extremely narrow and the bottom slopes rapidly into the oceanic depths.

Due to disappointing returns in the North Sea, medium-sized vessels of the Belgian fleet, designed for North Sea fishing, started several years ago to fish intensively on the Icelandic grounds. This proved successful and an increasing number of Belgian vessels engaged in fishing these waters. The smaller vessels met several difficulties not only because of the diminishing density of the fishing stocks further from the coast, but also because the bottom rapidly becomes too deep to be worked by less powerful vessels. In order to operate successfully, modifications of these vessels were required. Their hulls were strengthened and elongated and more powerful engines were installed at considerable cost to the Belgian owners. This fleet of medium-sized long-distance trawlers and some large steam trawlers developed into the most profitable part of the Belgian fishing fleet. For two of the last three years, these were the only vessels which not only covered their operating costs but returned profits to their owners. Due to their inability to operate in deeper waters, the medium-sized vessels will not be able to fish the Icelandic grounds once the boundaries are moved out further into the sea.

The finding of substitute fishing grounds is a problem. More distant fishing grounds, such as near Greenland and the Bear Island, have been previously explored without financial success. Only the largest vessels can work these grounds and the fish that have been caught there do not seem to be of the quality expected by the Belgian market. Other fishing grounds off East Iceland can perhaps provide a substitute, but it is uncertain that they can be fished by the smaller vessels of the Belgian fishing fleet. In addition, the species of fish most abundant there is the ocean perch. This species is comparatively unknown on the Belgian market and fishing industry

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officials are not certain that it can be successfully sold.

Another problem which the Belgian industry foresees as a result of the Icelandic action is depletion of the North Sea grounds. It is anticipated that the greater part of the smaller trawlers now fishing the Icelandic grounds will swarm over to the North Sea. Since the maximum sustainable yield is being attained at present, it is believed that should this redeployment of the small vessels take place, the North Sea grounds will be overfished in a very short time.



Canada

FISH-VISCERAL FLOUR USED AS PROTEIN SUPPLEMENT FOR HOGS:

Fish-visceral flour, a new byproduct of the Canadian fishing industry, was found to be a satisfactory protein supplement in the rations of growing and finishing hogs, in tests at the Nappan, Nova Scotia, Experimental Farm, Canadian Department of Agriculture. The hogs had no objection to the fish-flour ration and their rate of gain, feed efficiency, and carcass grade were quite satisfactory.

The hogs used in the Nappan tests received a ration of barley, oats, and minerals, plus fish visceral flour at the rate of 10 percent by weight of the grain allowance, from weaning until the pigs reached a live weight of 100 pounds. At this point the fish flour was reduced to 4 percent of the grain mixture and kept at this level until the pigs reached the market weight of 200 pounds.

Fish flour was prepared by collecting fresh cod and had-dock viscera on the vessels. Sodium nitrite, a preservative, was added to this material and the viscera kept at a temperature of 80° to 100° F., for several days. During this time most of the solids go into solution. The solution is then drum-dried and the dried material is ground into flour.

An estimated 90 million pounds of fish viscera are discarded annually in the Atlantic area. From this amount of viscera, approximately 18 million pounds of fish-visceral flour could be produced each year. The fish flour used in the tests was produced on an experimental basis by the Fisheries Technological Station, Halifax, N. S. Investigations on the use of this new feed are continuing at the Nappan Experimental Farm. (March 1958 Trade News of the Canadian Department of Fisheries.)

MARINE-OIL OUTPUT DROPS:

Marine-oil production in Canada in 1957 fell more than 40 percent below 1956, and probably will decline further in 1958. The drop resulted primarily from a smaller British Columbian herring catch, which in turn resulted from cold weather early in 1957, and a scarcity of fish. Also, a price disagreement between fishermen and processors curtailed fishing and processing.

The disagreement continued into 1958. Consequently there were no herring for processing and no oil produced in January and February. In the corresponding months of 1957 herring oil production totaled 4,950 short tons. On the Atlantic coast, however, herring oil output in January and February 1958 totaled 538 tons, compared with 117 tons in the first 2 months of 1957.

Canada's Marine-Oil Production by Type and Major Producing Area, 1956-57

Area and Type of Oil	1957 ¹ /1956	
	(Short Tons)	
Atlantic Coast:		
Cod-liver oil	3,689	4,347
Herring oil	1,127	668
Other ²	2,560	1,826
Total Atlantic Coast	7,376	6,841
British Columbia:		
Herring oil	9,224	21,284
Total	16,600	28,125

¹/Preliminary. ²/Includes seal oil and other fish oils.

There has been a sharp change in the use of fish oils in Canada over the last several years. In 1956--the latest statistics available--all the fish oil used in Canada went into margarine and shortening manufacture. In 1955, only 14 tons of fish oil went into soap, whereas in 1948 about 800 tons--representing about 75 percent of all the marine oil used that year--were used for this purpose (Foreign Crops and Markets, July 7, 1958, U. S. Department of Agriculture).

HERRING RESEARCH IN NORTH PACIFIC:

Far out in the Pacific Ocean (up to 200 miles offshore) a single British Columbia research vessel fished for herring this summer. The Canadian Fisheries Research Board's A. P. Knight was scheduled to make two cruises of approximately one month each in July and August.

The objective was to determine the offshore limits and ocean distribution of herring spawned in British Columbia coastal waters and to study and appraise the mixture of their stocks.

Midwater trawl and drift nets were used in fishing wherever herring schools are located. The drift nets are designed to be set at varying depths ranging from

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the surface down to 50 fathoms. (May 1958 Trade News of the Canadian Department of Fisheries.)

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NEW CONTAINERS FOR SHIPPING LOBSTERS BY AIR DEVELOPED:

The distribution of live lobsters to markets across the continent has become a major phase of the Canadian lobster industry. For shipments within the Maritime Province and to the nearby New England States lobsters are often packed in simple wooden crates. These are transported by train or truck which are iced during warm weather. For greater distances lobsters are usually packed in double-walled boxes or barrels. In one type, 50 pounds of lobsters and about 10 pounds of seaweed are packed in the inside compartment. Forty or more pounds of flake ice are placed in the outside compartment. The gross shipping weight for 50 pounds of lobsters is often more than 125 pounds.

When lobsters are taken out of sea water they often weaken and die rather quickly. Even under good shipping conditions they cannot be expected to remain vigorous for more than a few days. Obviously the quality of lobsters reaching distant markets could be improved by faster transportation. Shipment by aircraft is a possible answer that could extend the live lobster trade to distant areas which cannot be supplied at present. The usual methods of packing are unsuitable for air transport because of excessive weight and leakage. There is a growing need for a light-weight, leakproof method of packing for air shipment.

A Canadian company has designed a double-walled, corrugated, cardboard box with an aluminum foil covering for insulation. Depending on holding temperatures, up to 20 pounds of ice are used to keep the lobsters cool. The ice is sealed in a polyethylene bag to protect the lobsters from melting ice and to avoid undesirable leakage. To improve insulation, the box is well sealed with tape but tests showed that two 1/2-inch air holes were necessary to prevent suffocation of the lobsters. When packed with 50 pounds of lobsters and 10 pounds of ice the container has a gross weight of 64 pounds.

On October 29, 1957, through the cooperation of Trans-Canada Airlines, a trial shipment of 250 pounds was trucked from St. Andrews, New Brunswick, to St. John, New Brunswick, and then flown to Montreal and return. During the 30-hour shipment temperatures inside the boxes averaged 43° F. at an average air temperature of 47° F. On completion of the return flight over 95 percent of the lobsters were found to be in excellent condition.

A radically different idea, packing lobsters in dry wood shavings, has been demonstrated by two lobster buyers from Belgium. Lobsters were allowed to drain for 15 minutes to remove excess water. Dry wood shavings were placed in the bottom of a cardboard box and a layer of lobsters was packed on top of the shavings. Wood shavings were added to cover the lobsters. This process was repeated until the box was filled. In all, three boxes were packed in this manner, each box containing 50 pounds of lobsters and 5 pounds of wood shavings. The boxes were not iced but they were kept cool at a room temperature of 50° F. The gross weight for 50 pounds of lobsters was only 57 pounds.

The lobster dealers who watched the demonstration felt that this was rather drastic treatment. However, the 150 pounds of lobsters were in surprisingly good condition with no sign of weakening after 2 days' storage. The potential value of this method of packing for air shipment was obvious.

To find out how long lobsters could be expected to live in wood shavings at different temperatures some tests were done at St. Andrews. Six boxes were packed with 20 pounds of lobsters, and about 4 pounds of shavings in each. As in the demonstration, the boxes were not iced but were stored at various room temperatures. One box was stored at 70° F., three boxes at 45° F. and two at 35° F. The temperature inside the boxes was 50° F. when packed.

To see if survival could be prolonged by icing, 5 pounds of ice sealed in a plastic bag was placed in each of four other boxes that were held at 70° F. In addition one fairly tight cardboard box was packed with 20 pounds of lobsters without wood shavings and without ice. Two small holes in the box prevented suffocation. This box was stored at 35° F.

The 11 boxes were examined periodically and the tests were stopped when it was certain that some lobsters were weakening.

These tests show that lobsters packed in wood shavings will remain in vigorous condition for reasonably long periods (up to 6 days) if they are stored at low temperatures. When held at 70° F. without ice, the temperature in the box increased rapidly and the lobsters were in poor condition by 24 hours. However, with 5 pounds of ice added, low temperatures were maintained for 24 hours and the lobsters remained in good condition. After that time the temperature began to rise and the lobsters were in poor condition at 48 hours.

In the tests at 35° F., lobsters packed without wood shavings remained vigorous for 5 days and those with shavings for 6 days, a slight difference considering the times involved.

The insulating quality of wood shavings is probably the most important feature of this method of packing. Small quantities of ice (5 pounds) will maintain low temperatures for 24 hours during warm weather. To extend the safe holding time beyond 24 hours more ice, more shavings, or more ice and shavings could be used. The effectiveness of these treatments has not been studied as yet.

A commercial shipment of 12,600 pounds of lobsters packed by a New Brunswick firm was flown from St. John, N. B., to Belgium during early December. Since air temperatures were low no ice was needed. Although they were shipped more than 3,000 miles, over 97 percent of the lobsters remained in excellent condition.

The possibility that air shipment will become a practical method of transportation for live lobsters on a continuing basis is approaching reality with the development of light-weight leakproof methods of packing. (Trade News, March 1958, of the Canadian Department of Fisheries.)

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NEWFOUNDLAND FISHERIES ACT IN FORCE:

The Fisheries Act is now in force in Newfoundland, the Canadian Minister of Fisheries announced earlier this year. A proclamation has been issued setting the date on which the Act became effective as May 1, 1958.

The fisheries in Newfoundland were previously administered under the Newfoundland statutes existing at the time of union in 1949 and which remained in force until the present time.

Proclamation of the Fisheries Act in Newfoundland will have the effect of bringing fisheries administration for all Canada under the basic statute relating to the management and regulation of the resource.

Since Confederation, Newfoundland fisheries regulations have been authorized under several old Newfoundland

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acts, such as the Department of Natural Resources Act, the Fish and Wildlife Act, the Fisheries Board Act, etc. This situation created many serious problems with respect to fisheries legislation. These problems are now resolved as a result of the proclamation.

The Fisheries Act is a comprehensive document, but essentially the main points covered are: the powers of the Minister and Fishery Officers; conservation and protection of various species of fish; authority for fisheries regulations, pollution, and obstruction of streams; and the licensing of fishing vessels and fishermen. (May 1958 Trade News of the Canadian Department of Fisheries.)

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SALMON RESEARCH IN
NORTH PACIFIC, 1958:

Two fishing vessels, Key West 2 and Fort Ross, chartered by the Fisheries Research Board of Canada, have begun Canada's third Pacific Ocean survey, as part of the program of scientific research under the International North Pacific Fisheries Convention between Canada, United States, and Japan.

Both boats were fitted out at the Board's biological station at Nanaimo and will be cruising the high seas throughout the summer. While at sea the vessels will fish for salmon and other species to build up knowledge already gained on the racial characteristics and migratory patterns of salmon. Nine test fishing stations have been plotted and fishing operations will follow closely along lines established in 1956 and 1957. The Canadian vessels will be responsible for the area of the Pacific Ocean north of latitude 42 degrees and east of longitude 155 degrees. American and Japanese research teams will cover other parts of the North Pacific.

This year the Canadian vessels are carrying surface drift nets with mesh sizes varying up to a maximum of nine inches. Other drift nets will be set to fish at depths varying from the surface

to 200 feet under water. In addition both vessels will use midwater trawls when conditions warrant.

Fish will be kept in refrigerated storage holds. At the conclusion of the season's operations, specimens will be examined for fish-scale markings, parasites, stomach contents, feeding habits, and other factors that may have some bearing on the past history of the fish. Information and specimens will be pooled with the other countries concerned. Some tagging will be carried out when conditions are favorable. (May 1958 Trade News of the Canadian Department of Fisheries.)



Ceylon

FISHING FLEET MECHANIZATION
IMPROVES EARNINGS:

Mechanized fishing is becoming popular in most of the fishing centers around the island of Ceylon. After the Ceylonese Department of Fisheries, with the assistance of the Canadian Colombo Plan and Food and Agriculture Organization experts, gave a series of demonstrations to prove the efficiency of this method, many fishermen have purchased marine Diesel engines and outboard motors for use in their fishing boats. These have been obtained through the Department of Fisheries on easy repayment terms. The Department assists in their installation and also trains the fishermen in the proper use and maintenance of the new engines.

It is reported that fishermen who have started using mechanized boats have increased their income by being able to spend more time on the fishing grounds, reach them even at times when there is no wind, and return to the market when the price is normally at its highest.

Most of the fishermen have also adopted the use of more modern fishing methods, such as long lines and nylon drift nets (Trade News, Canada's Department of Fisheries, May 1958.)



Colombia

FISHERY LANDINGS INCREASED CONSIDERABLY IN 1957:

Colombia's total fishery landings in 1957 amounted to 66.4 million pounds, valued at Ps 24,451,400 (US\$3.0 million), as compared with 46.7 million

pounding operations. The number of fishing companies with vessels has increased from 3 in 1956 to 5 in 1957 and 9 in 1958. In 1956, there were only 9 vessels of more than 10 metric tons as compared with 14 in 1957 and 36 in 1958. The number of canning firms has increased from 2 in 1956, to 4 in 1957, and 6 in 1958.

Colombia's Landings and Utilization of Fish and Shellfish, 1957

Principal Species	For Fresh Use		For Salting		For Freezing		For Canning	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	1,000 Lbs.	US\$1,000	1,000 Lbs.	US\$1,000	1,000 Lbs.	US\$1,000	1,000 Lbs.	US\$1,000
Marine Fish:								
Herring and related species	1,279.6	71.0	0.2	-	0.2	-	448.7	7.9
Tuna and tunalike	19.4	1.1	-	-	3.9	0.4	102.4	7.0
Mackerels	124.6	6.6	-	-	5.5	0.5	28.4	1.3
Snappers	2,625.9	155.6	21.0	1.3	817.2	57.9	216.6	8.2
Mullet	1,081.9	45.9	21.2	0.5	190.3	7.4	1,062.7	30.1
Crustaceans:								
Shrimp	23.6	5.1	25.0	5.3	134.9	34.1	329.6	95.2
Spiny Lobster	12.1	3.2	-	-	48.5	11.1	-	-
Fresh-water fish	27,239.4	1,140.8	29,684.4	1,257.2	55.0	3.4	303.7	6.9
Others ^{1/}	305.7	17.4	17.3	0.1	82.9	5.7	51.7	4.6
Total	32,712.2	1,446.7	29,769.1	1,264.4	1,338.4	120.5	2,543.8	161.2

^{1/}Includes all other marine fish and crustaceans, mollusks, and sea turtles.

Note: Values converted at the rate of Ps. 8.17 equal US\$1.

pounds, valued at Ps 12,806,000 (US\$1.6 million), in 1956, recent statistics from the Ministry of Agriculture indicate. This was an increase of about 50 percent over the 1956 landings, states a recent dispatch from the United States Embassy at Bogota, dated July 10, 1958.

Fresh-water fish from the Magdalena River accounted for about 84 percent of the total 1957 landings, or 55.8 million pounds as compared with 37.7 million pounds from that same area during 1956. This increase was attributed to favorable climatic conditions. Thus far in 1958, the landings of fish from the Magdalena River have decreased as compared with the same period in 1957.

Since the demand for fishery products in Colombia is still greater than the supply, the average price of fish per pound increased from Ps 0.27 (3 U. S. cents) in 1956 to Ps 0.37 (5 U. S. cents) per pound in 1957, despite the increased catch. The prices of fish and shellfish are expected to continue rising.

Over-all fishing activity has also increased, due partly to the effects of Decree 0376 of December 13, 1957, which was designed to foster the development of the fishing industry. Almost all the firms connected with the fishing industry are augmenting their capital and ex-



Cuba

COD FISHING VESSEL PURCHASED:

The Cuban National Fisheries Institute has purchased from West Germany the M/V *Arktis* for the purpose of cod fishing on the fishing banks in the North Atlantic, according to a June 29, 1958, press report.

The vessel is 128.9 feet in length, and was built in Kiel, Germany, in 1950. It has a beam of 39.3 feet and a draft of 11.1 feet. Refrigerating facilities consist of 300 cubic meters capacity, and the vessel is expected to be able to transport 18 metric tons of fish. The *Arktis* is also equipped with radar, sonar, navigational equipment, and a fish-finding device.

The Cuban Economic and Social Development Bank, a Government financial agency, has granted the Institute a US\$225,000 credit to cover the purchase of the above vessel.

In 1957, 21.3 million pounds (valued at US\$4.4 million) of dried cod were imported by Cuba. Such imports came principally from Canada, Norway, Iceland, the United Kingdom, and France. The Institute expects to set up its own

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cod industry to reduce imports of this traditional Cuban food staple. The Ark-tis will be manned by a Spanish crew, experienced in cod fishing, according to trade sources. The green cod will be brought refrigerated to Cuba for further processing ashore.

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CONTRACT WITH CUBAN-JAPANESE TUNA FISHING COMPANY TO BE TERMINATED:

The Cuban Institute Nacional de la Pesca (National Fisheries Institute) has indicated that at a meeting of its Board of Directors on May 21, 1958, it was decided not to renew its contract with the joint Cuban-Japanese Fishing Company (Cia. Pesqueras Internacionales, S. A.) when it expires in September 1958.

The Vice President of the firm indicated that his company was not satisfied with the arrangement to furnish frozen tuna loins to the United States firms since it considers the real profits in the tuna fishing industry to be in the canning business itself and not in the supplying of raw material to the processors. He also pointed out that if, to comply with Cuban laws, the Japanese tuna clipper were to be purchased by a Cuban firm, the real problem would still be the use of a Cuban crew sufficiently capable of handling such a modern complicated fishing vessel. To do so would require the continued use of some Japanese fishermen who would have to be declared "technicians" in order to be excluded from the jurisdiction of current Cuban labor legislation restricting the employment of non-Cubans. In any case, the Institute had already shown some reluctance to continue with the contractual relationship with Pesqueras Internacionales, S. A. and the Japanese vessel Sumiyoshi Maru No. 12, and this has now culminated in the decision to terminate the contract with the company, effective as of September 1958.

The quantity of frozen cooked tuna loins prepared in Cuba from November 1957 to April 1958 was 375 tons (includes loins and flakes). These products were shipped to a Boston firm via New York City as frozen loins packed in 50-pound boxes (210 tons) for processing into tuna hams and sausages on a continuing basis. Also on a one-time basis only, 165 tons were shipped to a New York broker for canning in a Maryland plant for shipment outside the United States.

The joint Cuban-Japanese fishing company, defrosts and cooks the raw tuna and processes it into frozen loins for export.

As of the end of April 1958 the catch (principally off the Gold Coast near Africa) of the Japanese tuna vessel Sumiyoshi Maru No. 12 consisted of three trips of approximately 300 tons each. Out of a total catch of 907 tons, 800 tons consisted exclusively of tuna.

A small amount of tuna was permitted by the National Fisheries Institute to be consumed in Cuba during the period when local supplies were light. The joint Cuban-Japanese firm supplied such tuna to two local companies. One of the firms also has a contract, effective July 1, 1958, with the joint Cuban-Japanese firm to co-pack a canned product for export to all of Europe with the exception of Germany, under its own label.

As of April 1958 there were no other tuna products (frozen, canned, or prepared as "hams" or "sausages") produced in Cuba.

Raw tuna was purchased from the Japanese firm at prices based on United States west coast landed prices determined by cable sent to the west coast on the day the tuna is landed in Cuba. This price has varied from \$225 a ton to \$250 a ton. Sales prices on the frozen loins are based on a three-to-one formula, e.g., if the West Coast price is \$225 a ton, the price charged is \$675 per ton for frozen cooked tuna loins.

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OPEN AND CLOSED SEASONS ON SOME MARINE SPECIES ANNOUNCED:

The Cuban National Fisheries Institute imposed closed seasons, effective June 15, 1958, on the following marine varieties: oysters, turtles, tortoises, and shrimp. The pertinent resolutions invoking the above closed seasons appeared in the Official Gazette No. 109 of June 9, 1958 and will remain in force until cancelled by subsequent resolutions.

The closed season on oysters affects all of the aquatic regions of Cuba with the exception of the entire province of Oriente and the south coast of the province of Camaquey. Shipment of oysters captured in those regions must be accompanied by a transport permit issued by an Institute Port Delegate or the Naval Port Captain indicating the date, source, shipper, and the quantity of oysters covered by the permit.

Also effective June 15, 1958, the Institute resolved to terminate the closed season originally imposed April 1, 1958 on the capture of mojarra, states a June 13, 1958, dispatch from the United States Embassy in Habana.

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SEASONS ON BULL FROGS, SNAPPERS, AND CRABS REVISED:

The closed season on the capture of bull frogs, imposed on April 2, 1958, was terminated by the Cuban National Fisheries Institute effective July 5, 1958.



Bull Frog

The imposition of closed seasons, effective July 15, 1958, was announced for Moro or stone crabs, Cuban snapper ("cu-

Cuba (Contd.):

bera"), cubereta, and gray snapper ("caballerote").

These revisions in seasons were published in the Official Gazette of July 4, 1958, states a July 11 dispatch from the United States Embassy in Havana.



Denmark

FAROEES' PROPOSAL FOR 12-MILE FISHING LIMITS SUPPORTED:

The Danish Government announced on June 17, 1958, its support of a Faroe Islands Resolution that sets up a 12-mile fishing zone around the Islands for the exclusive use of Faroese fishermen. The Faroe Islands local Parliament early in June decided to join Iceland in extending territorial waters fishing limits for the Faroes to 12 nautical miles effective September 1, 1958. The formal resolution read: "Since Iceland has decided to remove her fishing limit to 12 miles from September 1, 1958, this fact has altered conditions for territorial waters so fundamentally that the Faroes must consider themselves free from the agreement with Britain dated June 24, 1901, as modified in the temporary agreement dated April 22, 1955, and the fishing limit around the Faroes will therefore have to be widened to 12 miles at the same date as Iceland." As the Faroes are under Danish jurisdiction, the resolution passes to Denmark for implementation internationally.

Following a discussion with the Faroese on the extension of fishing limits, the Danish Prime and Foreign Minister pointed out that the Government has assumed the standpoint during the recent Geneva Conference on the Law of the Sea that people like the Faroese, Icelanders, and Greenlanders, who by reason of their isolated geographical position are dependent to an unusual degree on the ocean, should be entitled to maintain a fishing zone of up to 12 miles from the basic lines constituting the point of departure for fixing territorial waters.

The Minister also pointed out that "the Danish Government fully understands the serious situation confronting the Faroe Islands and continues to adhere to the view that the present state of affairs with respect to the fixing of the limits of the fishing zone cannot continue to exist. In conformity therewith, the Government is in accord that the fishing zones of the islands ought to be 12 miles and it is fully prepared in conformity with the spirit and letter of the Home Rule Law to endeavor to have the Faroe Islands wishes, as expressed in the Resolution adopted by the Lagting (Island Legislature) on June 6, 1958, fulfilled. For the purpose of achieving this end Denmark will contact the British Government.

"The Danish Government had hoped that support might have been obtained from interested countries concerning the holding of a regional conference with a view to making an effort to bring about a joint solution of the fishing problem in the north Atlantic Ocean. According to investigations made, the Government does not expect that this idea can be realized."

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POND TROUT INDUSTRY:

Pond-trout farming began in Denmark in 1904, and after several experiments it was found that the American rainbow-trout variety was robust and well-suited for pond farming. It is known throughout Europe as a "Danish-born" trout.

The existence of pond-trout farming in Denmark is largely determined by the economics of location. In Jutland there is an abundance of clear fresh water in small streams which are easy to dam. The temperatures of the air and water are good for the trout year-around; and, most important of all, there is an abundance of inexpensive trout food.

There are about 400 trout farms in Denmark in which about 8.8 million pounds are produced annually at a value of US\$3.8 million. Almost all of the production is exported principally to the United States, Italy, Sweden, and the United Kingdom.

Table 1 - Danish Exports of Pond Trout, 1957

Item	Country of Destination	Quantity	Value
		1,000 Lbs.	US\$1,000
Pond Trout:			
Live	-	1,275	690
Dressed	Italy	2,404	862
"	United States	2,243	1,182
"	Sweden	1,247	431
"	United Kingdom	1,214	427
"	Others	1,201	487
Total dressed		8,309	3,422

Note: Values converted at the rate of 6,307 kroner equal US\$1.

In the spring the female trout are scientifically stroked to induce spawning. The males are similarly milked. After being mixed with the sperm and some water, the m

Denmark (Contd.):

are then placed in a special spawn hatchery, and set in gently running fresh water. Here they remain until the eye of each embryo can dimly be perceived through the pellicle.

The Danes have found that the eggs transport well at this stage and have developed a considerable export of trout eggs.

Table 2 - Danish Production of Pond Trout

Year	Quantity	Value
	1,000 Lbs.	US\$1,000
1957 1/	9,489	4,267
1956	8,680	3,604
1955	7,998	3,131

1/ Preliminary.

If the egg is to develop in pond culture, it remains in the hatchery until it casts off its yolk sack. Only then is it transported to other ponds as a young fish for further culture. This usually does not happen until fall. Trout do not reach edible size for another 1 1/2-2 years, and still another year is required if they are being produced for breeding purposes.

According to a trout research organization, 7 pounds of food are required to produce 1 pound of trout. This figure is disputed by the Ministry of Fisheries, which estimate that each fish consumes 11 to 17 pounds of food annually per pound of final weight. In Denmark the trout are fed exclusively on salt-water fish, mostly small hering with some sand eel (tobis) and whiting.

The problem of cannibalism is met, but not entirely successfully, by frequent sortings according to size.

Three years ago in Brøns, Jutland, a trout research organization, known as I/S Dansk Forsøgsdam-Kultur, was established, and at present is concerned with nutritional research, hormonology, and the treatment of fish diseases. The director of the research organization hopes to begin research soon on the hereditary biology of the species, aimed toward attaining uniformity in size. He claims that the breeders, owing to short-run economic considerations, have marketed the larger fish and used the smaller ones as breeders. He is convinced that the species could be improved, with eventual economic rewards, if the larger fish were kept for breeding.

The research organization is also concerned with the problem of stream pollution due to lignite mining, spillage from sewers and ensilage, and waste from chemical factories. The research station seeks out the source of the pollution on behalf of the breeder who is then able to obtain legal action against the pollution source because of Danish laws which were originally enacted in the interests of sports fishermen (U. S. Embassy in Copenhagen, dispatch dated April 9, 1958).



German Federal Republic

IMPORTS OF JAPANESE CANNED TUNA INCREASING:

Imports of Japanese canned tuna by West Germany have developed in a short period to the point where there has occurred an important change in the canned fish market, according to Allgemeine Fischwirtschaftszeitung of June 14. In fishery circles this increase has caused some worry.

In 1953 West Germany imported only 87.6 metric tons of Japanese canned tuna, while by 1955 it had reached 945.7 tons. In 1956 it increased to 1,609.7 tons and in 1957 to 2,810.3 tons. Because of the substantial increase in imports, the German fishery industry is questioning as to whether or not the Government is considering the curtailment of imports in the interest of retaining the domestic market for West German fishery products. (Fiskets Gang, July 3, 1958.)



Hong Kong

EXPORTS OF FISHERY PRODUCTS, 1957:

Exports of fishery products from Hong Kong during 1957, with one exception, were approximately the same as in 1956, according to a June 6, 1958, report from the United States Consulate in Hong Kong. The one significant change was in the export of fresh, frozen, or chilled crustacea and mollusks. Shipments of these products, mostly frozen shrimp, increased from 744 metric tons in 1956 to 1,328 tons in 1957. The greatest portion of this increase was represented by shipments to the United States which rose from 258 tons in 1956 to 696 tons in 1957, and at the end of the year there were indications they would continue to increase during 1958.

Shrimp exports to Canada also increased substantially during 1957. The Fisheries Officer of the Department of Agriculture believed the increased exports of frozen shrimp to the United States and Canada to be the most important development during 1957/58 for the local fishing industry.



Iceland

EXPORT FUND BILL PASSED:

The Icelandic Government's long-awaited Export Fund Bill was passed on May 29, 1958. The bill is the result of protracted research, internal debate, and compromises over the problem of how to meet the inflationary deficit in the state budget and the kindred problem of the growing gap between Icelandic costs and world fish prices, as reflected in the deficit in the Export Fund.

At first glance the new law might give the impression that the new scheme will make the existing complex multiple

Iceland (Contd.):

exchange rate system even more complex. But for all its detail, the new law represents a considerable simplification, as regards imports, exports, and invisibles, compared to the 43 different effective rates of exchange in the system which it replaces.

Although the official rate of exchange will remain at 16.32 kronur to the U. S. dollar (buying rate 16.26), the effect of the Act can be summarized most easily as establishing, for the majority of currency transactions, an effective devaluation of 35 percent, or a selling rate of approximately 25.30 kronur to the dollar. For these transactions, importers and other purchasers of foreign exchange will pay a conversion fee of 55 percent, and—as an innovation, from the prewar system, purchases of kronur with foreign exchange will be credited with a 55-percent premium. This applies to tourists, foreign embassies, and even drawings on foreign loans, but not to the official kronur purchases of the Defense Force or the contractors thereto, and to certain other minor receipts.

A most important innovation in the new Act is to equalize the supported prices paid for groundfish, delivered to processors, whether from motor boats or trawlers, thus ending the discrimination from which trawlers suffer under the present system. Herring fisheries will still receive a lower level of export supports, but the margin below cod and other groundfish is narrowed. (United States Embassy dispatch from Reykjavik dated June 2, 1958.)

Following is a comparison of the percentage level of supports on f.o.b. export prices, under the old system and that proposed in the bill. The fisheries would, under the new plan, be required to pay a conversion fee of 55 percent on fuel, imported nets, and other supplies from abroad which at present they can purchase free of any special currency or import fees:

	Present Support Levels	New Support Levels
	. . . (Percent) . . .	
All Fish Except Herring:		
Motor boats	55.7	80.0
Trawlers	42.0	80.0
Herring:		
North Coast	19.3	55.0
Other Areas	40.6	70.0

The bill originally provided for a level of only 50 percent for the North Coast herring fisheries, but this was raised to 55 percent. The barrels for the coming summer season's herring have already been purchased, but next year, when the industry will have to pay the conversion fee on such imported supplies, the demand will be insistent that herring should be placed on the same support level as groundfish.

Payments under the new law are also equalized in the case of iced fish sold abroad, thus ending a form of discrimination objectionable to trawler owners. This is achieved by granting them the 55-percent exchange premium on the foreign currency which they turn in to the banks from their sales, plus an additional 25 percent on the f.o.b. value of the catch to equal the 80-percent compensation for all groundfish exports.

Since the export industries will have to pay an estimated IKr 202 million (US\$12.4 million) annually in fees on their fuel oil, nets, etc., the increased supports are extended to leave the motor boat operators in much their present position, but will give some additional relief to trawlers.

To add to its complexity, Icelandic foreign commerce is characterized not merely by supports to the export fisheries, but by taxes on these exports as well, which one Althing member described as taking money from one pocket and putting it into another. The existing law provides for a 2.25-percent export fee on fisheries products, whose proceeds are divided as follows: 74 percent to Fisheries Loan Fund (to purchase new vessels); 4 percent to fisheries research (on new processing methods); 4 percent to Union of Icelandic Fishing Vessel Owners; and 18 percent to Fisheries Experimental Fund (on new catch methods).

The new law, as amended by the Althing, adds a surcharge to this fee of 65 percent of which 11/13 will go to the Fisheries Fund, 1/13 to the Experimental Fund, and 1/13 to the Fisheries Department of the University Research Institute.

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FISHING LIMITS EXTENDED TO 12 MILES BY DECREE:

An advance text of a decree extending Icelandic territorial waters fishery limits from 4 miles to 12 miles was published in the Icelandic newspaper *Thjodviljinn* in May 1958. Iceland on June 30, 1958, officially published regulations concerning fishery limits as follows:

"Article 1. The fisheries' limits off Iceland shall be drawn 12 nautical miles outside base lines drawn between the following points: (baselines as defined in March 19, 1952, regulations):

"Article 2. Within the fisheries' limits all fishing activities by foreign vessels shall be prohibited in accordance with the provisions of Act No. 33 of June 19, 1922, concerning fishing in territorial waters.

"Article 3. Icelandic vessels using bottom trawl, floating trawl, or Danish seine netting shall be allowed to fish within the fisheries' limits but outside the limits determined by Regulations No. 21 of March 19, 1952.

"Before these regulations become effective special provisions about such licences shall be promulgated stating further about fishing zones and periods.

"Article 4. Trawling vessels shall have all their fishing gear properly stowed aboard while staying at places where fishing is prohibited.

"Article 5. Fisheries' statistics shall be forwarded to the Fiskifelag Islands (Fisheries Association of Iceland) in the manner prescribed by Act No. 55 of June 27, 1941, concerning catch and fisheries' reports.

"If the Ministry of Fisheries envisages the possibility of overfishing the Ministry may limit the number of fishing vessels and the maximum catch of each vessel.

"Article 6. Violations of the provisions of these regulations shall be subject to the penalties provided for by Act No. 5 of May 18, 1920, concerning prohibition against trawling; Act No. 45 of June 13, 1937, concerning Danish seine netting in territorial waters, Act No. 33 of June 19, 1922, concerning fishing in territorial waters, as amended, or, if the provisions of said Acts do not apply to fines from Kr. 1000.00 to 100,000.00 ¹/₁.

"Article 7. These regulations are promulgated in accordance with Act No. 44 of April 5, 1948, concerning the scientific conservation of the continental shelf fisheries, as amended by Act No. 81 of December 8, 1952. As soon as it becomes operative Regulations No. 21 of March 19, 1952, concerning conservation of fisheries off the Icelandic coasts shall cease to be effective.

"Article 8. These regulations become effective on September 1, 1958.

"Ministry of Fisheries, Reykjavik, June 30, 1958."

According to a Reuters news item of July 1 from Iceland, that country's Fisheries Minister said the Icelandic continental shelf really is a part of his country and is clearly demarcated from the shelf of other countries. Also, that it is only sensible that Icelanders, not foreigners, should work the fishing grounds around their own country. ¹/_{About US\$61-\$6,130.}



India

OFFSHORE EXPERIMENTAL FISHING PLAN INITIATED:

The Government of India has decided to pool together the new types of large mechanized vessels (a total of 21) for experimental fishing in deep-sea waters. The fishing vessels will be grouped into four fleets, one each to be established at Bombay, Cochin, Tuticorin, and Visakhapatnam, for systematic exploration of the seas for offshore fishery resources in their respective regions.

The organization of experimental fishing on a regional basis will, however, be flexible enough to allow fishing vessels to be moved from one area to another, particularly when these cannot be operated because of monsoon or bad climatic conditions. This will not only ensure fuller use of fishing vessels but also encourage commercial fishing by State, cooperative, or private agencies, according to the May 1958 Trade News, published by Canada's Department of Fisheries.



Israel

RECENT DEVELOPMENTS IN THE FISHERIES:

The official inauguration of a new fishing base at the basin off the coast of Ashdod, Israel, took place on June 26, 1958, states a July 2 dispatch from the United States Embassy at Tel Aviv. The selection of this new fishing base was made after investigations proved that it was the richest fishing area on Israel's southern Mediterranean coast which, in the March-June 1958 period alone, yielded a catch of 600 metric tons of sardines, nearly as much as the record catch of 636 tons for the entire year of 1957.

The basin, the only one south of Tel Aviv and originally built by the Palestine Electric Corporation for its power plant there was turned over to the Ministry of Agriculture by that company for the exclusive use as a fishing base. The base began operations with five workers last December, and at present, the Ashdod fishing base has 20 fishermen who oper-

ate 2 motor vessels and 4 small boats. Apart from two Italian instructors, all the fishermen are new immigrants, mostly from North Africa, who reside in Ashdod and work on a percentage basis, receiving from 4 to 6 percent of the catch.

According to the Minister of Agriculture at the dedication ceremony, the establishment of this fishing base is regarded as another modest step toward the conversion of Ashdod into a major port city, which is in line with the plans of the Government of Israel to erect a deep-sea port in Ashdod. In the meantime, the Fisheries Department of the Ministry is studying plans for the establishment of a fish cannery in the area, or a branch plant of an already existing enterprise, although the Fisheries Department is currently dealing mainly with transport and marketing problems of fresh fish. Fishing in Israel hereto had been concentrated largely between Tel Aviv-Haifa, whereas it is now intended to explore this new rich fishing area in the southern sector of the country's Mediterranean coast. The local fishing industry currently provides only about half of the fish consumed in Israel.

Fishing in Israel			
Unit		1957	1953
Sardine Fishing:			
Fishermen groups	No.	20	14
Fishermen	No.	200	168
Yield of fish	Metric tons	636	252
Fish Canning Industry:			
Enterprises	No.	8	6
Fish processing	Metric tons	1,000	300
Output	Million cans	5	1.5
Work days	No.	41,000	12,000
		June 1958	January 1958
Fishing in Ashdod:			
Fishermen	No.	20	5
Fishing vessels	No.	9	2
Yield of fish	Metric tons	3.0	0.3

Another development in Israel's fisheries over the past several months is a seven-year expansion plan drawn up by the Fish Breeders' Union for the large-scale breeding of nutria (coypu), a South American rodent, in their fish ponds together with the carp, as done in Argentina. The Breeders' Union is confident that it will eventually be in a position to export hundreds of thousands of dollars worth of furs and the latest reports show that the animal lives well in ponds without affecting the carp.

Experiments have also been carried out by local fish breeders with the sabra

Israel (Contd.):

buffalofish in Israel ponds, following the importation two years ago of 35 young buffalofish from Alabama in the hope that they would produce a brood to coexist with local carp in the country's fish ponds. However, fish breeders have now given up hopes for the natural birth this season of a generation of this type of fish and they now intend to give the females hypopsis injections to speed the laying process. Last year the fish laid no eggs, although they thrived in Israel ponds to a good size, without producing, however. An earlier attempt to import buffalofish in the form of eggs failed with the death of all the fish that were hatched. Even if the planned injections should fail to bring results, the breeders will wait another year, since there is a possibility that the fish may need longer to mature in Israel waters. Officials at the Dor Research Station of the Israel Department of Fisheries are keeping the fish in the best possible prespawning condition, and experts are of the opinion that there will be no integration problems as experiments have shown that the buffalofish and the Israel carp together thrive well in Israel.



Mexico

COOPERATION OF U. S. SHRIMP VESSELS FISHING OFF COAST REQUESTED:

The U. S. Department of State received a communication from the Mexican Government in May 1958 requesting cooperation by United States shrimp vessels fishing in waters off Mexico.

The communication requested that United States shrimp vessels carry their nets inboard when present in Mexico's territorial waters and that prior authorization be obtained from the Mexican Ministry of Marine to anchor in such waters. It was also requested that when an American vessel is forced to put into a Mexican port, the captain, unless prevented by justified physical impossibility, report personally to the authorities informing them of the reasons for entry with an estimate of the time the vessel will remain in Mexican waters.

The communication also called attention to a requirement that before leaving a Mexican port, United States fishing vessels must obtain clearance (which includes approval of the vessel's manifest, the bill of health, and the crew list) from the appropriate Mexican Consular Official.

Mexican national officials have requested that American shrimp vessels be asked to fly the United States flag and to permit identification visits by Mexican naval vessels when in Mexican territorial waters and for the purpose of safety of navigation to refrain from turning off lights and running when a Mexican naval vessel appears.

Laws of the United States require the maintenance of appropriate lighting aboard American vessels and the failure to do so creates a problem of safety at sea. The United States, however, does not require United States vessels to fly the United States flag. This information is passed on to the American shrimp fleet so that it may know of the Mexican request in this connection for purposes of identification.

The U. S. Department of State is informing the Mexican Government that it is communicating the request of the Mexican Government to the United States shrimp industry, on the understanding, however, that it has reference only to the shrimp fleet's activities within three marine miles of territorial sea recognized by the United States.

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VERACRUZ FISHERIES TRENDS, APRIL-JUNE 1958:

Landings of 11.0 million pounds of fish, made off the coast of Veracruz by Mexican fishermen in 1957, will be equalled or surpassed during the current year, indicates a United States Consulate dispatch (July 7, 1958) from Veracruz.

During April-June 1958 there were excellent catches of mackerel, robalo, and other fish. With the possible exception of the robalo, in each instance, the catches were of such size that the market was temporarily flooded, causing a drop in prices. In at least one instance, the fishermen discontinued their opera-

Mexico (Contd.):

tions after a few days of successful fishing, because the market price was so low. There was no incentive for them to continue their work, even though fish were available in nearby waters in large quantities.

As usual, the problem of adequate refrigeration facilities to handle large catches of fish continues to plague the Veracruz fishermen. There appears to be no indication of plans to build new refrigeration facilities in the coastal area to service the needs of the fishermen.

Recently, a tuna resource was discovered off the coast between Veracruz and Alvarado, but press reports indicate that the resource is not too large, and that in any event Mexico does not possess the boats, equipment, and fishermen adequate for this particular type of fishing.



Netherlands

ANTARCTIC WHALING
TO BE CONTINUED:

Holland will not discontinue whaling expeditions with the factoryship William Barendsz II, according to the Director of Fisheries of the Netherlands Ministry of Agriculture, Fisheries, and Food. Commenting on recent suggestions by the Audit Office to stop whaling expeditions because of the losses involved, the Director said that it would be wrong to do so since Holland would "cast away the possibility of supporting itself in the field of whale oil if future conditions should take a turn for the worse." The Director said that it would be difficult to resume whaling operations once the expeditions were discontinued. He said that he was optimistic about Dutch whaling operations in 1958. (June 18 United States Embassy dispatch from Amsterdam.)

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FISHING ASSOCIATIONS PROTEST
ICELAND'S FISHING
LIMITS EXTENSION:

Private fishing associations from seven European countries at a meeting on

July 15, 1958 at Scheveningen discussed the decision of the Icelandic Government to extend its fishing limits from 3 to 12 miles. The press reported that a joint resolution was prepared asking the governments of the respective associations to urge Iceland to reconsider its decision. It was decided to hold a further meeting before September 1 to consider further measures provided no satisfactory solution was found.

Although Dutch trawlers do not ordinarily operate off Iceland, they fear that the waters in which they normally fish may become overcrowded if the trawlers of other nations are displaced from Icelandic fishing grounds, states a July 18, 1958, dispatch from the United States Embassy at the Hague.

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HERRING CATCH LOWER IN 1957:

Landings of 166.7 million pounds of herring in the Netherlands in 1957 were the lowest since 1945, according to the 1956/57 report of the Netherlands League of Herring Dealers. Prices increased with the drop in landings, but the herring trade has reaped relatively little from the upward trend in business during the past few years. There is growing concern about the failure to provide protective measures for Dutch herring in the European market. Biologists are not agreed on the causes of the continual decline in herring catches.

Contracts concluded with the Russians in 1957 called for the export of 100,000 casks of herring. No exports of herring to Russia were made in 1956, states a June 13, 1958, dispatch from the United States Consul at Rotterdam.



New Hebrides

TUNA FISHING INDUSTRY TRENDS:

Reports from the tuna plant at Palikulo (southwest coast of Espiritu Santo), New Hebrides, indicate a high percentage of albacore in the catches of the Japanese boats supplying the plant.

Built in 1957, the plant is now in full operation. The plant can handle 32 tons

New Hebrides (Contd.):

of fish a day, has smoke-curing and brine facilities, has a storage capacity of 500 tons of fish at present (with an additional 200-ton capacity planned), and also can manufacture 20 tons of ice (in 200-pound blocks) a day for the use of the fishing vessels.

Only frozen and cured fish are being exported so far, but a cannery may come later.

At the time that the company that operates the plant was being formed, it was stated that a catch of 3,000 tons a year would be necessary to make the venture worthwhile. Heaviest catches were anticipated during the cooler months. The company, a local one, set up the plant with United States and Japanese backing and Japanese fishing know-how.

Eight to twelve Japanese boats are working under contract for the New Hebrides plant.



Norway

COD FISHERIES TRENDS
THROUGH JUNE 7, 1958:

From January 1 to June 7, 1958, North Norway's total landings of young cod and spawning cod amounted to 127,987 metric tons as compared with 106,244 tons last year. Of this year's landings, 78,335 tons were sold for drying, 30,344 tons for curing, and 19,308 tons for fresh purposes. (Fiskets Gang, June 12, 1958.)

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FISHERIES TRENDS,
JANUARY-APRIL 1958:

Herring Fisheries: The winter herring shoals arrived unusually late off Norway this season. Apparently they were not as dense as formerly. The weather was cold and stormy through most of February and in the beginning of March. All this gave birth to the fear that the present herring period, which has lasted nearly 70 years, is drawing near its expiration. The landings through April 1958 (when the bulk of the herring landings were made) amounted to less than half of last

year's and less than a third of those in 1956. For the fleet of some 2,600 purse seiners and drifters and their crew of 26,000 fishermen, the season was highly unremunerative. Their gross income was 80.3 million kroner (US\$11.2 million) against 183.0 million kroner (\$25.6 million) in 1957 and 248.7 million kroner (\$34.8 million) in 1956. On the other hand, the equipment and operational costs are estimated at 125 million kroner (\$16.1 million) in 1958.

Table 1 - Norwegian Herring Landings and Disposition, January-April 1956-58

	1958	1957	1956
 (Metric Tons)		
Landings	341,868	795,615	1,145,853
Disposition:			
Iced or frozen	65,007	106,299	101,649
Curing	80,166	81,003	107,508
Canning	7,533	14,601	11,997
Reduction	178,374	584,970	913,074
Bait	6,882	4,278	6,417
Inland consumption .	3,906	4,464	5,208

The foreign buyers of iced winter herring got 29,700 tons, which is 26,000 tons less than last year. None of them got what they planned.

The production of frozen winter herring amounted to some 620,000 standard cases (about 31,620 tons) against 870,000 cases last year. The industry was forced to negotiate for reduction of their advanced sales. The marketing prospects this year were good.

The production of cured herring amounted to about 590,000 barrels. After a change of the original sales agreement with the Soviet Union, the shipment obligation for that market and for Poland, Eastern Germany, and Czechoslovakia amounted to 475,600 barrels. The balance was subject to special treatment and was earmarked for customers in free markets.

The severe cold this winter had a limiting effect on the operation possibilities for fat and small herring. Thus most of the catch of fat and small herring was landed through April when the conditions had improved. Last year's corresponding catch was twice as big.

Capelin: The capelin fishery, which takes place in Finnmark waters, has been very successful. From mid-March to April 1958 more than 90,000 metric tons were landed and practically all for reduction. Last year's final figure was 72,200 tons.

Meal: The production of herring meal and meal of capelin amounted to 60,000 tons. Advanced contracts for shipments abroad of 40,000 tons of meal had been negotiated. In addition, 40,000 tons have to be reserved for Norwegian requirements. In other words, a considerable credit has been drawn on future production, and Norway has at present no herring meal available for further sales.

In order to improve this situation of scarcity, an extensive fishing campaign in Icelandic waters was planned for the summer.

Norway (Contd.):

Cod Fisheries: North Norway's (Finnmark and Lofoten) landings of spawning cod January-April 1958 were higher than last year's. Nevertheless, they were considerably below average. The Lofoten fishery yielded 33,006 metric tons as against 22,938 tons in 1957 and 63,492 tons in 1956. The 1956 Lofoten catch is considered a normal one.

In the Finnmark young cod fishery, the period from the end of March to mid-June plays an important part in the seasonal Norwegian cod fisheries. Certain conditions of sea temperature, wind, and currents tend to lead the migrating shoals of young cod to the waters off Finnmark at this time of the year, and may, if the weather permits, form the basis of good fishing. This season has obviously complied with the conditions. The fishing has been very rich.

Table 2 - North Norway's (Finnmark and Lofoten) Spawning and Young Cod Landings and Disposition, January-April 1956-58

	1958	1957	1956
	... (Metric Tons) ...		
Spawning cod	67,642	57,975	106,041
Finnmark young cod	30,112	16,413	10,814
Total	97,754	74,388	116,855
Disposition:			
Dried (unsalted)	53,147	32,657	42,536
Cured	28,603	32,031	56,651
Icing or freezing	16,004	9,700	17,668
Byproducts produced:			
Cod-liver oil	4,396	3,063	5,361
Roes for curing	2,394	2,541	3,273
Roes for fresh purposes	1,376	1,074	1,351

As indicated in table 2, obviously the producers have had much confidence in the stockfish (dried fish) marketing prospects. This situation seems, however, at least to have entered a temporary change. The stockfish exports developed very satisfactorily last year and through January and February of this year. Since March, however, the important African market has been a very reserved buyer. Competition from Iceland, and perhaps also too optimistic price demands, created this situation. As to the Italian market, the trade at present can only offer insignificant quantities of the qualities and sizes preferred. The prospects of the Italian trade are expected to improve in July and onwards, when this year's production is dry and ready for shipment. Italy prefers the big size Lofoten fish, which this year ought to command a high export price. In any case the production is not too big, and producers have paid a high price for the raw fish.

The smaller production of salted cod is a result of poor marketing prospects for klipfish (dried salted cod). The deflationary development in Brazil has stopped exports. As Brazil is the chief Norwegian klipfish market, every effort is being made in order to normalize the situation. On the Portuguese market low-priced offers from France, Iceland, and partly Newfoundland has reduced the sales prospects for Norwegian klipfish. Altogether the bright spots of the klipfish trade are few.

Iced fish and frozen cod has moved rather well this year.

Cod-liver oil and other fish oils are moving slowly in dull markets. (Norwegian Fishing News, vol. 5, no. 1.)

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EXPORTS OF FISHERY PRODUCTS, 1957:

Norwegian exports of fishery products and byproducts during 1957 amounted to 724,684 metric tons, valued at US\$186.6 million, according to Norwegian Fishing News (no. 1, vol. 5, 1958).

Product	1957	
	Quantity Metric Tons	Value 1,000 US\$
Fresh herring	57,138	3,839
Frozen herring	45,686	4,009
Fresh fish	26,375	6,417
Fresh fillets	316	100
Frozen fish, round	7,872	4,152
Frozen fillets	17,318	6,237
Stockfish (dried unsalted fish)	36,040	21,772
Fish, salted and dried (Klipfish)	42,193	20,058
Salted herring	62,883	8,381
Salted fish	9,942	2,324
Salted smoked herring	4,004	833
Shellfish	2,897	4,034
Canned fish (all kinds)	42,881	24,284
Salted cod roe	1,387	239
Herring meal	120,468	20,005
Groundfish meal	14,231	1,921
Seaweed meal	7,342	415
Fish-liver meal	920	139
Whale-meat meal	10,106	1,285
Fish oils and fish-liver oils	141,697	34,166
Refined hardened oils and fats made of aquatic animal oils, edible and inedible	72,988	21,941
Total	724,684	186,551

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FISHING LIMITS PROBLEM CONSIDERED BY STORTING:

In answer to a question on fishing limits raised in the Norwegian Storting on June 18, 1958, the Foreign Minister stated that if the problem continues, Norway will be forced to extend its fishery limits. He stated further that: (1) Norway was not in agreement with the decision made by Iceland to extend its fishing limits to 12 miles; (2) the problem is much broader than whether or not Iceland and the Faroe Islands will consider Norwegian fishing interests and also hinges on whether these States are willing to consider interests connected with maintenance and strengthening of the "Law of the Seas;" (3) the best method of changing fisheries boundaries is by international agreement; (4) for Iceland and the Faroe Islands the 12-mile fishing limits merely mean a delay until an in-

Norway (Contd.):

ternational conference is held; (5) the Norwegian Government strongly desires, through informal, friendly discussions with Iceland to find a way out of present situation and would like to see such discussions take place with all countries directly concerned with fishing in northern waters; (6) Norwegians understand the Danish position in proposing a regional conference and will participate to protect Norwegian interests if a conference is held, but doubt that open formal negotiations will lead to agreement; and (7) if negotiations fail, a situation might arise in the fall of 1958 forcing Norway to take measures to "protect fishing banks along our own coast against results of trawlers from many countries being denied access to traditional fishing areas in the western part of the Norwegian Sea." (U. S. Embassy, Oslo, dispatch of June 19, 1958.)

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SHRIMP FISHERY:

About 1954 a large increase took place in the shrimp fishery in Rogaland, Norway. Before that, shrimp were landed with an annual value of about 3 million kroner (US\$420,000). Since the fishery began on the Skudesnes grounds, shrimp have been landed with an annual value of 8-9 million kroner (US\$1.1-1.3 million), and this prominent fishery continues. The shrimp fishermen, however, have taken to sea, and quite a number of them have made good catches. Frequently shrimp fishermen have landed catches of 1,300-1,800 pounds in two-day trips, and those really fortunate have landed more than 2,200 pounds. As prices rise in the course of the winter to 5-6 kroner per kilogram (32-39 U. S. cents a pound) heads on, even small catches may give reasonable incomes to the fishermen.

Before the Skudesnes grounds were discovered, most of the shrimp catches were landed in Egersund. Since that time a number of shrimp landing stations have been erected. On the Karmøy there now exist three such shrimp landing stations, two in Skudeshavn, and one in Aakrehamn, with 150 workers employed during the better part of the season.

The number of vessels participating in the shrimp fishery has also increased--200 shrimp trawlers are operating on the shrimp grounds in spring and summer, and a good half of the fleet belongs to Karmøy. In the southernmost part of the Rogaland County there also exists a number of landing stations for shrimp, first of all in Egersund, where several landing stations and shrimp plants are situated but also in Store Sirevaag where a considerable quantity of shrimp is landed every year.

One year ago a prominent exporting firm established its own landing station and freezing plant in Stavanger, where all kinds of fish are received for distribution to the different markets inland and abroad. Production of fish fillets is an important part of the activities of this prominent sales organization. This firm had a record-breaking year in 1957, with a total sales turnover of 17 million kroner (US\$2.4 million), apportioned between shrimp, fish, and lobster.

Very great quantities of shrimp are found off the North Sea grounds, sometimes far at sea, and at other times quite near the shore. When the shrimp fishery started on the Skudesnes grounds, the shrimp were caught just one hour's journey west of Geitungen; later on, however, the shrimp trawlers went to the Reef. Thus, the favorable places for the fishery changes. The shrimp fishery depends to a rather large extent on fair weather conditions. A number of Egersund trawlers are carrying on the shrimp fishery all year round, and those most successful may have shares of about 11,000 kroner (US\$1,540).

Shrimp trawling also yield a considerable quantity of mixed fish catches, which supply one half of the feed necessary for the important Norwegian mink-breeding industry, which operates with export figures of some 60 million kroner (US\$8.4 million) a year.

The failure of this winter's herring fishery will certainly lead to an increased activity in the Norwegian shrimp fishery. (Norwegian Fishing News, no. 1, vol. V, 1958.)

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Norway (Contd.):

WHALING FIRMS TERMINATE AGREEMENTS WITH OFFICERS AND CREWS:

Press reports from Norway state that all Norwegian whaling companies have sent termination notices to their officers and crews, totaling some 5,000 men. The reasons given by the companies for this action are that the whale-oil market has become increasingly weaker in recent years, that more than half of last year's production is still unsold, and that the prospects for further sales in the near future are not bright. Referring to the enormous costs of sending whaling expeditions to the Antarctic, each company stated in its notices that its participation in the 1958/59 season is uncertain. One whaling company stated to the press that the action was a means of giving the companies a free hand in a situation of uncertainty. The company declared, however, that there will still be some Norwegian whaling.

The whaling companies are in a difficult situation. With large stocks of unsold whale oil and a declining market, they are increasingly reluctant to invest the large sums required each year to outfit expeditions to the Antarctic (United States Embassy in Oslo, dispatch dated June 6, 1958).



Pakistan

FISHING VESSELS TO BE EQUIPPED WITH DIESEL ENGINES:

The program for mechanization of Pakistan's commercial fishing fleets was accelerated following the arrival (about April 1958) of 70 Danish marine Diesel engines purchased under the U. S. International Cooperation Administration's (ICA) commodity aid program for Pakistan.

Fifty of the engines were delivered to Karachi for installation in West Pakistan fishing vessels and 20 have arrived from Chittagong for use by East Pakistan fishermen, according to the Pakistan publication Dawn.

The 70 marine engines, of 10, 20, and 30 horsepower, will be allocated to individual fishermen by a committee set up by the Central Fisheries Department. Ten additional similar small engines were due to arrive in Karachi and 81 more engines with larger horsepower ratings were due to arrive in July or August 1958.

The engines and spare parts imported under the ICA program at a cost of US\$500,000, will provide several important benefits to Pakistan. They will permit fishing vessels to go farther to sea, where they can explore new fishing grounds and the boats will be able to return to port faster with fresher catches.

Also, it is expected that boats equipped with the Diesel marine engines will be able to double their catch of edible fish, bringing more cash income to the fishermen and providing more high protein food for the consumers (Trade News, Canada's Department of Fisheries, May 1958).



Philippines

CANNED FISH RETAIL AND WHOLESALE PRICES, JULY 1, 1958:

Retail and wholesale prices on July 1, 1958, for canned sardines in Manila were:

Product	Wholesale	Retail
	US\$/cs. (48 15-oz. cans)	US\$/can (15-oz.)
Canned Sardines:		
U. S. brand	15.25	32.5-35
Japan brand	10.90	22.5-27.5
Canned Salmon:	(48 16-oz. cans)	(16-oz.)
U. S. brand	30.25	70-75
Japan brand	31.50	70-75



Portugal

CANNED FISH EXPORTS, JANUARY-APRIL 1958:

Portugal's exports of canned fish during January-April 1958 amounted to 17,875 metric tons (1,127,000 cases), valued at

Portugal (Contd.):

US\$10.0 million, as compared with 13,253 tons, valued at US\$8.5 million, for the same period in 1957. Sardines in olive oil exported during the first four months of 1958 amounted to 12,496 tons, valued at US\$6.9 million.

Portuguese Canned Fish Exports, January-April 1958		
Species	Jan.-April 1958	
	Metric Tons	US\$ 1,000
Sardines in olive oil	12,496	6,928
Sardinelike fish in olive oil	2,233	1,559
Sardine & sardinelike fish in brine	357	91
Tuna & tunalike fish in olive oil	482	387
Tuna & tunalike fish in brine	177	86
Mackerel in olive oil	1,777	826
Other fish	353	121
Total	17,875	9,998

During January-April 1958 the leading canned fish buyer was Germany with 2,784 tons (valued at US\$1,598,000), followed by Italy with 2,312 tons (valued at US\$1,240,000), Great Britain with 2,141 tons (valued at US\$1,141,000), the United States with 1,894 tons (valued at US\$1,375,000), and Belgium-Luxembourg with 1,324 tons (valued at US\$708,500). Exports to the United States included 663 tons of sardines and 977 tons of anchovies. (Conservas de Peixe, June 1958.)

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CANNED FISH PACK,
JANUARY-FEBRUARY 1958:

The total pack of canned fish for January-February 1958 amounted to 3,037 metric tons as compared with 3,129 tons for the same period in 1957. Canned sardines in oil (1,986 tons) accounted for 65.4 percent of the January-February 1958 total pack, higher by 11.4 per-

Portuguese Canned Fish Pack, January-February 1958		
Product	Net Weight	Canners' Value
	Metric Tons	US\$ 1,000
<u>In Olive Oil:</u>		
Sardines	1,986	1,152
Sardinelike fish	201	92
Anchovy fillets	653	581
Tuna	66	60
Other species (incl. shellfish)	33	21
<u>In Brine:</u>		
Sardinelike fish	42	5
Other species	56	10
Total	3,037	1,921

Note: Values converted at rate of 28.75 escudos equals US\$1.

cent than the pack of 1,782 tons for the same period of 1957, the June Conservas de Peixe reports.

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DEVELOPMENT PLAN
FOR FISHERIES PROPOSED:

The proposed Second Six-Year Development Plan for Portugal provides for the investment of 550 million escudos (approximately US\$19,250,000) in the fishing industry during the period 1959-1964.

The bulk of the estimated investment will be devoted to modernizing and enlarging the various fishing fleets. While possible overproduction in certain sectors and overfishing in certain areas placed limitations on development of some fleets, maintenance of employment of fishermen called for consideration in others.

Construction and improvement plans contemplate increased production both for domestic consumption and for export with major emphasis on cod for domestic consumption and tuna for export.

The proposed development plans for the tuna and sardine sectors follow:

Sardine Industry: The proposal estimates that 20 million escudos (US\$700,000) will be invested in the construction of 20 sardine vessels during the 1959-1964 period. All of the new vessels will be replacements for old ships and no increase in fleet capacity is anticipated. In fact, the proposal points out that the present number and tonnage of the ships in the sardine fleet exceeds present requirements.

In order that productivity and income of the sardine fleet may be increased, certain improvements are to be made. The 25 percent of the fleet not yet so equipped will be fitted with echo-sounding devices. The 40 percent of the fleet presently without radiotelephone will be equipped with TSF devices. Because of their light weight, durability, low maintenance cost, and greater capturing power, the production and use of synthetic fiber nets is recommended by the proposal. In addition, the fleet is to be equipped with mechanical devices for hauling in nets. This equipment is to be of the type used by the California sardine fleet.

It is expected, the proposal states, that the number of shipowners will decrease by reason of the merger of companies into more economical units.

Expansion of the sardine canning industry is not dependent upon the acquisition of greater quantities of fish by the fleet since the cannery absorb something less than half of the annual catch. The problem for the canning industry, the proposal points out, is to obtain sardines at more favorable prices and without being subjected to the uncertainties of the auction system. Decree Law No. 40,787, which was published on September 7, 1956, but which has not yet been put into effect, attempts a solution to the problem. The first paragraph of that Decree-law provides that the sardine shipowners guild will enter into a contract with the sardine canning and industrial guilds for the purchase and sale of fish at an agreed price. In the event the guilds can not agree, the Minister of the Navy and the Minister of Economy are authorized to establish the conditions of sale. The proposal is silent as to why this Decree-law has not yet been put into effect.

Since purchasers of sardines for fresh consumption are direct competitors with cannery for supplies, the proposal takes a look at the probable demand for sardines for fresh consumption. Population growth and increased per capita income naturally point to an increase in demand by fresh sardine consumers. This increased demand may be tempered to some degree, the proposal notes, by a shift in consumer tastes resulting from a higher standard of living. The proposal ventures no forecast in this regard, however, and appears to conclude that the demand for sardines for fresh consumption will increase during the 1959-1964 period.

Portugal (Contd.):

Tuna Industry: The proposed Second Development Plan points out that Portugal presently produces about one percent of the total world production of tuna. This percentage is expected to be doubled by reason of an investment of 92 million escudos (US\$3,220,000) in the tuna industry during 1959-1964.

Investments include the acquisition of 6 large vessels of the tuna-clipper type, 17 vessels for local and coastal fishing, and the construction of freezing facilities. The 6 large clipper-type vessels are to be capable of extending their fishing operations as far as Angola while based in Portugal or the Azores.

Freezing facilities, of unspecified size, are to be built in the Azores and northern Portugal. These facilities would be utilized for freezing tuna landed by the coastal vessels during four months of the year. In addition, the freezing facilities in the Azores would be used during the remaining months as storage warehouses for meat produced in the islands pending shipment to markets where meat may be in short supply.

The proposal observes that the important development in the tuna industry is to change from traditional coastal fishing to long-distance, high-seas fishing in order that the industry may profit from Portugal's "privileged position" and the favorable conditions under which it can compete in foreign markets. The freezing of tuna, the proposal continues, has increased the advantage of fishing nations in supplying raw materials to canning nations. No difficulty is foreseen in selling frozen tuna abroad because the United States market is considered to be far from saturated and recently European markets, especially Italy and France, have been paying better prices for fish received directly from fishing vessels.

The discussion of the development of the tuna industry during the period of the Second Development Plan tends to reflect the intention for Portugal to concentrate on becoming a supplier of raw materials (frozen tuna) rather than a supplier of the finished product. The proposal points out that the majority of nations which do not produce sufficient tuna for their canning industry do not tax imports of frozen tuna. On the other hand, however, imports of canned tuna are subject to import duties which are sometimes very high. The proposal concludes with the observation that the economical exploitation of the frozen tuna trade would free Portugal from the vagaries and uncertainties inherent in the exploitation of other products for which the more industrialized nations do not have such a "prime need."

Cod-Fishing Industry: The government proposes an investment of 210 million escudos (US\$7,350,000) for the construction of 10 new cod-fishing vessels during the Second Six-Year Development Plan. The 10 vessels will add about 9,000 metric tons of dried cod to the present production.

This estimate of cod-fishing fleet requirements is based upon a 1957 per capita consumption of cod of 8.4 kilograms (18.5 pounds) and an anticipated annual net population increase in continental Portugal of 56,000 people. The proposal estimates that by 1964 not less than 74,000 metric tons of dried cod must be made available to mainland consumers annually, of which the Portuguese cod-fishing industry should supply 63,800 metric tons. In view of the fact that national production during the 1957/58 season yielded 54,049 metric tons of dried cod, an 18-percent increase will be required to achieve the desired goal.

Of the 10 cod-fishing vessels to be launched by the end of the Second Development Plan, six are to be line trawlers and four otter trawlers. The proposal takes notice of the tendency for advanced fishing countries to increase the tonnage of its fishing vessels for greater operating efficiency and comments that this argues in favor of building otter trawlers rather than line trawlers. In the case of Portugal, however, because of the need to provide employment for "the great surplus of fishermen that exists along the Portuguese coast," plus the fact that a higher percentage of larger fish can be captured by trawl line methods, the decision was made to build both types of vessels.

Although no funds are earmarked for that purpose, the proposal states that, as a logical corollary to the development of the fishing fleet, three new cod-drying installations are to be constructed during the period of the plan. These three new installations, together with the five which already exist, would assure regularity in the supply of dried cod-fish.

The government concludes its proposal for improvements in the cod-fishing industry by stating that the industry should give prime consideration to the construction of a cod research and exploration vessel. Funds for the construction of such a vessel, the government says, would be supplied not only by the owners of the cod-fishing fleet and the various cod organizations, but also by other segments of the fishing industry.

Trawl Fishing: The otter trawl fishing industry supplies the Portuguese market with all types of fresh and frozen fish for domestic consumption, except sardines. The trawler fleet is made up of high-seas trawlers and coastal trawlers.

The government proposes an investment of 202 million escudos (US\$7,070,000) in the trawl fishing industry during the 1959-1964 period. This investment would result in the construction of ten high-seas trawlers and five coastal vessels.

At the present time, eight large high-seas trawlers are under construction and will be completed before the end of 1958. These vessels are not included in the Second Development Plan. These eight trawlers will have an annual production capacity of 14,400 metric tons of fish which, the proposal points out, is 30.2 percent of the total capacity of the present fleet. With the addition of the ten vessels to be constructed during the period of the second plan, the fleet will have a total annual production capacity of 83,636 metric tons. This constitutes an increase of 75.5 percent over the present annual capacity of the fleet.

Although some of the new ships to be constructed will replace others now in operation, since the new vessels are bigger, faster, and better equipped, the proposal anticipates a substantial increase in ability to capture greater quantities of fish under more economical conditions. In fact, the proposal points out that the goal set constitutes the maximum expansion that is practicable without resulting in overproduction.

As concerns coastal fishing, ten vessels are presently under construction and will be put into service during the 1957/58 fishing season. Five more vessels are to be constructed during the course of the Second Development Plan. The total annual capacity of these 15 vessels is estimated at 9,600 metric tons. Although the net increase in annual capacity of the coastal fishing fleet will be somewhat less than 9,600 metric tons because some of the new ships will replace older ones, the increase is considered to be the maximum permissible in view of the preliminary indications of overfishing on the continental shelf.

Shellfish: A total of 6 million escudos (US\$210,000) are to be invested in the development of the crustacean and bivalve industry. While no specific projects are elaborated, the general aim is to intensify the capturing of lobsters and other crustaceans and possibly to build an oyster-treating station should local demand warrant.

Whaling Industry: A total of 8 million escudos (US\$280,000) are to be invested in the whaling industry during the Second Development Plan. Part of these funds will be derived from loans and part will be investments by whaling ship-owners.

Of the total amount to be invested in the whaling industry, 6 million escudos (US\$210,000) will be used to acquire equipment for reduction of whaling byproducts. This equipment will be installed in vessels presently without it. The balance of the investments will go toward re-equipping the Terceira and San Miguel whaling zones in the Azores.

Local Fishing: So-called local fishing is carried on by individual owners of small craft in the immediate vicinity of the fishing ports. Each fisherman works on his own

Portugal (Contd.):

account or in cooperation with a co-owner of the craft. The proposal notes that because of inadequate boats and means of capture these fishermen receive very mediocre and uncertain earnings. This type of fishing, the proposal observes, is important to Portugal primarily because of the number of fishermen involved—approximately 45,000. For this reason, and despite the fact that incomes are low, this type of fishing should not be discontinued.

Several of the organizations which are akin to fishermen's syndicates to date have granted loans to local fishermen for the purchase of motors and fishing gear and have established fish-selling services. Of 486 loans made during the first two years of the landing scheme, no difficulties in repayment have been encountered. Experience to date, however, had indicated that the 3,000-escudo (US\$105) loan ceiling is too low to enable local fishermen to build and repair boats, install motors, or buy gear. The proposal raises this ceiling to 6,000 escudos (US\$210) and sets the investment for this purpose at 6 million escudos (US\$210,000).

An additional sum of 6 million escudos is to be provided to enable local fishermen cooperatives to build new boats.

The development plan also provides for aid to the cod industry, the whaling industry, the inshore local fishermen, and the shellfish industry, points out a United States Embassy dispatch from Lisbon, dated May 13.

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FISHERIES TRENDS, APRIL 1958:

Sardine Fishing: During April 1958, the Portuguese fishing fleet landed 6,070 metric tons of sardines (valued at US\$336,000 ex-vessel or \$55.37 a ton). In April 1957, a total of 2,775 tons of sardines were landed (valued at US\$327,061).

Canneries purchased 24.0 percent or 1,456 tons of the sardines (valued at US\$81,000 ex-vessel or \$55.63 a ton) during April. Only 45 tons were salted, and the balance of 4,569 tons, or 75.3 percent of the total was purchased for the fresh fish market.

Matosinhos lead all other ports in April landings of sardines with 2,391 tons or 39.4 percent, followed by Setubal 1,650 tons (27.2 percent), and Peniche 971 tons (16.0 percent).

Other Fishing: The April 1958 landings of fish other than sardines consisted of 418 tons (value US\$55,652) of chinchard, and 477 tons (value US\$35,582) of anchovies. (Conservas de Peixe, June 1958.)



Spain

BILBAO FISHERIES TRENDS, MARCH-MAY 1958:

Cod Fishing: Two recently established cod-drying plants located in the inland province of Navarra have modernized and enlarged their installations to enable them to cure a combined total of 7,000

	1,000 Lbs.
Anchovies	26,800
Hake	499
Other	6,633
Total	33,932

Note: Values converted at rate of 42 pesetas equal US\$1.

metric tons of cod per year. It has also been announced that they plan to import the fresh or wet-salted fish from abroad rather than from local sources because of the high prices which presently prevail in the Spanish market. A ton of wet-salted fish in Spain sells for 20,000 pesetas (US\$476), while the imported fish, including import duties plus transportation and insurance costs from Iceland or the Faroe Islands, amounts to 17,860 pesetas (US\$425) per ton. The imported fish, moreover, is both larger and better cured than the local product.

The Spanish cod fishing fleet operates on the banks off Newfoundland and Labrador where the cod is much smaller than that found in the waters off Iceland, Faroe Islands, and Norway. Because of the distance from its home port and the lack of fresh water on journeys lasting about three months, the Spanish fleet is not able to clean, store, and refrigerate newly-caught fish as well as those who set out to sea one day and return to port the next with their catches.

Wet-salted cod immediately after being caught, are split and breaded, thoroughly washed, and packed in salt. They are then stacked on piles 6-7 feet high, and after a period of one week the stack is turned over in order to drain off some of the excess water. The conversion of wet-salted fish into dried fish can be done by the sun-drying process or the hot-air evaporation method.

Spain (Contd.):

In the first method the sun in northern climates during the late spring and summer months is well suited for drying or curing the wet-salted fish, which are placed on stone slabs for drying. The Icelandic trade name for dry fish is "Klipfisk" (stone fish). The sun slowly evaporates the excess water so that the Klipfisk contains about 42 percent moisture. This fish is whiter, has a better appearance, and tastes better than cod artificially cured by hot-air, the only drying process possible in Spain. This method is also utilized in Iceland, Norway, and the Faroe Islands when there is little sunshine. Drying by evaporation in hot-air tunnels requires about 3 to 4 days.

Spain produces approximately 50,000 tons of dried cod annually, and also imports 20,000 tons during the same period. All of the imported product enters Spain through the Port of Bilbao and is stored in warehouses in this city and in Barcelona. Last year the imported dry cod was purchased from the Faroe Islands (7,000 tons); Norway (6,000 tons); Iceland (4,000 tons); Newfoundland (2,000 tons); and Greenland (1,000 tons).

Fish Landings: During the months of March, April, and May of this year over 15,391 tons of fish, valued at approximately 76 million pesetas (US\$1.8 million), were caught within the province of Vizcaya as compared with 18,283 tons, worth about 81 million pesetas (US\$1.9 million), for the same period in 1957. The decrease this year was due to the scarcity of anchovies in local waters during March. In April they came in regularly and in great quantities, although not as much as in the neighboring ports in Santander province where canneries urgently hired farmers, housewives, mine workers, and children to handle the enormous quantities of anchovies.

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WVIGO FISHERIES TRENDS, MAY 1958:

Fish Exchange: Landings at the Vigo, Spain, Fish Exchange amounted to 9.0 million pounds during May 1958, an increase of about 0.9 million pounds over the preceding month, and about the same amount above May 1957. The May 1958 landings were valued at US\$1,059,000, an increase of about 27 percent in value over May 1957. The increased value this May was due to the inflationary trend

in fresh fish prices and to larger catches of the more expensive species.

Leading species sold over the Fish Exchange were large and small hake (2.1 million pounds), horse mackerel (1.3 million pounds), and sardines (1.0 million pounds). Sardine landings increased 422 metric tons over the May 1957 figure of 20 tons.

Fish Canning and Processing: Fish canners were encouraged by the better catches of sardines and hake and hoped for further improvement over the relatively good 1957 landings in 1958. During May 1958 canners bought over the Exchange 438 metric tons of fresh fish, only 54 more tons than in April, but 268 more tons than in May 1957. Fish bought for drying, smoking, and salting, totaled 452 tons, an increase of 232 tons from April 1958 purchases.

Tinplate Allocations: At a recent intersyndical meeting (fruit, metal, fish, cattle, and olive syndicates) revisions were made in coefficients for the distribution of tinplate imports and domestic production. Tinplate ordered by canners using foreign exchange earned through their own exports was exempt from the new revision. At the moment, exporters draw from the Foreign Exchange Institute 20 percent of their foreign exchange earnings for their own commercial use. These new tinplate quotas are tentative, and subject to further study. The new revision is necessary because it was agreed in December 1957 that the agreement reached then was to be provisional. Also agreed was that imported tinplate which varied in price would be distributed equitably.

Exports: Under an accord between the Foreign Exchange Institute and the Rumanian State Bank (dated January 28, 1958), Spain will ship to that country \$500,000 worth of canned fish products. The accord will run for a period of one year.

Landings 1957: The National Economic Council estimates the Spanish fisheries landings at 810,182 metric tons for the year 1957, an index of 124.8 using the 1953/54 season as a base. This compares with an index of 116.6 in 1956 and 118.1 in 1955.

Foreign Exchange: Lack of machinery for modernization and tinplate fabrication continues to create an incessant demand on the part of the fishing and fish-canning industry for more foreign exchange. Members of the industry claim that they have done everything possible to augment production and accelerate modernization, and all that can be done now is to import new machinery. The only way to achieve this they say is to increase the premium now granted on exports (3 pesetas over the official rate of 42) to a level where it is more realistic, or at the free market rate.

Local Taxes Affecting Fishing and Fish Canning Industry: The "Tribunal Centencioso-Administrativo Provincial" in October 1957 approved the decision of the Ministry of the Treasury that the tax exemption on canned fish products be raised from 60 to 90 percent, and on cod from 60 to 100 percent. This was done to avoid double taxation on raw materials and processing by the provincial government, similar taxes having been imposed by the central and municipal governments.

Provincial inspectors have chosen to interpret the 90 percent figure as a maximum figure, leaving it to each fabricator to prove lot by lot that he has exhausted his 90 percent exemption on the net worth.

Lawyers for the industry maintain that the basic law reading "in no case shall the exemption be less than 40 percent" reveals the legislative intent, and that the new revision reading, "the exemption shall be 90 percent" should be interpreted in that light. Opinion is that the prima facie figure of 90 percent will be accepted administratively, and that recourse to the courts will not be necessary.

Improvement of Markets: In a recent article in the trade journal *Industria Conservera*, Spanish cooperation with the European Organization for Economic Cooperation was lauded as offering industry an opportunity for closer economic relations with the 17 participating coun-

Spain (Contd.):

tries. The article stressed that Spain is not committed to a free exchange of goods, but only to enlarging present exchanges.

The magazine also discussed the possibilities of new markets for fish products behind the Iron Curtain. This great potential market, said the magazine, is another good reason for exporters to organize and present a united front, or the buyers (the Iron Curtain Countries), will have the bargaining advantage.

This theme of reorganizing the fishing and fish-canning industry is gaining more and more ground. Many people are of the opinion that something drastic must be done to reverse the downward trend which the industry has experienced in the last few years. Efforts must be made to organize so that the industry is no longer fragmented, individualized, and as the Spanish put it, atomized at the base. Recommendations are that more scientific practices must be used to reduce production costs, canners must concentrate on the faster selling items and publicize them adequately, containers must be standardized and the fabricators of them unite, and quality control must be stressed for those interested in wider foreign markets (United States Consul at Vigo, Spain, dispatch dated June 16, 1958).



Surinam

SHRIMP FISHERY TRENDS, MAY 1958:

Problems of net repairs and a single vessel operation continued to beset the Surinam shrimp fishery in May. The Coquette made four trips with two nights of trawling for each trip. Catches for each trip were 450 pounds, 300 pounds, 140 pounds, and 220 pounds, respectively; a total of 1,110 pounds.

Work on the ice plant at the Paramaribo shrimp-processing plant continues and the refrigeration equipment is now on hand. Construction is expected to be completed in two months. Work on the pier has been started.

A United States citizen was in Surinam during this period looking over the shrimp fishing prospects. His discussions have indicated some interest in the Trinidad-Belem area, possibly using Paramaribo as a base.

The Director of the Surinam Fisheries Service and the local biologist working here for the Dutch Foundation, held a press conference early in June to discuss research results of the last year or so. Reference was made to the survey results of the U. S. Bureau of Commercial Fisheries exploratory fishing vessel M/V Oregon and the locally-owned

vessel Coquette, the United States Consul at Paramaribo reported on June 11, 1958.



Sweden

COOPERATIVE ACTION IN SETTING FISHING LIMITS ADVOCATED:

Because of the recent Icelandic decree on the fixing of Iceland's fishing waters at 12 nautical miles, the Swedish Government on July 10 submitted a note of protest to the Icelandic Government. It draws the attention to its consistently upheld view that no state has the right to take unilateral action to extend its territorial waters beyond their present limit, said limit having been recognized by international law and that it may not establish additional zones in which it reserves special rights.

In the view of the Swedish Government measures taken in violation of these regulations constitute an infringement on the open seas, and the Swedish Government has continually felt obliged to lodge its protest and to reserve to itself its rights as soon as it learns of decrees or proclamations to this effect.

At the recently concluded Conference on the International Law of the Sea, the Swedish Government presented a proposal for universal control of territorial water limits, it is further said in the note. Leaving certain exceptional cases out of account, this proposal stated that every country could lay claim to maximum territorial waters of six nautical miles.

At the closing stage of the Conference the Swedish Government, in seeking to help reach a compromise settlement, felt that it could give its support to a United States proposal which granted states the right to claim territorial waters of six nautical miles and a fishing zone of six nautical miles outside these waters. This proposal, however, carried a proviso stipulating that countries, which in the past five years had conducted fishing within the said zone, had the right to continue such fishing. Inasmuch as the proposal was not adopted by the Conference, the Swedish Government has reverted to its previous standpoint.

Sweden (Contd.):

The Swedish Government recommends that the measures which may be found desirable for the control of fishing in the areas under question should be principally achieved by cooperation between the states which conduct fishing in these waters and which therefore have a common interest in the matter. It therefore hopes that the Icelandic Government will consider the possibility of negotiations between the countries most directly concerned with the aim of reaching a solution satisfactory to all parties. (The Swedish-International Press Bureau, Stockholm, July 16, 1958.)



Tunisia

UNDERWATER LIGHTS FOR SARDINE FISHING FLEET PLANNED:

The Government of Tunisia plans to equip all of its sardine fishing fleet with new-type underwater lights for night fishing. According to a report from an official of the Food and Agriculture Organization (FAO), it is expected that the proposed project--which is a result of underwater experiments performed with the assistance of FAO experts--will result in a considerable increase in the sardine catch and will also reduce the fishing fleet's expenditures by about \$2,800 per night of fishing.

The FAO representative in Tunisia stated that the Tunisian Government plans to equip one-third of its fishing fleet this year and the rest of the fleet next year. He added that during this year, the Government will equip some 30 or 40 vessels with Diesel generators and about 60 other vessels with the new-type underwater lights. Next year, he continued, the rest of the fleet will be equipped according to plan.

At present, approximately 1,000 Tunisian fishermen are engaged in sardine fishing at night. Government-supported loan facilities make it possible for the fishermen to buy the new equipment through fishery cooperatives.

During 1957, FAO fishery experts demonstrated to Tunisian fishermen

the methods of fishing with underwater lights.



Union of South Africa

PILCHARD-MAASBANKER INDUSTRY, JANUARY-MARCH 1958:

With another good month in March, the Union of South Africa Cape west coast pilchard and maasbanker (jack mackerel) catch for the first quarter of 1958 totaled 57,640 metric tons--56,104 tons pilchards and 1,536 tons maasbanker. Also landed during the first three months of this year were 18,256 tons of mackerel.

Returns released by the Division of Fisheries show that 23,321 tons of pilchards, 77 tons of maasbanker, and 1,346 tons of mackerel were caught in March. These figures compare with 24,208 tons pilchards, 709 tons maasbanker, and 49 tons mackerel in March 1957; and 39,593 tons pilchards and 4,043 tons maasbanker in March 1956.

The March fish catch yielded 4,354 tons fish meal, 126,753 gallons fish body oil, 908,775 pounds canned pilchards, 768 pounds canned maasbanker, and 279,984 pounds canned mackerel.



United Kingdom

EXPORTS OF FROZEN COD FILLETS TO U. S. S. R. INCREASED:

Quick-frozen cod fillets will be exported from the United Kingdom to the U. S. S. R. in larger quantities than originally expected. Early this year, a combination of eight firms located at the ports of Hull, Grimsby, and Fleetwood, contracted to export 4,000 long tons of frozen cod fillets between March 1 and September 1. This amount was then stepped up by 550 tons. Now, the contract has been extended by 1,500 tons, bringing the total amount to 6,050 tons.

It has been proposed that provision of the additional cod fillet exports should initially be divided between the Hull and Grimsby firms in the ratio of five to three,

United Kingdom (Contd.):

respectively, since the Fleetwood firms may not be able to supply more than the amount agreed to in the original contract. Thus, of the total amount exported under the new contract, Hull will supply about 57 percent, Grimsby about 35 percent, and Fleetwood, 8 percent.

Terms of the new contract have not yet been disclosed but it is understood that the ex-vessel price of the cod will be lower than the minimum summer price. Disposals of cod for freezing and export have been a means of absorbing unsold summer surpluses. (The Fishing News, July 11, 1958.)

* * * * *

FISH CATCH WILL BE SERIOUSLY AFFECTED BY 12-MILE FISHING LIMITS:

In reply to questions raised in the British Parliament during the week of June 16, 1958, concerning the effect of the proposed Iceland and Faroe Islands 12-mile fishing limits, the British Minister of Agriculture, Fisheries, and Food stated that the effect would be very serious.

According to the Minister, about 40- to 50-percent of the British fish catch comes from fishing grounds around Iceland and the Faroes, and about 13-percent of the total catch is taken within the proposed 12-mile fishing limits.

* * * * *

PARLIAMENT RAISES QUESTIONS ON PROPOSED ICELANDIC FISHING LIMIT:

On July 2 there were a number of questions in the British House of Commons addressed to the Foreign Secretary concerning unilateral actions by certain Governments, particularly Iceland, to extend territorial waters with respect to exclusive fishing zones. In his reply to these questions the Foreign Secretary stated that the British Government had made it absolutely clear that it would not accept unilateral declarations of this character and that any changes must be arrived at by negotia-

tion. He said that such negotiations might take the form of an international conference covering all the countries of the world, a regional conference, or bilateral negotiations. He also said that he was anxious to arrive at a solution of the problem by any one of these three methods of negotiation.

He added that the Icelandic regulations do not come into force until September 1958 and that it was the hope of the British Government that in the intervening time "we shall arrive at a mutually acceptable settlement by negotiation."

* * * * *

PROGRESS IN UNDER-WATER RESEARCH:

One of the great difficulties about improving the performance of the fishing trawl is that everything has to be done by trial and error, for no one knows just how a trawl behaves on the bottom of the sea in deep water.

An underwater camera has, however, been developed and is now being carried by the Ministry of Agriculture, Fisheries and Food fishery research vessel Ernest Holt, which sailed with it in mid-June for the Bear Island fishing grounds on another scientific expedition.

The camera, which uses ordinary 35 mm. film, is fitted with electronic flash gear and devices which enable it to be set to take a series of pictures at fixed intervals. It can be set to be triggered off by a plummet device when it is the right distance above the sea bottom or it can be set to start taking pictures at any set depth.

Already most successful pictures have been taken of the bottom of the sea at 100 fathoms, and shoals of fish which had been detected by the echo-sounder have also been photographed and did not appear to have been disturbed by the momentary flashes.

At the moment the camera does not indicate the approximate size of the fish so pictured, but the device is being developed and there is little doubt that this slight drawback will be successfully overcome.

United Kingdom (Contd.):

The camera opens up tremendous possibilities in deep-water fishery research work.

Among the exhibits at an exhibition of fishery research work held at Grimsby in mid-June was a most ingenious but almost ridiculously simple device for recording ocean currents at the bottom of the sea.

A bottle slightly smaller than a medicine bottle is partly filled with a kind of jelly which has a small compassfloat in it. The bottle is dropped overboard from the research ship with a sinker to take it to the bottom and a line and buoy for subsequent recovery. The bottle floats just above the sea bottom and the velocity of the current tilts it as it is anchored.

The coldness of the water sets the jelly and when the bottle is recovered, the angle of tilt of the solidified jelly enables the scientists to measure the speed of the current, while the compass set in the jelly gives the direction.

Apart from the cost of the compasses, about US\$2 each, the cost is almost negligible and it works far better than the scientific instruments previously used which cost more than US\$840 each and were moreover not accurate on a research ship tossing and rolling in heavy seas.

In the past the Ernest Holt has had to determine the density in the fish shoals and even their presence by the trial method of experimental trawls. More recently, however, these trial hauls have been supplemented with echo-sounder observations, and from the experience gained the scientists are now obtaining the bulk of their information from the "echometer blips," thus being able to cover far more ground than by the old method.

This, however, has entailed a constant watch and the recording of all "blips" on the screen continuously for as long as a week. This work is of so exacting a nature that the scientists had to take short watches in turn at the instruments.

Now they have devised an apparatus to record the "blips" automatically and so release the highly-trained team of scientists from a wearisome, exhausting and exacting duty.

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REACTION TO ICELAND'S FISHING LIMITS EXTENSION:

Iceland's proposed extension of her territorial waters fishing limits from 4 to 12 miles effective September 1, 1958, was discussed at a meeting between representatives of the British Trawlers Federation and the Minister of Agriculture, Fisheries, and Food in London on June 5. A joint statement, issued after the meeting, which was also attended by the Minister of State for Foreign Affairs, said that the trawler owners emphasized that they would support any proposal for discussions "aimed at securing a just and lasting solution, in the interests of all concerned, to outstanding fishery problems in the north Atlantic," according to a press report of June 6, 1958.

The President of the British Trawlers Federation, who attended the meeting, said: "We believe that restraint must be exercised, and that in the end, to get any lasting solution, it must be done by consultation and discussion round a table. This cannot go on as a running sore."

The British Government had said that they would provide protection for fishing vessels operating within the Icelandic 12-mile limit. "I cannot discuss what form of protection would be provided," said the Federation President. "Certainly between now and September our members will fish where they normally do" (U. S. Embassy in London, June 1958 dispatch).

* * * * *

WHITE FISH AUTHORITY LOAN INTEREST RATES REVISED:

The British White Fish Authority announced that as a result of recent changes in rates of interest charged to them by Her Majesty's Treasury, their own rates of interest were changed on loans as of June 6, 1958.

The new rates are: on loans of not more than 10 years, $5\frac{1}{4}$ percent; on loans

United Kingdom (Contd.):

for more than 10 years, but not more than 15 years, 6 percent; on loans for more than 15 years, 6 ¹/₄ percent.

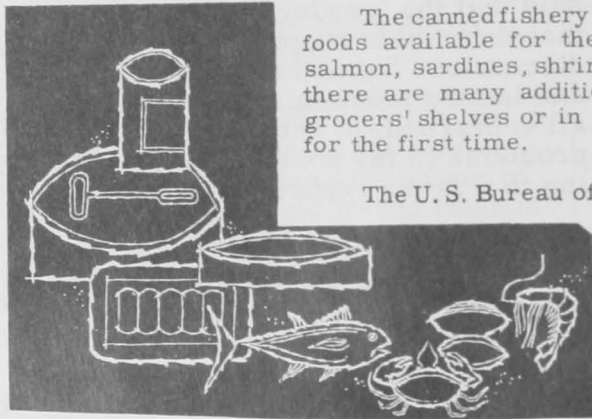
The new rates do not apply, however, where the final instalment of a loan, or interim instalments, in current cases, were paid by the Authority before June 6, 1958. The other terms and conditions of the Authority's arrangements for loans are unchanged.

The Authority's loans are connected with: the building of new fishing vessels of not more than 140 feet; the purchase, in certain circumstances, of new engines and nets and gear for inshore vessels; the construction of equipment and of processing plants; and the formation and development of cooperative organizations. (Fish Trades Gazette, British fishery trade periodical, of June 21, 1958.)



SEPTEMBER--CANNED FOODS MONTH

This year's "September is Canned Foods Month" was sponsored by the canned foods industry. Fishery products play an important part in the canned foods industry.



The canned fishery products industry has a wide variety of delicious foods available for the housewife. While items such as canned tuna, salmon, sardines, shrimp, and clams are well known to nearly everyone, there are many additional and somewhat less known delicacies on the grocers' shelves or in speciality food stores for many consumers to try for the first time.

The U. S. Bureau of Commercial Fisheries lists the following items which are canned by the domestic fishing industry: king salmon, chum salmon, pink salmon, red salmon, silver salmon, steelhead salmon;

albacore tuna, bluefin tuna, skipjack tuna, yellowfin tuna, tonno tuna, and the tunalike fishes, bonito and yellowtail; alewives; mackerel; anchovies; shad; alewife roe; shad roe; cisco roe; groundfish roe; lumpfish caviar, sturgeon caviar, salmon caviar, whitefish caviar; blue crab, dungeness crab, king crab; soft clams, razor clams, hard clams; fish cakes; fish flakes; gefilte fish; smoked or kippered salmon, finnan haddie, sturgeon, and tuna with noddles, beans, sherry, vegetables, and shad; creamed sauces; clam spread, cakes, pie, sauce, soups, and stews; conch meat and chowder; crab cocktails, deviled, soft-shelled, smoked, spread, soups, and stews; lobster meat, knuckles, spread, soups, and stews; smoked oysters, and oyster stew; oyster bisque, cocktails, and soup; shrimp cocktails, soups, and stews; squid; terrapin and turtle meat, soup, and stews. Other specialties are: cod; herring; mullet; salmon livers; saury; wahoo; creamed finnan haddie, antipasto, and chowder; crawfish bisque; scallops in sauce; frog legs; sea mussels, and unclassified soups and stews.

In 1957, 644 million pounds of canned fishery products were packed in the United States and the Territories; worth over \$300 million to the packers.



Maine Sardine

Northern Anchovy



Pacific Mackerel



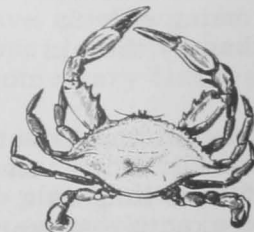
Horse Mackerel



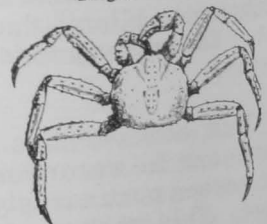
White Shrimp



Dungeness Crab



Blue Crab



King Crab