International

FOOD AND AGRICULTURE ORGANIZATION

TWELFTH SESSION OF FAO COUNCIL: The Twelfth Session of the Council of the Food and Agriculture Organization (FAO) was scheduled to begin at Rome, Italy, on June 11, 1951, a U. S. Department of State news release of June 8 announced.

The forthcoming Session, the first to be held since the transfer of the FAO headquarters to Rome, will review a statement, prepared by the Director General of the Organization, on the changes which have taken place in the world food and agriculture situation since the Fifth Session of the FAO Conference.

The Council will also make a detailed study of reports and proposals relating to such matters as the long-term objectives of FAO, international investment, full employment, commodity problems, technical assistance, plans for the Sixth Session of the FAO Conference next November, administrative and financial matters, and nominations for Director General and Chairman of the Council.

The Council of the FAO was established in 1947 by the Third Session of the FAO Conference to act for the full Conference between sessions and to keep the world food and agriculture situation under constant review.

Canada

DIGBY SCALLOP FISHERY: In the past 31 years the scallop fishery centering on Digby, Nova Scotia, has grown from practically nothing to an industry worth half a million dollars a year to Canada, the May-June Trade News of the Canadian Department of Fisheries asserts.

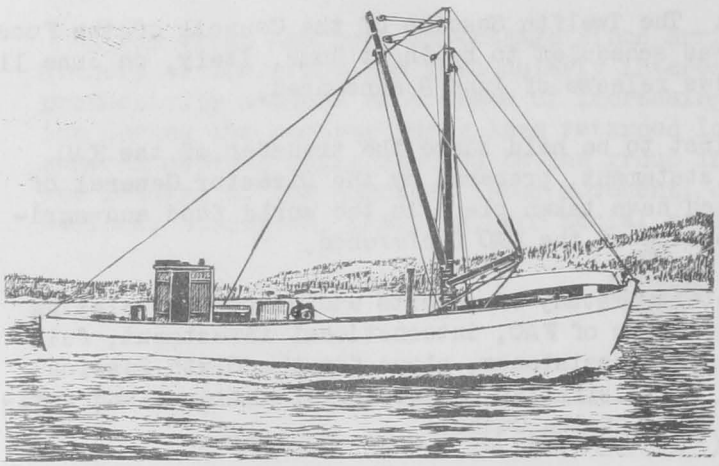
The Digby fishery was the first major commercial development in the Bay of Fundy to use modern vessels built especially for scallop dragging. Similar boats are used to a lesser extent by Prince Edward Island fishermen, and some scallops are still taken in Mahone Bay on the south shore of Nova Scotia. However, the dragging operations there are carried out by individual fishermen using motor boats and small drags towed and hauled by hand. Most of their catch is sold locally in Lunenburg County.

Scallop Areas and Season: In 1949, a Digby scallop dragger, under charter to the Research Board's Biological Station at St. Andrews, N. B., discovered another new bed with good commercial possibilities in Northumberland Strait, near Pictou Island.

Digby and the Bay of Fundy, however, are the names most closely associated with Canadian scallops. The fishery was built up during the 1920's, largely with scallops

taken from the shallow floor of Annapolis Basin which, for the time being, is no longer productive. The draggers now go far out in the Bay of Fundy. Few of the men of the scallop fleet actually live in Digby; most of them have their homes elsewhere along the Fundy shore and are known as Bay Shore men. They sleep aboard when in port. Digby's great value as a home for the fleet lies in its deep water harbor, in which boats need not be stranded by the high Fundy tides.

The season for all beds within seven miles of shore is from October 1 to April 30 and until recently scalloping was considered strictly a winter fishing effort. New methods of freezing, together with fast transportation, have made the scallop a year-round dish, and more and more vessels are fishing the offshore grounds outside the seven-mile limit during the summer time, when generally calmer weather permits more fishing time than would the winter months. Even on the inshore grounds within the seven-mile line the average number of fishing days, out of a 212-day season, is only 58. The reason that winter storms keep the fleet in port is that rough water causes the heavy steel scallop drags to jump about on the bottom and makes them dangerous to handle on deck, thus reducing the catch and increasing the hazard.



TYPICAL DIGBY SCALLOP BOAT.

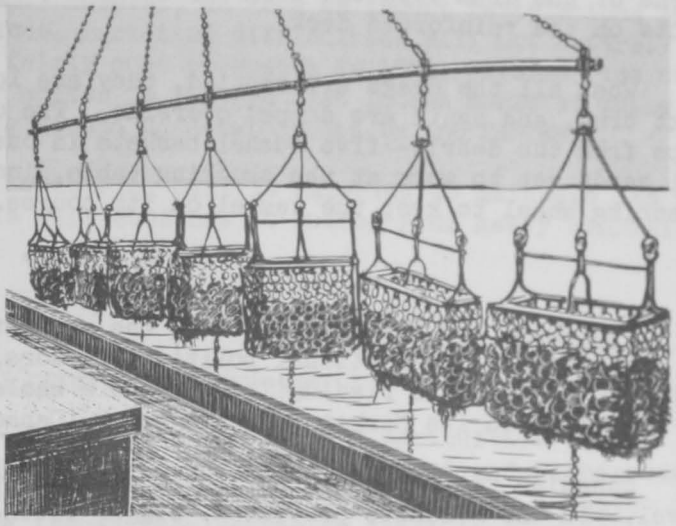
The mainstay of the winter fleet for several years during the 1940's was the "four-mile" ground. The "hour" ground (an hour's run from the fairway buoy at Digby Gut) was first fished in the 1930's, and until 1948 was less important to the fishery than the "four-mile" ground. Since then, however, the reverse is true. The depth of the water over the "hour" ground, about 10 miles out, is 50 fathoms or more.

Water Temperatures Affect Scallop Stocks: The scallop catch varies greatly, not only from month to month but from year to year, and charts of comparative landings show a fairly regular series of high and low points. From its beginnings in 1921, the fishery increased to its first peak in 1927. It reached a record high in 1937 and exceptionally good catches were made in 1941 and 1945. Investigations of the Research Board indicate that these changes in landings are not caused by the fishing effort but from changes in abundance determined by hydrographic conditions that are beyond human control. It appears that water temperatures in the Bay of Fundy during the spawning season in the late summer can seriously affect the stocks of shellfish. The scallops (Placopecten grandis) taken by Digby fishermen are usually from five to seven years old--it is illegal to sell Bay of Fundy scallops whose shells are less than four inches in diameter.

Size of Fleet and Type of Vessel: In the 1950-51 season the Digby fleet was made up of about 20 draggers built especially for scalloping. Their other uses are limited, although the holds can be sealed for carrying herring from weirs to canneries in New Brunswick and Maine. A typical Digby scalloper (value about C$12,000) is a 20-ton vessel about 62 feet long with a beam of 15 feet 6 inches and a draft of 5 feet. It carries two gasoline engines, each 87 h.p., and is manned by the skipper, a winchman who operates the engine for towing and hoisting

the drags, and two helpers. All four occupy themselves shucking scallops while the dragging operation is under way.

Type of Gear and Method of Fishing: The legal width of the Digby rig is 18 feet, which allows for seven individual drags attached to a single steel drag bar, which can be compared to a whiffletree. The nets of these drags are made of wire rings which, by law, must be no less than three inches in diameter so that young scallop can escape through them. The rings are connected to each other by washers and when one wears out or becomes twisted or broken, it is easily replaced. The net is about eight rings deep. Its opening is a heavy frame made of angle irons, the inside measurement of which is 2 feet $6\frac{3}{4}$ inches by 9 inches. A piece of hardwood to match the frame in size is used for the bottom part of the drag, which is thus kept open as fully as possible at all times.



A GANG OF SEVEN SMALL DRAGS CONNECTED IN LINE TO THE MAIN "SPREADER" BAR ARE USED BY DIGBY SCALLOPERS. THIS RIG IS OPERATED FROM THE STARBOARD SIDE OF THE UNRAILED DECK.

A gang of seven of these small drags is more efficient, on a ground which might be pitted with holes or strewn with larger rocks, than one to two long ones such as are used by United States scallopers in the Atlantic.

When in operation, the lower side of the frontal frame of each drag acts as a scraper, picking up scallops from the sea bed along with a certain amount of other matter, such as small rocks, starfish, sculpin, flounder, and anglerfish.

Each drag is connected in line to the main "spreader" bar, a swivel attachment used for the connection allowing the drags free swing. A set of chains attached to the bar at regular intervals acts as a bridle, linking the entire gang of seven to the towing warp.

This warp runs from a gasoline-powered winch on the port side of the deck, just forward of the wheelhouse. A strong steel cable is carried forward through a pulley to a shortboom which projects over the starboard side from the foot of the mast. The boom holds the warp clear of the side of the boat and thus, if the drags hit some obstruction on the bottom, the boat tends to swing around into the "pull," and the strain on the engines is eased.

The drags and spreader bar are laid along the starboard edge of the unrailed deck and dropped overboard in one quick operation, the winchman releasing a check rope tied to the spreader bar to let the cable run free. As the rig drops, the skipper speeds up his engines until the drags hit the bottom, at which point the winchman locks the cable and the boat slows down to settle into the drag, which usually lasts about 20 minutes.

By feeling the tension on the towing warp, which runs alongside the boat to the stern before dropping below surface, the skipper can usually tell when he has a catch at which point he says "Let's air 'em," and the drags are hauled up. They are brough alongside the boat and lifted on deck by a second winch cable. Thereafter, the same cable is attached to the chains which project from the bottom of each drag, and a few turns of the drum tips the drags upside down, usually two at a time, dumping the con tents on the reinforced deck.

When all the drags are emptied, they are lowered to the deck, arranged for the next drag, and again are dumped overside. The crew at once begins sorting the scallops from the debris--five bushel baskets in one haul are considered good--and then all hands get to work at the shucking table, including the skipper, who locks the steering wheel to keep the vessel on its course.

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FISHERIES OUTLOOK FOR 1951: On the assumption that the economic outlook today is dominated by international political factors, the year 1951 promises to be a good one for the Canadian fishing industry as a whole, points out the Canadian Department of Fisheries in its Market Bulletin No. 5 (Canadian Fishery Markets).1/

Canadian fisheries production is expected to be at or slightly above last year's level. In the Atlantic provinces, bigger catches of groundfish may be made with the help of additional trawlers and draggers, though the haddock fishery in Newfoundland has gotten off to a poor start. The effort put into the halibut fishery will be repeated and prospects for herring and sardines appear to be better than last year. On the other hand, there will be little incentive to increase shellfish landings because of the softening of prices in the first half of this year. The inland fisheries may somewhat exceed their production levels of 1950. No significant changes, apart from the normal cyclical variations of the different salmon species, are expected on the West Coast.

Market conditions on the whole should show an improvement over last year. In North America (our great fresh, frozen, and shellfish market), the high level of economic activity will sustain a correspondingly great demand. The market for groundfish fillets will remain basically strong, in spite of increased supplies from Canada and other countries. The U. S. market, in particular, is apparently still capable of very considerable expansion. Some adjustments in relative prices may, however, be required to restore the balance between supplies of the various species. Such relative adjustments may also be needed to clear comparatively heavy stocks of a few other varieties of frozen sea fish (e.g. halibut). Inland fish is likely to have another year of good demand at favorable prices. There have lately been signs of weakness in the shellfish market, attributable mainly to increased supplies. While these will continue, there is again no reason to believe that, in the generally prosperous circumstances of today, an aggressive sales policy could not succeed in a corresponding expansion of the market.

The domestic market for canned fish, which has been growing quickly over the last two years, is expected to continue quite strong. Export markets for these commodities have been limited mainly by governmental restrictions in consuming countries. In Europe, the principal foreign canned fish market, the exchange situation this year is appreciably better than in 1950 and some improvement is also evident in other areas that formerly bought sizable quantities of Canadian canned fish. Tariff concessions made by the United States and European countries and expected to come into effect about the middle of the year will be another favorable influence.

1/ SEE P. 93 OF THIS ISSUE.

The cured fish trade is also going into the 1951 marketing season under more favorable auspices than prevailed a year ago. There is virtually no carry-over of salted fish of 1950 production; access to Mediterranean markets has been assured for Gaspe and Newfoundland fish; and there are signs of strength in the market, due mainly to improved market conditions for frozen fish in Europe which have relieved some of the pressure on salted fish. However, as long as import restrictions in such large markets as Brazil continue, marketing difficulties will not entirely disappear. Other cured fish have fairly good prospects in 1951; pickled fish and bloaters will probably find easier access to British West Indies markets; while the prospects of dry-salted herring depend on developments in the Far East.

The market for fish meal and industrial oils is expected to maintain its improved appearance, but vitamin oils will continue to suffer from heavy competition.

China (Communist Mainland)

FISHERIES DEVELOPMENT URGED: The Chinese Ministry of Agriculture issued a directive on fishery production, calling upon various government and fishery agencies to organize the fishermen for mutual-aid, a May 25 American consular dispatch from Hong Kong announces. The directive issued from Peking on April 16 also urged the strengthening of transportation facilities for fishery products, the effective utilization of fishery loans, and the strengthening of the operation of the State's fishery enterprises.

Costa Rica

TUNA RE-EXPORTS NOT SUBJECT TO CERTAIN PROVISIONS OF EXCHANGE CONTROL LAW: Fish caught in Costa Rican extraterritorial waters, when re-exported, are not subject to the export license provisions of the current Law for Control of International Transactions, according to Law No. 1304, promulgated and effective on June 19, 1951. This Law has been enacted to clarify provisions of the International Transactions Control Law as they apply to tuna taken outside of Costa Rican waters and brought to Puntarenas for refrigeration and subsequent shipment to the United States; or to tuna caught beyond the Costa Rican territorial waters and transferred to other ships at Puntarenas or other Costa Rican ports for delivery to the United States.

Commercial documents covering these shipments usually value the fish at the delivery price in the United States. Local authorities have taken the position that such shipments were subject to the provisions of the Law for Control of International Transactions. In practice, this forced shippers to obtain licenses for their re-exports of tuna. Furthermore, shippers under this interpretation were also compelled to liquidate the U. S. dollar invoice value of the shipments in Costa Rica at the official rate of exchange. However, it is apparent that there was no justification for the requirement that more than the dollar value of services rendered in Costa Rica should be liquidated in Costa Rica regardless of the rate of exchange specified. Law No. 1304 removes this anomaly, a June 19 dispatch from the American Embassy at San Jose reports.

Cuba

FISHING AGREEMENT NEGOTIATIONS SUSPENDED WITH MEXICO: The Cuban Government has dropped negotiations for a fishing agreement with Mexico, according to June 11 Habana press items reported in a June 25 dispatch from the American Embassy at Habana. Cuban Government officials are now encouraging their fishermen to fish experimentally off the coast of the Bahamas or the adjacent keys. Cuba will now attempt to negotiate a commercial agreement with Mexico omitting fisheries.

CUBAN RESEARCH VESSEL YARA CONVERTED IN 1949.

The Cuban gunboat Yara,[1/] converted into a research vessel in 1949, a coast-guard boat, and two commercial fishing vessels (the Competidor and the Parapar) will make up an exploratory expedition for work in the Bahamas.

1/SEE COMMERCIAL FISHERIES REVIEW, MAY 1950, P. 58.

Denmark

DANISH FISHERMEN TO FISH OFF MOROCCO: A Danish fish exporter who has spent three months exploring the fishery possibilities off the Moroccan coast with his vessel Havørnen has recently returned to Denmark, according to Dansk Fiskeritidende a Danish periodical. He states that a good deal of experience has been gained and that in the fall a group of 20 Danish cutters will be sent to Morocco to fish for sardines with mid-water trawls.

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DANISH-ICELANDIC TRADE AGREEMENT SIGNED: A protocol covering Danish-Icelandic trade during the period March 15, 1951-March 14, 1952, was recently signed in Reykjavik, according to an American Embassy May 17 report from Copenhagen. While this agreement does not provide for any definite total value of goods to be exchanged, it indicates the framework within which trade between the two countries is to be conducted during the specified period. Iceland's principal export items under this agreement consist of fishery products, while Denmark supplies agricultural and manufactured products.

Under the terms of this new exchange of goods, the following items are of particular interest:

1. THE DANISH GOVERNMENT WILL PERMIT ENTRY OF ICELANDIC EXPORTS OF:

   A. 20,000 BBLS. OF SALTED HERRING (INCLUDING SPICED AND SUGAR-SALTED HERRING).
   B. 500 METRIC TONS OF OTHER SALTED FISH.
   C. CANNED FISH PRODUCTS VALUED AT 200,000 DANISH KRONER (ABOUT US$29,000).

2. ICELAND WILL PERMIT DANISH IMPORTS TO THE EXTENT IN WHICH ICELAND'S FOREIGN EXCHANGE POSITION MAKES IT POSSIBLE.

3. ICELAND WILL ISSUE EXPORT LICENSES TO DENMARK FOR 10 PERCENT OF THE EXPORTABLE QUANTITY OF HERRING MEAL AND 7 1/2 PERCENT OF THE HERRING OIL PRODUCED DURING THE SUMMER OF 1951 UNTIL SEPTEMBER 15, AND FOR 20 PERCENT OF THE EXPORTABLE QUANTITY OF HERRING MEAL AND 15 PERCENT OF THE HERRING OIL PRODUCED DURING THE WINTER 1951/52 UNTIL THE DATE OF THIS PROTOCOL'S EXPIRATION.

The previous Danish-Icelandic trade agreement expired on April 30, 1950. A new agreement was not negotiated at that time principally because the Danish demand for a settlement of certain Danish credit balances could not be resolved. A consolidation agreement signed later in 1950 developed a plan whereby the Danish credit balances could be liquidated over a two-year period.

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NEW DANISH-NORWEGIAN TRADE AGREEMENT: Negotiations for a trade and payments agreement between Denmark and Norway was consummated in Oslo, Norway, during April, according to a May 24 dispatch from the American Embassy at Copenhagen, Denmark. The trade agreement, dated April 30, covers the period April 1, 1951-March 31, 1952. Since a substantial part of the commodities traded between the two countries are on a regional (OEEC[1]) free list, the trade agreement quotas are confined to products still subject to import control and such liberalized commodities for which export commitments have been made.

Denmark's principal imports from Norway include several types of fishery products (see table). Denmark, in exchange, exports to Norway agricultural and finished products, but no fishery products.

Quotas for Danish Imports of Norwegian Fishery Products, April 1, 1951-March 31, 1952

Commodity	Quantity	Value	
	Metric Tons	Norw.Kr.	U.S.$[2]
Shellfish	-	400,000	56,000
Oyster brood	-	70,000	9,800
Canned fish	-	400,000	56,000
Fresh fish	-	250,000	35,000
Salted herring	-	1,000,000	140,000
Herring and other fish meal	6,000	-	-
Crude whale oil[1]	3,000	-	-
Refined marine animal oil	7,000	-	-
Fish glue	-	50,000	7,000
Alginates and products thereof, and carrageen extracts	-	300,000	42,000

1/ ON DANISH IMPORT FREE LIST.
2/ CONVERSION RATE: 1 NORWEGIAN KRONE EQUALS 14 U.S. CENTS.

1/ OFFICE OF EUROPEAN ECONOMIC COOPERATION.

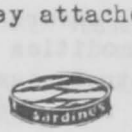
French Morocco

POOL FORMED FOR EXPORT OF MOROCCAN SARDINES TO U. S.: Approximately ten of the leading Moroccan sardine canneries have united to form the French and Moroccan Food Corporation (a Shereefian corporation) and, through the agency of this cor-

poration, to engage in an intensive campaign to promote the sale of Moroccan sardines in the United States and Canada. The project is the culmination of several months of preliminary investigations, which included an on-the-spot study of the United States-Canadian markets, and it is being actively encouraged by the Protectorate Government, particularly through its export promotion agency, Office Cherifien de Controle et d'Exportation.

The French and Moroccan Food Corporation plans to establish a branch office in New York and, perhaps, in Montreal and will have warehouses in both cities. These branch offices will act as importers in the United States and Canada so that the corporation will sell directly to American and Canadian jobbers and large wholesalers, a June 5 American consular dispatch from Casablanca points out. It hopes to dispose of 75,000 cases of sardines during the current season.

The corporation will concentrate on one brand of sardines only, and plans to ship only first-quality sardines. For the first year, at least, only a part of the sardines shipped will be skinless and boneless, but it is hoped to increase the proportion of this type as rapidly as possible. Both the plain and the skinless and boneless sardines will be packed in pure olive oil, however, and will be shipped in Norwegian-type cans, with individual key attached, and covered with paper wrapping



Germany

FISHING FLEET PROTESTS REDUCTION IN FUEL OIL SUBSIDY: In protest against reductions in the subsidy on fuel oil for Diesel-powered vessels, the entire German high-seas fishing fleet returned to port on May 28, states a May 31 American consular dispatch from Hamburg. The German Fishery Association states that this action should not be termed a strike, but that all vessels have discharged their crews and will remain in port indefinitely unless the subsidy issue is settled.

German fishing vessels, which had been able to buy fuel oil at the subsidized price of DM120 (about $28.50) per metric ton, were faced with a price of DM205 ($48.80) per ton under a cut in the subsidy announced by the Federal Government late in May. The new price is the charge made after the new subsidy of DM290 ($69.00) per ton has been deducted from the normal price of DM495 ($117.80) per ton, and it is understood that payments on this scale were to be made retroactive to the first of April.

Fish prices fell during the early months of 1950 due to a decline in consumer demand. Faced with this as well as with rising wage and other costs, fishing vessel owners seem to feel that the cut in their fuel oil subsidy is enough to drive them out of business. They are therefore keeping their vessels in port while their protests are being studied by the Federal Government. A statement in one Hamburg newspaper indicates that some fishermen have threatened to land their catches in the Soviet Zone if they have to put to sea again without the restored subsidy.

Greenland

FOUR DANISH FREEZERS ESTABLISHED: After July 1 four Danish freezers will operate in Greenland in Tovkussak, Christianshaab, Egedesminde, and Sukkertoppen. Machinery and equipment installations are now being completed in the latter two fre-

zers, according to the May 30 issue of Fiskaren, a Norwegian fishery periodical. Each plant will be able to freeze 10 metric tons daily and have a storage capacity of 150 and 250 metric tons, respectively.

Iceland

SUMMER WHALING SEASON BEGINS: The Icelandic whaling season opened June 1, 1951, and 74 whales have already been taken, the American Consulate at Reykjavik states in its June 25 report. Iceland's single whale-processing plant has been working at capacity, and whaling operations may have to be slowed down to permit the plant to keep up with the catch.

Iceland's whaling operations are carried on exclusively by one firm, which plans to add a tugboat to its present whaling fleet of four catchers. This tug would be sent out to bring in whales taken by the whaling vessels for processing the meat for local consumption. Whale meat is now in popular demand in meat-short Iceland. While a strong demand also exists in foreign markets for frozen whale meat, local freezing plants are now engaged at capacity or near capacity in freezing fish, and facilities are not available for processing whale meat. Whale meat may perhaps be frozen for export later in the season.

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WHALING, 1950: The Icelandic whaling season opened on June 1 and closed on September 28, a May 2 American consular dispatch from Reykjavik reports. A total of 265 whales were caught, 59 fewer than in 1949. Despite the smaller number of whales, production of whale and sperm oil equaled the 1949 level of 2,000 metric tons. The higher rate of oil production resulted from the fact that virtually all of the whale meat was reduced, whereas 600 tons had been quick-frozen for sale as meat in 1949. Marketing conditions the last half of 1950 made it desirable to produce oil rather than quick-frozen meat.

FIN WHALE BEING HOISTED UP RAMP LEADING TO WHALE PROCESSING PLANT AT HVALFJORDUR, ICELAND.

All of the 1950 production of whale oils was sold to west Germany reportedly for the manufacture of margarine, at favorable prices.

FISHING FLEET, 1950: The only notable addition to Iceland's fishing fleet in 1950 was one new trawler, which arrived in the closing days of the year. This is the first of 10 new trawlers, ordered in 1948, which are being built in British shipyards.

There were no significant changes in Iceland's fleet of small fishing craft, which number about 475, ranging in size from 10 to 200 metric tons.

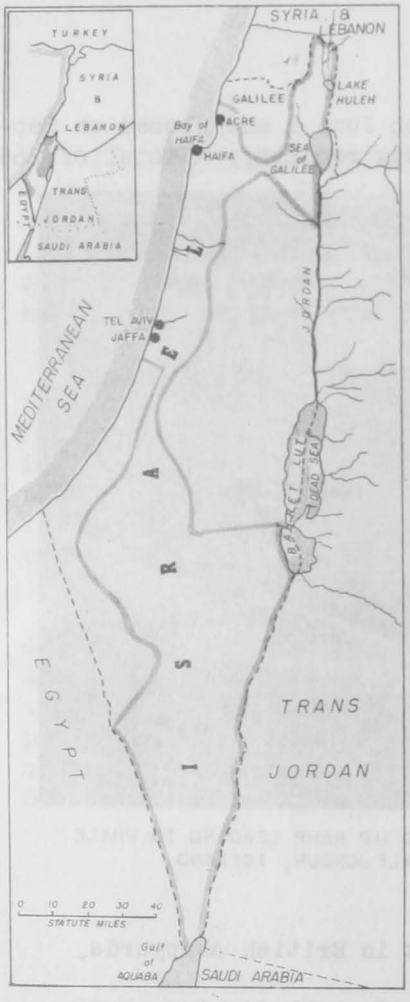
India

FISHERMEN REPORT SUCCESSFUL FISHING OFF INDIA: Danish fishermen operating out of Calcutta, India, with two Danish cutters report that in ten trips fish valued at 180,000 Danish kroner (US$26,100) were landed. The best catch was 55,000 pounds of fish in two days. The catches were marketed readily.

Earlier contracts of six months for these Danish fishermen have been extended for an additional half year. According to the May 23 issue of Fiskaren, a Norwegian fishery periodical, the fishermen are pleased with the operation and the results achieved.

Israel

DEEP-SEA AND LAKE FISHING EXPANDED IN 1950: The increasing demand for fish as a substitute for scarce meat supplies gave great impetus to the development of lake and deep-sea fishing in Israel during 1950, the American Embassy at Tel Aviv points out in a report dated January 15. The development of pond fishing, on the other hand, received little encouragement because of high production costs and the lack of foreign exchange to buy feedstuffs.



BOUNDARIES OF ISRAEL ARE INDICATED BY STIPPLED LINE. DOTTED LINE INDICATES FORMER BOUNDARIES OF PALESTINE

Fisheries development was given additional force by the immigration of trained fishermen, many from Turkey and Tripolitania. In the course of 1950 a company established by Belgian and local businessmen started deep-sea fishing operations on a large scale. Supported by the Government, the company began operations with two large vessels from Ostende, Belgium, and later ordered additional vessels. A considerable catch was already reaching Israel's markets before the end of the year.

Coastal fishing was also expected to benefit from the fishing ports which were under construction. A Danish fishing company trained local fishermen during the winter on a vessel it brought to Israel's shores.

Lake fishing progressed despite some consumer reluctance to accept the small sardine-like fish taken in Lake Tiberias. In order to improve marketing conditions the Food Control authorities limited the sale of imported frozen fish during certain periods in the summer of 195[illegible]

The total catch during the first nine months of 195[illegible] was 4,278 metric tons. Fish bred in ponds constituted roughly 57 percent, the deep-sea catch 18 percent, lake fish 14 percent, and the coastal fishing catch 11 percent of the total. During the corresponding period of 1949 only 2,610 metric tons were produced. Of the 1949 catch, 69 percent was pond fish, 14 percent deep-sea fish, 11 percent lake fish, and only 6 percent from coastal fish.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, APRIL 1950, PP. 66-9.

Japan

AVAILABILITY OF JAPANESE FISHING CRAFT FOR KOREAN FISHING INDUSTRY: Approximately 64 Japanese fishing craft are available for the fishing industry in Korea, according to information furnished the Korean Economic Aid agency of the Far East Command by SCAP's Natural Resources Section, the latter agency's June 2 Weekly Summary states.

Consisting mostly of trawlers, these boats are being offered for sale, although admittedly many of these boats are old and not in first-class condition. These craft are surplus to Japanese needs mainly as a result of the reduction of the East China Sea fleet which took place by action of the Japanese Government in its effort to reduce overfishing in the important trawl areas of the East China Sea within the SCAP-authorized fishing area.

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COASTAL FISHERIES PROGRAM: An outline of the physical rehabilitation of the Japanese fishing industry during the years since the Surrender, the financial and other economic problems which have developed during this period, and a program for the solution of these problems are discussed in a report[1/] recently released by SCAP's Natural Resources Section.

According to this report, the physical rehabilitation program for the fishing industry has been accomplished largely by restoration of the fishing fleet to a level somewhat greater than that existing before World War II and by the availability of nets and other equipment for these vessels and other facilities. In spite of this recovery, financial and economic problems have developed, principally because the number of fishermen has increased to 40 percent more than before the war while the over-all production of fish has failed to reach the prewar level, in spite of the larger numbers of fishermen and boats. Fishermen's operating costs have increased, and in many instances the price of catch has declined. As a result of these factors, fishermen are faced with a problem of obtaining sound financing to meet justifiable requirements.

The preliminary study presents a 5-point program for the solution of this economic crisis:

1. STOP FURTHER EXPANSION IN OVERFISHED FISHERIES AND ACCOMPLISH NEEDED REDUCTIONS IN FISHING INTENSITY.
2. DEVELOP SOUND CONSERVATION REGULATIONS WITHIN THE VARIOUS FISHERIES.
3. ESTABLISH STRONG DEPARTMENTS IN THE FISHERIES AGENCY AND PREFECTURES FOR ENFORCEMENT OF FISHERY REGULATIONS.
4. INCREASE THE FISHERMEN'S PROFITS THROUGH INCREASING THE RETURNS RECEIVED FOR THE CATCH AND DECREASING THE COST OF PRODUCTION.
5. ESTABLISH A SOUND FINANCING PROGRAM.

The Japanese Government, through Cabinet action, has officially approved the recommendations made in the report and has instructed appropriate units of the government to initiate action to determine how the recommendations can be implemented.

1/ A PROGRAM FOR JAPANESE COASTAL FISHERIES, PRELIMINARY STUDY NO. 48, MAY 1951, PREPARED BY WILLIAM C. HERRINGTON.

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JAPAN AGREES TO TEMPORARILY PROHIBIT PELAGIC FUR SEALING: An exchange of notes between the Japanese and U. S. Governments on the subject of pelagic fur sealing was made public in Tokyo on June 12.

The Japanese Government states in their note that they have no objection to the interpretation of Prime Minister Yoshida's letter of February 7, 1951,[1/] as extending to pelagic fur sealing. The February 7 letter announced Japan's intention to voluntarily prohibit their resident nationals and vessels from carrying on fishing operations in presently-conserved salmon, halibut, herring, sardine, and tuna fisheries in the waters of the eastern Pacific Ocean and Bering Sea where conservation measures have already been taken.

The notes exchanged follow:

U. S. AMBASSADOR JOHN FOSTER DULLES' MEMORANDUM DATED APRIL 3:

"IT WILL BE RECALLED THAT JAPAN, ALONG WITH THE UNITED STATES, GREAT BRITAIN AND RUSSIA, WAS A PARTY TO THE FUR SEAL CONVENTION OF 1911, WHICH PROHIBITED PELAGIC SEALING IN WATERS OF THE NORTH PACIFIC OCEAN, NORTH OF THE THIRTIETH PARALLEL OF NORTH LATITUDE AND INCLUDING THE SEAS OF BERING, KAMCHATKA, OKBETAK AND JAPAN. IT WILL BE REALIZED FURTHER THAT THE 1911 CONVENTION WAS ABROGATED BY THE JAPANESE GOVERNMENT IN OCTOBER 1941. SINCE THE DENUNCIATION OF THE 1911 CONVENTION BY JAPAN HAD THE EFFECT OF TERMINATING THE ENTIRE CONVENTION, THE UNITED STATES AND CANADA ENTERED INTO AN EXECUTIVE AGREEMENT IN 1942 GOVERNING SEALS IN THE NORTHEAST PACIFIC AREA; THIS AGREEMENT WAS RENEWED IN 1947.

"IN VIEW OF THE INTEREST OF THE UNITED STATES IN OBTAINING AN INTERNATIONAL AGREEMENT TO PROHIBIT PELAGIC SEALING, ACTIVE CONSIDERATION IS NOW BEING GIVEN TO RENEGOTIATION OF SUCH A CONVENTION AMONG THE INTERESTED PARTIES AFTER A JAPANESE PEACE SETTLEMENT.

"PENDING THE NEGOTIATION OF A CONVENTION ON THIS SUBJECT, THE UNITED STATES GOVERNMENT BELIEVES THAT IT WOULD BE DESIRABLE IF THE JAPANESE GOVERNMENT WERE TO EFFECT A PROHIBITION OF PELAGIC SEALING ON THE PART OF ITS OWN NATIONALS, AND BELIEVES FURTHER THAT IT MIGHT BE AGREED THAT A COMMITMENT TO THAT EFFECT, AS WELL AS ONE TO ENTER INTO RENEGOTIATION OF A FUR SEAL CONVENTION SHOULD IT BE DEEMED DESIRABLE, IS TO BE CONSIDERED AS FALLING WITHIN THE SCOPE OF THE EXCHANGE OF LETTERS OF FEBRUARY 7, 1951, BETWEEN PRIME MINISTER YOSHIDA AND AMBASSADOR DULLES.

"THE FOURTH PARAGRAPH OF THE PRIME MINISTER'S LETTER READS AS FOLLOWS:

> 'IN THE MEANTIME, THE JAPANESE GOVERNMENT WILL, AS A VOLUNTARY ACT, IMPLYING NO WAIVER OF THEIR INTERNATIONAL RIGHTS, PROHIBIT THEIR NATIONALS AND VESSELS FROM CARRYING ON FISHING OPERATIONS IN PRESENTLY CONSERVED FISHERIES IN ALL WATERS WHERE ARRANGEMENTS HAVE ALREADY BEEN MADE, EITHER BY INTERNATIONAL OR DOMESTIC ACT, TO PROTECT THE FISHERIES FROM OVER-HARVESTING AND IN WHICH FISHERIES JAPANESE NATIONALS OR VESSELS WERE NOT IN THE YEAR 1940 CONDUCTING OPERATIONS.'

"IT IS BELIEVED THAT THE FIRST CONDITION ESTABLISHED IN THE FOREGOING PARAGRAPH CAN BE MET ON THE GROUND THAT, WHILE THE EXECUTIVE AGREEMENT BETWEEN THE UNITED STATES AND CANADA RELATES ONLY TO THE NORTHEAST PACIFIC OCEAN, THE UNITED STATES GOVERNMENT HAS PASSED DOMESTIC LEGISLATION PROHIBITING ITS NATIONALS FROM ENGAGING IN PELAGIC SEALING IN THE WATERS OF THE NORTH PACIFIC OCEAN. IN THIS CONNECTION, SECTION TWO OF PUBLIC LAW 237 OF FEBRUARY 26, 1944, READS AS FOLLOWS:

> 'IT SHALL BE UNLAWFUL, EXCEPT AS HEREINAFTER PROVIDED FOR ANY CITIZEN OR NATIONAL OF THE UNITED STATES, OR PERSON OWING DUTY OF OBEDIENCE TO THE LAWS OR TREATIES OF THE UNITED STATES, OR ANY VESSEL OF THE UNITED STATES, OR PERSON BELONGING TO OR ON SUCH VESSEL, TO ENGAGE IN PELAGIC SEALING OR SEA OTTER HUNTING IN OR ON THE WATERS OF THE NORTH PACIFIC OCEAN.'

SO FAR AS THE SECOND CONDITION IS CONCERNED, THE JAPANESE GOVERNMENT AS OF 1940 WAS A PARTY TO THE FUR SEAL CONVENTION AND CONSEQUENTLY AT THAT TIME ITS NATIONALS WERE NOT LEGALLY ENTITLED TO ENGAGE IN PELAGIC SEALING IN THE NORTH PACIFIC OCEAN.

1/SEE COMMERCIAL FISHERIES REVIEW, MARCH 1951, PP. 30-32.

"IN THE LIGHT OF THE FOREGOING CONSIDERATIONS, THE UNITED STATES GOVERNMENT IS DESIROUS OF KNOWING WHETHER IT IS THE VIEW OF THE JAPANESE GOVERNMENT THAT PRIME MINISTER YOSHIDA'S LETTER OF FEBRUARY 7 TO AMBASSADOR DULLES MAY BE REGARDED AS EXTENDING TO PELAGIC FUR SEALING."

THE REPLY OF THE JAPANESE PRIME MINISTER TO THE UNITED STATES MEMORANDUM FOLLOWS:

"THE JAPANESE GOVERNMENT HAS NO OBJECTION TO THE INTERPRETATION OF PRIME MINISTER YOSHIDA'S LETTER OF FEBRUARY 7, 1951 AS EXTENDING TO PELAGIC FUR SEALING. THAT IS TO SAY, PENDING THE CONCLUSION OF A NEW CONVENTION ON THE SUBJECT AFTER THE COMING INTO FORCE OF A PEACE TREATY, THE JAPANESE GOVERNMENT WILL, IMPLYING NO WAIVER OF THEIR INTERNATIONAL RIGHTS, VOLUNTARILY PROHIBIT HER NATIONALS AND VESSELS FROM CARRYING ON PELAGIC FUR SEALING IN THE WATERS IN QUESTION, AND IS MOREOVER PREPARED TO ENTER INTO NEGOTIATIONS TOWARD THE CONCLUSION OF A NEW CONVENTION.

"THE JAPANESE GOVERNMENT, ACCORDING TO THE DOMESTIC LAW OF 1912 CONCERNING CONTROL OF SEA OTTER AND FUR SEAL HUNTING, IS ISSUING AT PRESENT NO PERMIT FOR PELAGIC SEALING OPERATIONS EITHER IN JAPANESE TERRITORIAL WATERS OR ON HIGH SEAS.

"THE JAPANESE GOVERNMENT AVAILS ITSELF OF THIS OPPORTUNITY TO EXPRESS ITS HOPE THAT NEGOTIATIONS ON A NEW CONVENTION WILL BE STARTED AT THE EARLIEST POSSIBLE DATE, ALSO THAT PENDING THE CONCLUSION OF THE CONVENTION AFTER THE SIGNING OF A PEACE TREATY THE GOVERNMENT OF THE UNITED STATES OF AMERICA WILL BE GOOD ENOUGH TO SEE THAT AN EQUITABLE SHARE AS UNDER THE 1911 CONVENTION IS ALLOTTED TO JAPAN."

Malaya (Including Singapore)

1950 REPORT ON FISHERIES: Production: Fisheries production in the Federation of Malaya and Singapore for the twelve-month period ending October 1950 amounted to 181,655 long tons (see table 1), valued at M$189,500,000 (US$62,133,260), according to a May 8 report from the American Consul at Penang.

Of this total, the 167,042 long tons, valued at M$169,247,000 (US$55,492,706), caught in the Federation increased the 1950 catch by 15 percent over the previous year. Salt-water species accounted for 135,746 long tons and fresh-water species 25,270 long tons.

Table 1 - Federation of Malaya and Singapore Fisheries Production, 1949-50 1/

Item	Nov.1949-Oct.1950			Nov.1948-Oct.1949		
	Quantity	Value 2/		Quantity	Value 2/	
	Long Tons	M$	US$	Long Tons	M$	US$
Salt-water fish ...	135,746	177,179	58,093,451	118,860	123,793	53,193,852
Fresh-water fish ..	25,270	8,854	2,903,050	22,610	4,505	1,935,799
Fish for fertilizer	20,639	3,467	1,136,760	18,250	2,957	1,270,623
Total	181,655	189,500	62,133,260	159,720	131,255	56,400,274

1/INCLUDES SUBSISTENCE FISHING OR FISH CAUGHT FOR FAMILY CONSUMPTION.
2/VALUES CONVERTED TO U.S. DOLLARS ON THE FOLLOWING BASIS: 1 STRAITS SETTLEMENTS DOLLAR (M$) EQUALS IN 1949 - 42.97 U.S. CENTS, AND IN 1950 - 32.788 U.S. CENTS.

The increased salt-water fish production was due primarily to mechanization of the fishing fleet. Fresh-water fish production increased due to a program of fry distribution to new rice (padi) fields and to pond owners. A new pond in Penang is reported to have produced over two tons of fish per acre per year and also a commercial quantity of water yams grown on the surface for use as pig fodder.

Fishermen, Boats, and Gear: More than half of the total number of fishermen live on the east coast of Malaya. Over 70 percent of the 72,697 fishermen are Malayan, and 25 percent are Chinese.

Of the 22,809 fishing vessels in the Federation of Malaya, more than 95 percent are non-powered boats. The number of licensed powered fishing vessels rose from 327 at the end of 1949 to 811 at the end of 1950. The motor boats are used for drift netting, long-lining, purse seining, and for servicing fishing stakes and offshore seine nets. Some are used as mothership and fish carriers. Outboard motors have become quite popular and serve a useful purpose in certain sections.

Marketing: Although there has been increased use of ice at sea for preserving the catch, there are not yet sufficient refrigeration facilities ashore for holding fish during periods of abundance. Distribution costs are high because of a Government ordinance which prevents trucks from carrying a load of refrigerated fish in one direction from seeking a pay load for the return trip. Another difficulty has been the Indonesian Government's denial of her territorial fishing grounds to Malayan fishermen, formally an important source of supply.

The condition in which fish is landed at present is considered much better because some of the boats carry ice. As a result, first-grade bottom-living species such as "ikan merah" (Lutianus sp.--red snapper) and "ikan kerapu" (Epinephelus sp.) are being marketed to an increasing extent as fresh fish rather than in dried and salted form.

During the year under review there has been a marked increase in the prices of nearly all grades of fish. The Kuala Lumpur market prices of twelve major types of local fish indicate that prices averaged 45 percent higher in November 1950 than during the corresponding period a year earlier.

Mexico

LEGISLATION PERMITTING AMERICAN VESSELS TO LAND SHRIMP PENDING: Under a new law pending in the Mexican Legislature, American vessels fishing shrimp would be permitted to unload their catches at Mexican ports where the shrimp could be processed in newly-opened plants, a June 28 report from the American Consul at Matamoros states. American fishing vessels are now permitted to enter Mexican ports with "touch and trade" papers only for refueling, icing, or minor repairs. Under the contemplated law, United States shrimp vessels would be permitted to unload their catches on payment of two cents per pound tax. For an additional two cents per pound, the shrimp could be processed, packaged, and frozen in Mexican ports.

With the increased activity in the processing field, Mexico can now offer three new processing plants in Carmen and those which have been in operation for some time at Mariscos del Carmen and Madere. Two other plants will soon be under way at Carmen and other plants are being considered for ports within range of the Mexican shrimp beds.

It is reported that the new legislation has excellent chances of becoming law since the Secretario de la Marina is allegedly in favor of the step. Passage of the law would probably lead to the eventual establishment of Carmen and Campeche as important fishing centers on the Gulf Coast just as Guaymas and Mazatlin are on the West Coast.

Norway

EXPERIMENTS ON USE OF DRY- AND BRINE-FROZEN HERRING AS BAIT: Further tests by the Norwegian Fisheries Research Laboratory have confirmed earlier experiments on the use of frozen herring for bait.[1/] Herring frozen dry, as compared with similar herring frozen in brine, demonstrated a much greater ability to catch fish. The tests were carried out in a number of fishing areas under actual fishing conditions. Dry-frozen herring treated with ascorbic acid gave the same results as untreated herring, according to a report issued by the Norwegian Directorate of Fisheries.

1/SEE COMMERCIAL FISHERIES REVIEW, JANUARY 1950, P. 51.

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FACTORY SHIP TO FISH OFF MOROCCO: A Norwegian fishing expedition consisting of four trawlers and the floating herring-meal factory ship, Clupea, was scheduled to go to the sardine fishing grounds off Morocco in mid-June, a June 5 American Embassy dispatch from Oslo states. The expedition will last from three to four months, and it is the first of its kind sent from Norway. If successful, it will pave the way for other expeditions using a factory vessel as a base of operations.

SEALING SEASON, 1951: The 1951 Norwegian sealing season recently ended with a catch of 142,000 animals, 22,800 more than last year. The Arctic Ocean catch amounted to 70,000 animals and 1,400 tons of blubber, 23,000 more animals and 500 tons more blubber than last year. The Newfoundland and vicinity catch amounted to 72,500 animals, 200 less than in 1950.

* * * * *

ITALIAN-NORWEGIAN COMMODITY EXCHANGE AGREEMENT CONCLUDED: A commodity exchange trade agreement was signed in Rome by Norway and Italy, the American Embassy at Oslo stated in a May 23 dispatch. The agreement replaced the trade agreement concluded between these two countries in November 1949. The new agreement, which went into effect on the date of signature (March 30, 1951), is retroactive to January 1, 1951, and will terminate on December 31, 1951. This commodity exchange regulation between the two countries, within the scope of the Office of European Economic Co-operation (OEEC), attempts to liberalize Norwegian-Italian trade to the greatest possible extent.

Norwegian imports of Italian goods will consist primarily of agricultural and finished goods, while Italian imports from Norway will include fishery products (see table).

Fisheries Commodities to be Exported by Norway to Italy Under the Terms of the Commodity Exchange Trade Agreement

Italian Import Quotas (Maximum values permitted to be imported)			Norwegian Export Quotas (Minimum values established for export, subject to licensing)		
Commodity	Value		Commodity	Value	
	1,000 Krone	1,000 U.S.$		1,000 Krone	1,000 U.S.$
Non-Free List Goods:			Free-List Goods:		
Tuna and mackerel, fresh and frozen	7,000	980	Dried fish	40,000	5,600
Other frozen fish, including fillets	5,000	700	Klipfish and salted fish	10,000	1,400
Other fresh fish	2,000	280	Cod-liver oil:		
Canned fish, including tunafish	2,500	350	Medicinal	1,500	210
Fatty alcohols and other sperm oil products	1,500	240	Veterinary	1,000	140
Fish hooks	300	42	Industrial	3,500	490
Fish glue	100	14	Refined fish and whale oil	3,000	420
Seaweed products	150	21	Fatty alcohols and other sperm oil products	2,500	350

NOTE: MONETARY CONVERSION RATE - 1 NORWEGIAN KRONE EQUALS 14 U.S. CENTS.

Reciprocity transactions will from now on not be allowed on this new agreement. Reciprocity transactions which, prior to the signing of this agreement, have been

approved by the two Governments can be carried through in excess of the quantities or values quoted in the schedules of the agreement in conformity with the conditions assumed in the respective approvals.

* * * * *

PRODUCTION OF ACTH FROM WHALE HYPOPHYSINS STEPPED UP: ACTH prepared from whale hypophysins brought from the Antarctic by Norwegian whale factories is now available in sufficient supply. Norwegian production of this arthritis-relieving hormone is enough to provide hospitals with additional quantities for further research, the Norwegian Information Service announced on June 28.

The chief doctor of the Rheumatics Hospital recently told a group meeting in Sandefjord, Norway, that ACTH has proved most effective on arthritis patients at his hospital. It is believed that enough of ACTH prepared from whale hypophysins can be produced in the future to meet most of Norway's needs.

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RECORD LARGE AND SPRING HERRING PRODUCTION REPORTED: The 1951 large and spring herring seasons produced a record quantity of herring. The fishing began January 22 and ended April 5 with a catch of over 9 million hectoliters (about 845,000 metric tons). Estimated disposition of the catch was as follows (in metric tons):

EXPORTED FRESH	74,400	DOMESTIC CONSUMPTION	5,580
SALTED	83,700	FROZEN FOR BAIT	6,510
TO KIPPER PLANTS	14,880	FOR HERRING OIL AND MEAL	660,300
		GRAND TOTAL	845,370

During the 25 days of the "storsild" or large herring season, 6,400,000 hectoliters (about 595,200 metric tons) were caught, or an average of 256,000 hectoliters (about 23,800 metric tons) per day. The largest catch in one day amounted to 700,000 hectoliters (about 65,100 tons). The total catch of "vaarsild" or spring herring totaled about 2,600,000 hectoliters (about 241,800 tons), reports the April 11 issue of Fiskaren, a Norwegian fishery periodical.

Republic of the Philippines

UNLIMITED IMPORTS OF CANNED FISH AUTHORIZED: The Price Stabilization Corporation (PRISCO) of the Philippines on April 1 took over from the Import Control Administration the licensing of 26 categories of essential import items, in accordance with an Executive Order issued in December 1950 but rendered ineffective for the first quarter of 1951.

PRISCO also was authorized by the President to import unlimited quantities of several commodities, including canned fish. Foreign exchange has been allocated by the Central Bank to PRISCO for the second quarter of 1951 for this purpose.

NOTE: SEE COMMERCIAL FISHERIES REVIEW, AUGUST 1950, PP. 53-6.

Portugal

AZORES ISLANDS FISHING INDUSTRY: Since 1929 the canned fish industry in the Azores Islands has been steadily increasing, states a May 17 American consular dispatch from Ponta Delgada in the Azores. These islands are now considered a province of Portugal.

There are at present 5 large and 6 small canneries, the principal ones being located on the islands of São Miguel and Terceira. They employ about 60 motor launches (with a crew of 1,200 fishermen) and a number of other small boats. When the industry is at its height the total number of persons employed is estimated around 2,500 persons, including fishermen, some of whom are recruited from Madeira Island for their superior skill. Tuna is the principal fish used for canning, though "bonito," a fish resembling a small tuna and the size of a good mackerel, is also largely used as are mackerel, pilchard, and sardines whenever large quantities are available.

Normal production is estimated at 1,500 metric tons per annum, however, the production in 1949 was considered the best in recent years with a total estimated production of 1,000 metric tons of canned fish, valued at about $1,000,000. The bulk of the Azorean canned fish is exported to the United States, Italy, France, Switzerland, Belgium and to a limited extent Brazil.

There are no statistics available showing the total catch of fish in these islands, but figures furnished by the Captain of the Port's office at Ponta Delgada, covering the island of São Miguel, indicate that 6,174,427 pounds of fish, valued at $237,896, were caught by fishermen of that Island in 1950.

AZORES WHALING INDUSTRY: Whaling, one of the oldest industries, has contributed considerably to the economic benefit of the Azores Islands. It is now an established activity on almost every island, especially São Miguel, where there is one good modern plant for the production of sperm oil, fertilizers, fish meal, and what is termed "ivory from the teeth of the cachalot." With the exception of a limited quantity of fertilizer and ivory used in the manufacture of souvenirs for the tourist trade, all other products are exported to foreign markets. There are no recent figures indicating the production of whale oil in the Islands, but Table 1 indicates the importance of the industry on the Island of São Miguel.

Table 1 - Island of São Miguel's Whale Catch, and Quantity and Value of Whale Oil Produced, 1940-49

Year	Whales	Oil Produced 1/	Estimated Value to Producers	
	Number	Metric Tons	Escudos	U.S.$
1949	3/	411	2,466,000	95,681
1948	3/	574	3,444,000	137,760
1945	103	340	2,444,000	97,760
1944	76	254	1,524,000	60,960
1943	93	337	2,022,000	80,880
1942	64	270	1,620,000	64,800
1941	39	230	1,380,000	55,200
1940	84	295	1,770,000	64,251

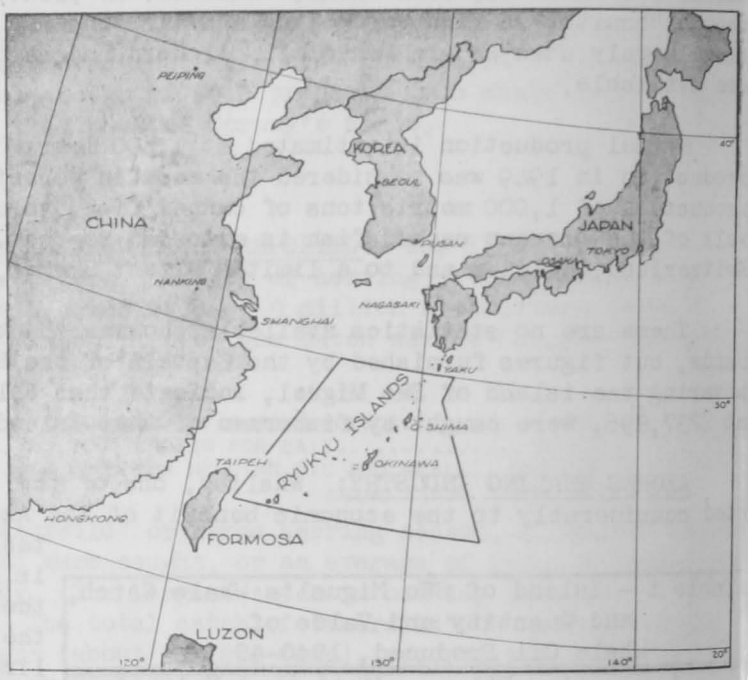
1/ MOSTLY SPERM OIL.
2/ VALUES CONVERTED ON THE BASIS OF ONE PORTUGUESE ESCUDO EQUALS 3.88 U.S. CENTS IN 1949, 4.00 U.S. CENTS FOR 1941 THROUGH 1948, AND 3.63 U.S. CENTS IN 1940.
3/ NOT AVAILABLE.

For a period during 1949 and 1950 whaling was suspended because of lack of capital and space to store sperm oil. Because there was no market for this oil in 1949 and early in 1950, inventories could not be moved. However, after the outbreak of hostilities in Korea in mid-1950, both European and American markets offered prices which permitted the resumption of whaling activities after stocks on hand were exported.

Production of sperm oil in the Azores during the first half of 1950 was estimated at 1,000 metric tons, valued at about 4,000,000 escudos (about $138,800).

Ryukyu Islands

FISHERIES REPORT, 1949-50: After ten years, the fish production in the Ryukyu Islands still lags behind pre-World War II levels. The latest estimate for the the 1949 production is 11,000 metric tons, only 73.6 percent of the 1939 production of 14,000 metric tons.



The Ryukyus are a source of a variety of fishery products. Among the more important marine products produced in the Islands are processed skipjack; fish pastes; dried fish, cuttlefish, and shark fins; salted fish; shells and cuttlefish bone; fish oils and sponges; and kaijinso (seaweed).

Ryukyu exports of marine products have been steadily increasing. The leading export product is sea shells, which accounted for 4,536.3 metric tons in 1950 (see table). Fishery products exported in 1950 totaled 4805.0 metric tons, with a value of US$361,171. Thus, exports increased 77.7 percent in quantity and 192.3 percent in value over the previous year, according to Bulletin No. 9 of the U. S. Civil Administration of the Ryukyu Islands, Sept.-Dec., 1950.

Ryukyu Islands Fishery Products Exports[1/], 1949-50

Commodity	1950		1949	
	Quantity	Value	Quantity	Value
	Metric Tons	U.S.$	Metric Tons	U.S.$
Sea shells	4536.4	150,298	525.3	103,563
Dried shark fins	6.0	199	-	-
Green snail shells	4.5	900	-	-
Kaijinso (seaweed)	257.1	209,099	22.6	20,000
Dried bonito	1.0	675	-	-
Total	4805.0	361,171	547.9	123,563

1/PEARL OYSTERS AND SEA CHESTNUTS ARE NOT INCLUDED.

Sweden

TWO RUSSIAN STEAM TRAWLERS LAUNCHED: The first two of four Russian steam trawlers being built in Sweden have been launched in the latter country, states the May 16 issue of Fiskaren, a Norwegian fishery periodical. Each vessel is 180 ft. long, will have a speed of 11.7 knots, and is equipped with a fish-meal plant and canning equipment. A 44-man crew will be carried.

United Kingdom

FROZEN FISH EXPORTS INCREASE: Quick-frozen fish exports by Grimsby and Hull firms recently have shown a marked increase, both in hard and soft currency areas, according to the May 26 issue of The Fishing News, a British fishery periodical. The increases noted are particularly for exports to Australia, Israel, and the United States.

British fishery firms believe that this trade will continue to increase.

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INDUSTRIAL POTENTIALITIES OF BROWN SEAWEED: Early in the 1940's, the British Ministry of Supply established three factories in Scotland for the production of certain types of non-inflammable camouflage material from seaweed. There are now six British firms producing chemicals from brown and red seaweeds with a value of £750,000 (US$2,100,525) per annum, according to an article in the May 1951 issue of a British pharmaceutical and fine chemical trade paper, The Manufacturing Chemist, abstracted by a member of the American Embassy in London.

The seaweed is generally harvested by hand, although some work has been done on the development of a mechanical harvester and the extension of collecting fields and processing techniques. Estimates place the amount of available littoral seaweed at 180,000 metric tons, with an additional 4,000,000 metric tons of economically harvestable seaweed existing below low-water mark. Studies of industrial potentialities are based on an estimate of 1,000,000 metric tons (net weight) per year.

As early as 1721, seaweed was used in Scotland for the production of various chemicals, beginning with sodium carbonate for the soap and glass industries and shifting in about 1860 to iodine and potassium salts. As the production of these salts from other sources developed, the industry became inactive until about 1934 when a company was formed to produce alginates from seaweed.

Alginic acid is now the only chemical commercially produced from brown seaweed. Mannitol, laminarin, and fucoidin are other products also being investigated by the Scottish Seaweed Research Association, which is studying the possibilities of seaweed industrial development.

NOTE: ALSO SEE COMMERCIAL FISHERIES REVIEW, FEBRUARY 1951, P. 72.

Union of South Africa

PILCHARD RESEARCH PROGRAM FINDINGS REPORTED: South Africa's fish meal and oil industry has limited its expansion pending a determination of pilchard and "maasbanker" (menhaden) resources off the west coast of South Africa, the American Consul reported in a May 10 dispatch from Cape Town. The objective of this research program was to ascertain to what extent pilchard populations can replace the mortality inflicted by decimation, either human or predatory, by natural reproduction, and the potential productivity of the pilchard populations. The scope is to determine the wisest exploitation of the available resources.

Areas Investigated: The inshore work at sea was carried out by two vessels, R. V. Schipa and P. B. Palinurus, from April 1950 to March 1951 within a sea area of approximately 800 square miles, incorporating the whole of St. Helena Bay and bounded by latitudes 32° S. and 34°47' S., the shoreline, and longitude 17°50' E. At the 15 stations worked weekly, oceanographical and biological (mainly planktological) data were collected and recorded. Catches from commercial fishing vessels were sampled at sea and on shore.

Offshore work at sea was handled by the R. S. Africana II, operating from Cape Town as a base. It completed 21 cruises and bimonthly covered 20 routine stations located within a sea area of approximately 4,800 square miles bounded by the latitudes of Lamberts Bay and Saldanha Bay, the shoreline, and the 200-fathom contour. Operations at these stations were similar to those for the inshore stations. This vessel also operated in a non-routine exploratory field outside of the Cape Point latitude in the south, the Hondeklip Bay latitude in the north, and as far as 170 miles offshore. This was done in an attempt to locate mass-spawning or breeding areas of the pilchards. A continuous echo-sounding search with appropriate graphic recordings for subsurface fish schools was maintained by the R. S. Africana II.

Field stations at Lamberts and Stumpnose Bays collected and examined samples taken from catches of individual commercial craft. An examination of plankton hauls made by the inshore research vessels was also undertaken at these stations.

Findings: Preliminary findings contained in this report suggest that a more intensive exploration of pilchard resources could be practiced without depleting resources. However, the Division of Fisheries is reluctant to permit an easing of restrictions until completion of its research program. Some findings of the program are as follows:

1. HYDROLOGY: AVERAGE TEMPERATURES WERE HIGHER INSHORE IN WINTER THAN IN EARLY SUMMER, A FACT CONNECTED WITH THE PREVALENCE OF SOUTHERLY WINDS IN SUMMER WHICH INDUCED UPWELLING OF COLDER WATER NEAR THE COAST. SOME 50-80 MILES OFF SHORE, THE AMOUNT OF UPWELLING IN EARLY SUMMER WAS NOT SUFFICIENT TO COUNTERACT THE RISE IN TEMPERATURE DUE TO SOLAR RADIATION AND CONSEQUENTLY EARLY SUMMER TEMPERATURES OFF SHORE WERE HIGHER THAN IN WINTER. OPPOSITELY-DIRECTED CURRENTS WERE NOT ALWAYS PRESENT AND WERE SOMETIMES FOUND AT DIFFERENT DISTANCES FROM THE COAST. THE CHIEF FACTOR CONTROLLING THE PRESENCE OF THESE CURRENTS IS CONSIDERED TO BE THE DIRECTION OF THE SURFACE WIND. LARGE SWIRLS OR EDDIES OF WATER APPEARED TO BE PRESENT, SOME MOVING CLOCKWISE, OTHERS COUNTERCLOCKWISE. THE AREAS BETWEEN OPPOSITELY-DIRECTED CURRENTS ARE OF FUNDAMENTAL IMPORTANCE TO THE SUPPLY OF NUTRIENT SALTS (E.G., PHOSPHATES) TO PLANKTON ON WHICH PILCHARDS FEED. THE MOVEMENT INSHORE OR AWAY FROM THE SHORE OF SUCH AREAS HAS A BASIC INFLUENCE ON THE AVAILABILITY OF THE PILCHARD FOODSTUFFS NEAR THE REGIONS OF INTENSIVE FISHING IN ST. HELENA BAY.

2. PLANKTON: WITHIN THE AREA INVESTIGATED, INCLUDING THE REGION NOW INTENSIVELY FISHED, PLANKTON WAS ABUNDANT AND DOMINANTLY PHYTOPLANKTONIC IN COMPOSITION INSHORE, BUT RELATIVELY POOR AND DOMINANTLY ZOOPLANKTONIC IN COMPOSITION OFFSHORE. THE ANNUAL OCCURRENCE OF THE PLANKTONIC STAGES OF NO LESS THAN 45 SPECIES, REPRESENTING ALMOST ALL GROUPS OF THE ANIMAL KINGDOM, WAS ESTABLISHED FROM EXAMINATION OF THE PLANKTON CATCHES. FROM A QUANTITATIVE POINT OF VIEW, IT IS CLEAR THAT THE HUGE SHOALS OF MATURING PILCHARDS FREQUENTING ST. HELENA BAY HAVE MORE THAN AN ADEQUATE FOOD SUPPLY IN THESE INSHORE WATERS. IN REGARD TO THE PLANKTONIC DEVELOPMENT STAGES OF THE PILCHARD IN THE PLANKTON CATCHES, IT APPEARED THAT PRESCALED LARVAE AND EGGS WERE COMPLETELY ABSENT IN INSHORE WATERS, WHERE CRUSTACEOUS AND DIATOMACEOUS PLANKTON ORGANISMS WERE FOUND TO BE MOST ABUNDANT AND SURFACE TEMPERATURES WERE LOWEST. IN OFFSHORE WATERS, WHERE THE SUPPORTING PLANKTON WAS CONSISTENTLY POOR IN QUANTITY, DISTINCTLY AN OCEANIC TYPE IN WHICH SALPS, DOLIALIDS AND OTHER TUNICATES WERE FREQUENTLY REPRESENTED, AND THE SURFACE TEMPERATURES WERE HIGHER THROUGHOUT, SUCH LARVAE AND EGGS NEVER OCCURRED IN LARGE NUMBERS.

3. SPAWNING OR BREEDING AREAS; IN REGARD TO PILCHARD SPAWNING OR BREEDING AREAS, THE POSITION TO DATE IS THAT NEITHER A SPECIFIC SEASON NOR A LOCUS OR LOCI HAVE BEEN FOUND. NO PATTERN OF OCCURRENCE AND/OR DISTRIBUTION IS DISCERNIBLE TO DATE AND THE NUMBERS OF PILCHARD EGGS AND LARVAE FOUND WERE NEVER LARGE ENOUGH TO INDICATE MASS SPAWNING AT ANY POINT OR OVER ANY AREA OF CONCENTRATION DURING ANY SPECIFIC PERIOD OF TIME. THE COMPLETE ABSENCE OF EGGS AND LARVAL FORMS FROM INSHORE WATERS, WHICH INCLUDE ST. HELENA BAY AREA, WAS INDICATIVE OF THE FACT THAT BREEDING DOES NOT TAKE PLACE IN THE WATERS CURRENTLY FISHED COMMERCIALLY. ADULT FISH CAUGHT COMMERCIALLY IN THE ST. HELENA BAY AREA, MORE ESPECIALLY THOSE CAUGHT CLOSE INSHORE, WERE GENERALLY SEXUALLY INACTIVE. SUCH ACTIVITY WAS SLIGHTLY MORE MANIFEST IN FISH CAPTURED IN THE SEAWARD PARTS OF ST. HELENA BAY, BUT ON NO OCCASION WAS A SINGLE FISH FOUND IN A RIPE-RUNNING CONDITION. AN INDICATION TO THE EXTENT OF THIS SEXUAL ACTIVITY WAS THE FACT THAT INSHORE-CAUGHT FISH HAD BEEN FEEDING VORACIOUSLY, WHEREAS SEAWARD-CAUGHT FISH HAD BEEN FEEDING LESS ACTIVELY.

4. FEEDING; ADULT FISH APPARENTLY SUBSIST ON A DIET ALMOST EXCLUSIVELY PHYTOPLANKTONIC IN COMPOSITION, AND IN THIS REGARD THEY ARE SELECTIVE FEEDERS IN RELATION TO THE AVAILABLE ZOOPLANKTONIC FOODSTUFFS. SELECTIVE FEEDING WITHIN THE PHYTOPLANKTONIC FIELD HAS NOT YET BEEN DETERMINED. PRESEALED LARVAL FORMS, ON THE CONTRARY, APPEAR TO FEED PRACTICALLY EXCLUSIVELY ON ZOOPLANKTONIC ORGANISMS, BUT TO DATE, THESE DATA ARE INCONCLUSIVE.

5. AGE ANALYSIS: SCALE AND OTOLITH STUDIES SHOWED WITH REASONABLE SURETY THAT THE COMMERCIALLY-EXPLOITED PILCHARD POPULATION IS GENERALLY COMPOSED OF FISH BETWEEN 2 AND 4 YEARS OF AGE. SOME 5-YEAR-OLD FISH MAY HAVE BEEN PRESENT IN SMALL NUMBERS, BUT FISH UNDER 2-YEARS OLD WERE EITHER ABSENT FROM THE AREA, VERY RARE, OR NOT CAPTURED BY THE COMMERCIAL GEAR CURRENTLY EMPLOYED. AGE-FREQUENCY COMPOSITION OF THE POPULATION HAS NOT YET BEEN DETERMINED.

THE ANALYSIS OF MORPHOMETRIC DATA HAS TO DATE REVEALED NO DISTINCTIVE RACES IN THE POPULATION.

6. ST. HELENA BAY: THE ST. HELENA BAY AREA IN WHICH THE COMMERCIAL FISHERY CURRENTLY OPERATES REPRESENTS AN AREA IN WHICH ALL THE ENVIRONMENTAL FACTORS, BOTH PHYSICO-CHEMICAL AND BIOLOGICAL, ARE FAVORABLE FOR FINAL CONDITIONING FOR BREEDING. THIS AREA FAVORS SCHOOLS IN PROGRESSIVE STAGES OF SEXUAL DEVELOPMENT, ENTERING AND DEPARTING FROM IT IN SUCCESSION FOR THE SPAWNING GROUNDS WHEN PRESPAWNING CONDITIONING HAS ADVANCED TO THE CRITICAL STAGE IN EACH CASE. IT APPEARS THAT THE FINAL SCHOOLS ENTER THE AREA SOMETIME IN OCTOBER AND PRACTICALLY A COMPLETE DEPARTURE OCCURS SOMETIME IN NOVEMBER. THE ROTATIONAL PROCEDURE IS RESUMED SOMETIME IN MARCH OR APRIL IN RELATION TO RE-ESTABLISHMENT IN SEASONAL TIME OF THE FAVORABLE PHYSICO-CHEMICAL/BIOLOGICAL NORM.

7. CONDITION OF THE FISH FOR COMMERCIAL USES: IN REGARD TO THE CONDITION OF THE FISH FOR INDUSTRIAL PROCESSING, INCLUDING CANNING AND MEAL AND OIL PRODUCTION, IT SEEMS TO BE CLEAR THAT A PROGRESSIVE RECESSION OCCURS, BOTH IN MASS-PREVALENCE AND INDIVIDUAL STATE, COMMENCING IN LATE

AUGUST AND CONTINUING TO THE TIME OF DEPARTURE OF THE SCHOOLS FROM ST. HELENA BAY SOMETIME IN NOVEMBER. THIS RECESSION IS MANIFESTED INTER ALIA BY FLABBINESS OF THE FLESH, ADHESIVENESS OF SCALES, SO-CALLED "STOMACH-BURN," AND PAUCITY OF OIL CONTENT. WHETHER THESE CHARACTERISTICS ARE DIRECTLY RELATED SPECIFICALLY TO BIOLOGICAL FACTORS, SUCH AS DEVELOPMENT TOWARDS SEXUAL ACTIVITY, A SELECTIVE OR GENERAL SEASONAL DIET, PHYSICO-CHEMICAL FACTORS SUCH AS WATER TEMPERATURES, OR A COMBINATION OF SOME OR ALL THESE AND OTHER ECOLOGICAL FACTORS, REMAINS TO BE ESTABLISHED. THE PROGRESSIVELY LOWER OIL YIELD AND THE PROGRESSIVE DETERIORATION IN THE QUALITY OF THE CANNED PACK DURING THIS PERIOD OF RECESSION IN THE FISH'S CONDITION ARE DEMONSTRABLE FACTS. AN ANALYSIS OF ALL DATA TO DATE REVEALS A PROGRESSIVE RECESSION IN QUALITY OF THE CANNED PACK OF PILCHARDS FROM AUGUST ONWARDS.

Recommendations: The report recommends that the fishing season be closed during September and October 1951, under the provision of Proclamation No. 195 (defining the area closed to fishing) dated August 4, 1949, and the restrictions in new plant construction contained in Proclamation No. 260 dated October 27, 1950, be enforced for at least twelve months from the date of promulgation. For the moment at least, the pilchard fishing industry is inclined to support the restrictive measures recommended by the Division of Fisheries.

U. S. S. R.

RUSSIAN VESSELS FISHING HERRING OFF NORTHERN NORWAY: Ten Russian fishing vessels and a mothership were currently operating off Andøya in Northern Norway, according to a report in the June 6 issue of Fiskaren, a Norwegian trade periodical. They were said to be taking good catches of large or winter herring. A fisherman from Andenes found about a hundred pounds of thin large herring in a small strip of a Russian gill net attached to a float which had torn itself loose.

The Norwegians are aware that spawning occurs both on Røst Bank and Traena Bank, according to a Norwegian scientist, Finn Devold. In 1938 a Russian expedition found herring from Lofoten to Stjernøya. The Russians believed the herring were a separate stock and called them Murmansk herring. Norwegian investigations also have found spawning herring there as well as herring larvae over the whole area in May.

Although the presence of these herring is not new, it is too early to say whether they have anything to do with the Norwegian large or winter herring. It is also an open question whether they are present in such volume that a fishery can be profitable. There have been many reports from Norwegian vessels passing large schools of herring on the way to Norway from the Arctic Ocean and Jan Mayen. But the herring observed were dispersed and the period was during the lightest part of the year. A solution to the problem is one of the things to be sought by the continued scientific investigations of the Norwegians.

A later report in the same periodical states that the mothership Angara is a Swedish-built refrigerator ship of 1,100 metric tons and that the fishing vessels are the first ten of 92 Russian trawlers now being built in East Germany.