FOREIGN

Argentine Republic

SEEKING GERMAN FISHING EXPERTS: Argentina is planning to establish a fishing industry in Patagonia and has asked German government officials for assistance in recruiting 5 fish cutter captains and a limited number of experienced crew members, a March 16 American consular dispatch from Bremerhaven reports. Reportedly it is planned to build new discharging quays and cold storage plants in Patagonia, and to put into operation a fleet of large fish cutters.

Brazil

INTERNATIONAL AGREEMENT FOR THE REGULATION OF WHALING APPROVED BY BRAZILIAN CONGRESS: By Legislative Decree No. 14 of March 9, 1950, the Brazilian Congress approved the International Agreement for the Regulation of Whaling, and the annex thereto, signed in Washington on December 2, 1946, an American consular dispatch from Rio de Janeiro dated March 20 reports. The President of the Senate promulgated the decree, which was published in the Diario Oficial of March 10, 1950.

British North Borneo

REVIEW OF THE FISHERIES, 1949: Survey of Industry: A primary survey of the fishing industry in North Borneo continued in 1949, a March 30 American consular report from Singapore states. Surveys were made of the daily sales of fish in the Sandakan fish market with about 400 species of fish having been identified during the year. Although the question of establishing controlled cooperative societies was examined, it was concluded that their formation was premature at the present time.

Pond Culture: Experiments were carried out in the culture of fresh- and salt-water fish of suitable species to be introduced into "padi" areas when irrigation becomes available. Four fish ponds of one acre each were started outside of Sandakan, two of which were for fresh-water fish and two for salt-water fish. The fresh-water fish, sepat siam (Trichogaster pectoralis), consisted of 25 pairs. These fish are referred to as "the poor man's dinner," and are not a first-rate fish. Some of the fish will be sent to the Labuk Bay area in January 1950 for use in the "padi" fields. The salt-water fish ponds, which are still in the early experimental stage, consist mainly of mullet and herring.

Fishermen's Rehabilitation: A Fisherman's Rehabilitation Scheme was started whereby the government supplies hooks and twine for making fish nets for needy fishermen. Over 900 fishermen were supplied in this manner during 1949.

Collection of socio-economic data in regard to the debt-bondage system under which such a large number of fishermen exist was undertaken. Chinese "towkays" or moneylenders have for many years kept a large proportion of the native fishermen perpetually in debt through exhorbitant loans and the exaction of a large share of the profit from the fish catches. The North Borneo Fisheries Department is hopeful that it will be able to collect sufficient evidence whereby such "towkays" can be prosecuted.

A commercial venture, approved by government, will be started in 1950 whereby eight Chinese junks from Hong Kong, about 60 to 70 feet each in length, will carry on fishing activities along the West Coast of North Borneo. If successful, more boats of this type may be brought in.

Exports: The principal fisheries products exported during the year were salt fish, dried prawn and prawn dust, shark fins, and trochus shells. No fishery products were imported.

Exports of Fishery Products from North Borneo, 1948-49 (Quantity and Value)

Commodity	1949			1948		
	Quantity	Value		Quantity	Value	
	Metric Tons	Singapore $	U.S.$	Metric Tons	Singapore $	U.S.$
Fish, salted, dried, or canned	820	463,900	220,353	862	436,121	207,157
Fish maws	4	13,135	6,239	3	14,671	6,969
"Blachan"	1	96	46	2	608	289
Prawns, dried or fresh	135	288,579	137,075	103	234,513	111,394
Prawn scrap	91	16,334	7,759	144	15,807	7,508
Shark fins	1	2,509	1,192	1	2,580	1,226
Trepang	5	5,051	2,399	13	7,019	3,334
Other sea products	135	52,359	24,871	95	41,764	19,838
	Pounds			Pounds		
Turtle and turtle shell	521	588	279	82	93	44
Pearls, cultured or seed	138	59,554	28,288	52	13,211	6,275

NOTE: Values converted on the basis of the average rate of exchange of one Singapore dollar equals 47.5 cents U.S.

The Fisheries Department: The Borneo Fisheries Department has its main office at Sandakan with three substations located at Labuan, Tawau, and Jesselton. The equipment of the Department was increased in 1949 by the purchase of a locally-built vessel with a 34-h.p. diesel engine, which is used for inshore fishing tests and the training of fishermen in the use of powered fishing vessels.

Outlook: Improvements in the Colony's fishing industry will continue very slowly in view of the lack of sufficient funds allocated for the purchase of equipment.

Canada

GOVERNMENT'S PLANS FOR THE DEVELOPMENT OF THE COMMERCIAL FISHERIES: The Government's share in the program for the development of Canada's commercial fisheries will include leadership in research and consumer education, and action to formulate international policies designed to protect the fishery resources and help export trade.

This outline of the Government's plans was given in Ottawa by the Canadian Minister of Fisheries during a luncheon address on March 21 at the fifth annual meeting of the Fisheries Council of Canada, reports the March 1950 Trade News of the Canadian Fisheries Department.

In connection with research, the Government stated that "research was believed to form the headlights of the industry" and the program was being expanded further.

The Minister reported that at the present session of Parliament, the Canadian Department of Fisheries hoped to get ratification of the International Northwest Atlantic Fisheries Treaty which is aimed at the conservation of vast fishery resources off the Maritimes and Newfoundland.

With reference to a fisheries treaty for the Pacific, the Minister said:

> "We have under consideration also a treaty on fisheries for the Pacific which may become a separate treaty on fisheries or which may be incorporated as part of the Peace Treaty with Japan."

In addition, the Minister pointed out that consumer education was being pushed as rapidly as possible.

FISHING EFFICIENCY OF DORY SCHOONERS AND OTTER TRAWLERS: A Canadian study of the comparative efficiency of vessels in the capture of cod and haddock has been made possible through the plotting of the average catches of the four largest dory schooners and the four largest otter trawlers carrying out continuous fresh fishing operations from Canada's Atlantic seaboard.

A summary report on the Maritime Groundfish Investigation performed by the Atlantic Biological Station of the Fisheries Research Board of Canada, points out that the introduction of new fishing methods has an important effect on the catch of fish.

By measuring catches made with various fishing methods, an attempt is being made to assess the efficiency of each method and the potentialities of effecting an increase through improved fishing efficiency.

Detailed records of each offshore fishing trip gives the Fisheries Research Board valuable information on abundance and fishing efficiency. A backlog of trip reports collected by the Department of Fisheries has been useful in building up the long-term picture of offshore fishing.

The plotting of average catches shows that the relative catches of otter trawlers and schooners differ from year to year. When haddock were abundant in the thirties, otter trawling proved to be an effective fishing method, but when cod were abundant during war years, line-fishing vessels, in general, made better total catches. In some years fish are abundant on the smooth grounds on the tops of the fishing banks while in others the fish are more readily available on the deeper and rougher parts of the banks. Since otter trawling is restricted to the smoother fishing grounds and line fishing is less restricted by bottom type, otter trawl catches are more variable than those of schooners.

In comparison with otter trawling, dory fishing is an efficient fishing method on grounds adjacent to the Maritimes, according to the information obtained by this investigation. The lower capital cost and lower operating expenses in schooner fishing, together with the high efficiency of this method, particularly in fish-

ing salt cod, suggests that the dory method will not be replaced quickly by otter trawlers on the Canadian east coast. Dory fishing is a rigorous life and the survival of schooner fishing hinges on the problem of finding dory fishermen rather than the relative efficiency of the method.

A major part of the groundfish investigation is concerned with the measurement of catches made with methods which are new to the Maritimes. The West Coast long-lining method was studied by the construction and operation of the long-liner M.V. J.J. Cowie (49 gross tons) and the purchase of four small gurdies which were operated by inshore fishermen in various parts of the Maritimes. The experiments showed that the use of a gurdy in line fishing reduced effort and permitted the handling of more gear, and thus, more fish. Power hauling was shown to be particularly useful in hauling heavy gear and large fish from deep water. This work stimulated the development of power hauling of line trawls by inshore fishermen in the Maritimes and power haulers of various types are now common in south-western Nova Scotia.

During the past two years, the J.J. Cowie has been used for Danish seining experiments. The method is clearly efficient for the capture of flounders. However, it must be remembered that the value of Danish seines is strictly limited since the use of this gear is restricted to smooth bottom and such grounds are not common in the Maritimes.

Bait experiments in the hake fishery during the summer of 1949 at Souris, P.E.I., showed that squid and mackerel, although expensive, yielded a greater net profit than the cheaper baits which were available locally.

The development of a variety of fishing methods is essential if groundfish resources are to be exploited more fully. Many of the groundfish species with small mouths (rosefish and witch, yellowtail, and winter flounder) are not available to line fishermen and other methods of capture must be used for these species.

In the measurement of the groundfish catches of the Maritimes, the groundfish investigation has been concerned with measurements of species, area and season of total catch, landed value, fishing efficiency, new concentrations of fish, abundance, migrations, growth, recruitment and mortalities. All these measurements are considered to be of importance in determining the potentialities for increasing the groundfish catch of the future. About half of the effort of the investigation is spent on a study of fishing efficiency and exploration, and the other half in the statistics for the measurement of the abundance and the factors controlling abundance. It is expected that both lines of attack will pay dividends.

POSSIBLE MARINE SOURCES OF INSULIN BEING STUDIED: The Canadian Pacific Fisheries Experimental Station is investigating the possibilities of obtaining commercial quantities of insulin from certain types of fish and whales.

According to the Banting Institute, the demand for insulin has been doubling every five years since 1930. Since present supplies of insulin are obtained from beef pancreas, a relatively fixed supply, the potential importance of the fishing and whaling industries as suppliers of insulin can be readily visualized.

From investigations made during the summer of 1949, it would seem that the most promising marine sources of insulin on the Pacific Coast are to be found in halibut and whales. In the halibut, the insulin-producing specialized tissue known as islets of Langerhans is concentrated in a capsule closely associated with

the gall bladder. Previous investigation has shown that the insulin content of these capsules is very high. They are remarkably easy to find, but the material requires immediate preserving because of its rapid rate of deterioration. In the present investigation, two types of preservation were tried--freezing in the natural state and the use of an acid-alcohol mixture--and it remains to be seen which is the more effective.

In the case of whales, the islets of Langerhans tissue is dispersed throughout a digestive gland called the pancreas. The average whale pancreas weighs in the neighborhood of 75 pounds and for the purpose of this experiment, five representative samples were taken from the pancreas of 10 sperm, 9 finback and 4 humpback whales. This material was preserved by immediate freezing.

All the material obtained during this project will be forwarded to the Connaught Laboratories in Toronto where the insulin extraction will be carried out. When this is completed, information will be available as to the total cost of obtaining the insulin and, therefore, its market value.

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NEWFOUNDLAND'S LOBSTER FISHERY, 1949: Newfoundland's production of live lobsters for export during 1949 reached an all-time peak of 3,912,074 pounds, valued at $978,018 (Canadian)--an increase above 1948 of 9 percent in quantity and 25 percent in value, an American consular dispatch from St. John's, dated March 16, reports. Exports of canned lobster in 1949 were 140,112 pounds, approximately 7 percent over shipments in 1948.

Newfoundland's Exports of Lobsters (Quantity and Value), 1946-49

Type	Quantity				Value			
	1949	1948	1947	1946	1949	1948	1947	1946
	(in pounds)				(in Canadian dollars 1/)			
Live (round wt.)	3,912,074	3,387,886	3,253,647	2,596,696	978,018	779,449	683,802	660,125
Canned (net wt.)	140,112	129,665	152,298	193,667	2/	174,514	166,301	296,341
Total	4,052,186	3,517,551	3,405,945	2,790,363	2/	953,963	850,103	956,466

1/ Value of Canadian dollar from 1946 through 1949 has fluctuated from 90 cents to $1.00 U.S. Since for most of the period 1946-49 it was valued at $1.00 U.S., values given may be read as United States dollars.
2/ Data not available.

Exports of live lobsters are made to the United States and the Canadian mainland, and the trade depends primarily upon the United States market, which took approximately 64 percent of all live-lobster exports in 1948.

The shipment of live lobsters to the American market began in the 1920's, but suffered some decline during the 1930's. A gradual revival began immediately prior to the war, and since 1946, the trade has been appreciably expanded. Air shipments of live lobsters to metropolitan United States markets are becoming more commonplace, and it is estimated that approximately one million pounds were moved to these outlets by air during 1949.

Lobsters have been canned in Newfoundland for almost one hundred years, and this phase of the lobster industry reached its peak toward the close of the last century. Canned lobster production declined after 1900, but revived somewhat after the end of World War I. The Newfoundland lobster fishery was nearly exhausted by 1925, and a closed season on lobsters for the years 1925-27 was imposed by the Government as a conservation measure. During the closed-season period,

many of the larger lobster canneries went out of business, and after the closed season was abolished, the Newfoundland Government, through the Fisheries Board, began to control canning operations through a system of licenses, in order to improve the quality of the pack and to expand the live-lobster fishery. The latter automatically permits better conservation because large lobsters are demanded by the trade. During 1949, 151 canning licenses were issued as compared with 199 issued in 1948, and 246 in 1947. The declining trend of canned lobster exports reflects the efforts of the Fisheries Board to encourage, in the interests of conservation, production of live lobsters rather than the canned variety.

During 1948, 70 percent of the canned lobster exports were made to the United States, with the remainder to Canada. Previously, markets had existed in Europe for the product, but European trade in this luxury item has been negligible since the end of World War II.

While the lobster fishery is a minor factor in Newfoundland's fishing industry, it has been a source of considerable supplemental employment and income to seasonally unemployed cod fishermen, loggers, and farmers. The industry is not capable of appreciable expansion, since Newfoundland waters are considered to be too cold for optimum survival and growth of lobsters. However, serious efforts are being made to prevent the taking of undersized and berried lobsters, and shipments of live lobsters are inspected for minimum size. The growth of the live lobster trade, which requires large lobsters, is undoubtedly contributing to the prevention of another near-exhaustion of the lobster fishery.

Outlook: With the continuation of present trends, the production of live lobsters for export will probably exceed 4 million pounds during the 1950 season. Some decrease in exports of canned lobster will probably occur. The United States is expected to remain the principal market for both live and canned lobsters, with the Canadian mainland receiving the remaining exports.

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GATHERS DATA ON ATLANTIC SEALS: In order to collect information on seals in Canada's east coast waters, scientists of the Fisheries Research Board of Canada have completed a series of flights over the Gulf of St. Lawrence area and east of Newfoundland. Aerial photography is being used to estimate the seal herds, according to the March 1950 Trade News of the Canadian Fisheries Department.

In addition, information on seal reproduction, stomach content, weights, and measurements of all age classes is being collected by special officers assigned to sealing vessels during the sealing season. It is hoped they will also be able to do some tagging to show migrations.

The investigations are designed to provide an accurate basis of information on the population of harp and hooded seals of the Western North Atlantic, the exact nature of their migrations, and relationships with more northern populations which are not involved in the present Canadian sealing industry.

Newly-born young or "white-coat" harp seal form the basis of the present Canadian sealing industry, as well as smaller numbers of the subadult or "bedlamers" and the adult harp seal.

Chile

GERMAN-CHILEAN COOPERATIVE PLANS FOR FISHING INDUSTRY: A fishing trawler (300 gross-registered metric tons) and 2 fishing cutters are being fitted in Hamburg for the long voyage to Valparaiso, Chile, where they will fish in Chilean waters for three years, a March 17 American counsular dispatch from Hamburg reports.

This is part of a German-Chilean cooperation plan, instigated by a Hamburg exporter and shipowner, together with a Chilean-Swiss industrial syndicate which will establish a fish industry enterprise in Chile. In the vicinity of Valparaiso, large factories will be set up where 150 metric tons of fresh fish can be handled daily. A daily production of 50 tons of canned fish and 100 tons of fish meal is planned. No decision, however, has been made yet in regard to the exact location of these plants since it depends on the water facilities. The city of Quintero is considered especially suitable since 656 feet of wharf space are available for the small fleet.

A number of Hamburg firms will participate in the shipment of equipment for canneries, cold storage plant, a fish meal factory, etc. German technicians will help to set up the factories.

The Chilean government is extremely interested in this project since Chile owns no fishing vessels. Long fishing trips will not be necessary for the fishing banks are right off the Chilean coast. The catches will contain, among others, small- and large-size sardines, herring, tuna (which appear in schools of thousands), spring lobsters reaching a weight of several pounds, bonito, and sharks. All of the catches are to be processed and sold in Chile. Only canned tuna will be exported to Germany.

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SWISS-CHILEAN GROUP CHARTERS GERMAN FISHING CUTTERS: In addition to the German vessels which were reported early in March as proceeding to Chile to engage in the fishery off the coast of that country, it is now planned to send two other German fish cutters as well. These vessels have been chartered for three years by a Swiss-Chilean group and will be used off Valparaiso, according to an American consular dispatch from Bremerhaven.

Cuba

SPINY LOBSTER EXPORTS UNDER LICENSE CONTROL: Cuban spiny lobsters may not be exported without a permit from the Ministry of Commerce, according to a circular issued March 17, 1950, by the Cuban Customs. The circular states:

> ..... Lobsters are subject to export control...in accordance with Decree 385 of 1941...and Decree of February 20, 1942 published in Official Gazette of February 25...(Lobster) exports without a covering permit are forbidden, and this applies in particular to vessels which come to Cuba and buy from fishermen...and freeze or refrigerate on board...The (vessels) pay no national taxes...and exports on them are prejudicial to Cuban processors and workers freezing or can-

> ning lobsters... Any lobster catches on board ice-laden boats (neveros), sail-boats or any other vessel reaching Cuban ports shall be construed as caught within Cuban territorial waters, unless proof to the contrary recognized by law is produced.

Since January 1949, a United States vessel, the Clair-Ellin (a subchaser converted into a spiny lobster quick-freezing ship) has been operating off the Isle of Pines. The ship's refrigerated storage capacity is 18,000 pounds. In recent months, it has quick-frozen monthly only 6,000 pounds, which have been flown to Miami from Nueva Gerona via Habana.

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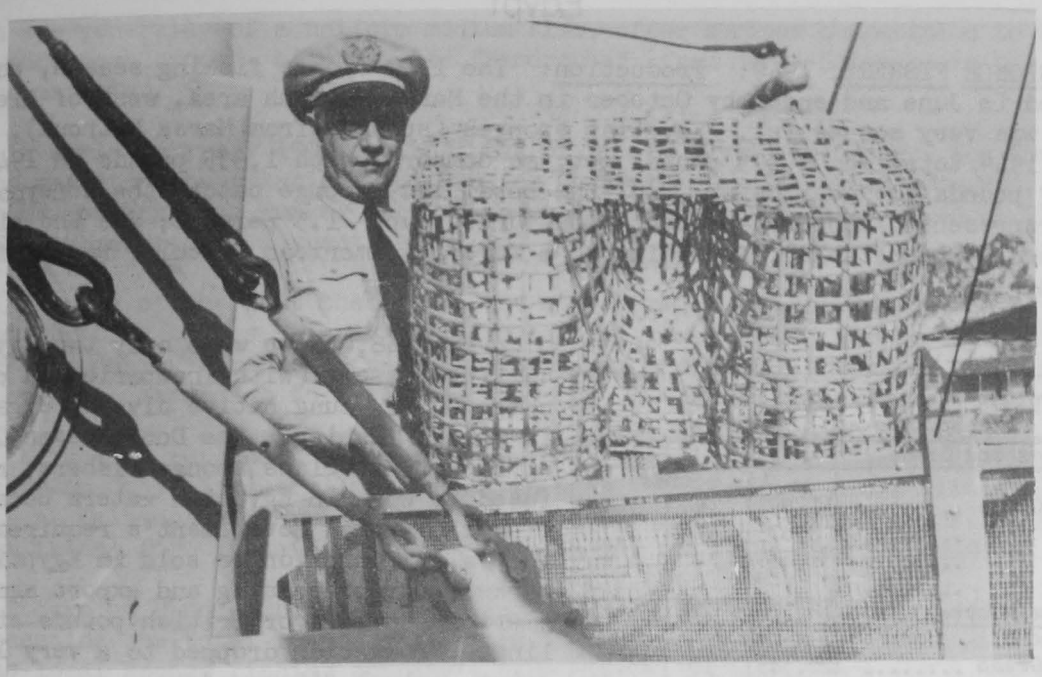
OUTFITS A VESSEL FOR MARINE RESEARCH: In 1949, Cuba equipped its first vessel to undertake marine research, reports a March 24 American consular dispatch from Havana. The Cuban Navy, with $100,000, overhauled the tugboat Yara (originally built in 1893) and equipped it with instruments, apparatus, fishing gear and paraphernalia, as well as other devices with which to do hydrographic, zoologic, and ichthylogic research work.

The crew of the Yara consists of 7 officers and 42 men.

THE 57-YEAR-OLD CUBAN TUGBOAT YARA, WHICH HAS BEEN CONVERTED INTO A HYDROGRAPHIC, ZOOLOGIC, AND ICHTHYOLOGIC RESEARCH VESSEL.



A REED DEEP-SEA FISH POT MADE IN CUBA.

Ecuador

CONDITIONAL LOAN GRANTED FOR FISH CANNERY: A representative of American and Foreign Enterprises, Inc. indicated in mid-April that the International Bank for Reconstruction and Development had granted the firm a loan of $850,000 (on one condition) for the erection of a coastal fish cannery in accord with provisions of the agreement between the firm and the Ecuadoran Government, reports an April 4 American consular dispatch from Quito. The representative of the company is in Ecuador to satisfy the one condition, namely to persuade Ecuador to settle its debt to Southern Railway (Ferrocarriles del Sur) bondholders.

It was the hope of the company representative that the bondholders could be reimbursed in sucres (Ecuadoran money) for the principal amount of their holdings with a provision for converting the sucres into cannery stock, and that back-interest obligations could be settled on a nominal basis. A decision will be made by the Ecuadoran Government by the first part of May. If the railway debt could be settled satisfactorily, work on the cannery is expected to begin promptly.

Egypt

SPONGE FISHERY, 1949: Production: The 1949 sponge fishing season, which started in June and ended by October in the Marsa Matrouh area, west of Alexandria, was very successful. Egyptian sponges (sponges from Marsa Matrouh), fished in 1949, totalled 77,073 pounds net, as compared with 1,359 pounds in 1948 and 32,547 pounds the year before. Of the total 1949 sponge catch, the honeycomb type represented about 71 percent; the Turkey cup, 21.5 percent; and the zimocca, 7.5 percent (see table), according to a March 24 American consular report from Alexandria.

Egyptian Sponge Production, 1947-49
(By Species and By Grades)

Species and Grade	1949	1948	1947
	.. (in pounds) ..		
Turkey cup:			
1st Grade	11,293	267	7,220
2nd "	3,679	108	1,734
3rd "	1,180	-	165
4th "	198	-	-
Total Turkey cup	16,350	375	9,119
Honeycomb:			
1st Grade	28,349	340	13,530
2nd "	15,863	522	5,361
3rd "	8,532	122	2,698
4th "	2,259	-	129
Total Honeycomb	55,003	984	21,718
Zimocca (zimouha)			
1st Grade	2,460	-	994
2nd "	1,629	-	476
3rd "	949	-	240
4th "	682	-	-
Total Zimocca	5,720	-	1,710
Grand Total	77,073	1,359	32,547

In 1948, there were only two Egyptian sailing vessels (with inexperienced crews composed of young native divers) engaged in sponge fishing. The Dodecanesan Greek divers, first-class sponge fishers, refused to work in Egyptian waters because of the Egyptian Government's requirement that all production be sold in Egyptian markets for processing and export against American dollars or British pounds sterling. Production dropped to a very low point, only 1,359 pounds.

In 1949, the Greek Government concluded a provisional agreement with the Sponge Fishing Company of Egypt, sole concessionaire for sponge fishing in Egyptian waters. Under this agreement, sponge-fishing permits were issued to 18 Dodecanesan Greek sailing vessels equipped with all types of diving apparatus upon payment of approximately $11,000 (at predevaluation rate of exchange) for each license. This fleet of eighteen vessels was accompanied by an auxiliary fleet of 20 boats used for food and water supplies and for storage. Two Egyptian vessels with diving gear and three auxiliary boats joined the Greeks. With 560 Dodecanesan Greek and 90 Egyptian divers and sailors engaged in operations, the 1949 production amounted to 77,073 pounds.

Marketing: All efforts of the Egyptian concessionaire to sell the 1949 production in Egypt to hard currency countries or to Great Britian met with no success because British and American buyers preferred to buy from the Greek sponge markets where large quantities of sponges from Cyrenaica, Tripolitania, and Crete are found. Then in January this year, in accordance with the agreement between the Greek Government and the local sponge fishing concern (the Egyptian production being unsold), Dodecanesan Greek sponge fishers were authorized to take their catch from the port of Marsa Matrouh for sale in their homeland sponge markets, after paying to the local sponge fishing concern the amount of about $200,000 at predevaluation rate of exchange, representing the total fees for 18 sponge-fishing permits.

MARKETING SITUATION FOR EGYPTIAN SPONGES IN GREECE: Although Egyptian sponges are well known for their fine texture as well as for their fine velvety touch and absorbing capacity, Cyrenaican sponges, especially the honeycomb type,

which are generally of a uniform medium size, offer serious competition to the Egyptian honeycomb sponge, often called "Mandrouha" (from Marsa Matrouh) in the Greek sponge markets.

In early February 1950, at the peak of sponge buying in Greece, New York, and London markets (the principal outlets for Cyrenaican and Egyptian sponges), some purchases of Egyptian Turkey cup and honeycomb sponges were made at about $11.70 and $10.18 per pound, respectively.

In spite of the fact that there are ample sponge stocks on hand in the London market, British buyers, fearing the approach of another war, appeared to be still interested during March this year in purchasing additional important lots of honeycomb sponges, according to local trade sources.

It is also reputed that in early March, American sponge buyers (Americans of Dodecanesan-Greek ancestry) are trying to conclude important deals with sponge merchants at Kalymnos and Symi sponge markets (Dodecanesan islands specializing in the sponge trade) for Cyrenaican and Egyptian Turkey cup, honeycomb, and zimocca sponges.

Stocks on Hand: Stocks on hand in Egypt consist of 1,500 pounds of sponges, representing the total 1949 sponge catch made by local sponge fishers still stored at the local sponge fishing company's warehouse at Marsa Matrouh and 6,300 pounds of the 1947 production held by two local sponge merchants. The local Egyptian concessionaire is trying to sell these stocks to dealers in Greece.

Prices: Current prices quoted for the remaining stocks of sponges in the local market are based on those quoted in the central sponge market at Piraeus, Greece.

1st Grade:	Mar. 1950 Per Lb.	Mar. 1949 Per Lb.
Turkey cup	$11.63	$13.09
Honeycomb	10.18	10.18
Zimocca	5.09	7.27

Local trade sources have supplied wholesale prices on the species (indicated on the right) and grades of Egyptian sponges for March 1949 and March 1950.

New Sponge Season: No information about arrangements for the 1950 sponge season is available. However, it is reported that the principal officer of the Egyptian sponge fishing concessionaire is in Greece negotiating a new agreement with the Dodecanesan Greek sponge fishers.

German Federal Republic

FISH CONSUMPTION: A survey was made in Western Germany between May 15 and June 15, 1949, during which 2,000 persons (mostly housewives) were questioned about their fish consumption, their tastes with regard to fish, their methods of preparing fish, and the supply conditions.[1]

Some of the results of the survey will be of interest to United States exporters of fish, mainly canned fish.

1/ The survey was conducted on behalf of the central administrative office for fish industry of the V.E.L.F. (Food, Agriculture, and Forest Administration), Hamburg, by the Institute for Demoscopy in Allensbach Am Bodensee. The report was issued in German and titled "Fish Consumption in Western Germany (Supply-Prices-Kind)." The excerpts abstracted here were taken from the translation made by the ECA Office of Special Representative, Paris, France.

Canned Fish: Among the top varieties of canned fish readily purchased by the Western German population, according to this survey, were sardines in oil (79 percent of those interviewed purchased sardines in oil), followed by herring in tomato sauce (61 percent), herring fillets in oil (39 percent), and herring in mustard sauce (36 percent).

Canned sardines in oil have more power of attraction than any other type of canned goods. The housewives kept on stressing the preference of their family for sardines in oil. Both country and cities represent an interested selling outlet. The consumption percentage of the upper income groups for sardines in oil was the highest met during the whole survey.

The majority of the housewives named herring in tomato sauce among the available types of canned fish which they liked to buy. On the whole, there were more people who liked herring in tomato sauce in Northern Germany than in Southern Germany, in upper and lower income groups.

Herring fillets in oil ranked before herring in mustard sauce on the preference list. As in the case of herring in tomato sauce, the number of people who refused to buy herring fillets in oil was very small.

Herring in mustard sauce were as popular as herring in tomato sauce in the Rhine Palatinate and in Baden, but in the other provinces they were by far less appreciated than herring in tomato sauce. Rejection was stronger in the country than in the city.

Interesting was the fact that housewives showed a considerable distrust for canned fish salad. The number of housewives who refused to buy fish salad was three times higher than the number who were in favor of it.

Processed Fish (Other than Canned): Kippers, grilled herring, rollmops, pickled herring, and herring in jelly led the processed fish group. Kippers were readily purchased by 78 percent, grilled herring by 56 percent, and rollmops by 52 percent.

Although fish sausage was by no means unknown to housewives, the number of people who liked it was very small. In the large cities especially, the number of housewives who refused to buy fish sausage was considerable and there was hardly one housewife who bought it readily. Rejection was particularly strong in the higher income groups.

Fresh Fish: Among the top varieties of fresh fish (except herring) readily purchased by the Western German population were haddock, cod, and salmon (58 percent, 48 percent, and 44 percent, respectively). Fresh herring was readily purchased by 61 percent and salted herring by 57 percent.

The liking for salmon was evenly distributed in the different provinces. In Schleswig-Holstein, Hamburg, Bremen and lower Saxony, salmon was more appreciated than haddock and cod. It enjoyed the same favor in country towns and in medium and big cities.

General Comments: A fundamental dislike for fish was found in only one tenth of the households. A further 20 percent of the housewives stated that one member of their family had a dislike for fish. Only 7 percent of the housewives claimed that fish was tasteless and limited their consumption accordingly.

According to their statements, the housewives contemplated increasing above all their consumption of herring, processed, and canned fish (i.e., to eat more fish at breakfast and at dinner).

In reply to the question as to what kind of fish they would rather buy, fish fillets in general were named by 14 out of 100 housewives, fresh herring by 11, all types of canned fish by 16, and canned sardines specifically by 8.

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DEFLATION AFFECTS GERMAN FISHERIES: The general deflationary tendencies in Germany have become apparent in the fishing industry. Normally, the Lenten season is one of high fresh fish production (cod, pollock, haddock), at high price levels. In mid-March, wholesale fish prices remained near the cent-per-pound minimum despite only moderate landings. Even at this very low price, wholesale purchasers were hesitant and appreciable quantities of quality fish had to be disposed of to fish meal factories, an American consular report from Bremerhaven dated March 16 states.

German fish prices now lie below the world market level, and the domestic industry does not now fear foreign competition. The prospects for a market for Icelandic fresh fish in Germany have become much less favorable in recent weeks because of the German deflation.

It is expected that the deflation will rationalize the German fisheries by forcing the retirement of the less economic vessels and the reduction of the difference between the price to the consumer and the return to the producer.

The campaign of fishing interests to promote fish consumption is expected to end around the middle of March. The campaign, the motto of which is "Fish Once a Day," appears to have had little effect in increasing consumption.

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SMALLER GERMAN IMPORTS OF FISHERY PRODUCTS FROM ICELAND PLANNED: Discussions regarding the trade agreement negotiations with Iceland took place in Hamburg on March 6, with specific reference to the distribution of the amount of $2.5 million provided for Icelandic fish imports, according to a March 16 Hamburg and a March 16 Bremerhaven American consular report.

This German-Icelandic trade agreement (concluded in Frankfort on March 15, 1950) permits Icelandic trawlers to land iced fish (other than herring) at German ports during the period August 1 to November 15 up to a maximum value of $1,600,000. No fixed quantity was agreed upon as the Icelanders will receive as payment only what their fish will bring at auction.

Germany also agreed to approve importation (on an f.o.b.-Icelandic-port basis) of a maximum of $400,000 of salted herring, $200,000 of frozen fish (other than herring), $200,000 of iced herring, and $100,000 of salted and dried herring. Iceland agreed to approve exports of herring oil and herring meal to Germany for which Germany will pay in pounds sterling.

The German-Icelandic trade agreement respects the demand of German trawler owners that foreign trawlers be allowed to land iced fish in German ports only during the German herring season.

If occasion arises for any adjustments, these will be determined at a later date. The Icelandic delegation again expressed the wish that the total amount for imports be increased to $4.5 million, but this was refused by the Germans.

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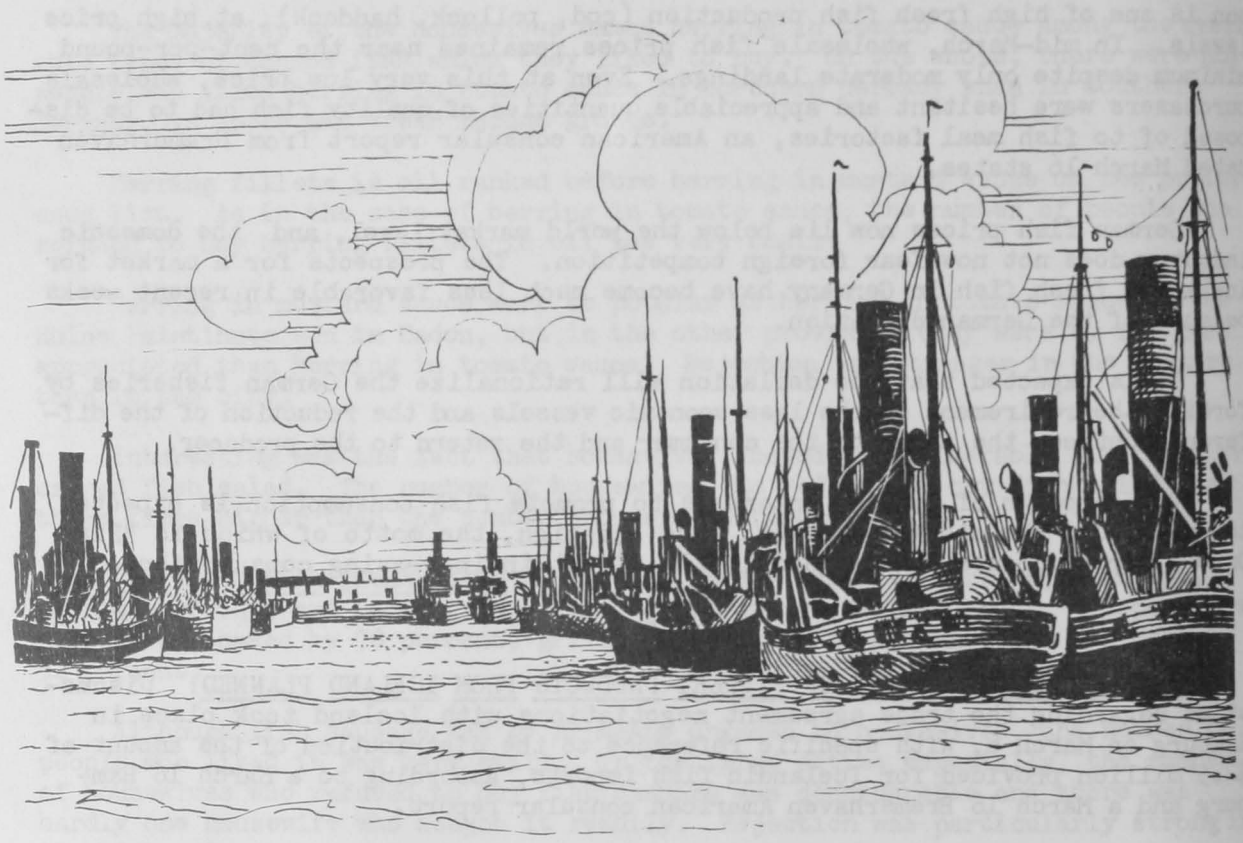
UNITED STATES TRAWLERS IN GERMAN FISHERIES: The 12 motor trawlers purchased in 1949 by the United States Army for use in the German fisheries have been in German hands for more than 6 months and their value to the German fisheries can be assessed now on the basis of the performance data at hand, states a March 30 American consular report from Bremerhaven.



PORT OF BREMERHAVEN SHOWING FISHING VESSELS IN PORT.

Since the time of the purchase, the German food supply situation has greatly improved, and it can be said that the German domestic production of fish together with German fish imports have created an oversupply of fish.

In recent weeks, large quantities of iced fish fit for human consumption have been consigned to fish meal factories for lack of other purchasers. The number of the active German trawlers is less now than it was one year ago before the American vessels arrived; 65 of Germany's 234 trawlers are now laid up as compared with 8 out of 188 on April 1, 1949. The purchase of the 12 motor trawlers has not resulted in an increase in the number of German trawlers operating.

Hold capacity of the active fleet, however, is now somewhat more than that of one year ago as 50 of the 180 vessels in operation last year have been replaced by new vessels having more capacity, thus more than compensating for the laying up of 11 vessels without replacement.

Since January 1, 1950, six new trawlers have been completed by German shipyards for German firms. These trawlers range in size from 400 to 644 gross registered metric tons, the median size being 540 gross registered tons. All are coal-burning steam trawlers. The American trawlers on the other hand range in size from 200 to 340 gross registered tons and are Diesel-powered. Some German firms are planning to build Diesel trawlers, but the American trawlers are of a type which no German company would build today.

The purchase price of the 12 trawlers was high by German standards. The 9 larger vessels are valued at approximately $142,800 for insurance purposes, which valuations are high by German standards, considering the size and age of the ships. The 3 smaller ones are valued at $119,000 and are similarly overvalued by German standards. At the time the ships were purchased, German shipyards would have been able within a period of 9 months to construct comparable new vessels for no more than 90 percent of the price paid in the United States for the used vessels. The recently constructed German trawlers of the 540-gross-ton class have cost about $275,000. German firms early in 1950 purchased in Belgium 3 oil-burning trawlers of 475 gross registered tons in operational condition for $175,000 each.

Up to March 1, 1950, the 12 trawlers landed fish in German ports valued at $602,312. The expense of converting the trawlers to meet German requirements has amounted to $221,340; the cost of transporting the vessels to Germany was $99,960. The total burden on the vessels, apart from the purchase price, is $321,300. From the gross return from the sale of the trawlers' catch, 11 percent must be paid by the operators to the Fischdampfer Treuhand, the public corporation acting as trustee for the United States. The Fischdampfer Treuhand retains 1 percent of the proceeds for administrative expenses and pays the remaining 10 percent to the Staatliche Erfassungs-Gesellschaft, the public corporation which advanced the funds to cover the transport and conversion costs. At prevailing price levels, the 12 trawlers may be expected to land fish valued at $71,000 per month. Thus, $7,140 per month will be available to pay back the $360,800 still outstanding as of March 1, 1950. The current long-term interest rate on first-class risks in Germany is 7½ percent per annum. If commercial interest rates were charged by the Staatliche Erfassungs-Gesellschaft, about 42 months would be required to repay the loan; if no interest were charged, 36 months would be required. Unless prices increase, the 12 trawlers must be kept in operation for at least three more years in order to earn enough to pay back incurred Deutsche-mark costs. However, as more and more new trawlers capable of fishing in bad weather and able to remain on Icelandic fishing grounds longer than 12 days are put into operation, the 12 American trawlers will find the competition stronger. The 3 smaller trawlers, which were returned to the Fischdampfer Treuhand by the original charterers in the winter 1949-50, may have to be laid up permanently after the end of the 1950 herring season.

In short, the 12 trawlers sent to Germany under the GARIOA appropriation have been useful to date in supplying fish to an already well-supplied German market. It is problematical if the 3 smaller trawlers will be in operation long enough to repay Deutsche-mark transport and conversion costs. The earning capacity of the trawlers in Germany is too small to permit the vessels to be sold in Germany for more than 50 percent of their procurement cost.

Germany (Russian Zone)

DRIFTERS TO BE TURNED OVER TO SASSNITZ FISHERY: Of the 158 welded steel drifters to be built in the Russian Zone of Germany in 1950, around 100 will be used by the Sassnitz "peoples-own" fishery, according to a March 16 report from the American consulate at Bremerhaven. The drifters will be manned by 26-men crews and can remain at sea for 30 days.

Reconstruction of the harbor at Sassnitz (at the western end of the Baltic Sea) is proceeding. Three or four landing stages, one with Diesel bunkering facilities, are to be built this year. Under construction are concrete quays with coaling bunkers, ship and engine repair facilities, and a two-story discharging building with cold-storage rooms.

Hong Kong

FISHING INDUSTRY, 1949: Since the end of World War II, the fishing industry of Hong Kong experienced its best year, according to a March 29 American consular dispatch from Hong Kong.

In 1949, the quantity of fresh fish sold in the Government-controlled markets has quadrupled that for 1947. Early estimates place the amount at approximately 24,241,500 pounds, compared with 16,242,000 pounds in 1948 and 592,200 pounds in 1947.

The increase in fish production is attributed to good fish runs and the use of motorized junks, which are able to reach the fishing grounds and return to port without depending on the weather. Ten junks were mechanized during the year, bringing the total motorized vessels to about 50.

Iceland

EFFECTS OF ECA AID ON ICELAND'S ECONOMY: Iceland is well on the road toward readjustment of dislocations in her economy as she enters the third year of the Marshall Plan, the Economic Cooperation Administration announced on April 4.

Summarizing the progress made by Iceland in the program of expansion for the fishing industries, the Icelandic Minister of Commerce recently said: "Iceland has been undergoing rapid economic development since the end of the war. Production has exceeded, by far, prewar levels. The average annual fish production during 1935-39 amounted to 257,000 metric tons, while in 1948 it reached 409,000 metric tons; and in 1949, 337,000 metric tons. The volume of exports have also about doubled since the prewar years.

"These results have been possible due to the modernization and expansion of the fishing industry and the favorable export markets for Icelandic products all during the Forties."

The first Marshall Plan funds, a $2,300,000 loan, were utilized for expansion of herring-processing capacity which had proved very short during the big winter herring seasons of 1946-7 and 1947-8 and for aiding the construction of the new fish meal factories. The herring-processing investment has been largely unused thus far because of subsequent failures of the catch, but research is now being undertaken into new fishing methods, since it is known that herring is still running in abundant quantities off Icelandic coasts, but at depths too great to be caught by present fishing gear.

As further ECA dollars were made available, they assisted in maintaining essential consumer and raw material imports, such as, foodstuffs, feedstuffs and petroleum products, and enabled Iceland to devote part of her own foreign exchange receipts to continued execution of the production development program.

"Long dependent for her economic well-being on fishing, which by its very nature is an unstable industry," said the Chief of the Special ECA Mission to Iceland, "Iceland is now aiming at diversifying her economy in order to cushion the effects of periodic poor fishing seasons on her balance of payments and provide a broader base for the standard of living of her people. Increased agricultural production is one of the directions which this diversification is taking."

Despite this immense rise in production over prewar levels, Iceland has been beset with economic difficulties during its "reconstruction" period, the Minister of Commerce commented. "Market conditions have recently been deteriorating, particularly as regards fresh fish. This development has further aggravated the difficult economic situation which has mainly been caused by inflation and repeated herring failures. Consequently, in March 1950 it became necessary to devalue the Icelandic krona by over 42 percent."

The Minister is, however, optimistic about the future. "With the recent devaluation of the Icelandic currency and the determined stabilization policy of the Icelandic Government, a new start is being made for Icelandic recovery," he said. "In that connection, the Marshall Plan will in the second half undoubtedly have greater importance than before. The continued American aid will be instrumental in bringing about internal balance as well as carrying out certain long-term projects for greater diversification of the Icelandic economy."

With an eye on the dollar market, Iceland is also planning a factory to process condensed fish solubles from wasted herring residue. A market in the United States, where condensed fish solubles have begun to be used as livestock feed, is thought to exist.

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FURTHER DEVALUATION OF THE KRONA: The International Monetary Fund has concurred in a 42.6 percent devaluation of the Icelandic krona as proposed by the Government of Iceland. The new rate of 6.14 U. S. cents per Icelandic krona became effective March 20, 1950, according to a news release from the Fund.

This is a second change in the par value of the krona following announcement by the Fund of an initial par value on December 18, 1946. The rate then established was 15.411 U. S. cents per krona. This par value was changed with the concurrence of the Fund on September 20, 1949, to 10.7054 U. S. cents per Icelandic krona. With the current March 20 devaluation, an aggregate decline of 60.2 percent has taken place in the value of the Icelandic krona in relation to the United States dollar.

Although it is difficult to gage, at the present time, the full effect of the devaluation, since Iceland's fisheries are an important part of that country's economy, the current devaluation no doubt will result in a decline in the prices of the fishery products which Iceland exports to the United States. On the other hand, it will mean that Iceland will have to pay higher prices for those commodities which it imports from the United States for its fisheries and for other purposes.

What Iceland hopes to accomplish with this devaluation is to increase its dollar earnings and to close up the gap between its imports and exports.

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ICELAND RATIFIES NORTHWEST ATLANTIC FISHERIES CONVENTION: An instrument of ratification concerning the International Agreement on the Protection of Fishing Grounds in the Northwest Atlantic was signed by the President of Iceland on February 9, 1950, and forwarded to the United States Department of State in Washington, D. C.

The above announcement concerning Iceland's ratification of the Northwest Atlantic Fisheries Convention, which was signed on behalf of Iceland in Washington on February 8, 1950, appeared in the Icelandic Official Law Gazette of March 15, 1950, according to an American consular dispatch from Reykjavik.

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NEWSPAPERS CONTINUE TO STRESS EXTENSION OF TERRITORIAL WATERS: Overfishing and the employment of highly effective trawls have contributed to a gradual depletion of sea life in Icelandic waters, according to an editorial which appeared on February 21, 1950, in the Icelandic newspaper Timinn.

The Icelandic University Research Institute has statistics to prove that it requires more man-hours to effect smaller catches of fish despite the employment of modern, efficient vessels and gear, reports a March 16 American consular report from Reykjavik.

The Icelanders are inclined to believe that their claim for the extension of territorial waters (not complete sovereignty) should receive special consideration by the major Atlantic and North Atlantic fishing countries. They base their claim primarily on three factors: (1) almost complete economic dependency on the produce derived from the territorial seas, (2) law of comparative advantage, and (3) the old oriental thesis that "propinquity creates special interests and rights".

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UNITED STATES FISHERIES EXPERT TO ADVISE ICELAND'S FISHERIES INDUSTRY: A United States fisheries expert will make a two-month study of Iceland's fisheries industry to recommend more efficient methods of salting, freezing, and otherwise processing fish, and better utilization of byproducts.

The fisheries expert was scheduled to arrive in Reykjavik about April 9. ECA dollar costs in the project are estimated at $5,600, according to an April 9 announcement by the Economic Cooperation Administration in Washington, D. C.

Indochina (French)[1/]

REVIEW OF THE FISHERIES, 1949: No important improvement or change took place during 1949 with regard to Indochina's fisheries, according to an American consular dispatch dated February 14 from Saigon.

Indochina's Exports of Fishery Products, 1947-49
(Quantity and Value)

Year	Quantity	Value	
	Metric Tons	Piastres	U.S.$
1949	2,744	14,148,000	884,250
1948	4,976	24,734,000	1,970,800
1947	4,710	32,046,000	4,610,935

Note: Values converted on the basis of the following official exchange rates:
1949 - 16.00 piastres equal U.S. $1.00;
1948 - 12.55 " " " " ;
1947 - 6.95 " " " " .

Fish form an important part of the native diet, and large quantities are caught in the coastal waters, in the rivers, and in Lake Tonle Sap.

Dried fish were formerly in important export and, though now but a fraction of prewar exports, they are still important.

During 1948, the following fishery products were exported (in metric tons): fresh, salted, dried and smoked fish--2,184; dried shrimp--808; fish oils--1,952; and other fishery products--32.

1/ Transfer of administrative powers from the French Government to the three Associated States of Vietnam, Cambodia, and Laos took place early this year.

Italy

GENEPESCA V DOCKED AT LIVORNO (LEGHORN), ITALY. IT IS OWNED BY THE SAME FIRM THAT OWNS THE GENEPESCA I AND GENEPESCA IV.

ITALIAN VESSELS LEAVE FOR NEWFOUNDLAND BANKS: The Italian vessels, Genepesca I and Genepesca IV, left Livorno, Italy, in February to fish for cod on the Newfoundland banks, according to Fiskets Gang of March 16.

The firm owning the vessels has previously operated trawlers in arctic waters, but never before off Newfoundland. During the war it lost nine vessels, but is now reported to be in better shape than before the war.

The two vessels are of 1,400 and 1,600 metric tons, respectively, and were built in Trieste, principally with American funds. Although one vessel is equipped with a freezer, the catch which will be taken during the 4- to 5-month trip to the Newfoundland banks will be salted.

Japan

PRICE AND DISTRIBUTION CONTROLS ON FISH LIFTED: Fish was released from price and distribution controls effective April 1, states the March 25 Weekly Summary of SCAP's Natural Resources Section.

The recovery of fish production from its low point in 1945 is a major factor affecting this important decontrol action. Fish production has progressed from a level of 1,810,000 metric tons in 1945 to a level of 3,113 metric tons in 1949. This is approximately the maximum level practicable within the existing fishing area.

Because of its significance in the Japanese diet, fish has been controlled since the war except for a two-month experimental period, December 1945 and January 1946. Prices increased sharply during that time and controls were reinstated promptly.

A general increase of food availability is indicated by the relative stability of food prices. During 1949, the total food index increased less than one percent. Staple food prices increased only seven percent, vegetables remained about the same, while meat, dairy products and fish prices actually decreased 15, 22, and six percent, respectively.

It is not expected that this decontrol action will cause any significant rise over current consumer costs.

STATUS OF FISH PROCESSING PLANTS: Fish processing plants in 11 ports in Kyoto, Hyogo, Shimane, Tottori, Yamaguchi, Hiroshima, and Osaka prefectures were inspected towards the end of last year by representatives of the Natural Resources Section of SCAP, according to the December 10 Weekly Summary issued by that Agency.

Refrigeration Plants: Generally, refrigeration plants were adequate insofar as refrigeration and minimum equipment were concerned. Some plants are very old and have difficulty in maintaining good sanitary standards. Most ports had plans for constructing new refrigeration plants or enlarging existing facilities. Processors tended to examine and evaluate their equipment with the idea in mind of replacement or reconstruction. The increase in foreign trade and the desire to equal the plants in other countries are mainly responsible for this tendency.

The major drawback to the fish-freezing industry is an imperfect knowledge of technological improvements made during the last decade.

Canners: Canneries inspected generally were in better condition than refrigeration plants. Most canneries are newer than the refrigeration plants, because since 1938 the increased importance of canned fish as an export item has led to the construction of many canneries.

Canning procedure is fairly uniform throughout Japan. An excessive amount of hand labor is used, and too little attention is paid to quality-control measures, such as, precook and quality of oils and sauces added. A rather wide range of sterilization processes was noted in the canneries visited. Retorts in only a few of them were properly equipped with recording thermometers, mercury thermometers, pressure gauges, and vents.

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REPORTED VISIT TO JAPAN OF UNITED STATES FISHERIES GROUP: The English-language Nippon Times in its issue of April 1, 1950, published an article concerning reported plans for the visit to Japan of an American fisheries delegation. The purpose of the delegation is to carry out discussions with Japanese fisheries representatives with a view to developing "a fishing resources conservation program" to govern international fisheries in the Pacific between the United States and Japan, reports an April 5 American consular dispatch from Tokyo.

It is believed, according to the Nippon Times article, that the American mission will be composed of Department of State officials and representatives of the fishing industry who will confer with a corresponding delegation of the Japanese Government and fishing representatives. The article further states that only after a peace treaty has been signed can even a provisional international fishing agreement be concluded, but there are hopes that many points of prewar friction may be removed by the proposed discussions.

JAPANESE GOVERNMENT

Kenya Protectorate

DEMAND FOR FISH EXCEEDS SUPPLY: Kenya could use up to 100,000 metric tons of fish a year, whereas the catch along the coast at present is only about 2,000 metric tons a year, according to the Assistant Fish Warden in charge of Kenya's Marine Fisheries. However, it is indicated that only a portion would be consumed fresh. The greater amount would be processed into stock feed, fertilizer, and dried fish for African consumption.

The tremendous difference between supply and estimated demand is due to the continual increase in Kenya's European settlement, and the rise in the African's standard of living which has made the natives important to the fishing industry as consumers. The main reason for the great deficit is considered to be the fact that primitive fishing methods are still used off the coast of Kenya, an American consular report from Mombasa dated December 16, 1949, states.

Malaya (Including Singapore)

REVIEW OF THE FISHERIES, 1949: Fisheries production is low in the Federation of Malaya and the Colony of Singapore, and retail prices exorbitantly high, according to a March 30 American consular report from Singapore.

Total production of fishery products in all of Malaya during 1949 was equal to that for 1948 when 140 million pounds were produced (119 million pounds in the Federation and 21 million pounds in Singapore).

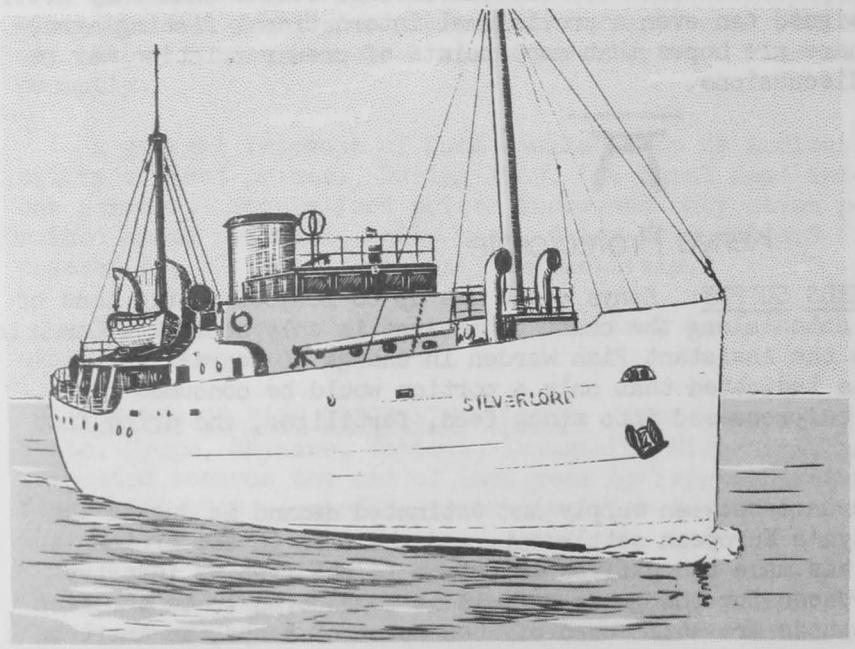
A project for developing a research and training institute for fresh-water fish culture in Penang is being started. Salt-water fisheries are in a primitive stage with the public and the government conscious of the need for modernization, but with plans and allocations of funds indeterminate as yet.

In Singapore, official interest in legislative circles has been aroused with the objective of endeavoring to develop a cooperative fish-marketing project in an attempt to reduce prices to the public.

The Colonial Development Corporation is studying a fish-cannery project for Malaya.

Colony of Mauritius

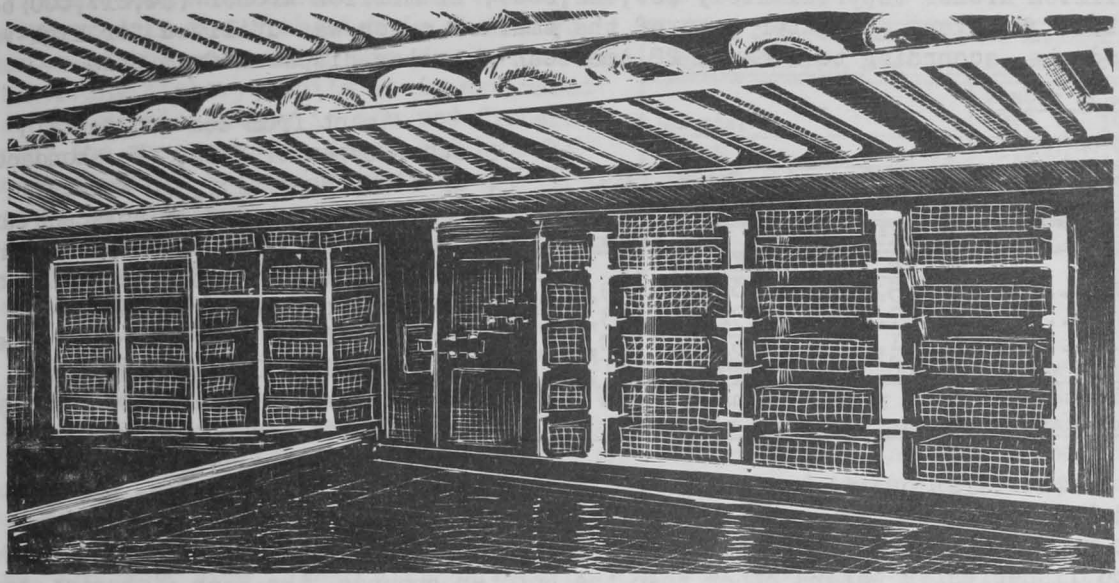
VESSEL WITH QUICK-FREEZING FACILITIES TO FISH IN INDIAN OCEAN: An ex-naval converted corvette sailed early in February from Port Louis, Mauritius, on its first experimental voyage to the Indian Ocean fishing grounds, according to the February 16, 1950, issue of Modern Refrigeration, a British periodical. This 1,095-ton fishing vessel, Silverlord, has been equipped with a modern quick-freezing plant and low temperature holds (with a capacity of up to 360 metric tons).



THE 1,095-TON FISHING VESSEL SILVERLORD ON EXPERIMENTAL VOYAGE TO INDIAN OCEAN FISHING GROUNDS. EQUIPPED TO QUICK-FREEZE FISH AT SEA.

Fishing by line only, owing to the presence of extensive coral reefs, the vessel is expected to catch an average of 15 metric tons a day, of which

half will be quick-frozen in a novel type of blast freezer, operated by a simple system of revolving racks, and capable of handling approximately 1,700 pounds of fish at a time. Tiers of racks are situated on either side of a revolving insulated door, measuring 10 feet by 5 feet and pivoted in the center.



NOVEL TYPE OF BLAST FREEZER USED BY THE SILVERLORD. OPERATED BY A SYSTEM OF REVOLVING RACKS, AND CAPABLE OF HANDLING 1,680 POUNDS OF FISH AT A TIME.

When one side has been loaded, the door is revolved so that the tier of racks enters the freezing chamber, which is kept at a temperature of -25° F., and the racks on the other side are then exposed for reloading. An automatic cut-out shuts off the 8 h.p. fan when the door is opened. Special ducts are installed to divert the air blast to the holds for additional refrigeration, should it be required.

There is a total of 21,600 cu. ft. of refrigerated storage space, consisting of 11,000 cu. ft. between-decks and 10,600 cu. ft. in the lower hold. Insulation is provided throughout by 11 inches of glass-fibre material, except for the tank tops in the lower hold, which are of 8-inch slab cork and special deck covering, reinforced with 1½-inch expanded metal.

The refrigerating machinery room, situated below the lower hold, contains three twin 7-inch "Freon" compressors, of which two are driven by 45 h.p. steam engines, and the third, through belts, from a 100 h.p. 6 LW. diesel engine, which also drives a generator. The brine and circulation pumps are electrically driven. The diesel engine would continue to operate one compressor in the event of a breakdown. Steel brine grids of 1½-inch bore are installed throughout the holds, maintaining a temperature of -5° F.

An additional twin 2½-inch compressor cools the ship's provision store, while an automatic refrigerator is installed in the galley. An ozone plant is provided for deodorization.

Norway

REVIEW OF THE FISHERIES, 1949: Production: Norway's total fisheries catch for 1949 was estimated at approximately 1,035,000 metric tons--a decrease of about 260,000 tons from the record catch of 1948. But the value to the fishermen was 295 million kroner (approximately $59,442,500), 21 million kroner ($4,217,500) below 1948. However, a greater part of the smaller catch was utilized for high-value products, according to a March 28 American consular dispatch from Oslo.

Table 1 - Norwegian Fisheries Catch, 1949, with comparisons (Quantity and Value)

Year	Quantity	Value	
	Metric Tons	Kroner	U.S.$
1949 1/	1,035,122	295,000,000	59,442,500
1948 1/	1,297,215	315,929,000	63,660,000
1947	1,031,521	299,537,000	60,357,000
Average 1945-49	1,008,800	257,300,000	51,846,000

1/Preliminary data and probably final figures will show some deviation.

Apart from cod and certain other types of fish, the abundance of fish, generally, in Norwegian coastal waters and on adjacent banks during 1949 appeared to have been about normal. Weather conditions, however, particularly in the beginning of the year, were extremely unfavorable all along the coast. This naturally influenced greatly the size of the catch during the two big seasonal fisheries that occur in the first quarter of the year--the winter herring fisheries and the Lofoten fisheries. Also, the catch of a number of other fisheries was greatly reduced by the stormy weather during the winter and spring months. That was the case with the cod fisheries in waters other than the Lofoten grounds, the bank fisheries, and the shark fisheries.

Equipment: The supply of fishing gear and tackle was good; therefore, the rationing of such equipment was revoked as of July 1, 1949. Although great investments in fishing gear have been made during the last few years, the fishing equipment destroyed during World War II has not been completely replaced. Since the war, the importation of gear and tackle materials for their manufacture has been carried out by the Government, first through the purchasing offices and subsequently by the Directorate of Fisheries.

It is estimated that fishermen during the four years 1946 to 1949 purchased about 188 million kroner ($37,882,000) of fishing gear, or an average of 47 million kroner ($9,470,500) annually. In order to aid the fishermen in restoring their equipment, the Government has granted substantial subsidies for fishing gear and tackle. It has been estimated that such subsidies amounted to approximately 20 million kroner ($4,030,000) in 1949, compared to about 18 million kroner ($3,627,000) in 1948.

The war-years' losses and wear on fishing boats probably have been fully made good, but an analysis of fishing boats, according to size, shows that there has been a shift since prewar years towards bigger vessels.

Besides the building of new boats and conversion of old ones, a substantial investment in the fishing fleet has also been made by installing modern equipment, such as, light equipment, radio, and radio-sounding devices.

Investments in the fishing fleet have been largely financed by the Government Fishermen's Bank. At the close of September 1949, the bank's loans totaled 56.9 million kroner ($11,465,350), only 1 million kroner ($201,500) of which was for gear and permanent plants. This is a very large increase from 1945 when the loans, as of June 30 that year, amounted to only 8.8 million kroner ($1,773,200).

Number of Fishermen: Apart from the cod fisheries and the sealing expeditions, in which an enumeration of fishermen and catchers has been made, estimates of the number of fishermen are based only upon surveys, and these show that participation in the fisheries was somewhat greater in 1949 than in the preceding year.

There was an increase in the number of men engaged in the fisheries in the first quarter of the year which was due to the winter herring fishery, while it is estimated that the participation in the cod fisheries during the same quarter decreased by 2,000 men as compared to the previous year. Increases in the second and third quarters were mainly due to greater participation in the cod fisheries and in the fisheries in distant waters.

Table 2 - Norwegian Manpower Engaged in the Fisheries, 1948-49, by quarters

Quarter	Number of Men	
	1949	1948
First	61,000	59,900
Second	67,300	64,700
Third	43,300	40,400
Fourth	43,500	44,500

Cod Fisheries: Government supervision was established at Lofoten on January 28, but the catch was poor during the first weeks. At the end of February conditions improved, and it appeared that the catch would about equal the 1948 level, or exceed it. But due to strong currents and unfavorable weather conditions, the concluding fisheries did not come up to expectations, and the total Lofoten catch reached only 66,700 tons as compared to 71,000 tons the preceding year. As in previous years, the major share of the 1949 yield was caught by the ordinary gear--net, line, and hand line. Best catches were obtained by those who used nets, while the fishermen using lines and hand lines had poorer results.

The Directorate of Fisheries continued tests with purse seines in the Lofoten area, fitting a number of boats with such equipment. On the whole, favorable results were obtained.

The winter cod fisheries yielded less than last year all along the coast. In Finmark, there was little fish, but in all other sections unfavorable weather was the cause of the smaller catch as compared to that of 1948. From various places along the coast it was reported that for weeks stormy weather would prevent fishermen from going to sea, except for half a day at a time, at great intervals. During the spring season it was reported that there was little fish on the fishing grounds. The winter cod fisheries yielded only 22,200 tons, the smallest catch since 1931--2,900 tons less than in 1948.

Including liver and roe, the total Norwegian catch of cod declined from 150,000 tons in 1948 to 129,500 tons in 1949, but the value only declined from 53 million kroner ($10,679,500) to 51 million kroner ($10,276,500) because a larger part of the 1949 catch was utilized as fresh fish.

Herring Fisheries: The winter herring fisheries of 1949 began January 13, two days earlier than in 1948, at Svinøy and Florø, on the West Coast, and southwards to Solund. The herring schools went into protected fjord waters which made it possible to continue the fisheries in spite of stormy weather, which prevented fishing in the open ocean. But it made operations difficult in the narrow waters, especially for the drifters.

During these fisheries, experiments were made in using the new Danish "atom trawl" and also a bank-herring trawl. Results of these experiments were not too encouraging.

Table 3 - Norwegian Winter Herring Fisheries Catch, by Type of Gear, 1947-49			
Gear	1949	1948	1947
	(In Metric Tons)		
Purse seine	295,647	325,500	231,384
Net	234,639	423,708	256,959
Land seine	37,200	71,052	5,952
Total	567,486	820,260	494,295

Winter herring fisheries production was estimated at 567,300 metric tons--a decrease of 251,100 tons from the peak year of 1948. However, considering the unfavorable fishing conditions during 1949, the result was good, and the catch was actually larger than that of any previous year except the record-year 1948. Value to fishermen amounted to 90.5 million kroner ($18,235,750) in 1949, compared to 131 million kroner ($26,396,500) in 1948. Of the total catch, 316,200 tons were "large herring" and 251,100 tons "spring herring."

The decrease in catch during 1949 especially affected production of herring oil and meal. The export of fresh herring was about the same as in 1948, while the curers of salted herring showed a little increase in their production.

Table 4 - Norway's Utilization of the Winter Herring Fisheries Catch, 1949 with Comparisons							
Year	Total Catch	Utilization					
		Fresh Export	Fresh-home Consumption	Salted	Canned	Processed (oil & meal)	Bait
	(In Metric Tons)						
1949	567,486	120,714	4,929	125,829	13,485	294,624	7,905
1948	820,260	119,691	7,533	118,203	17,763	539,958	17,112
1947	494,295	94,953	6,138	103,044	17,112	263,376	9,672

Prices and Marketing: For the total cod catch, the average price paid to fishermen, including roe and liver, was about 3 2/3 cents per pound in 1949, compared to 3.2 cents per pound in 1948.

For the 1949 winter herring catch, the Government again guaranteed minimum prices, but according to a sliding scale, depending upon the size of the catch. If actual sales by the Norwegian Herring Pool bring a greater return than corresponds to the prices guaranteed and paid to fishermen, the surplus is paid into an equalization fund, which in turn may be drawn upon if deficits arise at other periods of time.

Table 5 - Norwegian Average Prices to Fishermen for Certain Fish, 1949 with Comparisons					
Species	1949	1948	1947	1946	1945
	(in U.S.$ per hundredweight)				
Herring	1.33	1.44	1.68	1.42	1.61
Brisling	6.03	5.99	6.40	6.40	5.21
Cod	3.66	3.20	3.56	3.29	4.02
Coalfish (Pollock	-	-	2.74	2.83	3.56
Hyse (cod)	-	-	4.57	4.20	4.94
Mackerel	-	4.75	5.03	6.58	4.66
Halibut	-	-	17.09	16.45	17.91

Table 6 - Norwegian Cod Prices to Fishermen by Method of Utilization and Area, 1949			
Utilization	Area		
	Finmark	Nordland	More
	(In U.S.$ per hundredweight)		
Freezing	4.21	4.30	4.67
Fresh consumption	3.48	3.75	4.67
Salting & drying	2.93	3.02	3.20

Prices to fishermen of the more important types of fish increased by some 200 percent during the war years as compared with the prewar years. However, since the war, prices have remained fairly stable (see Table 5).

Demand for fish was fairly strong throughout the year 1949. Fishermen were greatly interested in delivering

their catches of cod, coalfish (pollock), and a few other species to the freezing plants as the price of fish for freezing has been considerably higher than for fish utilized in other ways (see Table 6). However, it was not possible for freezing plants to accept all the fish offered and at times difficulties arose.

NOTE: All values converted on the basis of the predevaluation rate of exchange of one Norwegian krone equals 20.15 cents U. S.

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INTEREST IN EXPORTING FROZEN ROSEFISH FILLETS TO U. S. INCREASING: Interest in the export of frozen Norwegian rosefish or redfish (Sebastes marinus) fillets to the United States is increasing, according to the February 23 Fiskaren, a Norwegian fishery periodical. The Norwegian Minister of Fisheries is optimistic about frozen rosefish fillets as an export article, but has stated that the price of fresh rosefish must first come down to the level of cod prices if Norway is to compete. Norwegian trawlers, according to the Minister, catch large quantities of rosefish each year, which they cannot use and must discard.

Norwegian redfish are identical with, but usually larger, than the rosefish or ocean perch caught especially by the Gloucester fleet and marketed in volume as frozen ocean perch fillets.

CANNED HERRING-SARDINES DEVELOPED TO COMPETE WITH BRISLING-SARDINES: Norwegian brisling-sardines, which have been supreme in world markets because of their exceptional qualities, now will have a worthy competitor in Norwegian herring- or sild-sardines, according to a report of an engineer in the Canned Fish Industry's Quality Control Laboratory. A discovery has been made at the Canned Fish Industry's laboratory in Stavanger which improves the quality of herring.

The result of the experiments, which have been conducted with a revolutionary flavoring, mononatrium, will put the Norwegian canning industry in a position to deliver a quality canned product which will be better, it is claimed, than the Spanish or French sardines.

The research conducted has shown that unpleasant taste and odor is due to a substance in the raw material called aminooxide. When packing herring, it is necessary to remove or neutralize this substance. To accomplish this, a simple chemical operation has been found. After the oxide has been removed, a herring- or sild-sardine is obtained which ripens just like the brisling-sardine.

The canning laboratory has obtained world patents on the method.

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GOVERNMENT TO BUILD FISH PROCESSING PLANTS: Among proposals which the Norwegian Government has put before the present session of Parliament are the formation of a company to build, own, and operate fish-processing plants in North Norway, an April 5 report from the Norwegian Information Service states.

The proposed capital for the fish-processing plants is approximately $210,000, the State to own the majority of shares. Other shareholders will be the fishermen's organizations and the Norwegian Trade Union Council.

It is recommended that 10 plants be built, mostly for fish filleting and freezing. Six plants which the State already owns or is building may also be taken over by the new company.

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EXPERIMENTS WITH STORAGE SILOS FOR FISH: An experimental silo[1/] is being built in Maaloy, Norway, which will test methods for preserving herring for later reduction into meal and oil, the Director of the Fishery Directorate's Chemical-Technical Research Institute in Bergen has informed the local press. The plant under construction is being built by a private firm, but with over $42,000 of aid from the Government. Plant capacity will be about 100 tons per 24 hours. Earlier trials of preservation with chemicals have given promising results.

If the operation proves successful and raw material can be stored for an appreciable period without affecting their quality, the reduction plants will overcome processing problems and enjoy a longer and more uniform season, reports the February 16 Fiskaren, a Norwegian periodical.

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VACUUM PUMP FOR DISCHARGING HERRING: A Norwegian has invented a vacuum pump for discharging herring from holds of vessels. Up to the present time, only one has been constructed, a December 29 dispatch from the American Consulate at Bergen reports. This pump has been undergoing tests in Norway since shortly before Christmas with what is said to be excellent results. The inventor, S. O. Jacobsen, has turned over manufacturing and sales rights to a Norwegian firm in Oslo. The firm hopes that some 15 pumps will be ready in time for use during the coming summer's herring fishing off Iceland.

The inventor stated that his invention pumps herring a height of about 20 feet at the rate of 200,000 pounds per hour; at 16 feet, 400,000 pounds per hour; and at 10 feet, 800,000 pounds per hour.

The pump is able to pick up dry cargo, i.e., deck loads. In other words, water does not have to be added to fish cargoes to improve suction. This ability to work dry cargo is said to reduce up to 20 percent the fat value lost under ordinary unloading methods. Fish discharged through the pump does not come in contact with any moving part of the vacuum-producing mechanism and tests to date show an average of not more than two damaged herring for every 200 pounds.

The present model weighs approximately 1,800 lbs., but the inventor believes it will be possible to reduce this by one-third when the pump goes into production. The unit housing the vacuum-producing motor mechanism, discharge ports, and the automatic device computing the volume of fish discharged measures approximately one cubic yard; it can therefore be moved about quite easily. A rubber suction hose has given best results; for discharging herring such a hose must be at least eight inches in diameter.

The inventor believes his pump can produce sufficient suction to discharge any reasonably sized fish, i.e., cod. To handle large fish merely entails a larger hose The pump can also be installed on the decks of fishing vessels for emptying nets at sea.

1/ See Commercial Fisheries Review, April 1950, p.74

The experimental pump now in operation is powered by a 2½ h.p. electric motor which uses from 8 to 10 amperes at 700 r.p.m.

The Norwegian firm does not desire to manufacture the pump in Norway for export to the United States, according to reports, preferring to license American manufacturing rights to a firm in the United States. The invention has been patented in Norway and applications for patents have been filed in 17 other countries, including the United States. The trade name given in the American patent application is "silverpump."

* * * * *

FISHING INDUSTRIES TO RECEIVE ELECTRONICS INFORMATION FROM UNITED STATES: Norway's fishing and shipping industries, which were cut off from knowledge of wartime technical developments during the Nazi occupation, will receive information about electronics and mapping through two Marshall Plan projects announced on March 30 in Washington and Olso by the Economic Cooperation Administration.

A five-month study of United States electronic systems is being made by a Norwegian hydrographic surveyor. During most of his study, he will be attached to the Coast and Geodetic Survey's ship Hydrographer, operating in the Gulf of Mexico.

Studies of electronic systems will be used for surveying purposes in Norway and as aids to navigation and fisheries along the coast. The Norwegian Government pointed out that fishing and shipping are two of that country's major industries and earn a large share of Norway's foreign exchange.

ECA dollar costs, including U. S. travel and subsistence, are estimated at $2,000 for the electronics study.

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COD FISHERY RESEARCH: The world's most modern marine research vessel G. O. Sars is at present investigating the possibilities of the Rost and Trena banks in the Lofoten vicinity where the large Norwegian cod fisheries are found. So far Norwegian trawlers have not operated on these banks, according to an April 1 release of the Norwegian Information Service.

Of particular interest to the Norwegian Marine Research Institute, which is directing the tests, is the behavior of the cod at a depth of about 200 feet. The G. O. Sars is equipped with a giant microphone, which is lowered in the ocean to find out if the cod "talks" during spawning. The vessel is also equipped with a deep-sea camera enabling filming of the cod shoals. One asdic apparatus and two echo sounders are to be used to find out how cod react to sound and light.

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NORWEGIAN-GREEK TRADE AGREEMENT: A new agreement for the exchange of goods between Norway and Greece during the period February 15 to December 31, 1950, was signed at Athens on February 15, 1950. A new payments agreement was concluded simultaneously. Norwegian exports are to include fish and fish oils, among other products. Norwegian imports from Greece do not include any fishery products, according to a March 31 American Embassy report from Oslo.

Contemplated Norwegian Exports of Fishery Products to Greece		
	1950	
Commodity	First Half	Second Half
	.. (Value in U.S. $) ..	
Salted cod	105,000	154,000
Frozen fish, including mackerel ..	1/	70,000
Smoked herring	1/	70,000
Canned fish	105,000	35,000
Cod roe	98,000	28,000
Medicinal and veterinary liver oil	154,000	-
Herring oil and other fish oils ..	560,000	-
1/ No specific amount specified.		

The new payments agreement proposes the establishment of an account in Norwegian kroner in Norges Bank (Bank of Norway). Since the account established in the previous agreement was in United States dollars, this signifies a change from dollars to kroner.

Portugal

NEW VESSEL ADDED TO FISHING FLEET: Portugal added a new vessel to its cod fishing fleet in March. This motor vessel, Soto Mayor, was built in Holland, a March 17 American consular dispatch from Lisbon states. It has displacement of 1,600 metric tons, measures 216 feet in length, and has a reported capacity of approximately 2 million pounds of fish (mostly salted). Designed for line-fishing operations, the vessel has accommodations for 75 fishermen.

Somaliland Protectorate (British Somaliland)

STATUS OF THE FISHERIES: Since no permanent lakes or streams exist in the Protectorate, the only fish are those obtained from the Gulf of Aden, according to a January 2 report from the American Consulate at Aden.

The principal salt-water fish of commercial importance are the sharks, tuna, and kingfish. There is only one firm which engages in commercial fishing to any extent, and it is financed largely by local Indians and prominent Somalis. This firm cans tuna and kingfish for local consumption and export.

Other fish products of the Protectorate include shark oil, which is obtained in Zeilah on a small scale. An attempt has also been made to produce sponges in Zeilah on a small scale.

There is a privately operated fish canning industry at Elayu at the eastern end of the Protectorate coast. This appears to be establishing itself successfully and it is expected that another factory will soon be opened in the same area.

FISH CANNERY ESTABLISHED: A fish canning industry, operated by a British company, is the first recent attempt to establish a new enterprise in the Somaliland Protectorate, according to a January 5 report.

The firm is registered in the Somaliland Protectorate with a subscribed capital of approximately $70,000 1/, of which $25,000 1/ was subscribed by local Somalis. Administration of the company is carried on in Berbera and the canning factory operates at Elayu.

1/ Values converted on the basis of 1 British pound equals $2.80 U.S.

Table 1 - Production and Value of Canned Tuna in Somaliland Protectorate, 1948-49		
Size of Can	Quantity	Value 1/
	No. of Cans	$
3½ oz.	40,000	-
4 lbs.	3,000	-
Total	43,000	33,600
1/ Values converted on the basis of 1 British pound equals $2.80 U.S.		

This season, owing to lack of money, the firm was very late in starting. The maximum value of fish that the factory can process is approximately $70,000-1/, and during this current season as much will be produced as is possible (see Table 1).

The Firm has the equipment to construct another factory (which will cost approximately $33,600) and the company wishes to do this at Adado where it will process kingfish, providing the Government will give them the necessary land. The new factory, when in full production, will produce 200,000 cans of fish per season.

The company experienced some difficulty in marketing the canned fish locally. A Middle East exporter-importer of general merchandise, who offered to undertake the marketing in other countries, sent samples throughout the chain of agencies in Africa and the Middle East and results were very satisfactory.

Table 2 - Current Canned Fish Prices F.O.B. Berbera		
Type of Canned Fish	Size of Can	Price Per Can 1/
Tuna	3½ oz.	14¢ U.S.
"	4 lbs.	$1.68 U.S.
Kingfish	1 lb.	25¢ U.S.
1/ Prices converted on the basis of 1 East African shilling equals 14 cents U.S.		

The Ministry of Food in London has now agreed to take the entire production of kingfish after an analysis by the Ministry's Food Inspectors. It is expected that other countries will place orders when their local markets have been fully canvassed.

Spain

SPANISH SYSTEM OF DRAGNET FISHING "BY PAIRS:" Dragnet fishing "by pairs" has enjoyed considerable success in Spain and seems likely to change long-established commercial fishing practices, a February 24 consular report from Bilbao states. The system is called fishing by "pairs" because two vessels are used to tow the fishing net or fishing gear between them. Although first introduced in Spain some forty years ago, the system has developed and improved through years.

Principal Spanish Ports from which "Pairs" Operate and the Number of these Vessels Operating From Each Port	
Port	No. of Vessels
Pasajes	250
Bilbao	26
Ondárroa	38
Santander	18
Gijón-Avilés	74
Coruña	106
Vigo	168
Marin	36
Huelva	43
Cádiz	34
Sevilla	21
Algeciras	18
	826

Type of Vessels Employed: At first, low-powered, coal-burning fishing ships were used, such as those driven by 100 h.p. steam engines and, generally, these were quite small, being from 65-72 feet long. These ships carried out their fishing operations by the day, that is, they left at dawn and returned at night-

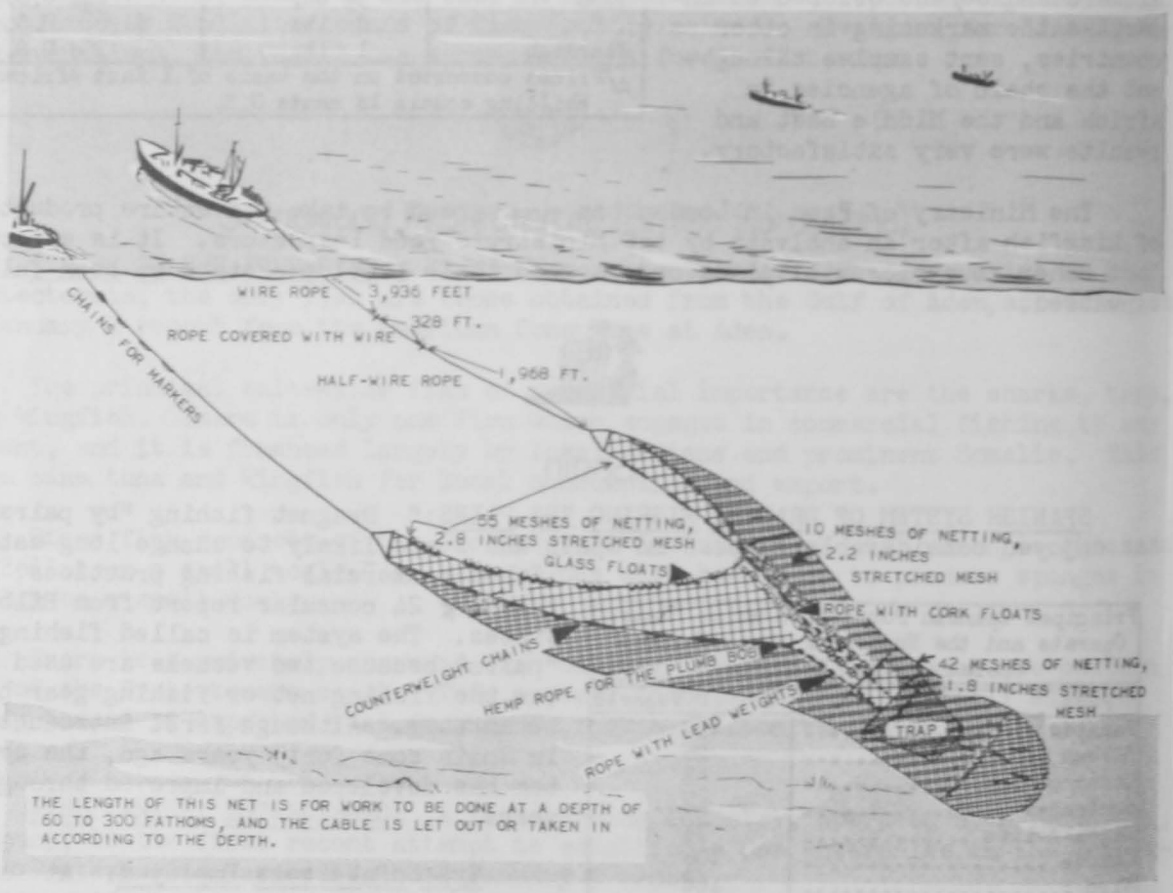
fall, dropping their nets near the coast close to the bottom of the sea where there has in the past usually been an abundance of many species of fish at a depth well suited to this type of fishing.

As intensive operations depleted the fish in the area near the Spanish coast and in view of greatly increased national consumption of fresh fish, which has come about since the Spanish Civil War, the construction of larger ships was considered imperative and, therefore, carried out. Many improvements have been made in the construction and propulsion of the vessels used for this purpose.

At present, the ideal vessel for fishing "by pairs" (regardless of distance from the coast), is stated to be the following:

A steel ship with a keel of not less than 98 feet; a 12-foot hold beam, 20 feet; equipped with Diesel motors of not less than 350 h.p. Average gross dead weight of two of these vessels may be estimated at 350 metric tons.

Present cost of construction, according to a local shipbuilder, of one of these vessels, at the present time, may be estimated at 3 1/2 million pesetas



THIS SKETCH SHOWS THE METHOD USED IN THE SPANISH DRAG-NET SYSTEM OF FISHING BY "PAIRS" (THE TOWING OF THE NET BY TWO VESSELS). THE SYSTEM ILLUSTRATED IS FOR DRAGGING IN EUROPEAN WATERS AND IT USUALLY IS AND CAN BE MODIFIED TO MEET THE REQUIREMENTS OF THE AREA AND THE FISHERY IN WHICH IT IS USED.

(approximately $140,000 U. S.[1]) if all supplies and equipment for the construction could be obtained legally; since this is rarely if ever possible at the present time, the actual cost is probably 50 percent over this amount.

Location of Fishing Grounds: This type of vessel has made crossings to Iceland, Newfoundland, and elsewhere and has been highly successful, both as regards fishing and sailing. Customarily, pairs of ships from the Bilbao area of Spain operate in the regions called the Grand and Petit Sole (South and Southwest of the coast of Ireland), and also in the fishing banks that run parallel to the Atlantic French coast.

Another group of the Spanish fishing fleet of "pairs" operates along the coasts of Africa, and this year for the first time, a large number of "pairs" expect to fish the Newfoundland banks, leaving Spain in March and April, as the few vessels of this type that made this trip last year are reported to have been extremely successful.

The Fishing Net: The usage of the fishing net is the chief difference between the Spanish method of pairs and the internationally used system of trawling. With a trawler the net is towed by only one ship, while the system of "pairs" necessitates, as stated above, two ships.

Quantity and Species Caught in European Waters "By Pairs": It is difficult if not impossible to estimate the amount of the average catch made by "pairs" at the present time as so much depends on the weather, location, and luck. During and after the war years, however, when the European fishing grounds were fished by vessels of a limited number of countries, a Spanish "pair" after a 20-day cruise frequently brought back catches of 80-100 metric tons but, at present, "pairs" fishing off nearby shores only expect to bring back a minimum of 30 metric tons from a similar trip.

Among the species of fish commonly caught by "pairs" in the European waters are hake (merluccius), bream (sparidae family), sole (not the American genus achirus, but belonging to the genus solea and a valuable food fish which attains a length of two feet or more), and rouget (Helicolenus dactylopterus), as well as the red mullet (Mullus barbatus). It should be noted that an important species of fish which is commonly fished hereabouts by trawlers and not by "pairs" is the common herring (Clupea harengus).

Crew: Each ship of a "pair" from local ports customarily has a crew of 13, with a full complement consisting of a captain, sailing master, machinist, boatswain, three oilers, and six sailors.

Each vessel of the "pairs" has a sailing master, one of whom is subordinate to the other. They tell the captain where to take the vessels and have entire charge of and responsibility for the fishing operations, just as the captain has for the actual sailing of the vessels. The actual handling of the fish and the nets is, of course, done by the sailors.

Terms of Work: These are governed by government regulation. Wages are composed of a fixed salary and a share in the profits. A sailor, for example, receives an average of 700 pesetas (approximately $28 U. S.[1]) a month and a bonus calculated on the value of the catch.

[1] Converted on the basis of the tourist-family assistance rate of exchange of 1 Spanish paper peseta equals 4 cents U. S.

There is a certain amount of variation between different owners but it may be stated, generally, that 14 percent of the profits of each trip is divided between the crew, of which the captain receives some 2 percent, the fishing masters 5 percent, and the balance of the crew receive the remaining 7 percent.

Since many basic items of food in Spain are strictly rationed (although they are available for a price on the black market), the more liberal rations given by the authorities to sailors may be considered an additional compensation for fishing.

"Pairs" vs. Trawlers: Although the pairs have shown themselves to be more adaptable and better able to fish under a larger variety of conditions and consequently are usually more profitable than the trawlers, the latter have always monopolized the lucrative fishing operations on the Newfoundland banks; therefore, the trawlers owners are reported to be largely dissatisfied with the forthcoming large-scale encroachment of the "pairs" into what they have considered their domain, but being fewer in numbers, their efforts to hamper this competition have hitherto been ineffectual.

Interest by Other Countries in This Development: In recent years, and particularly since the adaptation of modern propulsion machinery has so greatly increased the cruising radius of these vessels, there has been considerable interest shown in the possible acquisition of such craft by the fishing fleets of other nations. There is, however, at the present time, said to be a Canadian government emissary in Madrid who is negotiating with the Spanish government regarding fishing matters who is both interested in the possible use of "pairs" by Canadian concerns and is reported to be making some arrangements regarding the trip of the Spanish "pairs" to Newfoundland waters. There is also reported to be a concerted effort on the part of important French fishing interests, said to be supported in their efforts by the government of that country, to charter one or more "pairs" for fishing off the North African coast in place of trawlers which have hitherto been utilized there. It is understood that payment in French francs is to be made the Spanish owners (the ships in question are from the port of Pasajes) at the rate of 20 percent of the value of the vessels per year.

An owner of "pairs", who appears to enjoy a highly favorable local reputation, has on several occasions indicated his interest in initiating a similar operation with an American concern under an arrangement whereby he would furnish the ships, crew, and "know how" for a trial period of a year in return for a reasonable financial return, with the thought in mind that if at the termination of the trial period the system proved as successful as he anticipates, a mutually satisfactory agreement (either to continue on in the same way, to build such ships in the United States, or to take some alternative action) could be arrived at for a longer period of time.

Spanish Morocco

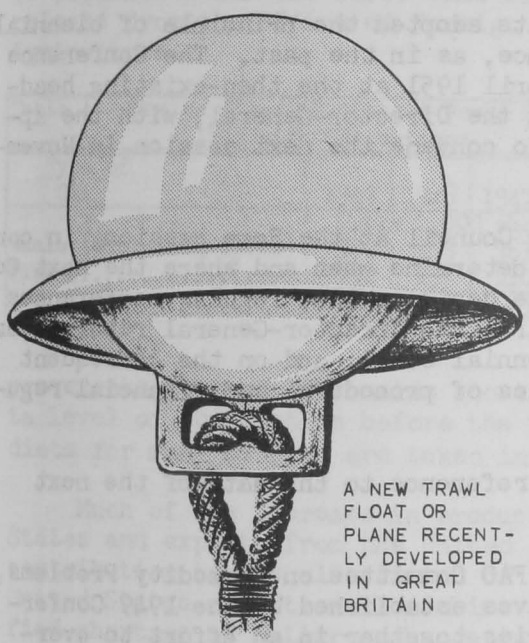
FISHING INDUSTRY, 1949: The fishing fleets of Spanish Morocco were exceedingly hard hit by the violent storms which struck the Zone last December and which resulted in heavy losses of life as well as small craft, not to mention the almost total destruction of the port of Villa Sanjurjo and severe damage to other ports. This will undoubtedly result in greatly curtailed output by the fishing industry for at least a year or two to come.

During 1949, there were 7,384 metric tons of fish caught in the Zone, valued at 13,705,000 pesetas (approximately $1,221,800 at selling rate of the Spanish peseta of 11.22 pesetas to one U.S. dollar), and during the first nine months of the year an additional 1,393 tons were imported, states a March 18 dispatch from the American Consulate at Tangier.

Spanish Morocco's estimated consumption of fresh fish for the entire year was 9,242 tons.

During the year 1949, authorizations were granted for the establishment of seven plants for the processing of salted and dried fish.

United Kingdom



A NEW TRAWL FLOAT OR PLANE RECENTLY DEVELOPED IN GREAT BRITAIN

NEW TRAWL FLOAT DEVELOPED: A new trawl float, or trawl plane as it is called by the manufacturers, was recently invented and developed by a British firm, reports the February 25 issue of The Fishing News, a British periodical. The firm claims that the new trawl plane has a remarkable buoyancy, and that it gives forty pounds of lift at normal towing speed simply by transforming drag into lift.

The attachment of the float as shown in the illustration gives it room to work.

Demonstrations of this new device at various fishing ports in England have proved very successful, according to reports.

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RESEARCH VESSEL INVESTIGATES BEST WATER TEMPERATURES FOR FISHING COD: The research vessel Ernest Holt[1/] of the British Ministry of Agriculture and Fisheries has been engaged for over a year investigating the best water temperatures for fishing cod on Bear Island grounds, reports a March 21 dispatch from the American Embassy at London.

The use of thermometers in fishing operations is promising, but there are many complications, and it is not possible yet to say how to get the best results. In the meanwhile, the work of the Ernest Holt shows clearly that Bear Island cod is not as a rule found in large quantities in water appreciably colder than 35.6 F. There is an important exception to this rule--during the season of heavy feeding from July to September, the cod towards Sea Horse Island were frequently taken in very large quantities in water colder than 32° F. It seems as if, when actively pursuing food, such as, the capelan, the cod is not as sensitive to cold water as it is at other times.

1/ See Commercial Fisheries Review, April 1949, pp. 59-63.

International

FAO COUNCIL MEETS IN ROME: Looking toward establishment of FAO permanent headquarters in Rome sometime in the first of 1951, the 18-government Council of the Food and Agriculture Organization held its ninth session in that city beginning May 8, 1950.

Consideration of plans for the removal of headquarters to Rome, as directed by the 1949 FAO Conference, held an important place on the agenda, along with the question of the time and place of the next session of the Conference of FAO's 63 member countries.

The Council received a report on preparations for the move, including the progress of negotiations with the Italian Government, and the technical, legal, and financial implications of the transfer.

At the 1949 Conference member governments adopted the principle of biennial, rather than annual sessions of the Conference, as in the past. The Conference directed that the next session be held in April 1951 at the then-existing headquarters of the Organization, but authorized the Director-General, with the approval or on the direction of the Council, to convene the next session in November 1950 if need arose.

On the basis of reports made to it, the Council at the Rome session, in consultation with the Director-General, was to determine when and where the next Conference will be held. In connection with the decision that regular conferences in the future shall be held on alternate years, the Director-General reported on plans for programming and budgeting on a biennial basis, and on the consequent need for amendments to the constitution, rules of procedure, and financial regulations.

The question of regional meetings with reference to the date of the next Conference was also considered.

The Council received a report from the FAO Committee on Commodity Problems, an advisory group of government representatives established by the 1949 Conference to bring producing and consuming countries together in an effort to overcome balance of payment difficulties standing in the way of the movement into consumption of surplus agricultural commodities. The Committee reported on its initial activities, its plans, and the procedures under which it proposes to work.

Among other matters considered by the Council was an application for membership in FAO received from the Hashimite Kingdom of the Jordan. (The Council couldnot pass finally on the application, since the Conference alone can admit new members to the Organization.)

Members of the FAO Council are Australia, Belgium, Brazil, Burma, Canada, Chile, Denmark, Egypt, France, India, Italy, Mexico, Pakistan, Union of South Africa, United Kingdom, United States of America, Venezuela, and Yugoslavia.

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POLAND WITHDRAWS FROM THE FAO: Poland has announced its withdrawal from the Food and Agriculture Organization, the Department of State reported in a press

release dated April 27. Poland's action is particularly surprising because of the benefits which it has obtained from membership in the Organization. For one thing, at the request of Poland, an agricultural mission was sent to that country by the Organization in 1947. A number of the recommendations of the mission have been put into effect with beneficial results to the Polish economy. Specialists were also sent to Poland at the request of that country in 1947, 1948, and 1949.

Poland's withdrawal from the Food and Agriculture Organization follows closely its withdrawal a few weeks ago from the International Bank for Reconstruction and Development and the International Monetary Fund.

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WORLD PRODUCTION OF MARINE OILS, 1949: All Fats and Oils: World production of all fats and oils in 1949 (up 5 percent over 1948) exceeded the prewar level of production for the first time since the end of hostilities, states a March 6 release from the Office of Foreign Agricultural Relations, U. S. Department of Agriculture.

Table 1 - Marine Oils: Estimated World Production, 1949 with Comparisons

Type of Oil	1949	1948	1947	Average 1935-39
	(in 1,000 short tons)			
Whale (excluding sperm)	392	385	363	585
Fish	292	237	220	460
Total	684	622	583	1,045

In general, 1949 saw the end of the acute shortage in the world's supply of all fats and oils and the situation should improve further in 1950 when much of the 1949 production will be available for distribution.

In spite of these marked improvements, the world remains short of fats and oils, compared with the per capita level of consumption before the war, and even shorter if inadequate prewar diets for many peoples are taken into account.

Much of the increase in production since prewar has occurred in the United States and exports from the United States during 1949 made the largest single contribution to the alleviation of the world shortage. Indications are that United States exports will decline somewhat during 1950 because of the intensified shortage of dollar exchange in importing countries. This is likely to mean continued high prices in soft currency areas relative to prices in dollar areas.

Marine Oils: In 1949, world production of marine oils (whale and fish), estimated at 684,000 short tons, was up 10 percent from that of 1948 though still well below prewar (see Table 1). This increase resulted principally from a substantial expansion in the production of fish oil—about one-fourth greater than in 1948.

Table 2 - Marine Oils: World Exports, 1950 with Comparisons

Type of Oil	Forecast 1950	Estimate 1949	1948	Average 1935-39
	(in 1,000 short tons)			
Whale (excluding sperm)	385	383	380	584
Fish	100	90	102	150
Total	485	475	482	734

The increase of whale oil output, however, was small because the catch of baleen whales during the 1948-49 Antarctic whaling season again was limited to a maximum of 16,000 blue-whale units under the regulations of the 1946 International Whaling Convention. Whale oil production varies little from year to year because of the limit placed on the pelagic whaling catch in the Antarctic. Exports of whale oil were slightly higher in 1949, compared to 1948 (see Table 2).

World production of fish oil in 1949, estimated at 292,000 short tons, is the largest postwar output, but it still was 37 percent below the prewar average. Production in Canada (excluding Newfoundland) and the United States, the world's largest producer, probably did not exceed the 1948 output of 63,200 and 13,300 tons, respectively. Indications are that Norway, the United Kingdom, and possibly several other European countries increased their production in 1949. Newfoundland's fish oil output was considerably larger than a year earlier. Exports of fish oils were down in 1949. Shipments from Iceland, the principal exporter, were almost 75 percent less than in the preceding year.

THE CODFISH INDUSTRY IN NORTHERN PORTUGAL

The codfish industry in Northern Portugal, the region extending from Figueira da Foz to the Spanish border, is not only an important industry in the region but also one of the most important industries in the country, representing a capital investment of about $14,000,000. The history of the industry is long, and the earliest reports are undoubtedly mixtures of fact and fiction. Some even claim that Portuguese fishing vessels found America before Columbus. However, it is known that such vessels sailed from Oporto on the Douro River as early as 1497 to fish on the Grand Banks. Portuguese fishing activity has varied considerably through the years, but, regardless of this, dried codfish has constantly remained a basic item in the Portuguese diet. Northern Portugal alone with a population of about 4,000,000 consumes an average of twelve percent of the world codfish production at present levels, and even then the demand is not entirely filled.

Today Portugal is one of the foremost producers (ten percent) as well as a principal consumer (twenty percent) and importer in the world codfish market. The production side of the industry is now of particular importance: it is a great saver of foreign exchange; it is a good provider of a basic item in the national diet; and it employs directly an estimated 6,000 persons in the North excluding wholesale and retail sales people. In 1948 the North produced an estimated 21,000 tons of undried codfish valued at 130,000 contos, which was converted to 15,500 tons of dried fish valued at 147,000 contos. This constitutes over seventy-five percent of the Portuguese production. Portugal, in addition to using almost the entire production herself, as exports are negligible, imported three tons of undried cod worth 21 contos and 23,302 tons of dried cod worth 248,304 contos. (One conto equals approximately $34.)

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