FOREIGN

International

NORTHWEST ATLANTIC FISHERIES COMMISSION

FRANCE LAST OF SIGNATORIES TO RATIFY CONVENTION: The Government of France on January 27, 1953, deposited its instrument of ratification of the Northwest Atlantic Fisheries Convention. France is the tenth and last signatory to the Convention to deposit its instrument of ratification and thus become an active participant in the work of the Commission. The other nine countries are: Canada, Denmark, Norway, Spain, Italy, Portugal, Iceland, United Kingdom, and the United States.

ECUADOR-PERU-CHILE FISHERIES CONFERENCE PLANNED

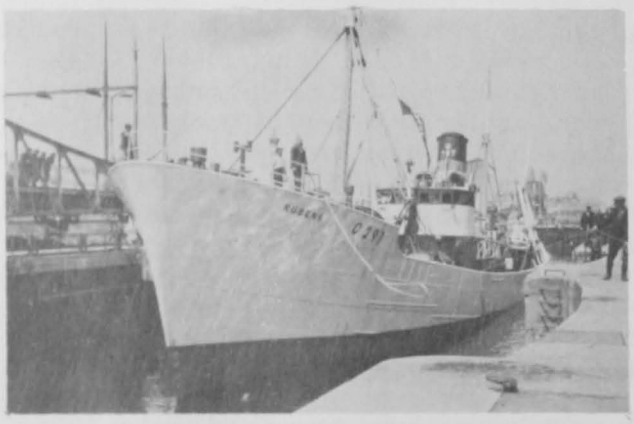
The Ecuadoran Government extended invitations to the Governments of Chile and Peru to participate in a fisheries conference in Quito some time in April, according to press reports. These three Governments are the members of the Permanent Commission for the Conservation and Development of Fishing Resources of the South Pacific, which was established pursuant to a resolution approved in the fisheries conference held at Santiago, Chile, in August 1952.

The agenda of the meeting in Quito will be prepared by the Ecuadoran Government, the U. S. Embassy at Quito reports in a February 6 dispatch.

NOTE: ALSO SEE P. 72 OF THIS ISSUE AND COMMERCIAL FISHERIES REVIEW, VOL. 14, NO. 10 (OCTOBER 1952), PP. 54-5.

Belgium

FISHING FLEET, 1951: The Belgian fishing fleet as of December 31, 1951, totaled 427 craft with a gross tonnage of 25,985 tons, a decrease of 17 vessels but an increase of 263 gross tons when compared with 1950 (see table). During 1951, 14 craft (including 11 new ones) were added to the fleet, while 31 were removed, according to a report of the Belgian Administration de la Marine (Service de la Peche Maritime) published in the December 1952 World Fishing, a British trade magazine.



BELGIAN TRAWLER READY TO LEAVE FOR THE FISHING GROUNDS.

There has been a gradual decline in the total number of Belgian fishing vessels since 1938. The largest decrease has been in the smaller Class I vessels, an indication that coastal (inshore) fishing is becoming increas-

ingly less profitable. The number of vessels in this class has decreased 30½ percent since 1938, and only one vessel of this class was added to the fleet in 1951.

Belgian Fishing Fleet as of December 31, 1951

Type of Vessel	No. of Vessels	Total Gross Tonnage	Average Age
Class I - Motor Crevettiers, less than 80 hp.	164	2,798	17 yrs. 17 mos.
Class II - Coastal Motor Trawlers, 80-119 hp.	72	2,363	14 yrs. 3 mos.
Class III - Middle-Water Motor Trawlers, 120-239 hp.	122	8,577	16 yrs.
Class IV - Motor Trawlers, 240-349 hp.	50	6,048	13 yrs. 8 mos.
Class V - Motor Trawlers, 350-500 hp.	10	1,800	9 yrs. 8 mos.
Class VI - Motor Trawlers, Over 500 hp.	2	784	25 yrs.
Class VI - Steam Trawlers, Over 480 hp.	7	3,615	6 yrs. 5 mos.
Total 1951	427	25,985	
1950	444	25,722	
1949	461	30,028	
1946	479	22,533	
1938	510	28,037	

Of the 427 fishing vessels available at the end of 1951, 389 were manned with 1,862 men. Of this total, 1,457 were seamen (fishermen) and 405 were engineers or other specialists. This is an increase of 20 seamen and 2 specialists over 1950. The number of boy entrants (apprentices) is far lower than what the fleet could absorb, and might possibly lead to a lack of replacement for older fishermen. According to a 1931 law, each fishing vessel with a crew of 3 to 8 adults must have 1 boy in service, while each vessel with a crew of more than 8 adults must carry 2 boys. Thus, on December 31, 1951, the fleet should have had a total of 387 boys whereas it only had 138, a 64 percent deficit.

The port of Ostende had the largest fishing fleet in 1951--a total of 205 vessels, including all 9 class VI trawlers and 9 of the 10 class V trawlers. Zeebrugge was next in importance with 156 vessels, followed by Nieuport with 58 vessels, and Blankenberge with 8 vessels.

Canada

FISH FROZEN AT SEA TESTED FOR TASTE: Freezing-fish-at-sea experiments, mainly to determine the comparative taste appeal of certain British Columbia species under various conditions of storage, have been carried out by the Pacific Experimental Station of the Canadian Department of Fisheries at Vancouver, B. C. A tasting panel of 200 Vancouver citizens helped to evaluate the results of the investigations. They compared fish which had been (1) packed only in crushed ice for different periods up to 12 days after catch, (2) frozen within a few hours after being caught and then stored frozen for varying periods, and (3) held in ice up to eight days before freezing and storage. Various other holding and freezing conditions were also compared, reports the December 1952 Trade News, issued by the Department of Fisheries.

Advances in commercial freezing and cold-storage techniques now make it quite practical to maintain high quality in frozen fish, providing that the quality of the fish is excellent when freezing takes place. During the past year tests were continued on fish landed from the Tauranga, a commercial trawler operating out of Vancouver, equipped with mechanical refrigeration facilities made available by the Canadian Fisheries Research Board.

Taste Preference	Test 1	Test 2	Test 3
	Fish Held at -15° F.		
	1 Week	3 Mos.	4 Mos.
	%	%	%
Halibut, frozen at sea and stored frozen.....	31.8	30.4	31.4
Halibut, frozen and stored on shore from fish iced at sea.....	41.6	41.3	42.6
No preference.....	26.6	28.0	26.0
	100.0	100.0	100.0

Observations made in the latest series of tests dealt with halibut and other flat fish, specifically brill and rock sole. The Tauranga's catches were of very high quality, due in part to the refrigerating equipment aboard but also to the short runs to the fishing grounds; the Tauranga landed its fish on the average of 3 to 5 days after catch. Much of that marketed as fresh was delivered to the consumer market 7 to 10 days after catch. Unfrozen fish on the Tauranga was packed in refrigerated ice and stored at temperatures in the refrigerated hold slightly above the freezing point of fresh fish, which is about 30° F.

Halibut Tests: In three recent tests halibut was sometimes frozen on board and sometimes only packed in refrigerated ice aboard for later freezing ashore. Both kinds were held frozen for varying periods at the Station. About 42 percent of the members of the tasting panel expressed a preference for the halibut landed in ice and later frozen and stored; about 31 percent preferred the halibut frozen at sea and kept frozen ashore; and about 27 percent had no preference (see table). The percentages of preference and no preference were remarkably consistent in the three similar tests.

In earlier tests it was shown that when iced halibut was held on ice at 32° F. for storage periods of up to 18 days, preference for frozen halibut increased sharply. This indicated that most of the tasters preferred halibut frozen at sea. The halibut frozen at sea appears to be firmer in texture and to have less moisture than the fish which has been on ice.

Flat-Fish Tests: For flat fish, such as brill and rock sole, 45 percent of the tasters preferred the frozen-at-sea; 35 percent preferred those fish iced at sea and frozen later; the remainder had no preference. The tasters showed a preference for flat fish dressed before storage on board to flat fish dressed after landing, though differences were not great. For example, in one test 37.2 percent preferred dressed-at-sea; 28.1 percent dressed-after-landing; 34.7 percent detected no difference. The usual commercial procedure is to rinse the ungutted flat fish with sea water, then pack whole on ice and store in the hold until landing.

Tuna Tests: Common practice aboard the tuna vessels is to chill the fish and freeze it without dressing, etc. On an albacore tuna fishing trip, fishermen aboard the Tauranga removed the gills and viscera immediately after catching; the fish were then chilled, packed in refrigerated ice, and frozen by contact with the aluminum walls of the refrigerating jacket. Upon landing, the tuna was stored in the frozen state until processed.

Tuna is most familiar to consumers as a canned product. For this reason it was desirable to offer the panel tasters a product already processed. By way of

comparison a can of good quality, unlabelled, commercially-canned albacore tuna was sent to the tasters with a can of tuna from the Tauranga catch. The "commercial" tuna was caught in the same general area as the Tauranga tuna; both boats are refrigerated, the times of catch were within the same fortnight, and both packs were canned locally. The only difference in treatment was that the Tauranga tuna were dressed before chilling and freezing whereas the "commercial" tuna were dressed after landing at Vancouver.

The results to date (from 158 persons participating in the panel of 245 persons) are: 54 percent preferred the Tauranga pack, 33 percent preferred the "commercial" pack, and 13 percent indicated no preference.

Further tests on canned albacore tuna are to be made after varying periods of storage of the raw or unprocessed fish.

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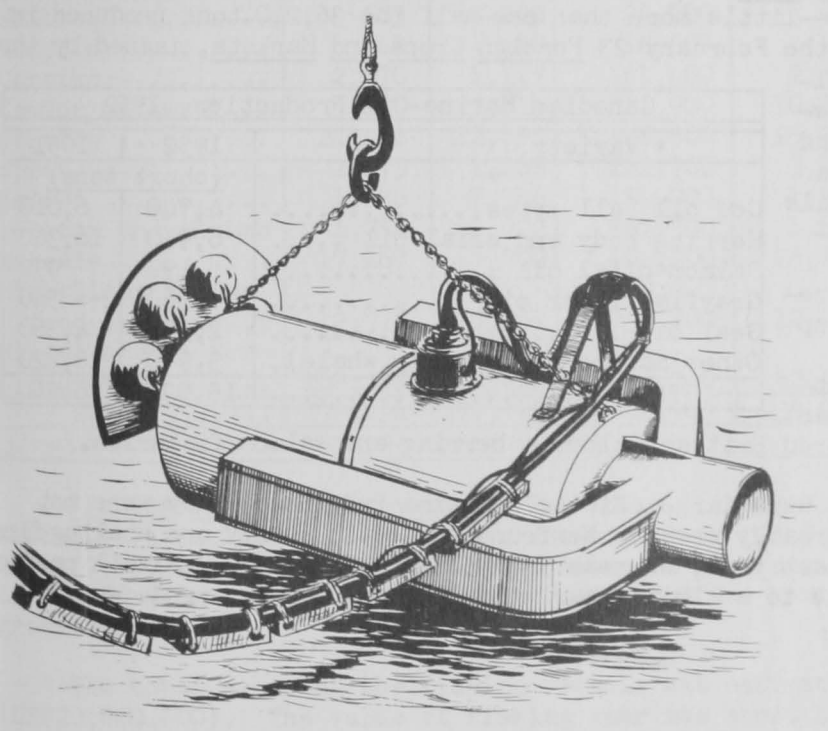
UNDERWATER TELEVISION TESTED OFF BRITISH COLUMBIA: The first Canadian underwater television tests in salt water were carried out off British Columbia in the vicinity of Nanaimo on November 4 and 5, 1952, from the Canadian research vessel Investigator I. The tests were made to familiarize the staff of the Pacific Biological Station of the Fisheries Research Board of Canada with the possibilities of the equipment in fisheries research. Previous tests had been made in fresh waters of the Ottawa River and Lake Ontario in 1951, and in Lake Minnewanka in 1952, according to the November 1952 Trade News of the Canadian Department of Fisheries.



SKETCH OF CAMERA BEING LOWERED INTO THE WATER.

The Canadian equipment was devised by W. F. Torrington and his assistants, W. E. M. Dale and T. R. Smith, of the National Research Council of Canada.

The television camera is enclosed in a steel watertight cylinder and weighs about 300 pounds out of water. The cylinder is 3 feet long and 18 inches in diameter. In addition to the camera, it contains 3 electric motors and a 50-pound lead weight which serves partly to offset the buoyancy and partly, by shifting its position forward or backward, to incline the nose of the cylinder up or down. Two propellers fitted to the stern are driven by electric motors and are capable of moving the cylinder forward or backward, or of swinging it from side to side. A battery of four spotlights is mounted on the front of the casing and provides adequate illumination. Weights suspended by a length of chain beneath the unit cause it to sink until the weights touch bottom, whereupon the unit regains its buoyancy and remains at a distance from the bottom, governed by the length of chain.

The images picked up by the sensitive tube in the camera are transmitted to the television screens on the boat through a coaxial cable. In addition there is a one-inch cable, lined with wooden floats to help buoy it up and reduce drag on the cylinder to a minimum. This cable contains all the conductors providing power for the camera, lights, and propulsion motors. The present cable is about 600 feet long and weighs about 400 pounds.

All operations of the camera are governed by remote control. Movements of the camera are directed from a small unit. The master control unit regulates the quality of the image on the screen and the other electronic functions, yet also enables the operator to focus the camera and change the lens openings. The lens can even be changed from the normal 2 inches to 5 inches for close-ups.

There are two viewing units. One provides for continuous underwater observation, while an auxiliary unit is fitted with a special movie camera. This can make a permanent record of objects of interest, without interfering with ordinary observations.

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MARINE-OIL PRODUCTION, 1952: Canadian marine-oil production in 1952 is estimated at 19,070 short tons--little more than one-half the 36,240 tons produced in 1951 (see table), reports the February 23 Foreign Crops and Markets, issued by the U. S. Department of Agriculture. Competition from lower-priced vegetable oils and synthetic vitamins, and the reentry of Japanese fish oils into the market, caused Canadian processing firms to reduce fish prices. As a result, many fishermen tied-up and 1952 Canadian landings of sea fish were 10 percent lower than the previous year. Tie-ups particularly hampered British Colombia herring and salmon fisheries.

Canadian Marine-Oil Production, 1952

Variety	1952	1951
	(short tons)	
Cod oil (all types)	4,740	6,010
Herring body and offal oil	6,940	16,340
Salmon offal oil	190	970
Grayfish liver oil	260	340
Seal oil	2,970	4,360
Other marine oil (mostly whale)	3,970	8,220
Total	19,070	36,240

Although cod landings were large off the Maritime Provinces, they were not sufficient to offset the greatly reduced Newfoundland catch. Only one whaling firm operated in Newfoundland last year, whereas in 1951 there were 3. Seal-oil production likewise decreased due to a limited market and low returns to producers.

Denmark

REVIEW OF THE FISHERIES, 1951: Landings and Value: The total catch of fish and shellfish in Denmark in 1951 amounted to approximately 278,300 metric tons, valued at about 177,100,000 kroner (US$25,600,000) to the fishermen (see table), according to Fiskeri-Beretning for the Year 1951, a Danish Government publication. This includes 15,000 metric tons, valued at 7,000,000 kroner (US$1,000,000), landed by Swedish vessels in Danish ports, and it was mostly herring.

The total catch of edible fish and shellfish increased about 1,600 metric tons over 1950, while the catch of fish for reduction increased about 46,000 metric tons

and the mussel catch declined about 8,500 metric tons. About 11,700,000 kroner (US$1,700,000) of the increased value can be attributed to edible fish and shellfish, mainly due to a slight rise in the price of plaice, dab, cod, and mackerel. The remaining 8,200,000 kroner (US$1,200,000) increase mainly derived from the increased catch of waste fish for reduction.

Danish Fishery Products Landings, 1951 and 1950 1/

Species	1951 Quantity	1951 Value		1950 Quantity	1950 Value	
	Metric Tons	1,000 kroner	US$	Metric Tons	1,000 kroner	US$
Common sole	3,103	6,563	948,400	1,704	4,086	590,500
Turbot	1,022	2,070	299,100	1,025	1,739	251,300
Brill	387	635	91,800	320	569	82,200
Plaice	31,744	52,721	7,619,100	31,860	47,778	6,904,300
Lemon sole	1,007	1,606	232,100	589	960	138,700
Witch flounder ...	473	397	57,400	337	297	42,900
Flounder	5,166	3,910	565,000	5,681	3,925	567,200
Dab (yellowtail)..	4,302	3,467	501,000	3,410	2,188	316,200
Haddock	1,483	1,781	257,400	2,390	2,141	309,400
Cod	48,282	23,785	3,437,000	45,308	21,327	3,081,900
Whiting	503	240	34,700	440	146	21,100
Lumpfish	142	128	18,500	165	134	19,400
Garpike	2,470	1,117	161,400	2,295	880	127,200
Common mackerel ..	9,975	5,639	814,900	10,281	4,750	686,400
Herring	24,486	12,655	1,828,800	26,341	12,153	1,756,200
Sprat	2,875	1,465	211,700	3,855	2,175	314,300
Salmon	1,136	7,986	1,154,000	1,355	8,359	1,207,900
Lobster and shrimp	1,752	6,002	867,300	1,676	6,917	999,600
Mussels	17,267	700	101,200	25,792	1,186	171,400
Miscellaneous for food	12,328	25,851	3,735,800	12,020	25,777	3,725,000
Miscellaneous for reduction	108,391	18,426	2,662,700	62,117	9,711	1,403,300
Total	278,294	177,144	25,598,900	238,961	157,198	22,716,400

1/ INCLUDES CATCH OF BOTH FRESH- AND SALT-WATER FISHERIES.

Fishing Fleet and Fishermen: The total fishing fleet at the end of 1951 consisted (not including 40 craft for the transport of fish) of about 16,065 vessels, of which 7,697 were motor vessels. Of these, 18 were over 50 gross tons, 1,293 between 15 and 50 gross tons, 2,335 between 5 and 15 gross tons, and the remainder below 5 gross tons.

The total value of the fishing vessels was estimated at 143,600,000 kroner (US$20,800,000). The value of fishing gear was about 44,600,000 kroner (US$6,400,000). The value of sheds, for the storing of the fishing gear etc., was estimated at about 3,000,000 kroner (US$433,000) in 1951.

The total number of fishermen regularly or occasionally employed was 19,623 in 1951 as compared with 19,882 in 1950. The number of regular fishermen decreased from 14,260 to 14,078.

Stormy periods during the year caused a number of shipwrecks and loss of human lives. In all, 25 fishermen perished in the course of the year while engaged in fishing, and 20 vessels foundered (4 by explosion of mines).

Catch of Principal Species: The plaice fisheries yielded about the same as in 1950, but the catch showed a considerable increase in the Skagerak, the Kattegat and the Belt Sea, and a corresponding drop in the North Sea.

The total yield in 1951 from the herring fisheries was about 2,000 metric tons less than in 1950. The yield from the herring fisheries in the North Sea was almost double that of 1950, while the Baltic and the Belt Sea showed only a small increase. On the other hand the catch in the Skagerak declined about 4,000 metric tons as compared with 1950; likewise the catch in the Kattegat declined but considerably less than that of the Skagerak.

Cod, the most important edible fish in volume, increased 3,000 metric tons. Fishing was carried on mainly in the Belt Sea and the Baltic, which together yielded almost 50 percent of the total catch of cod.

The 1951 mackerel catch was almost equal to that of 1950. About 85 percent of the mackerel was caught in the Kattegat and Skagerak—60 and 40 percent, respectively.

The drop in the catch of mussels is due to the almost complete suspension of this fishery in the Kattegat and the Belt Sea.

Fishing Areas: The catch from the fiords of Western Jutland, the Lime Fiord, and the more remote waters declined slightly in 1951, while catches in all the other waters increased.

DANISH BEACH LANDING CRAFT. FAO EXPERTS HAVE STUDIED THESE BOATS TO SEE WHETHER THEY COULD BE INTRODUCED IN OTHER COUNTRIES.

About 50 vessels were fishing in the Barents Sea in 1951 as compared with about 100 in 1950. The total yield, which was landed in British ports, amounted to about 500 metric tons valued at about 800,000 kroner (US$116,000) as compared with about 800 metric tons and 900,000 kroner (US$130,000) in 1950. This fishing, therefore, seems to have been fairly profitable to the fishermen in 1951. Plaice totaled 400 metric tons, valued at about 700,000 kroner (US$100,000).

The bulk of the Danish catch in 1951 was caught in Danish waters, but Danish fishermen also exploited remote seas—first and foremost, the waters off Greenland. Five companies operated there, and work has been continued on the basis of the experience gained in recent years. Improved landing facilities have been provided, and technical improvements introduced at the stations ashore. Fishing was mainly

by lines and pound nets. The total yield (converted into whole fish) amounted to about 5,400 metric tons of which about 5,000 metric tons were salted cod.

As in previous years, a large number of cutters with trawl and Danish seine have been operating in waters off Iceland. They disposed of their catch (mainly plaice) in British ports. Further, a few Danish expeditions also took part in the herring fisheries off Northern Iceland. The total catch from this area was about 1,400 metric tons valued at about 1,500,000 kroner (US$218,000), mainly plaice, herring, cod, and haddock.

Fresh-Water Fisheries: Only scant information is available about the fresh-water fish caught in lakes and rivers. The total yield is estimated at about 1,000 metric tons, valued at about 1,000,000 kroner (US$145,000). Fairly complete information has been obtained about the considerable rearing of brook trout, which takes place in the pond cultures at Danish fish farms. Total production for export was about 2,500 metric tons in 1951, valued at about 12,100,000 kroner (US$1,750,000) as compared with 2,100 metric tons and 10,300,000 kroner (US$1,500,000) in 1950. Only a small part of the production was disposed of on the domestic market.

Shellfish: Oyster dredging, state operated and carried on in the Lime Fiord, only yielded a total of 2,600,000 oysters in the 1951/52 season as compared with 3,100,000 in 1950/51.

Imports: Danish imports of fishery products in 1951 were valued at about 26,900,000 kroner (US$3,900,000). The value of fresh fish imported (mainly from Swedish landings) totaled about 11,400,000 kroner (US$1,650,000). Imports of cured products amounted to 15,500,000 kroner (US$1,600,000), of which salted cod and herring accounted for about 14,100,000 kroner (US$2,000,000) and canned fish about 1,200,000 kroner (US$173,000). Imports of fish meal and herring oil accounted for about 14,900,000 kroner (US$12,200,000), medicinal fish oil about 6,900,000 kroner (US$1,000,000), and other kinds of fish oil and whale oil 41,100,000 kroner (US$5,900,000).

Exports: Total exports in 1951 amounted to about 120,700 metric tons, valued at about 187,500,000 kroner (US$27,100,000) as compared with about 122,700 metric tons and 169,500,000 kroner (US$24,500,000) in 1950. Of this, about 91,000 metric tons were fresh fish valued at about 147,000,000 kroner (US$21,200,000) as compared with about 88,000 metric tons and 128,000,000 kroner (US$18,500,000) in 1950. Further, 15,400 metric tons of various shellfish and cuttlefish were exported fresh, valued at about 3,900,000 kroner (US$564,000) as compared with about 22,200 metric tons and 4,900,000 kroner (US$708,000) in 1950. The export of cured fish products (including shellfish) amounted to about 14,200 metric tons in 1951 valued at about 36,400,000 kroner (US$5,300,000) as compared with about 12,500 metric tons and 36,200,000 kroner (US$5,200,000) in 1950. Of these exports, canned goods reached a total of about 3,300 metric tons, valued at 17,000,000 kroner (US$2,500,000), and salted products of herring and cod reached about 10,700 metric tons valued at about 18,300,000 kroner (US$2,600,000).

Fishery Loans: In the fiscal year 1951/52 the Fisheries Bank granted long-term loans totalling 3,016,800 kroner (US$440,000) as compared with 5,788,550 kroner (US$836,000) in 1950/51.

Fishery Legislation: The basic fishery laws were revised in 1951 both for fresh-water and salt-water fisheries. Together with the extensive legislation on the domestic and export fish trade passed in 1950, these new laws have created a modernized basis for public control of production and distribution of fishery products and byproducts.

Hungary

FRESH-WATER ELECTRICAL FISHING EXPERIMENTS: Experiments in fresh water to catch fish by electricity have been carried out in Hungary the past few years. The results are considered successful, reports The Fishing News of January 17, a British trade magazine. Sponsored by the National Fish Breeding Institute, the aim was to discover the most suitable type of apparatus and to find out if the current had any harmful effect on the fish and on fish breeding. Electrical fishing proved particularly successful in waters where plants, reeds, snags, and roots prevent the use of traditional fishing gear. Field experiments were carried out for 11 months mainly in the autumn and winter of 1950-51.

The apparatus finally adopted consisted of an electric generator capable of producing up to 300 volts and powered by an 8 hp. motor. It was found preferable to use the apparatus from a small craft, to which a copper strip had been fitted to the keel to act as a negative electrode.

The postive electrode is fitted to the end of a wooden pole and attached to the generator by a length of cable. It consists of a basket-like construction covered with a fine metal mesh. The fisherman stands in the stern of the craft, which is kept in constant motion by an oarsman. When the craft is in a fishing area, the positive electrode is lowered into the water and the current switched on. An electric field is created around the positive electrode and any fish within a radius of one to two meters (3 to 6½ feet) is attracted to the positive electrode. It is stunned by the current and can be lifted out of the water in a net.

Although the radius of the current is small, the fact that the electrode can be dipped into the water about 100 times an hour means that a large area of water can be covered. It was found that the best results were obtained in cooler weather when the fish were more sluggish, and fishing can even be carried out when there is thin ice on the water. Fish which are too small or are otherwise unsuitable can be left to recover and swim away. Also, small fish are less attracted by the current than bigger ones.

Direct current is used, as alternating current paralyzes the fish and makes them sink to the bottom almost immediately. The strength of the current used varies considerably, but even when full power is used it is not practicable to fish in water more than six feet deep. The electrode is dipped in the water for up to eight seconds at a time.

The experiments showed that electric fishing while not suitable for big rivers and large expanses of water, gives excellent results when used in favorable areas. One boat fishing for six weeks on the Nagyberen River, where traditional methods are impracticable, caught 5½ metric tons of fish.

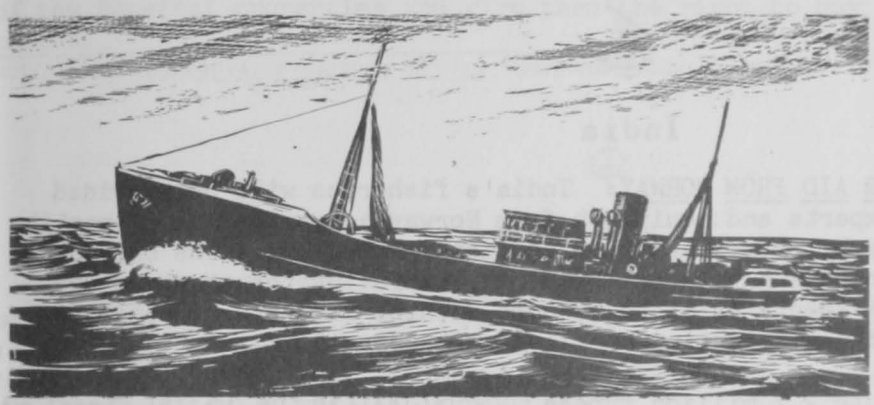
It is intended to encourage fishing by electricity in appropriate waters. The method is also to be used to rid rivers and ponds of cannibal fish and to catch fish for breeding in ponds.

Iceland

FISHERIES OUTLOOK FOR 1953: The beginning of the main winter fisheries took place in the face of contracting markets for both frozen and salted fish and stocks of processed fish which are already taxing Iceland's limited storage facilities. The outlook is so poor that the freezing plants have so far been unwilling to agree

to a renewal of last year's price of I.kr. 1.00 per kilo (about 2.8 U. S. cents per pound) for cod (gutted with head on), to be paid to the motorboat operators. Price discussions are now going on, after the actual start of fishing operations has taken place, states a January 28 U. S. consular dispatch from Reykjavik. The most favorable market outlook at present is for stockfish (dried cod). This has been a significant export commodity only during the past two years, but will probably be of increasing importance in the future as Iceland develops its own markets for this commodity. Iceland's largest buyer of stockfish is at present the Federal Republic of Germany, which re-exports the fish to African customers. Iceland lacks experience in fish drying for export, and the weather at the beginning of the season is somewhat risky, but the prospects are that drying will be done on a much larger scale this year.

PLAN TO INCREASE FISHERY PRODUCTS EXPORTS: A representative of the Icelandic Foreign Office's Commercial Section is now in Warsaw negotiating a renewal of the Icelandic-Polish trade agreement, which expired at the end of 1952. The increasing importance of compensation trade in Iceland's search for markets for fisheries products has led to attempts to arrange triangular deals by which Iceland will buy more of a product than she can consume, and re-export the surplus. It can be expected that Iceland will attempt to re-export Spanish oranges to the Faroe Islands and certain "curtain" countries, particularly Hungary. The Icelandic Chamber of Commerce has taken the lead in promoting this type of trade which, it is hoped, will improve Iceland's export possibilities by making it possible for her to offer her customers an attractive "package" of commodities, and at the same time enabling Iceland's suppliers to take more Icelandic fish.



ICELANDIC STEAM TRAWLER.

U. S. ARMY VETERINARIAN VISITS FREEZING PLANTS: The Chief Veterinarian for the U. S. Army's European Command visited Iceland in January to inspect fish freezing plants as a possible source of supplies of fish to the U. S. Army. The Army's needs, procurement, and sanitary inspection procedures were discussed at a meeting attended by representatives of the organizations exporting frozen fish, the Ministry of Commerce, and the Legation. A number of freezing plants in the Reykjavik, Akranes, Keflavik area were inspected and the Veterinarian reported that he was very much impressed with the plants he saw. He is recommending that the plants be put on the Army's approved list. U. S. Army requirements are for 250,000 pounds of fish monthly; and while this is a comparatively modest amount, the Icelandic producers are anxious to supply the U. S. Army because of increasingly poor prospects for marketing the fish caught during the season just beginning. (Editor's Note: Although not specifically stated, requirements are for U. S. troops in Iceland only. Purchase of fish abroad to meet requirements of troops in United States not contemplated, according to the U. S. Army Quartermaster Corps.)

MOTORBOAT-FISHING-FLEET LABOR DISPUTE: A strike at the beginning of the main South Coast season involved approximately 650 seamen and immobilized the motorboat fishing fleet in Reykjavik and Hafnarfjordur. It began on January 1 and a settle-

ment was reached on January 21. The principal demand of the strikers was for an increased wage guarantee. The settlement substantially met this demand and introduced a guarantee for the latter half of the year, which the previous agreement did not contain.

RENEWAL OF MOTORBOAT CURRENCY AGREEMENT: Negotiations are now taking place regarding the renewal of the currency retention scheme for the motorboat fishing fleet. The motorboat owners are attempting to obtain a larger share of the foreign exchange proceeds of their exports. As a collateral demand they are asking that they be allowed to name one member of the Government's Economic Board, as they contend that no one on the present Board knows the fishing industry well enough. The owners are also pressing for a reduction in the interest rate of the banks on operational loans to fishing-boat operators, from the present 7 percent to 5 percent. The prospects are for a renewal of the currency scheme on the same basis as before, with a possible concession on the question of interest rate.

India

FISHERIES TO RECEIVE AID FROM NORWAY: India's fisheries will be provided with fishery technical experts and equipment from Norway as part of a tri-partite agreement signed recently by representatives of India, Norway, and the United Nations. The agreement includes an over-all plan for improving the economic and social conditions in a limited area of Travancore-Cochin, on the west coast of India, states the Norwegian Information Service on February 5.

Norway will contribute 2.7 million rupees (US$560,000) in the 1953/54 fiscal year toward technical aid to a community of some 12,000 fishermen living on the shores of the Ashtamudi Lagoon in the estuary of the Callada River. In the same period, the Government of India will spend 10.6 million rupees (US$2.2 million) on developing fisheries in this same area.

Among the projects that will have top priority are: (1) the installation of Norwegian engines in Indian fishing craft; (2) promoting rational methods of handling fish; (3) construction of an ice-making plant for the fisheries; (4) purification of drinking water; and (5) establishment of a health center.

The Norwegian assistance will be financed by a fund voted by the Parliament, later to be supplemented by the proceeds from a nationwide collection drive now being organized.

Iran

GOVERNMENT TAKES CONTROL OF IRANIAN-SOVIET JOINT FISHERY COMPANY: The Iranian Government took over control on February 1, 1953, of the former Iranian-Soviet joint fishery company in Iran. The company will now operate under the name of the National Fisheries Company, according to recent newspaper press releases from that country. The 25-year contract (signed in 1927) expired on January 31, 1953, 25 years after the agreement went into effect.

The Russian officials of the jointly-owned firm closed their accounts shortly after the first of February, according to the press reports quoted by U. S. Embassy

dispatches from Tehran. The financial and administrative affairs of the firm will now be managed by Iranian officials and the Soviet Government will no longer have any interest in its financial affairs. Iran officials have replaced former Soviet officials in the accounts department. Iranian Government representatives visited various installations of the fisheries and issued new instructions for each section. Among the technical staff, 29 Soviet nationals continued with their work to prevent a breakdown of operations pending their replacement.

The 1927 agreement provided that when the contract expired the operations of the company would cease and the assets would be divided equally between the two countries. One Iranian Government official expressed confidence that the procedure of liquidating the assets would run smoothly, and when finally settled some Russian experts may remain in Iran to help operate the new company.

It is understood that the Iranians plan to pay in fish for the Russians' half of the physical properties and give them the right to buy all of the new company's output.

NOTE: SEE COMMERCIAL FISHERIES REVIEW, NOVEMBER 1952, P. 37.

Japan

CANNED AND FROZEN TUNA EXPORT QUOTA TO UNITED STATES INCREASED: The export of an additional 3,000 short tons of frozen tuna and 150,000 cases of canned tuna to the United States for the period April 1952 to March 1953 has been authorized by the Japanese Ministry of International Trade, reports a February 17 U. S. Embassy dispatch from Tokyo.

The Japanese Government on April 7, 1952, established a quota for the export of frozen and canned tuna to the United States for April 1952-March 1953. The original quota for frozen tuna was 12,000 short tons; last September this was increased by 6,000 tons to 18,000 tons; and the latest increase of 3,000 tons raises the quota to 21,000 tons. The original quota for canned tuna was 1,000,000 cases and the present increase raises it to 1,150,000 cases.

NOTE: THERE HAS BEEN SOME CONFUSION AS TO WHETHER THE QUOTA WAS EXPRESSED IN METRIC OR SHORT TONS. HOWEVER, ACCORDING TO RECENT INFORMATION IT IS REPORTED THAT THE JAPANESE GOVERNMENT HAS ALWAYS REPORTED THE QUOTA FOR FROZEN TUNA EXPORTS TO THE UNITED STATES IN SHORT TONS.

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FISHERIES PRODUCTION OUTLOOK THROUGH 1957: Japanese fisheries production is expected to steadily rise each year until it reaches approximately 10.8 billion pounds in 1957 as compared with the 7.9 billion pounds produced in 1951 and an estimated 8.5 billion pounds in 1952 (see table). The 1957 estimate represents a 27-percent increase above the prewar level of 1936. This prediction, published in the Japanese press (Kyodo, December 3, and Tokyo Shinbun, December 2), was made by the Japanese Fisheries Agency, reports a U. S. Embassy dispatch from Tokyo.

Estimated Japanese Fisheries Production, 1952-57

Year	Estimated Production	Production Index
	Billions of Lbs.	(1936 = 100)
1952	8.5	99
1953	8.9	105
1954	9.4	110
1955	9.8	115
1956	9.7	121
1957	10.8	127

The upward trend in catch is expected to result from: (1) the shift from coastal fishing to more productive offshore fishing grounds, including exploration and development of some of the

more distant areas; (2) improvement in coastal fisheries with respect to mackerel-pike, cuttlefish, and mackerel, and the revival of the sardine fisheries as a result of increased abundance through natural causes; (3) application of conservation measures to reduce overfishing in inshore and coastal fisheries and to insure the best utilization on a sustained-yield basis; and (4) continued improvement in the whaling catch, reaching prewar levels.

The Japanese Fisheries Agency anticipates that fishermen will require government financial and other assistance to increase fishing fleets and effect nec-

BULL TRAWLERS USED BY JAPANESE FISHERMEN IN THE EAST CHINA SEA. OPERATED IN PAIRS. FUKUOKA, KYUSHU, JAPAN.

essary changes in the types and locations of fisheries activities to attain the production goal set for 1957.

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WHALE-CATCHER BOAT LOCATES GOOD TUNA GROUNDS IN CORAL SEA: Experimental fishing by a Japanese whale catcher (Fumi Maru No. 15) en route to the Antarctic has revealed indications of good catches of tuna in the Coral Sea between Australia and New Caledonia, according to a Japanese press report (Mainichi Shimbun, December 20). This catcher (attached to the factoryship Nisskin Maru) did some experimental fishing with long lines in waters south of the equator. Good tuna fishing was indicated at 19°43' S. latitude and 156°32' E. longitude. The catch of the brief experimental fishing consisted of 11 yellowfin tuna, 8 albacore, 1 broadbill swordfish, and 15 Spanish mackerel. This is equivalent to a Japanese tuna boat catch of 350 baskets of gear on regular long-line operations, or 256,000 pounds per haul.

This information was received with considerable interest by the tuna fishermen at Misaki, one of the leading tuna ports in Japan. Misaki is 3,480 miles from the new tuna area. Tuna fishermen believe this distant fishing ground can be fished by the large-sized tuna boats (350 gross-ton class) which have been completed or are under construction. Indications are that Japanese boats will soon be making trips to this newly-reported tuna area to determine the possibility of full-scale commercial operations.

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WHALE OIL SOLD TO WEST GERMANY: An agreement for the sale of 12,250 metric tons of Japanese whale oil to West Germany was reached recently. This should go a long way towards solving Japan's difficulty in disposing of the bulk of its 1951/52 Antarctic whaling production, according to a Japanese press report (Kyodo, December 12, 1952). This amount is 35 percent of Japan's total production (34,700 metric tons) of whale oil for 1951/52. In exchange for the whale oil (in storage in Europe), West Germany is expected to sell Japan 26,000 metric tons of Cuban sugar.

Several factors contributed to Japan's inability to dispose of the 1951/52 Antarctic production of whale oil:

1. On the export market: (a) whale oil was banned by the United Kingdom, one of the largest consumers, because of its import curtailment policy; (b) Germany, the Netherlands, and other countries in Europe suffered the loss of markets due to Japan's excessive export credit; and (c) the supply of whale oil increased.

2. On the domestic market: the sale of whale oil has been adversely affected by imports of cheap beef tallow from the United States.

The price of whale oil has been affected by the world-wide increase in the production of vegetable oils. Because of the decline in the price of vegetable oils, the whale-oil price decreased from £120 (US$336) per ton in December 1951 (the beginning of the whaling season) to £70 (US$196) per ton in May 1952 after the whaling season had ended. The price quoted in the deal with West Germany is approximately £95 (US$266) per ton.

The Japanese whaling industry is endeavoring to dispose of its whale-oil stocks in storage in Japan--approximately 23,000 metric tons. The Fisheries Committees of the Lower House on December 19, 1952, called on the Japanese Government to purchase whale oil to stabilize the price. No decision has been made by the Government on this problem.

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FISHING VESSELS LAND AT HONG KONG: Two Japanese otter trawlers landed their catches at Hong Kong on December 6, marking the first Japanese catch to be landed directly at that port in the postwar period, reports the Japanese press (Nippon Times, December 8). The two boats, owned by a Tokyo company, are part of a 13-boat fleet operating under a special license granted the firm for fishing in the South China Sea, including the area off Hong Kong. This trawler fleet is headed by the mothership Baikal Maru of 7,477 gross tons.

These landings are the result of negotiations at Hong Kong between a representative of the Japanese fishing company and Hong Kong Government officials. In discussions with Hong Kong officials regarding fishing and marketing conditions, the Japanese representative was informed that there were no legal objections to the landing of catches by Japanese fishing boats although it was expected that Hong Kong fishermen would oppose such landings. However, the officials added that the catches would have to be sold through the Government marketing system, to which the Japanese representative agreed.

The Hong Kong officials also stated that the current supply of fish was considerably below requirements since the local population has increased greatly in the past year or so, largely because of the influx from Red China. The Hong Kong fleet is apparently incapable of adequately supplying this increased need at the present time. It was believed, therefore, that landings by Japanese fishing boats would be helpful in meeting the shortage of animal protein foods.

Anticipating that Hong Kong fishermen would object to the landings by Japanese boats and wishing to prevent any adverse effect of such landings on the Hong Kong market, the Japanese company plans to limit landings by using only two trawlers of its fleet. It further plans to hold the landed catches to limited quantities and to space them over specified intervals of time to prevent a drastic drop in fish prices on the Hong Kong market. The catch of the rest of the Japanese fleet operating off Hong Kong will be carried directly to Japan.

Hong Kong fishermen have already voiced opposition to the landings of Japanese catches (Kyodo, November 29). They charged that a sharp drop (50 percent) in fish prices occurred prewar when Japanese fishing boats "suddenly dumped" their catches at Hong Kong.

According to a December 7 press report, the two Japanese trawlers landed approximately two metric tons of fish and the catch was sold through Hong Kong Government channels. The fish arrived at a time when recent adverse fishing weather had resulted in much smaller catches by Hong Kong fishermen.

The Japanese company received information from Hong Kong on December 9 that good progress had been made in clarifying a misunderstanding on the quantity of Japanese-caught fish to be landed and that the "situation was quiet." The Japanese company is anxious to avoid international friction and, therefore, carefully reviewed the situation and discussed the project with responsible Hong Kong officials before deciding to send its boats into that port.

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FISHING RESTRICTIONS OFF KOREA CAUSE CONCERN: The Japanese have expressed concern over the restrictions on fishing in areas off South Korea as a result of the "Sea Defense Zone" established by the Commander-in-Chief of the United Nations Forces, a U. S. Embassy dispatch from Tokyo dated December 29 states. It is hoped by the Japanese that a solution will be found which will allow Japanese fishermen to have access to those waters.

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JAPANESE-KOREAN DISPUTE OVER FISHING AREAS OFF KOREA: Korean President Rhee has stated his willingness to meet with representatives of the Japanese fishing industry to discuss problems of mutual interest to Japanese and Korean fisheries.

The scheduled meeting (expected to take place in February) developed from a request to President Rhee by the Japanese fishing industry to lift the Korean restrictions on Japanese fishing inside of the Rhee Line which was established by unilateral action of Korea in January 1952 by a proclamation by President Rhee. The Japanese Government has objected to Korea's action in claiming territorial jurisdiction beyond the international three-mile limit and extending into "high seas" areas. Seizures of Japanese vessels by Korean patrol boats have taken place over the last several months. These have been vigorously protested by the Japanese fishing industry operating in the waters off South Korea. This topic has received wide publicity in the Japanese press.

Although the discussions between President Rhee and his officials and the Japanese fishing delegation will be informal, fishery circles hope that they will pave the way for the solution of fisheries disputes by official negotiations which may follow between the Governments of Korea and Japan.

The newly organized Great Japan Fisheries Society is an important supporter of efforts to seek an amicable solution to the Japan-Korea dispute over fishing areas off Korea. Reorganization of this Society was begun in December 1952 and completed January 12, 1953.

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PEARL-SHELL FISHING PLANNED IN THE ARAFURA SEA: Pearl-shell fishing in the Arafura Sea (north of Australia) has been authorized by the Japanese Government for the first time in the postwar era, states a December 17 dispatch from the United States Embassy in Tokyo. Fishing will be by mothership operations on the high seas by a private company organized on December 5, 1952. Final composition of this expedition has not been decided as yet, but it is expected that it will consist of not more than one mothership (tonnage not known), 25 diver boats (50 to 80 gross tons average), and 70 Japanese divers. The fleet will probably sail from Japan in late February or early March 1953.

A total of 25 applications have been approved by the Japanese Fisheries Agency from a total of 78 received. The Agency gave preference to those who had engaged in pearl-shell fishing before the war, and all approved applicants have had such experience. Those authorized to engage in this activity will also be required to obtain special operational licenses, provided the vessels and other conditions meet Government requirements.

The Government has limited the annual catch to 1,250 metric tons to avoid catches in excess of requirements that would oversupply the limited market. The Government has also imposed a minimum oyster-size limit. The landed catch will consist only of shells 15 centimeters or larger. The catch will be brought to Japan and processed into shell buttons. It is reported a New York firm will be a principal distributor.

Prior to World War II a fleet of Japanese divers fished for pearl shells in the Arafura Sea. According to reports, the fleet numbered 170 boats and 2,200 fishermen at its peak, and produced an annual catch of 3,800 metric tons. A large part of the production was exported to the United States button markets. In 1923, the Japanese also began experiments in the culture of the pearl-shell oyster at Buton, Celebes. In 1930, a company was organized in the interest of further development in the culture of the pearl-shell oyster. This company was in existence until 1944.

JAPANESE GOVERNMENT

Mexico

U. S. VESSELS ACCUSED OF FISHING IN MEXICAN TERRITORIAL WATERS: According to reports of Mexican commercial fishermen, approximately 30 United States shrimp fishing vessels are regularly operating off the coast of Mexico between Tampico and Tuxpan, frequently within one or two miles off the coast. These reports also indicate that the vessels carry an unusually large number of small arms. A large fleet of United States fishing vessels is also reported in Campeche Sound, according to reports transmitted by the U. S. Embassy at Mexico City in a February 13 dispatch.

United States operators of fishing boats operating near Mexican waters are notified that foreign vessels found fishing in Mexican waters without authorization from the Mexican Government may be seized by Mexican Authorities. Mexico considers its territorial waters to extend nine miles out to sea.

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STATUS OF FISHERIES, 1951: The total investment of capital in the Mexican fishery industries amounted to approximately 250 million pesos (US$29 million) as of December 30, 1951, reports the November 1952 World Fish Trade, a Danish trade periodical. Further expansion is predicted.

There were at least 36 freezing plants operating in Mexico during 1951--29 on the Pacific Coast and 7 on the coast of the Gulf of Mexico. In addition, there were 27 plants processing sardines, tuna, bonito, Spanish mackerel, and abalone for both export and domestic consumption. These processing plants are located in the states of Sonora, Sinaloa, Baja California, and Campeche.

Total exports of shrimp to the United States in 1951 amounted to 39,652,640 pounds. One-third of this total was caught in the Gulf of Mexico and the remainder in the Pacific Ocean, including the Gulf of California.

Government revenue through taxes on fishery products exports has been steadily increasing.

Norway

HUGE FISH-FREEZING AND COLD-STORAGE PLANT BEGINS OPERATIONS: A fish-freezing and cold-storage plant, considered to be the world's largest, was scheduled for testing in Bergen, Norway, late in January, according to a report in Fiskaren (January 14), a Norwegian trade periodical. The plant was expected to begin accepting herring for freezing in half-boxes (44 pounds) at a rate of 2,500 boxes per 24-hour day. During the trial operation, storage will be available for about 40,000 boxes.

When the plant is in full operation later in the summer, it will be able to freeze 5,000 half-boxes per 24-hour day and store 12,000 metric tons of fish, including herring. The dry-freezing capacity will be 75 metric tons per 24-hour day, with special consideration for tuna. The plant is equipped with refrigeration machinery of American manufacture.

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WHALE-MEAT INDUSTRY: Production: A total of 6,800 metric tons of whale meat was produced in Norway in 1952, compared with 5,420 metric tons in 1951, reports a December 15, 1952, U. S. Embassy dispatch from Oslo (see table). It is expected that the future annual production will remain at between 5,000 and 7,000 metric tons.

Table 1 - Norwegian Production of Whale Meat, 1951-52

Kind of Whale-Meat Product	1952	1951
	(Metric Tons)	
Steak	2,500	2,300
Manufacturing meat	4,300	1,150
Animal food		1,970
Total	6,800	5,420

The main whale-catching districts are located on the west coast of Norway which has about 100 deep-freezing plants. The total capacity of these plants is well over 100 metric tons per 24-hour day. There are 4 shore whaling stations, operating 3 catcher boats each. These catcher boats are mainly engaged in catching large whales, which they tow to the shore stations for processing. In addition, there are 240 smaller boats catching smaller whales. The number has been reduced from over 400 in previous years in order to avoid reduction of the number of whales. The small boats, in contrast to the whale catchers of the shore stations, strip the whales of blubber and cut the meat in the catching area. After the meat has cooled, it is iced.

The Norwegian Government, through the Office of Whaling of the Ministry of Industries, issues licenses valid for one year to small boat owners who wish to engage in whale catching. Licenses were issued to 240 boats for the 1952 season, less than the number issued in previous years. In order to avoid depleting the whale supply, the Government by licensing larger boats, is attempting to encourage whale catching farther from the Norwegian coast.

The catching season for small boats is from March 15 through September 14, with the exception of the period July 1 through 20. The catching season for the shore stations is from April 20 through October 19. The shore stations are allowed to catch whales during the July 1-20 period, but they are not allowed to market whale meat during this period. The shore stations are issued licenses valid for 7 years.

Attempts have been made to have whales processed within 24 hours after killing, but this is very difficult to control. In any event, meat intended for sale for human or animal consumption is inspected and passed by government inspectors. Meat which does not pass inspection is processed into other products.

Processing Regulations: Regulations on the handling and packing of whale meat specify, in part, that:

All whale meat packers must be authorized by the Ministry of Industries.

As soon as possible after catching, the blood shall be drawn from all whales which are to be towed ashore for processing.

Prior to towing, all whales shall be opened in order that they may be eviscerated during towing.

The whales shall be stripped of blubber as soon as they have been brought ashore.

During processing, the whale meat is to be graded as follows:

1. Whale steak - Meat cut from the back or side of the whale, of at least a 50-square-centimeter cross section area down through the grain.

2. Manufacturing meat - The same meat as whale steak, but of smaller cuts.

3. Whale-tongue meat - The light colored meat from the tongue.

4. Animal food or waste meat - All other meat from the whale.

The meat should be deep frozen within 72 hours from the time freezing is started.

Exports of grades of whale meat other than "whale steak" or "manufacturing meat," and whale meat which is not frozen, are prohibited.

Exports: Exports of whale and seal meat from Norway in the period January-October 1952 totaled 3,861 metric tons (table 2). In the entire year 1951 exports totaled 1,144 metric tons. Frozen whale meat exports are not available separately, but seal meat exports are an insignificant part of the total. About 56 percent of the total 1952 production of whale meat has been exported at an average f.o.b price of 1.68 kroner per kilo (10½ U.S. cents per pound). About 90 percent of total exports went to the United Kingdom.

Wholesale Frozen Whale-Meat Prices: Prices paid by Norwegian wholesale distributors for frozen whale steak for human consumption has varied from 2.75 to 3.25 kroner per kilogram (17½-20½ U.S. cents per pound) during the last few years. The price of frozen whale meat for animal consumption has varied between 1.00 and 1.50 kroner per kilogram (6½-9½ U.S. cents per pound).

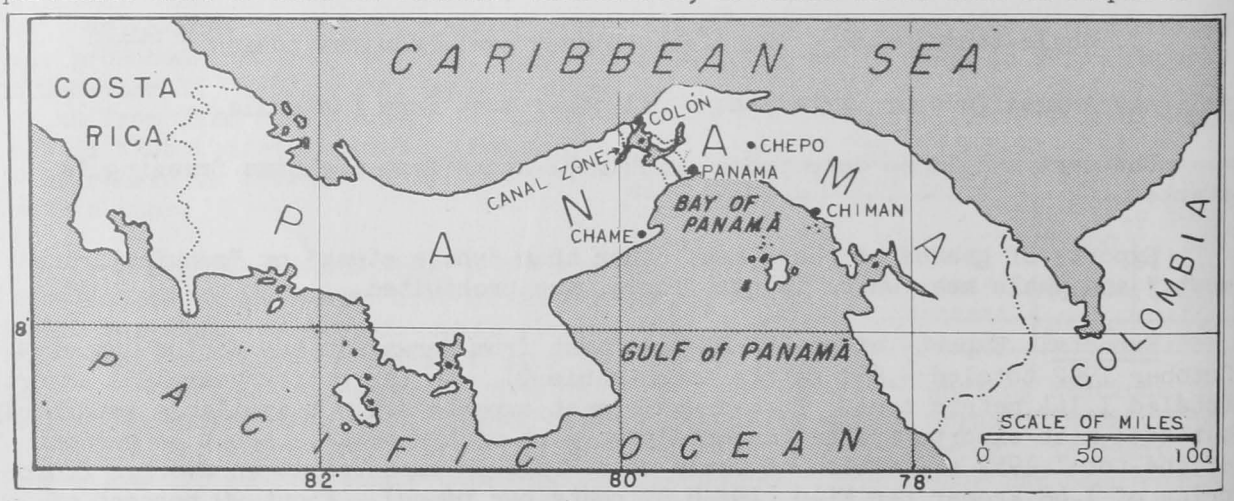
Table 2 - Norwegian Exports of Whale and Seal Meat, January-October 1952 and January-December 1951

Country of Destination	1952 January-October			1951 January-December		
	Quantity	Value (f.o.b.)		Quantity	Value (f.o.b.)	
	Metric Tons	1,000 Kroner	1,000 US$	Metric Tons	1,000 Kroner	1,000 US$
United States	292.2	693.9	97.0	16.8	42.3	5.9
Belgium	5.0	8.8	1.2	-	-	-
Denmark	2.3	2.3	.3	-	-	-
Sweden	3.3	10.5	1.5	10.1	6.6	.9
United Kingdom	3,537.7	5,718.5	799.8	398.4	352.5	49.3
Czechoslovakia	-	-	-	498.2	930.9	130.2
Western Germany	20.5	44.6	6.2	17.0	32.4	4.5
Austria	-	-	-	203.0	390.0	54.5
Total	3,861.0	6,478.7	906.1	1,143.5	1,754.7	245.4

One of the main exporters of whale meat (the only significant exporters of frozen whale meat for human consumption to the U. S.) indicated that in a normal catching season, if exports to the United Kingdom were reduced and favorable prices on the American market prevailed, he would be able to offer the following quantities for export to the U. S. annually: 1,000 metric tons whale steak, 1,000 tons manufacturing meat, and 2,000 tons whale meat for animal feeding. A representative from the Whaling Office of Ministry of Industries considered these figures too high, and believed that no more than about 2,000 tons of the Norwegian production of manufacturing meat and animal food could possibly be exported.

Panama

BAIT-FISHING VESSELS NO LONGER REQUIRED TO PURCHASE FUEL AND LUBRICANTS IN PANAMA: The purchase of fuel and lubricants in Panama by licensed bait-fishing vessels is no longer required. Panamanian Decree No. 73, dated February 13, modified Article 8 of Decree No. 30 (December 22, 1952) which had specified that such purchases must be made in Panama. Henceforth, licensed boats will be required only to buy their supplies and to make small repairs there. Decree No. 73 was effective commencing February 13, reports a February 16 dispatch from the U. S. Embassy at Panama.



This modification of Decree No. 30 is the direct result of the Panamanian Government's recognition of the fact that it now does not have available practical means for selling the fuel and lubricants in Panamanian territory and for collecting the related import duties. The oil companies refused to assist in collecting these duties.

Spain

REVIEW OF THE TUNA FISHERIES: Landings: The total catch of tuna, albacore, and bonito in Spain (including the Canary Islands) for the first ten months of 1952 amounted to 26,565 metric tons (table 1), reports a January 2 U. S. Embassy dispatch from Madrid.

According to Spanish classifications, "tuna" includes the yellowfin and bluefin species, while skipjack, yellowtail, and bonito are classified under the general heading of "bonito." Albacore (also called "Bonito del norte") is classified separately. Data in this report are accordingly classified under three separate headings: "tuna," "bonito," and "albacore" in accordance with Spanish classifications.

Table 1 - Spanish Tuna and Tuna-Like Fish Landings (including Canary Islands), 1947-52

	Jan.-Oct. 1952	1951	1950	1949	1948	1947
	(Metric Tons)					
Tuna	4,538	7,005	8,574	15,210	10,126	15,573
Albacore	20,180	15,343	18,508	16,983	14,622	16,930
Bonito	1,847	9,989	12,964	1,405	275	858
Total	26,565	32,337	40,046	33,599	25,023	33,361

Fishing and the Fleet: The Spanish tuna fishing industry is centered chiefly in the Canary Islands and the Provinces of Huelva and Cadiz. Bonito and albacore fishing is scattered generally around the northern and northwestern littoral, with the Cantabrian region ranking first in bonito and albacore catches.

Tuna fishing off the shores of Huelva and Cadiz is from fixed nets, owned by one company. This organization is believed to be capitalized at between 75 and 100 million pesetas (US$1,892,000-2,522,000). The Spanish Government controls 52 percent of its capital stock and private Spanish interests the remainder. In 1951 it operated 218 boats of all types and employed 1,400 persons in fishing and tending its installations. Fishermen earn a fixed salary plus a percentage of the catch with average earnings amounting to about 1,000 pesetas (US$25) monthly. This firm also operates a number of canneries in this area, the output of which consists of various species of fish for export.

Tuna fishing in the Canaries supplies about 8 percent of the total fish catch in that area. There are no available data relating to the percentage of the Canary Island fleet specializing in tuna fishing. The total fishing fleet (excluding oar-propelled boats) in the Canary Islands numbers some 557 units with a net tonnage of 11,894 metric tons and a declared value of approximately 76 million pesetas (US$1,917,000).

The entire Cantabrian fishing fleet of Northern Spain in 1951 numbered 2,371 vessels (excluding oar-propelled) with a net tonnage of 56,818 metric tons. Similarly, there is no breakdown of data relating to the percentage of vessels specializing in albacore or bonito fishing. The greater part of this fleet is reported to be antiquated and badly in need of replacement. There are, however, a number of modern and well-equipped fishing vessels included in the fleet.

The fleet engaged in fishing for albacore off the Vigo area is estimated to number some 50 units of from 80 to 150 tons. Its fishing grounds are roughly described as an area 50 to 60 miles from Vigo off the Spanish and Portugese coasts and as far north as the 45th parallel, near the Grand Sole. The season generally runs from the beginning of June through the middle of October, with the larger vessels extending their operations later in the season up to the 45th parallel.

The Direccion General de Pesca Maritima states that the Spanish tuna fleet, as such, is relatively small. The Government has apparently made no special effort to develop a tuna industry since the end of the Spanish Civil War.

In 1950 the Government repealed the ban against the construction of fishing vessels of less than 100 tons and offered subsidies for the construction of new vessels and the refitting of old ones. However, new construction was hampered by the lack of raw materials, ship fittings, and the requirement that one old unit be removed from service for every new one constructed under a subsidy. Since the majority of owners possessed only one or two units, they could not afford to remove their vessels from service while awaiting the construction of new ones. The scarcity and excessive cost of ship-building materials still hamper the expansion of the Spanish fishing fleet.

Prices: Prices paid to fishermen vary throughout the different regions. The national averages for the years 1949-52 are shown in table 2.

Table 2 - Spanish Tuna and Tuna-Like Fish Ex-vessel Prices, 1949-52

	1952		1951		1950		1949	
	Pesetas Per Kilo	U.S. Cents Per Lb.	Pesetas Per Kilo	U.S. Cents Per Lb.	Pesetas Per Kilo	U.S. Cents Per Lb.	Pesetas Per Kilo	U.S. Cents Per Lb.
Tuna	6.40	7.34	6.59	7.55	5.68	6.51	4.55	5.22
Albacore	7.75	8.89	8.24	9.45	7.65	8.77	7.79	8.93
Bonito	7.05	8.08	8.44	9.68	7.26	8.32	5.24	6.01

Canning Industry: An impediment to the development of the fish-canning industry in general is the shortage of tinplate. With increased arrivals from the United States and European sources Spain is gradually allocating more to the fish-packing industry. Packers still complain, however, that they could export more fish if there were sufficient tinplate available.

About 20 percent of the approximately 425 fish-canning plants in operation during 1951 listed tuna and tuna-like fish among their specialties. The Vigo area is the leading packing center with a total of 103 plants--23 of which handle tuna, bonito, and albacore, among other species. Albacore fishing for canning in this area sprang into importance about 1944 when the scarcity of sardines forced the canning industry to turn to other species. When sardines are available, the canning of albacore is estimated to represent about 16 percent of total production, practically all of which is for export. When sardines are not available, as has been the case for the past several years, the canning of albacore is estimated to represent about 45 percent of production.

The canning facilities in the Vigo area are estimated to account for about 80 percent of the total volume of the Spanish fish-canning industry. There are no figures available as to the percentage of the national output of tuna and tuna-like fish canned in any one area. Other important areas in which tuna and tuna-like fish are canned are Oviedo, Vizcaya, Santander, and La Coruna. Of the 10 fish-canning plants in the Canary Islands, 7 specialize in canning tuna.

It is estimated that approximately 80 percent of the tuna and tuna-like fish canned in Spain is packed in olive oil, the remainder in a mild solution of vinegar and salt with a flavoring agent, such as laurel leaves. During the fishing season a small percentage of the catch is sold fresh in the local markets. There are limited cold-storage facilities in some of the principal fishing centers in Spain, but there are no special fish-freezing plants. It is reported, however, that a Vigo firm has such a plant under order but not in operation.

Exports: Various trade sources estimate exports of tuna, albacore, and bonito as between 70 and 85 percent of the total catch. The same sources state that Italy is Spain's traditional export market for tuna and tuna-like fish, followed by Switzerland, Egypt, Cuba, Great Britain, Uruguay, Mexico, United States, and Germany.

Sweden

FISH CONSUMPTION, 1949-51: The total consumption of fishery products in Sweden during 1951 amounted to 107,700 metric tons, reports a December 5 U. S. consular dispatch from Goteborg (see table). This was a decrease of 3 percent from the total consumption in 1950, and 5 percent less than for 1949.

Consumption of fishery products during the first six months of 1952, according to preliminary estimates, amounted to approximately 48,175 metric tons, compared with 44,802 tons in the similar period of 1951 and 53,855 tons in 1950.

Swedish Consumption of Fishery Products, 1949-51

Variety	1951		1950		1949	
	Total	Retail Value	Total	Retail Value	Total	Retail Value
	Metric Tons	US$	Metric Tons	US$	Metric Tons	US$
Salted herring	10,000	3,417,000	11,300	3,378,400	15,000	4,845,000
Other fish and fish preserves	97,700	47,026,700	99,800	39,454,400	98,900	40,289,535
Total	107,700	50,443,700	111,100	42,832,800	113,900	45,134,535

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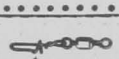
CANNED FISH PRODUCTION, 1947-49: The total production of canned fishery products in Sweden in 1949 amounted to 21,435 metric tons, an increase of 5 percent when compared with 1948, and 3 percent more than in 1947, states a December 5 consular dispatch from Goteborg. Herring snacks, anchovies, and sardines (in that order) were the leading items canned.

Swedish Production of Canned Fishery Products, 1947-49

Product	1949	1948	1947
	.....(Metric Tons).....		
Anchovies	4,687	5,211	5,499
Herring snacks	7,718	6,894	6,294
Mackerel preserves	489	544	538
Sardines	3,000	3,377	2,783
Caviar and other fish roe	1,364	1,414	935
Fish balls and minced fish	3,114	2,230	3,789
Other herring preserves	547	241	332
Other fish preserves	254	318	359
Shellfish preserves	262	259	220
Total	21,435	20,488	20,749



Union of South Africa

STATUS OF COMMERCIAL FISHERIES, 1952: The commercial fishery industries of the Union of South Africa produce about 600,000 metric tons of fishery products annually and are still in the process of expanding, states a December 23 U. S. consular dispatch from Cape Town. The industries are valued at close to £13 million (US$36 million).

The fishing fleet totals 2,558 craft--36 steam trawlers, 6 motor trawlers, 46 whaling vessels, 72 motorboats, 266 sail and row boats over 13 feet in length, and 1,493 dinghies under 13 feet. Approximately 8,000 fishermen are active in the industry and a similar number are engaged in the processing plants. Over 50,000 men, women, and children in South Africa are directly dependent on the fishing industry for a livelihood.

Trawling: Cape Town is the most important of the Union's trawling centers. Of the 62,500 metric tons of the fish caught by trawlers in 1951, 58,000 tons were landed in Cape Town, while the balance was handled at Port Elizabeth, East London, and Mossel Bay. Three-quarters of the total catch consisted of stockfish (Merluccius capensis).

Pilchard Fishery: South Africa's vast pilchard potential (which prior to the World War II years had been practically completely ignored) has developed into the Union's most important fishery industry. Now over 500,000 metric tons of pilchard and maasbanker are taken annually. At present there are 15 reduction plants--11 in the St. Helena-Saldanha Bay area and 4 (with licenses for 2 more) at Walvis Bay. These plants produce over 100,000 metric tons of fish meal and approximately 5,000,000 gallons of fish oil each year. The canning plants handle 30,000 metric tons of pilchard. One of the four major pilchard factories at Walvis Bay went into operation only in September 1952, two reduction plants, with capacities of 10 metric tons per hour, were in operation when the factory opened, and a third has now been completed.

Seven vessels are presently feeding the factory, which is producing only fish meal until the cannery is completed next year. Two vessels fishing at Walvis Bay for this plant are specially designed purse seiners--larger than the usual type. It is reported that the performances of these vessels are being watched with interest by the industry.

Nearly all pilchard canning companies report record trading profits for the most recent financial year and hopes for still better results are supported by the construction work in progress along the West Coast. It appears that the aggregate output of canned pilchard is soon to increase by 50 percent and this may be the limit for some time in order to preserve the resource.

Spiny Lobster Industry: Canned and frozen spiny lobster has also assumed an important role in the Union's fishing industry. About 28,000,000 pounds of spiny lobster are caught each year off the West Coast. The Government has imposed a ceiling of 7¼ million pounds on the annual exportation of canned and frozen spiny lobster tails.

The Union consumes about 2,000,000 pounds of spiny lobster of which about 600,000 pounds are in the form of frozen tails. The frozen spiny lobster fishery has also developed into an important dollar-earning industry through exports to the United States, while the canned product is exported mainly to the United Kingdom, Australia, and the Far East.

Standard Specifications Proposed: The South African Government recently issued two notices in its official gazette concerning the introduction of proposed compulsory standards specifications for canned fish and canned spiny lobster. Although these specifications will not be enforced until two months after the publication of a final notice, the Cape Town Chamber of Commerce has, at the request of the South African Bureau of Standards, recently advised its members to dispose of their existing stocks of canned fish and canned spiny lobster, as the final notice is to be issued in the very near future.

Trends and Developments: The most serious problem facing the fishery industry along the West Coast is the lack of fresh water for use by canneries and processing plants. There is however, a Government plan afoot to supply fresh water from the Berg River to Saldanha Bay and the area around the Berg River mouth.

Development of the industry and the responsibilities of providing amenities for those engaged in the industry are in the hands of the Fisheries Development Corporation of South Africa Limited. This organization, which was established in terms of the Fishing Industry Development Act of 1944, is at present a wholly Government-owned body.

Its main objects, as set out in the Act, are briefly as follows:

1. To establish and manage schemes for the promotion or better organization of the catching of fish and to finance such schemes.

2. To carry on the business of buying, selling, processing, and marketing of fish and fish products.

3. To acquire shares in any company engaged in catching fish.

4. To establish mutual benefit societies, social clubs, townships, housing utility companies, home ownership schemes, social and health services, and any other similar undertakings which may be beneficial to fishermen.

The organization has contributed much towards the success and stability of the industry and towards the general well being and social uplift of the fishermen. The Government has also taken active steps to establish a training scheme for fishermen to improve their efficiency. A Union Mercantile Marine Trading Advisory Board has been created to deal with the question of nautical training generally, with special reference to the training of fishermen.

Research: In 1950 the South African Government had a research ship Africana II specially designed and built for research work in the South African seas. The length of the vessel is 205 feet, displacement 1,300 tons, maximum speed 13.5 knots, and a range of 6,500 miles. It is fitted with radar, wireless, and echo-sounding equipment (down to a depth of over 4,000 fathoms). Accommodation is provided for 35 officers (including six scientists) and men. Two smaller vessels are also employed for inshore research work and patrolling spiny lobster sanctuaries.

Commercial enterprise is further aided indirectly by the Fishing Industry Research Institute which carries out research of a technological nature in the fields of canning, freezing, and processing of fisheries products. The Institute is shortly to be transferred to the grounds of the University of Cape Town where a modern block of twenty research laboratories is to be erected.

Other scientists and scientific bodies are also contributing their share to the accumulated knowledge of fishes of the coast of the Union. The Zoological

Department of the University of Cape Town is, for example, engaged in marine biological studies of estuarine waters, while the South African Council for Scientific and Industrial Research operates a special unit for the purpose of carrying out basic research into the industrial potentialities of marine resources.

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SOUTH-WEST AFRICA CURTAILS PILCHARD FISHING: The administration of South-West Africa set a limit on the number of pilchard fishing vessels each factory may operate at Walvis Bay, states a January 5 U. S. consular dispatch from Cape Town. Each factory will be limited to 24 vessels, except in cases where factories already have more than this number operating. It is reported that pilchard schools are so large that vessels have caught more fish than they can carry and are forced to discard some of the catch. Another factor prompting this action is the vessel congestion at fishing factory jetties where due to unloading delays fish rot in the holds. Now, no vessel may wait more than 12 hours before unloading.

United Kingdom

WHITE FISH AND HERRING INDUSTRIES BILL INTRODUCED: The "White Fish and Herring Industries Bill" introduced into the House of Commons on December 15, 1952, will provide grants towards the cost of building and equipping vessels for inshore and near- and middle-water fishing. The White Fish Authority stated in its first annual report that 75 percent of these vessels are over 30 years old, reports a December 18 U. S. Embassy dispatch from London.

Exchequer payments over a period of ten years will be authorized in the amount of £9 million (US$25 million) to the White Fish Authority and up to £750,000 (US$2,100,000) to the Herring Industry Board. The terms of the grants will apply only to vessels or engines ordered after July 1952. Thus, working owners will be eligible for a grant of 25 percent of the cost, with a maximum of £4,000 (US$11,100), and in other cases the grant will be 20 percent of the cost. Working fishermen also are eligible for grants for 25 percent up to a maximum of £1,000 (US$2,800) for new engines.

Under the Sea Fish Industry Act, 1951, the White Fish Authority may borrow up to £15 million (US$42 million) and the Herring Industry Board under its empowering legislation up to £2.5 million (US$7 million). These limits have now been raised to £25 million (US$69.6 million) and £4 million (US$11 million), respectively.

The existing white fish subsidy will be continued until March 31, 1958; the total amount allocated for such subsidy is now £7.5 million (US$20.9 million) but this limit may be raised to £10 million (US$27.8 million) subject to an affirmative resolution of the House of Commons.

The grants to be made by the Herring Industry Board towards the cost of new vessels and engines are similar to those of the white-fish industry. Furthermore, the powers of Ministers to make grants to the Board for promoting the sale of herring, the conversion of surplus herring to oil and meal, and other purposes will be extended for ten years from the passage of the Bill and the maximum payable is to be raised from £1.5 million to £3 million (US$4.2 to 8.4 million). The provision for grants for new vessels and engines does not apply to Northern Ireland, but the other provisions relate to the United Kingdom as a whole. A financial memorandum which accompanied the Bill estimated that during the coming financial year

(April 1, 1953, to March 31, 1954) grants will total £325,000 (US$905,000); advances to the Board in respect of boats and engines will amount to £120,000 (US$334,000); and the white fish subsidy will cost £1,950,000 (US$5,400,000).

None of the provisions of this Bill affect distant-water trawler fleets.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, JANUARY 1953, P. 66.

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HERRING MARKETING FUND PAYMENTS, 1951/52: In the fiscal year ending March 31, 1952, the Herring Industry Board was advanced £95,000 (US$264,000) from the Herring Industry Vote (Government grants), which was applied to loans to fishermen for provisions, reconditioning, and equipment of boats. No advances for these purposes are scheduled to be made after August 2, 1952.

Also, from the Herring Marketing Fund the Board was advanced £257,000 (US$715,500) for working capital, largely for the herring meal and oil schemes. There were no loans granted during the year for export promotion such as was previously granted British kipper exporters for assistance in breaking into the United States market, reports a January 6 U. S. Embassy dispatch from London.

U.S.S.R.

RUSSIAN FISHERIES STATUS, 1952: The Russian catch of fish in 1952 was 70 percent greater than in 1940, and the capacity (presumably its gross tonnage) of its fishing fleet was 3.2 times that of the prewar fleet, according to a report by a member of the Politburo published in the January 17 issue of The Fishing News, a British trade magazine. By 1955 the capacity of the fishing fleet would be increased to 4.5 times the prewar figure. Before World War II Russian fishermen landed the third largest catch in the world, estimated at 1,560,000 metric tons. Only the United States and Japan surpassed this catch.

The deep-sea catch amounted to 66 percent of the total 1952 landings as compared with the 1940 figure of 48 percent. While the catch off the Murmansk coast and the Baltic Sea was increasing satisfactorily, landings for the Sea of Azov, the Black Sea, the Caspian Sea, and Far Eastern fishing grounds were light.

There was every possibility that the total catch might be increased at an even higher rate than in the past, and that the output of high-quality fish products might also be considerably increased so as to fulfil the assignments of the current Five Year Plan--namely, to raise the catch to more than twice the 1940 level. To carry out this task it would be necessary to expand the number of coastal bases serving the fishing fleet and to build new ones, to build still more fish-processing factories, to increase the mechanization of catching and processing operations, and to expand the program for building fishermen's houses.

A large number of skilled fishery personnel--captains, navigators, and mechanics--have been trained in postwar years, though there is still a shortage of such men. There were in 1952 about 12,800 men under training as compared with 740 in 1940, stated the member of the Politburo.

The inland breeding of fish in ponds and reservoirs is another aspect of the fishing industry in the Soviet Union. The construction of the huge hydro-electric power stations on the Volga and the Don, as well as on the Dnieper, the Kura, and the Amu Darva rivers, had resulted in the establishment of immense reservoirs (in-

land fresh-water seas) which if properly developed could be the basis of fish-breeding on a vast scale and would lead to a large increase in stocks of bream, carp, pike, perch, and other fish.

The changes effected in the river system as a result of the hydro-electric power program, however, would substantially alter the natural conditions of fish propagation in the Caspian and Azov Seas, and would involve the intensive development of the breeding of the valuable species found there in order to prevent a depletion of stocks. The valuable sturgeon fishery, which was conducted by the Soviet Union under an agreement with Iran, is located in the South Caspian.

Hatcheries and special fish ponds must, therefore, be constructed on a large scale, stated the member of the Politburo. He complained that the Soviet Ministry of Fisheries had been very slow to carry out these measures. Ponds on collective farms are potentially a rich source of fish supplies. A big building program is envisaged. The levels to which the productivity of such ponds could be raised was shown by the experience of fish farms in three provinces in the Ukraine, where a number had achieved a yield of 1.5 to 2 tons of fish per pond hectare (just over two acres) per year.

In 1952 the Soviet Union claims that its cold-storage capacity for all frozen foods, including fish, had more than doubled, and that by the end of the current plan in 1955 it would be more than four times that of 1940. Delays in equipping the distribution network with mechanically-operated refrigeration plants were rapidly being overcome. In 1948 there had been 1,650 centers equipped with such plants; in 1952 there were 18,000, and by 1955 it was expected to total 40,000 plants.

The number of self-propelled refrigerator ships--mostly engaged in the fishing industry--was more than doubled in 1952, and by 1955 it would reach three times the prewar figure.

The five-year plan for 1951-55 was considered at the Communist Party conference held in Moscow recently, reports the February 1953 World Fishing, a British trade periodical. It estimates that the production of fish in 1955 will be 58 percent greater than in 1950. But it must be remembered that the target figure for the previous five-year plan was not achieved. It was set at 2,250,000 metric tons, but 1950 production was only 1,800,000 tons.

CANNED MACKEREL QUALITY ENHANCED BY BLANCHING FISH BEFORE FREEZING

In freezing mackerel for canning it was found that blanching for 7 to 8 minutes before freezing enhanced the quality of the canned product. Dipping in ascorbic acid solutions before freezing prevented non-blanched mackerel from becoming rancid, but had no effect on blanched mackerel. (Report of the Technological Laboratory of the Danish Ministry of Fisheries 1951.)

--World Fisheries Abstracts, vol. 3, no. 6, (Nov.-Dec. 1952), p. 1.