

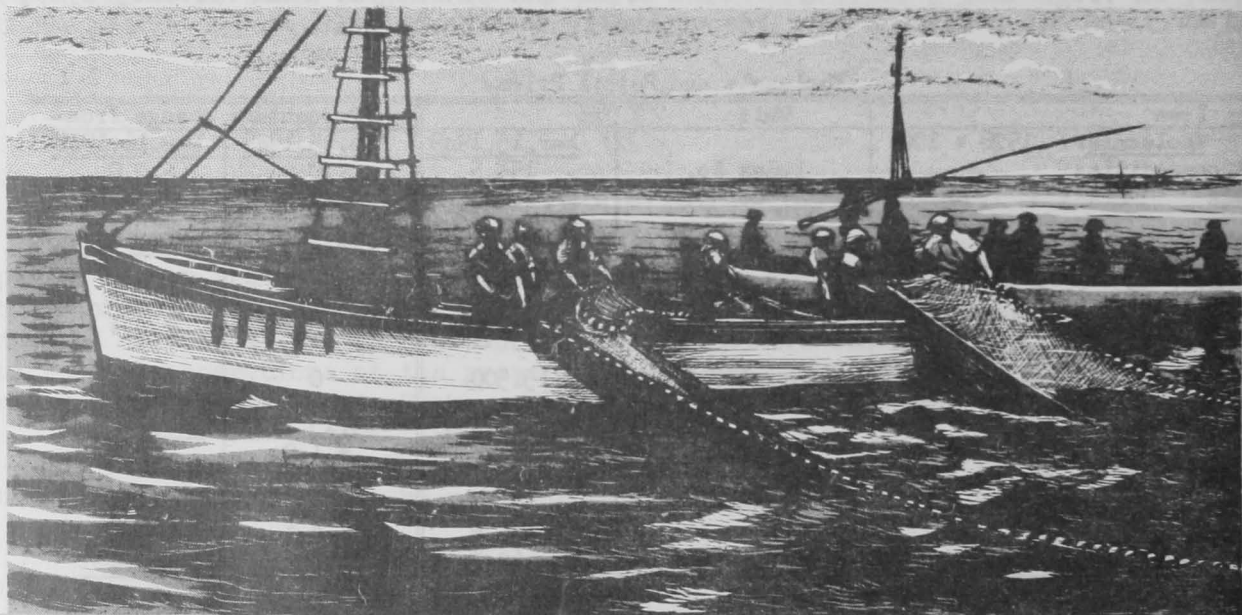


Argentine Republic

ANCHOVY FISHERY: The anchovy is one of the most important species produced by the Argentine fishing industry, and is principally exploited in Mar del Plata, south of La Plata estuary. Fishing for anchovies begins the middle of September and continues until the first part of November.

During October 1948, 9,277,840 pounds of anchovies were taken, an amount greater than the total 1947 production of 9,129,648 pounds. Up to the end of October 1948, the total production was 10,090,520 pounds to which will be added the catch in November, when the season ends.

The anchovy fishery is prosecuted with boats of 6 to 10 metric tons working in pairs. Each boat, under favorable conditions, may produce as much as 35,200 pounds or as little as 4,400 pounds per trip. On the average, a pair of boats take about 13,200 pounds.



FISHING FOR ANCHOVIES. NET IS TAKEN IN BY TWO BOATS.

Mar del Plata, the center of the industry, has 82 plants for salting and canning anchovies registered with the Argentine Ministry of Agriculture. These plants have modern equipment and machinery and skilled technicians. Anchovies are processed in three forms: in small bottles; salted, similar to sardines; and in the form of various prepared anchovy products similar to those produced in other countries.

Australia

ESTABLISHING AN OYSTER CANNING INDUSTRY: Japanese oysters are to provide the basis for an Australian oyster canning industry, according to a January 19 press release from the Australian Council for Scientific and Industrial Research. The Council has now successfully transferred a second batch of seed oysters from Japan to Pittwater in Tasmania as a foundation for the establishment of an oyster canning industry.

The imported oyster will not rival the local varieties. The Australian oyster has a demand as a fresh oyster which cannot be satisfied by the present industry. The Japanese oyster produces a large rather coarse meat which is usually used for processing.

First shipment of seed oysters from Japan was made in 1947, and the oysters were planted out in Oyster Bay in Western Australia and at Pittwater in Tasmania. The latest consignment was brought by the Council's Division of Fisheries from Hiroshima by sea. As the growth and survival rate of the oysters placed in Oyster Bay in 1947 was poor, the new arrivals were all distributed at Pittwater where growth and survival had been good.

There is now a stock of approximately 400,000 seed oysters at Pittwater. In the summer of 1949-50, the 1947 shipment should be ready to spawn; and those of the 1948 shipment in the following year. If spawning and spat fall are successful, the present stock should make an adequate foundation for the oyster canning fishery.



Belgium

FISHERIES REVIEW, 1948: Consumption: There is no rationing of food in Belgium, and at present the consumption of fishery products is considerably above prewar, according to a February 28 report from the American Embassy at Brussels.

Total disappearance of fish in Belgium based on production, imports, and exports averaged about 90,000 metric tons per year before the war. In 1947, this figure was 135,158 tons, but some of this disappearance was represented by building up of stocks of canned fish in anticipation of the fact that duties were to be charged on canned fish beginning January 1, 1948. The 1948 disappearance of 117,870 metric tons represented a per capita consumption of about 31.9 pounds per year compared with about 24.2 pounds before the war.

Table 1 - Belgian Fish & Shellfish Catch, 1938, 1947-48

Type of Fish & Shellfish	1948	1947	1938
	lbs.	lbs.	lbs.
Iceland cod	6,757,912	10,316,398	4,091,890
Other cod	9,657,987	10,346,809	5,053,246
Iceland haddock	2,887,639	4,195,211	973,247
Other haddock	3,692,649	2,845,368	1,908,918
Plaice	10,065,433	13,787,970	6,743,112
Ray	8,088,192	10,193,663	7,563,070
Turbot	1,650,526	1,888,174	1,631,436
Sole	3,913,925	5,887,512	4,999,489
Whiting	8,809,273	8,502,404	6,948,869
Full herring	31,902,092	33,533,423	12,943,440
Spent herring	17,337,045	37,819,841	
Sprat	5,098,146	1,333,917	2,551,177
Shrimp	3,632,906	4,484,689	6,489,813
Miscellaneous	28,273,795	20,894,533	24,199,461
Grand total	141,767,520	166,029,912	89,097,168
Total Iceland fish .	17,810,419	21,528,835	10,397,145

Production: Total production in 1948 amounted to 141,767,520 pounds (valued at \$10,627,150)—somewhat less than in 1947, but over 50 percent above prewar.

Product	Imports		Exports	
	Metric Tons	Value	Metric Tons	Value
Fresh fish:				
Fresh-water	959	\$ 719,969	-	-
Herring	3,086	441,692	1,259	\$ 140,714
Other sea fish	9,069	2,893,492	5,131	1,511,882
Salted and smoked fish:			1,425	297,091
Herring	10,302	2,232,748	-	-
Other	917	539,327	-	-
Oysters, mussels, etc.:			1	3,013
Mussels	19,463	678,201	-	-
Other	2,246	2,021,171	-	-
Canned fish:			423	266,616
Sardines	9,092	5,983,749	-	-
Pilchards	853	459,471	-	-
Salmon	4,046	2,647,737	-	-
Other	1,638	1,456,958	-	-
Total	61,669	20,074,515	8,239	2,219,316

The Belgium Government does not grant any subsidies nor any other aid to the fishing industry.

Imports: As compared with 69,096 metric tons of fishery products imported in 1938, Belgian imports during 1947 totalled 81,139 tons, while during 1948 they amounted to 61,669 tons. Of the 4,046 tons of canned salmon imports, 3,113 tons came from Canada.

Exports: In 1938, Belgium exported 11,116

metric tons of fish; in 1947, 21,351 tons; and in 1948, 8,239 tons.

On January 21, 1949, a supplementary commercial agreement with Trizone Germany was reached under which Belgium may export to Germany up to June 30, 1949, \$735,000 of fresh sea fish, fresh and salted herring, and other salted fish.

Note: Values based on exchange rate of 1 Belgian franc equals 2.3 cents U. S.



Bizone Germany

CRISIS IN GERMAN SEA FISHERIES: In Bremerhaven fish-catching circles, March 30, 1949, will be remembered as the "Schwarzer Tag" (black day), according to an April 5 American consular report from Bremerhaven. On that date the controlled distribution system for fresh fish broke down due to decreased consumer demand. Some 660,000 pounds of cod, haddock, and pollock (coalfish) could not be distributed at the controlled price and were put up for auction. In free bidding for cod, the offered price dropped to 3.3 cents per pound ex-auction hall, equivalent to 6.8 cents per pound to the consumer. Hoping to minimize their losses, the fish-catching firms stopped the auction at this point, and set a standard price of 5 cents per pound for all types and grades of fish. At this price 550,000 pounds were purchased by the local industry for processing by local plants, but the remainder had to be held and sold the next day. The significance of the day's events lies in the facts that the March 30th landings totaled only 1,540,000 pounds and that German fish consumption is higher preceding Easter than at any other time of the year.

Local fishing-ship owners are critical of several measures adopted by the Frankfurt authorities. The recently ordered 2.2 cents per pound increase in the price of fish is universally criticized. Ship owners are well aware that the demand for their product has become exceedingly elastic of late due to the hardening of the currency and to the increasing supplies of meat and fish. They realize

that any increase in the price of fish will seriously affect consumption. They almost without exception want to see the rationing of fish ended because they think that the distribution system now is over-inflated, and the difference between the cost to the consumer and the return to the fisherman is too great.

Another Frankfort action, privately criticized by fish-catching circles, is that of concluding 1949 fish imports contracts for 322,000 metric tons. On the average, the imported fish cost 10 percent more than domestic fish even after the recent 2.2 cents per pound increase, which is looked upon by some merely as an attempt by the Frankfort authorities to do away with the need for import subsidies. It is maintained that if the money paid out as a subsidy on imported fish had instead been used to rehabilitate the German fishing fleet, Germany would be better equipped for catching with its own ships the fish needed by its people, and in addition would have saved foreign exchange. The German fishing industry presently is not being subsidized, as it was before the currency reform, by being sold coal at less than cost.

The break in fish prices is not expected to hinder the construction of new fishing vessels of the 400-ton series, nor the chartering of used fishing craft from the United States. While neither the 400-ton craft nor the United States vessels will be as profitable as new, German-built, 600-ton vessels, they will be good enough when compared to the average vessel now in use. The local fishing companies are confident that imports will not be subsidized by the German taxpayer, and that the home fleet will thus be given an opportunity to compete with other fleets on a more equal basis.

Note: Values converted on basis of official rate of exchange of 1 Deutsche mark equals U. S. \$0.30

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RESEARCH ON FAT CONVERSION FROM PLANKTON: Dr. Richard Harder's pioneer experiments in the production of fat from oceanic plankton are beginning to assume great importance as a possible source of future nourishment for mankind, according to an April 4 report from the American Consulate at Bremen. Dr. Harder is the dean of the mathematical-scientific faculty at the University of Goettengen. His experiments on the subject, begun during the war and encouraged by the effectiveness of the allied blockade of Europe, have awakened considerable interest in other countries. It may be particularly noticed in this respect that the British Government's Ministry of Food has established an experimental plant for such work at the Microbiological Research Institute at Trinidad.

Plankton, a microscopic type of oceanic plant life, is one of the abundant substances in the sea; it forms the main diet of whales and many fish. Dr. Harder, who is still principally occupied with this problem, is attempting to produce fat directly from the plankton; this would, of course, eliminate the fish or animal as the "middleman" in the production of the fat. He asserts that he has been successful in the basic experimentation. Attempts, however, to utilize his researches for the manufacturing of synthetic margarine and fat, have not yet worked out; Harder is therefore continuing his tests in an attempt to render his processes industrially practicable. No data has been published to date on these researches.



Bulgaria

FISHERIES, 1947: The government has planned to increase the importance of fishing in Bulgaria, according to an April 7 report from the American Legation at Sofia. According to the Bulgarian press, 550,000 pounds of fish were caught during the spring of 1947, using the first organized deep-sea motor fishing fleet in Bulgarian history. The 1947 output of dolphin oil was 149,600 pounds compared with 116,600 pounds in 1946.

Legislation was passed in 1947, according to the Official Gazette, No. 264, of November 13, 1947, creating the "State Fish Hatcheries and Fisheries" for the purpose of organizing and developing deep-sea and inland fishing.



Canada

BRITISH COLUMBIA HERRING FISHERY, 1948-49: The British Columbia herring are caught in the immediate vicinity of the shore, the fishery being known as "shore fishery." On the Pacific Coast, the main season, when huge catches are taken, runs through the fall and winter months. In the waters off British Columbia, purse seining is employed in the production of the major portion of the catch, though there is some gill-net fishing.

The 1948-49 British Columbia herring season closed on March 5, 1949, when it was discovered that the herring in the vicinity of Laredo Channel, the main fishing center, had begun to spawn. During that season, fishermen landed 189,251 tons, as compared with the catch of 171,434 tons the previous season, and received \$8.50 a short ton for herring destined to reduction plants and canneries, according to a March 18 report from the American Consulate General at Vancouver.

Although part of the herring catch is marketed fresh, the fish lend themselves to several forms of preparation. When Great Britain was badly in need of a cheap food, high in protein value, during the war years, more than a million cases were canned annually for that market in British Columbia. However, shipments to the United Kingdom practically ceased by 1948. As a consequence, the fishing industry here reduced its production of canned herring during the 1948-49 season to a mere 92,815 cases (48 pounds per case).

Production of meal this season amounted to 31,605 tons, most of which was sold in United States and the domestic market; prices f.o.b. Vancouver being quoted at \$1.75 per unit of protein early in the season, but \$2.75 per unit early in 1949.

The production of herring oil from this season's catch amounted to 3,081,528 gallons. Approximately 75 percent of the entire production of herring oil in British Columbia was sold either in the United States or in the domestic market. The price during most of the season was 15 cents a pound, but an early 1949 shipment to Denmark was made at a price of 11.85 cents per pound. The oil is used for feeding and also utilized for industrial purposes. There are now no Canadian export restrictions on herring meal or oil.

MARKETING 1949 BRITISH COLUMBIA SALMON PACK: Immediate prospects for the successful marketing of the 1949 British Columbia salmon pack are uncertain and anything but bright due to the loss of British markets, which in prewar years took 80 percent of the pack, according to a March 30, report from the American Consulate General at Vancouver. This year such markets are not expected to absorb more than 50,000 cases from an anticipated pack of 1,500,000 cases. In view of this, a Canadian fishermen and allied workers union on behalf of its members is urging the Canadian Government "to permit trade with our essential markets on a barter basis, by long-term credits and deferred credits, so that our industry may continue to produce to the limits of its capacity." The union also referred to the high United States duty on canned salmon, and to proposals made to Washington by American fishing interests to further restrict imports of fresh and frozen species of fish which are competitive with Canadian products.



PART OF THE BRITISH COLUMBIA SALMON TROLLING FLEET.

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MINIMUM PRICES GUARANTEED SASKATCHEWAN FISHERMEN: The Saskatchewan Fish Board has ceased operations as a commercial agency to buy and sell fish, the Saskatchewan Resources Minister announced in the legislature, according to an April 1 release by the Saskatchewan Bureau of Publications. However, the Board will continue to operate under the Department of Natural Resources and will guarantee a floor price to fishermen when it is economically and socially advisable to do so.

Floor prices will be established if fishermen request that the Department market their fish. Agent for this marketing operation will be the Fish Board Division of the Lake and Forest Products Corporation.

The suggested floor prices would pay fishermen the normal expenses of operation and provide a living while they are fishing. All returns from government-marketed fish would go toward paying the floor price and the expenses of marketing. Any surplus will be distributed to fishermen as a dividend. Any deficit will be paid by the Department and reported to the legislature by way of supplementary estimates.

Where floor price regulations are in effect, only local fishermen will receive licenses to fish, and limits will be set in accordance with good conservation practice and the needs of the fishermen.

The Department would increase its advisory and regulatory functions in the Province's fisheries for the purposes of improved conservation, improved quality of the product, and to assist fishermen to organize so that they will be better able to protect their marketing interests.



Costa Rica

FISHERIES REVIEW, 1948: Exports: Costa Rican exports of fresh (frozen) tuna were almost doubled in 1948, but this increase was more than offset by the decline in exports of the canned product so that total tuna exports dropped below the 1947 total, according to a March 4 report from the American Embassy at San Jose.

Quantity		Value	
1948	1947	1948	1947
(metric tons)		(in thous. of U.S.\$)	
2,965	3,210	818	921

Fishing Gear and Bait: During 1947, a dispute flared up between bait and seine fishermen regarding the use of purse seines for tuna fishing, and it was proposed that purse seines be banned in Costa Rican territorial waters. The proposal never became law. In 1948, the dispute resolved itself through the depletion of bait (sardinas) in the Gulf of Nicoya, which for years was well stocked with bait fish. The Government seems to have decided that both types of gear are acceptable.

The bait situation in the Gulf of Nicoya became so acute that, in November 1948, a decree was issued by the Costa Rican Government closing that body of water to bait fishing for a period of six months. It is not yet known whether such a brief closing of the season will result in an increase in the depleted bait supply.

Tuna Catch Reported at Puntarenas: Although there was a scarcity of bait, political unrest in Costa Rica, and concern over pending decrees to regulate the activities of fisheries, a larger catch was reported through the customs office in Puntarenas than at any time within the past 10 years. Much of the tuna caught by boats based at Puntarenas came from as far away as the Galapagos Islands. A considerable amount also was caught off the Costa Rican and Panamanian coasts.

Tuna Cannery: The country's only modern canning plant, an American-owned tuna processing and canning plant located at Puntarenas, is operated only on a part-time basis. The manager of the plant stated that the extent of the future activities of the plant will depend principally upon the nature of the pending regulation and taxation measures.

Decree-Laws: As evidence of its belief that the State has at least an interest in all of the means of production within the country, the Junta has issued three decree-laws affecting the fisheries in Costa Rican waters. The first decree extended Costa Rican sovereignty over waters within 200 miles of the coast; the second laid the basis for the establishment of various conservation and control measures within these waters; and the third, issued in January of 1949, established various taxes to be paid by the fishermen.

Concern has been expressed by some United States fishing organizations as to the effect on them of such regulations when issued, in view of Costa Rica's claim to sovereignty for 200 miles at sea. Since tuna is the most important fish caught off Costa Rican shores, restrictive regulations would affect the tuna fishing industry more than any other.

Table 2 - Fresh, Frozen & Canned Tuna Catch Reported at Customs Office in Puntarenas, 1939-48

Year	Fresh & Frozen Tuna		Canned Tuna	
	lbs.	Value	lbs.	Value
1948	6,323,874	\$709,046	199,540	\$109,014
1947	3,858,534	404,299	3,205,473	516,962
1946	2,818,200	202,000	706,200	311,000
1945	1,432,618	112,759	498,333	185,167
1944	1,900,787	413,182	22,999	9,587
1943	991,481	73,078	45,485	20,092
1942	2,345,847	117,703	17,186	4,058
1941	1,843,184	147,920	-	-
1940	4,203,280	244,432	-	-
1939	7,465,260	413,441	-	-

Other Fishery Products: The only other fishery products in Costa Rica are shark livers and turtles. Of the former, all of which were exported to the United States, only 60 metric tons were exported in 1948 compared with 219 tons the previous year, and 146 tons in 1946. The value increased materially. In 1948, shark liver exports were valued at \$123,753, compared to \$53,061 and \$79,000 for 1947 and 1946, respectively.

Exportation of live giant turtles is still carried on from Port Limon on a small scale. Exports for 1948, all of which went to Panama, Colombia, and the Canal Zone, were 182,820 pounds valued at \$4,126.



Denmark

GREENLAND FISHERIES, June-October 1948: The fishery, which was begun in Greenland waters in 1948 by several Danish companies with six cutters, a factory ship, and two other vessels, undoubtedly will continue, according to the January 1949 issue of the Danish publication Konserves. The fishery, in 1948 began in June and ended about October 1, and produced 683.6 metric tons of fishery products.

Product	Quantity
	Metric Tons
Halibut, frozen	2.8
Cod fillets, "	46.0
Cod, salted	577.0
Halibut, "	3.0
Pollock, ling, & haddock	21.0
Roe, cod	0.3
Liver, Greenland shark .	26.0
Oil, cod liver	7.5
Total	683.6

Salting occurred on shore and on the vessels. Freezing took place on the factory ship Greenland (290 gross tons), equipped with pressure plate freezers. It also was fitted out to fillet and salt fish, and produce liver oil. Filleted fish were frozen in about two hours between plates which could be brought down to about -22° F. It is not yet certain whether additional ships like the Greenland will be built or future freezing operations will be carried out on land.



Germany

PERMITTED TO CONSTRUCT LARGER FISHING VESSELS: An agreement between the Military Governors of the United States, the United Kingdom, and France in Germany, regarding limitations to be placed upon certain industries in Germany in the interest of security, was announced by the U. S. Departments of State and Army on April 13, 1949.

Article VIII (d) of the "Agreement Concerning Prohibited and Limited Industries in the United States, French and United Kingdom Occupied Areas of Germany" provides that capacity of Germany's shipbuilding industry shall be limited to that remaining after the removal of three yards, in addition to those four that have already been made available, for reparations.

Article XI (1) provides that the construction of ships whose size or speed does not exceed those listed in the Agreement shall be permitted in Germany, provided that no ocean-going ships shall be constructed until a German coastal fleet

adequate for the requirements for European and German recovery has been reconstituted. Included under this phase of the Agreement is the provision that Germany will be permitted to construct small craft (including fishing vessels and ships other than cargo-carrying craft) not to exceed 650 gross-registered tons and a speed of 12 knots. The former limitation for fishing vessels was 400 GRT, although Germany was permitted to use 51 fishing vessels in excess of this tonnage in accordance with allocations made by the Tripartite Naval Commission.

Notwithstanding anything contained in the Agreement to the contrary, the Military Governors, acting upon the advice of the Military Security Board, may authorize under license the construction of vessels having a greater speed than 12 knots that are shown to be essential for such purposes as the prevention of smuggling and illegal fishing, frontier control, etc.



Iceland

DISPUTE BETWEEN SEAMEN'S UNIONS AND TRAWLER OWNERS SETTLED: The fishing trawlers of Iceland, which stopped fishing on February 10, resumed operations on March 26, according to the April 2 issue of the British periodical, Fish Trades Gazette. The dispute centered around the refusal of the trawler owners to continue paying a full war-time bonus to Icelandic fishing crews which land their fish in Great Britain and other foreign countries. (See Commercial Fisheries Review, April 1949, page 49).

The exact terms of the agreement are not known in full. It is understood that some bonus, but less than that paid during the war years, will be paid to those boats landing their catch outside of Iceland.

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FAROESE FISHING RIGHTS IN ICELANDIC WATERS: A law extending the period of time in which Faroese have the right to engage in hand-line fishing from deck vessels, with or without engines, and from open boats within Icelandic territorial waters was passed by the Icelandic Althing on December 17, 1948. The period is extended to the close of the year 1949. This law amends the Act of October 9, 1946, which was passed pending the completion of the negotiations now in progress as a result of the abrogation of the Danish-Icelandic Union Pact of November 30, 1918, according to a February 11 American consular report from Reykjavik.



Italy

TO DEVELOP COD FISHERY IN ATLANTIC: The Superior Council of the Merchant Marine has approved a report on the importance of the ocean fisheries to Italy and has expressed the opinion that it will be to Italy's interest to develop the Atlantic Ocean fisheries and particularly that of the cod fishery, according to the November-December 1948 Bollettino di Pesca of the Department of Agriculture and Forest. The Department of the Merchant Marine, Treasury, and Foreign Commerce, are studying ways and means of obtaining adequate financial aid for Italian cod fishery enterprises.

FINANCIAL ASSISTANCE FOR NEW FISHING VESSEL CONSTRUCTION: The Italian Government will provide financial assistance for the building of fishing vessels. The new plan, approved by the Council of Ministers, provides for financial assistance for building fishing vessels of under 500 gross registered tons. For all fishing vessels, regardless of size, certain funds are allotted for financing the installation of electric and refrigerating plants. The purpose of this aid is to encourage the installation of refrigerating equipment on fishing vessels. Various other financial provisions are included in this plan for the Government to aid the fishing industry to build fishing vessels.



Japan

LANDINGS OF FISHERY PRODUCTS, 1948: The estimated total Japanese production of marine fishery products during 1948 (excluding aquiculture and Antarctic whaling)

Japanese Official Reported Landings of Marine Products by Species, 1948

Species	Quantity	Species	Quantity
Fish:	Metric Tons	Fish (Continued):	Metric Tons
Herring	92,227	Sharks	90,397
Atka mackerel	52,395	Others	456,070
Sardine	316,277	Total	1,521,759
Bonito	45,589	Other Marine Products:	
Tuna	31,079	Shellfish	71,662
Mackerel	80,064	Crustacea	28,705
Horse mackerel	21,329	Cuttlefish and octopus	283,247
Flatfish	88,818	Sea cucumber	6,856
Sea bream	25,243	Whales	73,320 ¹
Skipper	39,646	Seaweed	43,385
Cod and pollock	162,727	Total	507,175
Yellowtail	19,898	Grand Total	2,028,034

¹/The total whale production is computed by multiplying an average weight of 40 metric tons per whale by the number of whales caught.

totaled 2,385,919 metric tons compared with the estimated 2,827,550 tons in 1947, according to the March 19 Weekly Summary of the Natural Resources Section of SCAP.

Taking only the data from official reports of landings of marine products (estimated to be between 85-95 percent of the actual total landed), the reported catch for 1948 was 2,028,034 metric tons, 105,284 tons more than the reported catch in 1947 (estimated to be 60-70 percent of the actual total landed).

PRESS CONFERENCE STATEMENT ON JAPANESE FISHING AREAS: A representative of the Natural Resources Section of SCAP made the following statement on February 5, 1949, at a press conference, according to the February 5 Weekly Summary of this agency.

"Fishing areas are of great importance to the people of Japan, not only because the fish taken from these areas supply the principal part of the animal protein in their diet, but also because fishing operations in such areas provide one of the broadest fields of contact between the Japanese people and those of other nations. Many persons, in addition to fishermen, therefore, are interested in the answer to this question, 'When, if ever, will Japanese fishermen again be allowed to fish the high seas with no greater restrictions on their operations than those covering the fishermen of other nations?' This is a question which

I cannot answer at present, for the answer depends upon the performance and attitude of Japanese fishermen and of Japanese Government officials connected with fisheries.

"Present restrictions on Japanese fishing operations are connected with the behavior of Japanese fishermen before World War II. This behavior caused the



TYPICAL SMALL JAPANESE FISHING BOAT USED FOR SET-NET FISHING IN COASTAL WATERS.

people, particularly the fishermen, of other nations to distrust Japanese fishermen and the Japanese Government as being irresponsible and having no consideration for international agreements or the interests of other countries. Such convictions have led these nations to insist that Japanese fishermen be restricted so that they will not be able to endanger the fisheries of importance to these nations.

"What have the Japanese fishermen done to deserve this reputation? Let us review the record. Before World War II, Japan conducted Antarctic whaling without regard to regulations designed by the International Whaling Convention to preserve this great international resource and agreed to by all other whaling countries. Japanese whalers indiscriminately killed whales, without regard to size, sex, or number, so that this great resource would have been destroyed economically, except for the fact that World War II interrupted Antarctic whaling. Japan, too, without regard to the interests of United States, Canada, and Russia, abrogated the International Fur Seal Treaty, which had made possible the restoration of the seal herds of the North Pacific. Japanese boats also conducted clandestine salmon fishing in the Bering Sea, which endangered Alaska salmon runs that had been restored and maintained by the United States Government through extensive research and regulation.

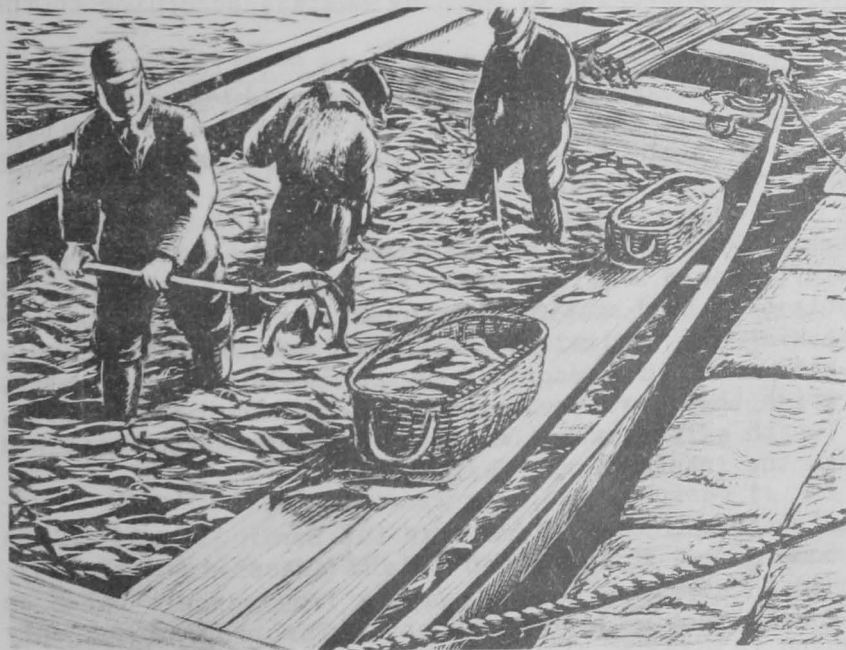
"Since the Japanese surrender in 1945, Japanese fisheries, to a large extent, have been restored as a result of assistance supplied by the Supreme Commander for the Allied Powers and the people of the United States. Wide fishing areas have been opened to Japanese fishing operations. The area now authorized for Japanese fishing supplied 80 percent of Japanese home island fish production in the years preceding World War II. However, many Japanese fishing boat captains and owners

have refused to respect the orders from the Supreme Commander which limit fishing operations to this authorized fishing area. Japanese trawlers in the East China Sea have been particularly notorious in this respect, for although they have been warned repeatedly, many boats continue to operate from time to time outside of the authorized fishing area.

"Japanese fishermen obviously would like to be readmitted to the high seas to conduct their operations with no restrictions other than those applying to all nations. The only way these fishermen can achieve such an end is by convincing the Supreme Commander for the Allied Powers and people of other nations of these two things:

1. Japanese fishermen will respect regulations and agreements controlling their operations, whether these regulations are established by the Supreme Commander for the Allied Powers, their own government, or by international agreement.
2. Japanese fishermen and their government desire and are able to prevent over-exploitation of aquatic resources and to obtain the maximum sustained yield through adequate research and regulation.

"Such convictions cannot be created by promises and assurances. They can be fostered only by effective and continued performance. This requires that Japanese fishermen and the Japanese Government comply with and enforce the regulations on fishing operations promulgated by the Supreme Commander for the Allied Powers and the Japanese Government. This also requires that Japan develop and apply a program involving adequate research on problems of aquatic productivity and application of the results of these studies through regulations designed to maintain the productivity of aquatic resources.



HERRING UNLOADED FROM THE BOAT INTO BASKETS AT HOKKAIDO.

"The Japanese Government now is evidencing a sincere desire to conduct an effective program for detecting and punishing violations of the authorized fishing area and for solving the problems essential to the maintenance of continued productivity of aquatic resources. Certain wise and farsseeing members of the fishing industry are vigorously supporting this program. These efforts deserve the full support of all people sincerely interested in the future of Japan's fisheries. Favorable

consideration of petitions for expanding the present area depends primarily on how the Japanese Government and Japanese fishermen comply with regulations governing fishing areas and the progress they make in solving the problems related to continued productivity of the aquatic resources."

RESEARCH VESSEL: The Tenyo Maru, a 225-ton vessel built at Tsurumi, Kanagawa Prefecture for the Central Fisheries Station, was recently launched. The vessel will specialize in studying bonito and tuna fisheries and oceanography, especially along the east coast of Japan.

USE OF LIGHTS IN CATCHING FISH: The use of electric lamp lures for trapping fish has been used in Japan particularly in connection with the operation of large set nets, according to the March 5 Weekly Summary of SCAP. The work is still in the experimental stage, although operations to date indicate some improvement in catches when lights are used on dark nights (See Commercial Fisheries Review, February 1949, page 48). No particular differences have been noted in the kinds of fish that are caught by the net on which lights are used, as compared with nets on which lights are not used. Experiments have been made during seasons and in areas where principally the yellowtail (a form of amberjack) have been running.

The originator of the method expects that the light lures will be especially effective during the runs of squid, as they are attracted to light. This is indicated from present methods of light fishing for squid with hand jigs.

Details on the use of lights in catching fish are:

1. The main cable and branch lines to the lamps are rubber-insulated and of 24-millimeter wire gauge.
2. The lamps are 150-watt, 100 volts.
3. The electricity is taken off a power line from shore.

WHALE MARKING PROGRAM: To study the migration habits of whales in Japanese coastal waters, the Japanese Fisheries Agency, under the supervision of the Natural Resources Section, is undertaking a program of marking whales, according to the February 26 Weekly Summary of SCAP.

Marking is done by firing a stainless steel dart from a 12-gauge shotgun into the body of the whale. The dart is a tube $9\frac{1}{4}$ " by $\frac{1}{2}$ " with a $1\frac{1}{4}$ " lead tip. The following legend is engraved on the tube: "NO ___ JAPANESE FISHERIES AGENCY NO ___ TOKYO."

At the time of the marking, the position of the research ship and the species of whale are recorded. Later, should a marked whale be taken by a catcher boat operating from a factory ship or a land station, the location of the killing compared to the location of marking will indicate the migratory habits of the animal. Natural Resources Section will maintain a record of any reports of recovered darts, together with the date on which they were recovered, the location of the catch, and the species, sex, and length of the marked whales. Any information obtained will be disseminated through the International Whaling Commission.

The program will be initiated in the waters near the Bonin Islands in the middle of March, and upon completion of the Bonin-Island season in early May, the program will be continued in Japanese coastal waters from vessels based on land stations in northern Honshu, Hokkaido, and Kyushu. The program not only will provide information which is vital to the establishment of the level of catch in Japanese waters commensurate with best conservation principles, but will also make valuable scientific information available to the whaling nations and scientists of the world.

Though little is known of the migratory habits of whales in Japanese coastal waters, it is thought that some of the herds which appear off the Japanese coast move into the waters near Kamchatka Peninsula, Sakhalin, the Korean coast, and Formosa. If so, Russian, Korean, or Chinese whalers possibly might recover some of the darts fired by the Japanese. Information as to the date and location of such recovery would be valuable to the Supreme Commander for the Allied Powers and the Japanese Fisheries Agency.

This marking program resembles one conducted by the Discovery Committee of the United Kingdom in Antarctic waters before World War II.



Korea

FISHERIES REVIEW, 1948: Marine products accounted for a large portion of the export trade of South Korea in 1948. Approximately \$5,000,000 worth of marine products were exported by the Government. They constituted from 33 percent to 71 percent of the monthly private trade exports. Shortages of fishery supplies handicapped operations throughout most of the year, but deliveries improved considerably during November and December. Reports indicate that 832 fishing vessels were damaged and 396 were destroyed by storms. Very few replacements were made; shortage of shipbuilding lumber handicapped repairs; and no large-scale fishing boat procurement or construction program was possible during the year.

Preliminary figures for 1948 indicate a slight decrease in marine products landings as compared with 301,952 metric tons reported for 1947, according to the International Reference Service of the Department of Commerce.

POSSIBILITIES OF INCREASING FISHERIES PRODUCTION: Fishing in Korea underwent rapid development under the Japanese, and in some years of the 1930's, when the sardine landings were high, Korea produced more than 1,750,000 metric tons, according to the report, "Economic Conditions in South Korea, 1947," issued December 1948 by the Office of International Trade, Department of Commerce. In the years following 1937, however, when sardines failed to appear in large schools as formerly, total production was considerably lower.

Production data for the fisheries of South Korea during the occupation period are incomplete, but the total landings of marine products for 1946 are reported at about 300,000 tons, with a slightly higher level indicated for 1947. The industry has been handicapped in the postwar period by shortages of boats, gear, and preservation and refrigeration facilities.

With full rehabilitation of the industry to a level of prewar production, fishery products of South Korean waters can help in increasing the indigenous food supply and also provide a major source of foreign exchange.



Netherlands

FISHERIES REVIEW, 1948: Production and Value: The total fish production of the Netherlands during 1948 was 258,000 metric tons valued at approximately \$34,200,000,

according to a February 25 report from the American Embassy at The Hague. Of this total, 140,000 metric tons valued at approximately \$17,480,000 consisted of herring, mostly salted.

Deep-sea fishing, consisting largely of herring together with a considerable variety of other species, accounted in 1948 for some 70 percent of the total proceeds. The receipts of Ysselmeer fisheries, producing the much-prized eel, accounted for only about 19 percent of total receipts in 1948 compared to 24 percent in 1947. Coastwise fisheries, which produce shellfish mostly, accounted for about 11 percent of the 1948 total.

Prices: The general increase in prices, equivalent to nearly 6 percent, compares with an increase of 26 percent in the price of fresh sea fish and a decline of 17 percent in the fresh-water product; all the other increases being fairly close to the average.

Outlook: There are indications that in the future both Ysselmeer and coastwise fishing may decline in importance, relative to deep-sea fishing. The Ysselmeer, now a fresh-water lake, will be further reduced in area by land reclamation projects. Fishing along the North Sea coast was very productive for a time after the war, but is likely to become progressively less. The same observation applies to the area between the Ysselmeer sea dike and the Wadden Islands.

Note: Values converted on basis of 1 Dutch florin or guilder equals U. S. \$0.38.



Newfoundland

FISHERIES REVIEW, 1948: Fresh and Frozen Fish: The fresh and frozen fish industry staged a strong revival during 1948. Total exports rose by 54 percent

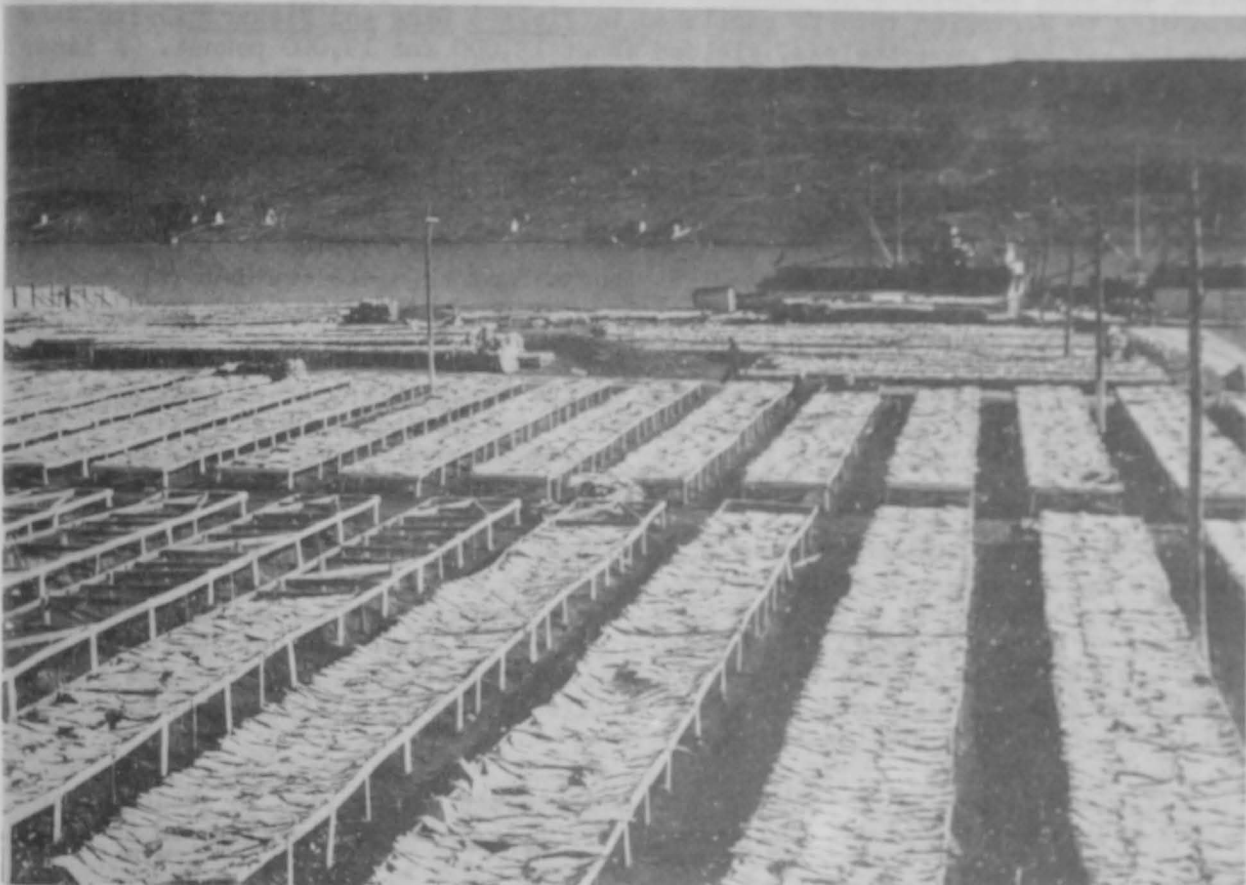
Country	1948	1947
	Lbs.	Lbs.
United States	26,155,265	13,333,563
Canada	4,641,577	6,720,536
St. Pierre	168,780	13,525
Trinidad	-	44,908
Bermuda	-	24,660
Jamaica	-	8,640
United Kingdom	600	300
Puerto Rico	17,250	610
Brazil	-	9,670
Belgium	10,000	-
Total	30,993,472	20,156,412

from 20,156,412 pounds in 1947 to 30,993,472 pounds, according to a February 28 report from the American Consulate General at St. John's. The United States and Canada continued to be the principal markets, taking over 99 percent of total exports in both years, but there was a sharp change in the respective amounts taken by these two markets, that of the United States almost doubling while exports to Canada fell off by almost one-third.

Salt Cod Fisheries: The total 1948 production of salted cod in Newfoundland amounted to 105,280,000 pounds. This represented a drop of almost 20 percent from the 1947 production of 130,704,000 pounds. The decrease is ascribed to the exceptionally strong weather prevailing at the height of the fishing season and to the serious bait shortage.

The demand for salted cod continued good and in excess of available supply, so that market prices rose. The Newfoundland Government continued to make dollars available to cover the exports of salted cod from Newfoundland to certain sterling area markets, although ECA dollars from some countries lessened the drain on Newfoundland Government reserves.

The Government continued its policy, initiated in 1947, of making dollars available to exporters of salt cod in exchange for their sterling balances accumulated by sales to European countries.



COD BEING DRIED IN THE SUN ON "FLAKES" AT HARBOR GRACE, NEWFOUNDLAND.^{1/}

Herring Fisheries: Various contracts were made for herring exports, but none could be filled completely, owing to the shortage of herring. The 200,000 barrel contract with the U. S. Army Procurement authorities was filled to the extent of only 109,495 barrels; another contract for 18,000 barrels of Newfoundland Scotch-cured herring drew only 9,287 barrels; a Labrador Scotch-cured herring contract for 5,000 barrels was completed only to the extent of 120 barrels; and a fourth contract for 3,000 barrels of Green Bay Scotch-cured herring also was not fulfilled. It will thus be seen that although the total exports of pickled herring totaled approximately 38,000,000 pounds as compared with 33,033,635 pounds in 1947, the catch and exports fell far short of anticipations. To start off the new year, the Fisheries Board has arranged a contract for 20,000 barrels of Newfoundland Scotch-cured herring.

Seal Fisheries: The seal fisheries were not so prosperous in 1948 as in 1947. Although the total number of seals compared favorably with last year, Newfoundland's share of the total showed a sharp drop.

Prospects for 1949: The prosperity of the cod fisheries will depend on the availability of dollars, Canadian or American, in exchange for sales to the sterling area.

^{1/}Courtesy of Daily News, St. John's, Newfoundland.

Norway

COD FISHED WITH DEEP-WATER PURSE SEINE: A so-called deep-water purse seine which was used for cod in the Lofoten area early in March, has given good results, according to Norwegian reports published in Fiskets Gang and Fiskaren. Two sets tore the net but, nevertheless, yielded about 13,000 and 19,000 pounds. A later set took 20,000 pounds which was sold alive to a well boat. The seine seems to be effective in moderate weather and is expected to produce from 44,000 to 66,000 pounds a set under good conditions.

The seine is reported to measure 200 fathoms by 40 fathoms and is used with a depth finder.

* * * * *

FROZEN FISH EXPORTS COULD BE INCREASED: High commendation for Norway's "Recovery First" policy was voiced recently by the Deputy Director of America's ECA Mission to Norway in an address before members and guests of Oslo's Business Executives Club, according to an April 16 report from the Royal Norwegian Information Service.

Concentrating on the means by which Norway could increase exports—particularly to dollar areas—the speaker placed special stress on the production and publicizing of products which have hereto been exported in but limited quantities. Of Norway's present foreign exchange sources, it is expected that immediate increases in shipping incomes would be limited, and that of fish, cod liver oil, pulp, paper, and metals, only ores and metals offered prospects of increased exports—and these, only on a limited scale.

If a market can be developed, items which could be exported in greater quantities include, cod fillets, and other frozen fish products, in addition to other commodities.

GROWING HERRING OIL INDUSTRY: After the First World War, the amount of herring oil produced in Norway showed a steady increase, subject to such fluctuations as were occasioned by the yield of the fisheries, according to a March 5 report from the Royal Norwegian Information Service. During the last war, unfavorable general conditions brought about a curtailment of production and, even in the first post-war years, output remained a good deal below the prewar level as a result of the damage sustained by the fishing fleet during the war. However, the fishing fleet has now been rebuilt or repaired, and production figures are again increasing.

In the early years of the herring oil industry, the processing plants were small and old-fashioned, and the quality of the oil left much to be desired. In the interwar period, the factories were expanded and processing methods perfected, and the quality brought up to a point where the oil could be used with advantage in the manufacture of edible fats.

Just before World War II, a firm in Bergen introduced a new refining process, which made it possible to produce a liquid oil from which every objectionable taste or smell was eliminated.

This oil has found its principal use in the Norwegian canning industry, and this industry has, since the war, made exclusive use of refined herring oil for packing herring and "brisling" sardines, and in the manufacture of cod roe paste. The new processing method marks an important step towards self-sufficiency in this

particular branch of Norwegian industry. A certain amount of this oil is also sold to foreign canneries, but the prevailing shortage of edible oils and fats, and the system of allocation governing the sale of these products, have so far set definite limits to the export trade. However, this trade is expected to assume greater significance when these restraining influences have disappeared.

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REVIEW OF THE FISHERIES, 1948: Production: The total Norwegian fish production during 1948 amounted to 1,335,000 metric tons compared to 1,065,000 tons in 1947. In its four-year program to attain economic viability by 1952-53, the planned increase for fish production for the four-year period as compared with 1938 production levels is 140 percent, according to a February 10 report from the American Embassy at Oslo.

Like the preceding year, 1948 was a year of large catches considerably above the average of prewar years.

While in prewar years the cod fisheries and winter herring fisheries made up approximately 60 percent of the total annual catch, the importance of these fisheries in postwar years increased still more. In 1948, they made up 78 percent of the total catch.

The abundance of cod on Norwegian fishing grounds is less than in prewar years. No increase is to be expected prior to 1951-52, when new age classes of cod from recent years of favorable breeding conditions come to swell the schools on the fishing grounds.

The 1948 yield of the important Lofoten cod fisheries was a great disappointment. The catch was only 71,000 metric tons as compared to 146,000 tons in 1947. But the low yield must be ascribed not so much to lack of fish and abnormal behavior of the schools as to much stormy weather which prevented the fishermen from venturing out to sea.

For the country as a whole, the total 1948 catch of cod was 150,000 tons as compared to the prewar average, 1930-39, of 177,000 tons.

Year	Cod ^{1/}	Herring &	Other	Total
		Sprat	Fish	
(Metric Tons)				
1948	150,000	1,026,000	157,000	1,335,000
1947	259,000	636,000	170,000	1,065,000
1946	214,000	511,000	130,000	855,000
1945	113,000	553,000	90,000	756,000
1930-39 Av.	177,000	605,000	153,000	935,000

^{1/}Includes cod livers and roe.

The abundance of herring on the other hand is greater now than prior to the war. In 1948, a record catch was obtained, 880,000 metric tons as compared to an average catch during the 1930's of approximately 385,000 tons. The schools came close to shore and weather conditions were unusually favorable. The greater catch in recent years must also be ascribed to the use of radio-sounding devices for locating the herring.

On account of the great quantities of herring caught in 1948, the facilities for marketing and processing were overtaxed.

The total value of the herring catch to the fishermen was \$26,357,200 compared to \$16,156,360 in 1947. Mainly on account of the record yield of the herring

fisheries, the total value of fish exports reached a new high record, \$77,059,600 for January-October 1948, as compared to \$73,840,400 for the same period in 1947.

The Fishing Fleet: The total fishing fleet now is greater than in prewar years. There is a total of 12,429 fishing boats with deck as compared to 12,290 in 1940, the year when Norway was drawn into the war. On the other hand, the average age of the boats now is greater, namely 19.1 years as compared to 17.5 years in 1940. Of the new boats being built, a greater proportion are large boats and thus the capacity of the present fleet is being steadily increased. Already, it is greater than prewar capacity.

Fishing Gear: During the first postwar years, the supply of fishing gear and tackle was entirely insufficient, a factor that detracted greatly from the efficiency of the fishing fleet. In 1947 and 1948, the supply situation has greatly improved. The annual output of new gear and tackle now considerably exceeds that of prewar years; and the new types of gear are more effective than the old.

Prices of fishing gear are stabilized at a low level by the means of Government subsidies. Such subsidies, in 1947, amounted to \$2,816,800 and in 1948, they totaled \$3,219,200.

Processing: In postwar years, considerable investments have been made in new, larger, and more diversified processing plants; \$3,420,400 were invested in such plants in 1947 and \$6,237,200 in 1948.

The utilization of the catch depends upon the size and composition of the catch. As a rule approximately half the catch is exported as fresh, frozen, salted, or dried fish.

Home consumption of fish only accounts for 11 to 13 percent. The remainder of the catch is utilized as raw material in the canning industry and in the fisheries as bait.

Processing and marketing of fish constitutes an important part of the Norwegian economy, and the effect of the size of the catch; therefore, is felt throughout the economy.

Table 2 - Norwegian Average Prices to Fishermen for all Fish, 1945-48

Year	Price Per Metric Ton
1948	\$48.89
1947	56.13
1946	51.30
1945	50.90

Of the country's total exports, fishery products made up 25 percent in 1947 and 23 percent in 1948.

Prices: The decrease in the average price of the 1948 catch as compared to that of 1947 has come about as a result of the change in composition of the catch, a much larger proportion being herring, and a smaller part being cod.

Bilateral Trade Agreements Include Fishery Products: Nearly all bilateral trade agreements throughout 1948 included fishery products (Table 3). Virtually, all agreements will be renewed or revised when they expire.

Table 3 - Norwegian Trade Agreements - 1948

Country	Period of Agreement Dates	Amount of Norwegian Exports Under Agreement ^{1/}	
		Fishery Products	Whale Products
Austria	11/27/48-11/27/47	500 M.T. + \$1,609,600	-
Belgium-Luxembourg	2/21/46- 2/21/49	50,000 bbls. + \$ 804,800	-
Czechoslovakia	7/28/48- 2/28/49	12,050 M.T. + \$ 402,400	Oil: 5,000 M.T.
Denmark	4/1/46 - 3/31/49	-	Oil: 8,000 " + \$1,126,720
Finland	11/1/48 -10/31/49	10,800 M.T.	Fat: 2,000 M.T.
France	6/11/48- 6/15/49	13,700 " + \$3,219,200	-
Germany (U.S. & U.K.)	7/1/49 - 7/1/49	\$16,098,000	Oil: - \$6,478,640
" (Fr. Zone)	7/5/48 -12/31/48	500 M.T.	-
" (Soviet Zone)	2/19/47-12/31/49	21,580 M.T.	Oil: 1,800 M.T.
Hungary	8/27/46-12/31/48	One-third increase of previous agreement	-
Netherlands	4/1/48 - 4/1/49	\$1,408,400	-
Poland	12/31/48-12/31/49	26,800 M.T.	Oil: 5,000 M.T.
Switzerland	6/28/48- 6/30/49	Quantities not specified	-
U.S.S.R.	12/27/46-12/31/49	33,000 M.T.	Fat: 25,000 M.T.
Yugoslavia	4/22/48- 4/30/49	-	Oil: \$ 221,000

^{1/}Norway in return imports various commodities (no fishery products). All amounts are for a period of approximately one year.

Note: Conversion of values based on exchange rate of 4.97 Norwegian kroner equals \$1.00 U.S.

WHALING, 1947-48: In postwar years the Norwegian whaling industry has aimed at restoring the Norwegian whaling fleet to its prewar size. The Government has discouraged any further expansion because it would result in excess capacity and poor economy, on account of the limited stock of whales in Antarctic waters and the international agreements restricting pelagic whaling in those waters.

For the season 1945-46, Norwegian production of whale oil accounted for 63 percent of the total production by whaling expeditions of all nationalities taking part in pelagic whaling in Antarctic waters. Both in 1946-47 and 1947-48, Norwegian production was very close to 50 percent of the total (See Commercial Fisheries Review, June 1948, p. 39).

For the season 1947-48, two new floating factories had been added to the Norwegian whaling fleet while the number of vessels of the expeditions of other nationalities remained unchanged.

Season	Floating Factories	Catcher Boats
1948-49	10	106
1947-48	9	91
1946-47	7	57

Personnel on the Norwegian whaling fleet in 1947-48 totaled 3,560 men. Besides, 2,445 Norwegians were employed in whaling vessels of other nationalities.

Prices for whale oil of Norwegian production for the three seasons 1945-46 to 1947-48 were as follows: \$270, \$403, and \$443 per metric ton, respectively

The total catch of whales in Antarctic waters is limited and the Norwegian whaling fleet has more than sufficient capacity to acquire the number of whales normally obtained by Norwegian vessels. Therefore, it is expected that future production policy in the whaling industry will emphasize improved utilization of

Season	Production (Metric Tons)
1947-48.....	175,000
1946-47.....	163,000
1945-46.....	86,800
1936-37-1938-39	154,400

whales, that is, greater production of frozen whale meat, tankage, whale meat meal and extraction of vitamins and biologics from the liver and glands of the whale.

Note: Conversion of values based on exchange rate of U. S. \$4.03 equals one British pound.



Peru

FISHERIES REVIEW, 1947: Employment: The Peruvian Ministry of Marine reports that as of December 31, 1948, there were 5,850 fishermen registered in Peru, of

which 1,365 fishermen were registered in the port of Callao, according to a January 13 report from the American Embassy at Lima.



CALLAO - ONE OF PERU'S PRINCIPAL FISHING PORTS.

The Bureau of Fisheries, Ministry of Agriculture, estimates that at the end of 1948, there were approximately 2,000 persons employed in the fish canning industry. The same source reports that, in 1947 and 1948, earnings of Peruvian fishermen averaged about 5,000 soles each, per year; while wages paid in fish canning plants were 3.50 soles (ap-

proximately 54 cents) per day for unskilled laborers, and from 5 to 20 soles (approximately \$.77-\$3.08 daily for skilled laborers. The regular working hours in the fish canning industry remained unchanged in 1946-48 at 8 hours per day, but occasionally, the plants worked 12 and 16 hours with overtime paid at the rate of $1\frac{1}{2}$ times the regular wage.

Fishing Vessels: Trade sources report that, in the last three years, there have been added to the Peruvian fishing fleet about 70 locally-built boats, 36-45 feet long, most of which are capable of purse-seining, and, in addition, two refrigerator boats of U. S. registry operating in Peruvian waters. Purse seining is reported to have developed considerably for fishing bonito and tuna, but gill-nets and trolling are still used to a large extent.

Production: The production of fish in 1947 amounted to 67,712,066 pounds compared to 60,845,972 pounds for 1946 (Table 1). For the first six months of 1948, the catch was 36,199,533 pounds.

The principal fishing ports are Callao, Ilo, Paita, and Sechura. In 1947, Callao accounted for 34.4 percent of the total landings; Ilo, 12.7 percent; Paita, 8 percent; Sechura, 6.9 percent; Pucusana, 4.1 percent; Chancay, 3.6 percent;

Supe, 3.5 percent; and the balance of 34.8 percent divided among the ports of Chimbote, Huacho, Pimentel, Samanco, Pacasmayo, Cabo Blanco, San Jose, Talara, Lobitos, Mollendo, Pisco, and Huanchaco.

Table 1 - Peruvian Fish Catch by Principal Species - 1946-47

Principal Species	1947		1946	
	Lbs.	% of Total	Lbs.	% of Total
Bonito	35,275,253	52.1	32,453,614	53.4
Caballa (Mackerel)	5,506,547	8.1	6,217,312	10.2
Cojinoba (Pompano)	5,203,029	7.7	4,373,419	7.2
Lorna (Drum)	2,380,763	3.5	1,502,875	2.5
Cabrilla (Sea bass)	2,161,069	3.2	1,950,516	3.2
Albacora (Albacore)	2,118,976	3.1	1,142,467	1.9
Atun (Tuna)	1,869,419	2.8	2,997,544	4.9
Corvina (Sea bass)	1,327,984	2.0	788,801	1.3
Tollo (Dogfish)	1,169,500	1.7	1,363,514	2.2
Peje-blanco (Whitefish)	1,149,487	1.7	795,839	1.3
Machete (Herring)	923,985	1.4	634,962	1.0
Robalo (Drum)	911,343	1.3	808,020	1.3
Sierra (King mackerel)	849,922	1.3	551,859	0.9
Ayanque (Drum)	716,768	1.1	371,830	0.6
All others	6,148,021	9.0	4,877,400	8.0
	67,712,066	100.0	60,845,972	100.0

Production of Canned Tuna and Bonito: Trade sources estimate that the total production of canned bonito and tuna in oil during July 1947-June 1948 was approximately 350,000 cases^{1/} compared with about 300,000 cases in 1946-47, and approximately 200,000 cases in 1945-46.

Prices: The Bureau of Fisheries reports the prices paid to fishermen by canneries for tuna and bonito in the ports of Callao and Ilo, two major fishing ports in which there is an official price control (Table 2).

Table 2 - Prices^{1/} Paid Fishermen by Canneries for Tuna & Bonito, 1946-48 at Ilo & Callao

	ILO			CALLAO			
	(\$ per 100 lbs.)			(\$ per dozen fish)			
	1948	1947	1946	1948	1947	1946	
Bonito ^{2/}	(2nd Half) \$1.08 $\frac{1}{2}$	(1st Half) \$.80 $\frac{1}{2}$	\$.75	\$.70	\$1.85	\$1.38 $\frac{1}{2}$	\$1.08-1.38 $\frac{1}{2}$
Tuna	1.15 $\frac{1}{2}$	1.12	1.11	1.08	(Not landed)		

^{1/}Based on official rate of exchange - 6.485 soles per U.S. \$1.00.

^{2/}Average weight of a bonito: landed at Ilo, 7.7 lbs.; landed at Callao, 7.3 lbs.

Number of Plants Canning Bonito and Tuna: According to the Bureau of Fisheries and reliable trade sources, there are, at present, in Peru 23 plants actively engaged in catching bonito and tuna. Of this total, 7 plants are reported to be capable of producing 1,000 or more cases of 48 $\frac{1}{2}$ -pound cans in 8 hours. Nineteen were installed and started operations after 1945.

Export Duties: The Peruvian Government assesses the following export duties and surcharges on canned tuna and bonito:

Ten percent ad valorem tax^{2/} on the difference between cost price (fixed by law at U.S. \$425.00 per short ton of 907 kilos 184 grams, net weight) and the consular invoice value (Law 10545 of April 16, 1946).

^{1/}About 90 percent is said to correspond to cases containing 48 7-oz. tins.

^{2/}Payable in soles at the official rate of exchange.

Ten percent additional export tax^{2/}, payable when the consular invoice value exceeds by 25 percent the base fixed price (Law 9466 of December 18, 1941). This tax is assessed, according to Allao Customhouse, on the difference between the fixed cost price (U.S. \$425.00) and the export value as shown on the consular invoice, minus one-fourth of the cost price.

One percent ad valorem Pro-Unemployed tax.^{3/} (Law 7540 of June 30, 1941)

U.S. \$1.60^{2/} per metric ton of weight or measurement (Supreme Decree of September 22, 1944).

\$/2.00 per metric ton of weight (Law 10811 of March 3, 1947).

^{2/}Payable in soles at the official rate of exchange.

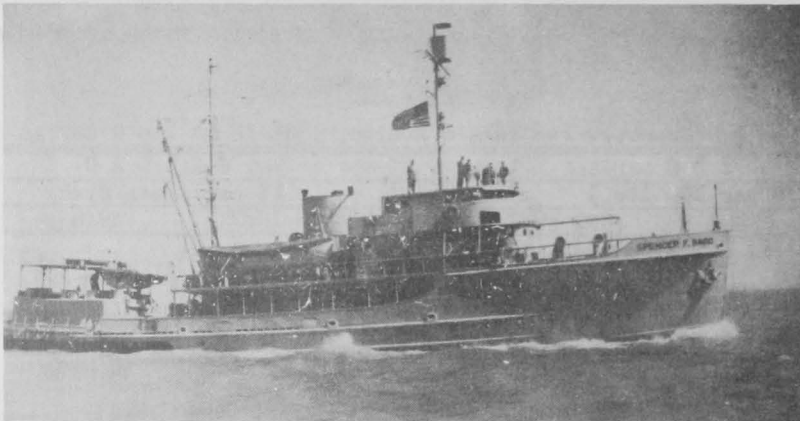
^{3/}45 percent of the tax payable in soles at the official rate of exchange, and 55 percent payable in soles at the free-market rate of exchange.



Republic of the Philippines

EXPERIMENTAL FISHING FLEET: The three exploratory vessels of the U. S. Fish and Wildlife Service's Philippine Fishery Program returned to port early in March from voyages to different parts of the Philippines, according to an announcement made by the Administrator of the Program and the Director of the Philippine Bureau of Fisheries.

The Spencer F. Baird, oceanographic research vessel, returned from a trip from Sibuyan and Visayan Seas where the first oceanographic data ever taken in



SPENCER F. BAIRD, PHILIPPINE FISHERY PROGRAM RESEARCH VESSEL.

those waters were collected. The investigators aboard reported unusual conditions in several places but they were particularly intrigued by the evidences of stagnation in the bottom of Ragay Gulf. The data collected but not yet analyzed indicate a relatively shallow sill near the mouth of that area which limits circulation of water with the outside. A profound effect on the fishing potentiality of that area is indicated. The vessel departed late in March for the Sulu Sea to continue the collection of oceanographic data.

The David S. Jordan came in from a trip to Lingayen Gulf where investigations were made of otter-trawl grounds, and demonstrations were made of the otter-trawl gear to interested parties in the provinces bordering that area. Preliminary reports indicate that Lingayen Gulf could support a small fleet of otter trawlers with profit to the operators. Following minor repairs and taking on stores, the vessel proceeded to the South about the middle of March.

The Theodore N. Gill returned from a voyage in the Northern Sulu Sea where experiments were carried out with various adaptations of the long-line trawl pre-

paratory to an extensive voyage planned in the near future to the southernmost part of the Philippine seas for tuna. At the end of the month, she departed for the Sulu Sea and will work down the Sulu archipelago as far as Tawi-Tawi and the vicinity of the Turtle Islands. Some otter trawl hauls will be made in the latter area where conditions appear to be favorable.



THEODORE M. GILL, PHILIPPINE FISHERY PROGRAM RESEARCH VESSEL.



Turkey

EXPANSION OF FISHING INDUSTRY: Evidence of the Turkish Government's desire to encourage expansion of the fishing industry was revealed by the completion of a fisheries bill, according to an April 5 American consular report from Ankara. The extent to which the Government will participate in this field is not known, but the bill is based on the belief that the potentialities for a greatly enlarged industry are considerable.

Turkey's exports of fish amounted to approximately 6,000 metric tons in 1948.



Union of South Africa

SARDINES ADDED TO LIST OF PROHIBITED IMPORTS: Import controls and exchange restrictions, which were imposed in November 1948 by the Union of South Africa, have been extended effective March 4, 1949, to include sardines, according to a report in the March 12 Foreign Trade of the Canadian Department of Trade and Commerce. Sardines were excepted under the previous order which included "fish: other, except sardines." (See Commercial Fisheries Review, February 1949, page 64).



United Kingdom

CANNED WHALE MEAT: The first shipment from the Antarctic of 1,000 metric tons of whale meat canned within six hours of capture arrived in Great Britain aboard the Ketos, the latter part of March, according to the April 2 issue of the British periodical, The Fishing News. The refrigerated steamer, Ketos, owned by an English whaling company, also discharged 3,734 metric tons of whale meat extracts, meat, meal, and other whale products. This vessel was one of the expedition of 22 ships, including another refrigerated ship, besides the factory ship (Balaena), and a floating cannery.

The captured whales were processed on board the Balaena, then transferred to the floating canning factory vessel, Thule, where the meat was canned. This is the first whale canning ship in operation.

The S. S. Thule, a 10,000-ton tanker, which sailed from Liverpool for the South Atlantic on October 24, 1948, has been hitherto employed in carrying fuel oil to the fleet of United Whalers, Ltd., returning to its base loaded with whale oil. This year a complete canning plant was installed in the forepart of the vessel.

Most of the frozen whale meat, also brought to Britain by the Ketos, is to be canned in England, much of it in the form of the new whale meat roll which has already made its appearance in the shops.

According to an official of the English whaling company, the whale cannery venture was an experiment, and there are a number of difficulties to overcome. Whether or not the operation would be developed in the Antarctic or the meat brought back to be canned depends on what the data of the experimental operation reveals.

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GRIMSBY—LEADING FISHING PORT IN NORTH ATLANTIC: Grimsby, England, is the leading fishing port among the North Atlantic ports. During 1948, it handled an average of 12.1 million pounds of fish a week, according to a note in the April 2 issue of the British periodical, Fish Trades Gazette. This was 4.4 million pounds per week above prewar years.

The landings at the two ports of Grimsby and Hull in 1948 totaled nearly a half million metric tons (1.1 billion pounds) or 47 percent of the total landings of fishery products in England and Wales.

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MINISTRY OF FOOD STANDARDS FOR PRODUCTION OF QUICK-FROZEN FISH: The policy of the British Ministry of Food is to encourage the quick freezing of fish and to grant special allocations of fish for this purpose to those merchants who are equipped to produce quick-frozen fish according to the standard prescribed by the Ministry. Since the introduction of this policy in 1946, the quick freezing of fish has developed steadily, according to a December 10 report from the American Embassy at London. The future of the industry depends on the high standard of its production. The ideal conditions needed for the production and distribution of quick-frozen fish, and the present conditions with which quick freezers must comply before they receive allocations of white fish are as follows:

- (1) The ideal conditions for the production and distribution of quick-frozen fish.
 - (a) Only fresh fish of best quality should be frozen.
 - (b) The delay between catching and quick freezing the fish should be as short as possible.
 - (c) The fish should be frozen at such a rate that the time taken to cool the fish from 32° F. to 23° F. does not exceed 2 hours and the temperature of the fish leaving the freezing plant should not exceed 0° F.
 - (d) The frozen fish should be carefully "glazed" by immersion in or by spraying with cold water and/or sealed in moisture and vapor-proof wrappers.
 - (e) The fish should be stored at uniform and adequately low temperatures as follows:

WHITE FISH

Storage up to 4 months. Not higher than 5° F.
Storage up to 8 months. Not higher than 20° F.

FATTY FISH

Storage up to 3 months. Not higher than 5° F.
Storage up to 6 months. Not higher than 20° F.

(2) Present conditions which quick freezers must satisfy.

Although quick freezers should aim at satisfying the conditions set out in (1) above, the Ministry realizes that it may be difficult to comply with all of them at the present time. In the meantime, allocations of white fish for quick freezing will continue to be granted provided that:

- (a) The plant is capable of cooling the fish from 32° F. to 23° F. in not more than 2 hours either when dealing with whole fish separately or in regularly shaped packs, or with packages of fillets in molds, cardboard boxes or normal light wrappings of cellulose film, waxed paper, etc.
- (b) When removed from the quick freezing plant no part of the fish is at a temperature higher than +10° F.
- (c) Cold storage accommodation at -10° F. or below is available on the same premises as the quick freezing plant, or, where it is not at present possible to comply with this condition, alternative arrangements are provided which have been approved by the Ministry.

The quantity of fish allocated for quick freezing in any plant will be based upon the time taken to cool every part of a batch of fish from the temperature of the fish as delivered to the plant to at least +10° F., when the plant is operating under normal conditions.



Venezuela

CONSTRUCTION OF FIRST PRIVATE SHIPYARD: In construction for slightly over one year, the first privately-owned shipyard in Venezuela is nearing completion in Puerto Cabello, according to a February 14 report from the American Embassy at Caracas. It is estimated that the total cost is \$240,000-\$270,000. Of this amount, \$45,000 was furnished as a loan by the Government-owned Venezuelan Development Corporation in furtherance of its current campaign to revitalize and expand the Venezuelan fishing industry. The new shipyard includes a machine shop, carpenter shop, supply warehouse, and drydock, and will be able to handle boats up to 300 gross tons.

