FOREIGN

International

FOOD AND AGRICULTURE ORGANIZATION

WORLD FISH CATCH TOPS 50 MILLION TONS IN 1964:

The world fish catch soared to a record 51.6 million metric tons in 1964, according to the Food and Agriculture Organization (FAO). The 1964 catch was more than 4 million metric tons above the record 47.4 million tons caught in 1963.

Peru again led with the biggest single national catch of 9,130,700 tons in 1964 as against 6.9 million tons in 1963. Peru has led the world in national fish catch since 1962, when it overtook Japan. The bulk of the Peruvian annual catch is anchoveta, which is manufactured into fish meal for use as animal feed.

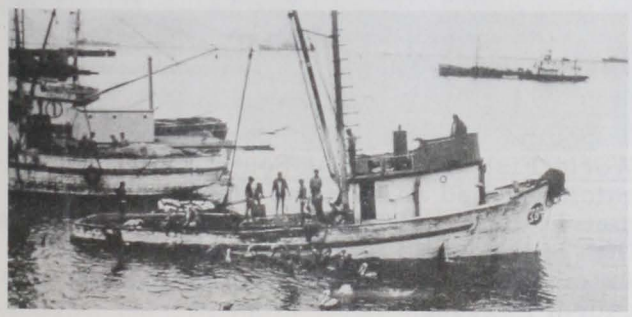

Fig. 1 - In Peru, older type anchoveta fishing vessel waiting to unload at the port of Chimbote.

Japan was in second place in 1964 with a catch of 6,334,700 tons, a drop of 360,000 tons from its 1963 catch of 6,694,700 tons. The Japanese catch is more varied than that of Peru since Japanese high-seas vessels fish all over the world.

The estimated catch of about 5.8 million tons for Communist China in 1964 placed her in third place.

The U.S.S.R. was in fourth place in 1964 with a catch of 4.48 million tons, an increase of about 0.5 million tons over her 1963 catch of 3.98 million tons.

Fig. 2 - Japanese factoryship Tenyo Maru in North Pacific.

Fig. 3 - Soviet "Majakovski" stern trawler in North Atlantic.

The United States was in fifth place with 2,638,000 tons in 1964, a slight drop from the 2,776,700 tons landed in 1963.

The other countries which caught over a million tons of fish in 1964 were Norway with

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Fig. 4 - United States tuna purse seiner operating from a California fishing port.

1,608,100 tons, India 1,320,300 tons, South Africa and South-West Africa (combined) 1,254,500 tons, Canada 1,210,700 tons, Spain 1,196,600 tons, Chile 1,160,900 tons, and Denmark (including Faroe Islands) 1,010,200 tons.

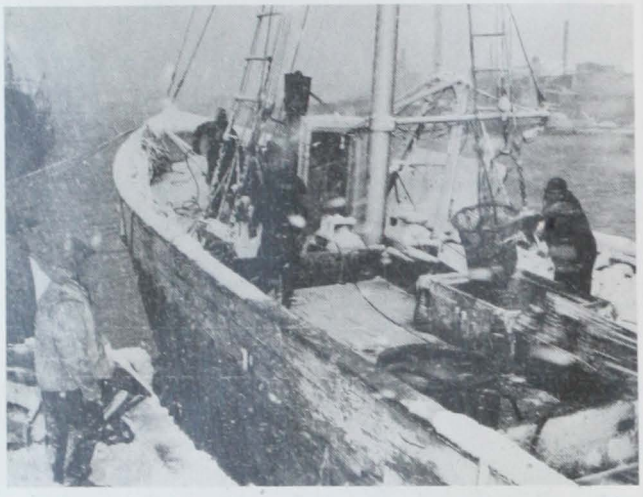

Fig. 5 - Unloading ocean perch from a U. S. trawler at the port of Gloucester, Mass., during a stormy winter day.

Countries with 1964 catches in excess of 0.5 million tons were the United Kingdom with 974,600 tons, Iceland 972,700 tons, Indonesia (estimated) 936,200 tons, France 780,400 tons, Federal Republic of Germany 624,300 tons, Philippines 623,500 tons, Portugal 603,700 tons, Thailand 577,000 tons, and Republic of Korea 524,000 tons.

Asian Fishermen Land 19 Million Tons in 1964: The nations of Asia and the Far East caught 19 million tons of fish in 1964 to lead all other continental areas. That catch was slightly above the 1963 total Asian catch of 18.98 million tons. But Asia's percentage of the world catch in 1964 fell to 37 percent as against 40 percent in 1963.

Japan again led Asia in national catch. Following Japan, the next Asian fishing nation was Communist China. India came next, and on a world basis ranked number seven. Next in order was the Philippines (up 57,900 tons from 1963), followed by Thailand and the Republic of South Korea. The last two for the first time joined the small circle of nations which catch above 0.5 million tons a year. Thailand's 1964 catch was up 158,300 tons over 1963 landings. South Korea's catch was 58,300 tons above 1963 and ranked 7th in Asia and 21st in the world.

Other Asian nations catching 50,000 tons or more were: South Viet Nam 397,000 tons, Taiwan 376,700 tons, Burma 360,000 tons, Malaysia 241,000 tons, Cambodia 164,600 tons, Ceylon 96,100 tons, and Hong Kong 76,300 tons.

Fig. 6 - Fresh-water fish farm near Mexico City, Mexico.

South America Lands One-Fifth of 1964 World Fish Catch: The South American fish catch reached an all-time high of 11,130,000 metric tons in 1964. That was more than one-fifth of the world total, and well above South America's previous high of 8.42 million tons caught in 1963.

Peru accounted for 82 percent of the South American catch. Her catch has now gone up about 110 times since the end of the Second World War.

Chile was the second most important South American fishing nation, with 399,000 tons more than in 1963. Argentina followed with 160,000 tons (an increase of 36,100 tons). Venezuela caught 110,600 tons as compared with 97,300 tons in 1963. Colombia increased her 1964 catch to 53,300 tons, a gain of 12 percent over the previous year. Ecuador caught

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46,300 tons in 1964, a slight drop from its record 49,700 tons in 1963. Catches of other South American countries were small.

Europe's 1964 Fish Catch a Record: The nations of Europe, excluding the Soviet Union, caught 9.66 million metric tons of fish in 1964. The 1964 European catch was almost 800,000 tons above Europe's previous high of 8.89 million tons, caught in 1963. In 1964, Europe accounted for 19 percent of the world catch, the same percentage as in 1963. Only Asia with 19 million tons and South America with 11 million tons caught more fish than Europe on a Continental basis. Eight European countries were among the world's top 20 fishing nations.

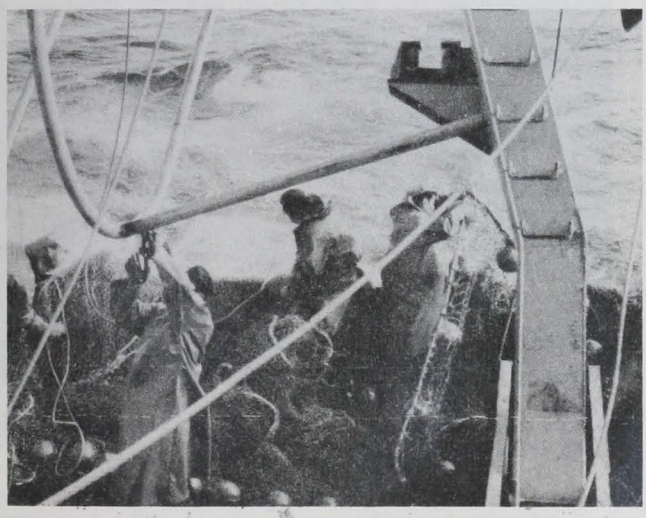

Fig. 7 - Aboard a French stern trawler.

Norway was the leading European fishing country with a 1964 catch up more than 200,000 tons from 1963, but below Norway's record 1956 catch of 2,187,300 tons.

Second among the European nations was Spain, with a record catch and an increase of about 9 percent over 1963.

The Danish catch in 1964 showed a small gain over the 985,000 tons taken in 1963.

The United Kingdom's catch was up 23,400 tons from 1963, but well below her record catch of 1,206,100 tons in 1948.

Iceland brought in a record catch in 1964, well above her 784,500 tons of 1963, and topping by better than 140,100 tons her previous high of 832,600 tons in 1962. France also had a record 1964 catch. West Germany's 1964 catch was slightly down from 1963. Portugal was the only other European nation to catch more than 0.5 million tons--her 1964 catch was also a record, surpassing by 63,900 tons the previous high of 1963.

Other European nations catching 100,000 tons or more in 1964 were: the Netherlands 387,800 tons, Sweden 372,100 tons, Poland 264,300 tons, Italy 252,400 tons, and East Germany 224,900 tons.

Soviet Union Lands Nine Percent of World's 1964 Fishery Catch: The Soviet Union caught a record catch in 1964, up almost 13 percent from 1963. The 1964 Soviet catch accounted for 9 percent of the world total. The Soviet catch has almost doubled during the past 10 years and is about triple what it was in 1948. It now is greater than the United States and Canadian catches combined.

Among the 15 Soviet Republics that make up the U.S.S.R., the Russian Soviet Federated Republic, which stretches from the Arctic Ocean to the Caspian and Black Seas and from Europe to the Pacific, traditionally brings in about three-quarters of the total Soviet catch. The Russian S.S.R.'s 1964 catch was 3,333,500 tons, compared with 3,014 tons in 1963.

The second most important Soviet fishing area is the Baltic, where the Estonian, Latvian, and Lithuanian Soviet Republics normally bring in yearly more than 100,000 tons each. The 1964 catches for those Soviet Republics were 163,500 tons, 269,900 tons, and 208,400 tons, respectively, compared with 138,600 tons, 210,600 tons, and 177,200 tons in 1963.

Another important Soviet fishing area is the Ukrainian S.S.R., whose ports are exclusively on the Black Sea. In 1964, that Republic had a catch of 256,600 tons, compared with 210,700 tons in 1963.

Catches of other Soviet Republics in 1964 were as follows: Armenian S.S.R. 1,000 tons, Azerbaijan S.S.R. 52,800 tons, Byelorussian S.S.R. 6,100 tons, Gruzin S.S.R. 21,000 tons, Kazakh S.S.R. 106,000 tons, Kirgiz S.S.R. 1,300 tons, Moldavian S.S.R. 1,300 tons, Tadjik S.S.R. 300 tons, Turkman S.S.R. 31,500 tons, and Uzbek S.S.R. 22,500 tons.

African Fishermen Land Record Catch: The nations and territories of Africa caught a record 2.91 million metric tons of fish during 1964, up 250,000 tons from 1963. The 1964 African catch accounted for 6 percent of the world total.

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The South Africa Republic (includes South-West Africa) was the leading African fishing country with a 1964 catch up 83,700 tons from 1963. Angola had the next largest African catch with 355,800 tons in 1964, compared with 239,800 tons in 1963.

Fig. 8 - Conveyor and labeling machine in a South-West Africa pilchard cannery.

In 1964, Morocco's catch was 203,800 tons, against 184,700 tons in 1963. Senegal's was 127,400 tons, an increase over the 1963 catch of 118,200 tons.

Fig. 9 - Fishing canoes on a beach in West Africa.

Other African countries catching more than 20,000 tons in 1964 were: Chad 80,000 tons (the same as in 1963); Ghana 79,100 tons (compared with 62,800 tons in 1963); Uganda 72,100 tons (69,600 tons in 1963); Nigeria 59,000 tons (the same as in 1963); Zambia 30,800 tons (28,600 tons in 1963); Dahomey 26,000 tons; Sierra Leone 21,500 tons; and Kenya 20,700 tons. Catch data in 1964 for the United Arab Republic, Tanzania, and the Republic of Cameroon are not available. (FAO Yearbook of Fishery Statistics, Catches and Landings, 1964.)

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EASTERN HEMISPHERE COUNTRIES SEND DELEGATES TO FAO-U.S.S.R. STUDY TOUR ON FISHERIES TRAINING:

For the benefit of governments and territories in the Eastern Hemisphere with developing fisheries, a seminar and study tour on Soviet fisheries training was organized in the summer of 1965 by the Food and Agriculture Organization (FAO) in cooperation with the Soviet State Committee for Fisheries.

The Soviet Government considers its fishing industry one of the most important branches of its national economy. Soviet fisheries not only provide protein foods and full employment in fishing areas, but also promote growth in Soviet heavy industry. An elaborate system of fisheries training has enabled the U.S.S.R. to rapidly develop a modern and effective high-seas fishing industry.

Fig. 1 - Opening meeting of FAO-U.S.S.R. Seminar and Study Tour on Fishermen's Training.

The seminar and study tour began on August 26, 1965, in Moscow where 23 participants from 14 countries and 5 FAO staff consultants spent 5 days hearing lectures which described the general system of education in the U.S.S.R, and introduced aspects of fishermen's training. The group then spent the following 10 days in the fishing ports of Murmansk and Kaliningrad visiting fishery schools, research institutes, fishing vessels, and fishing installations before returning to Moscow for discussions by the participants. The tour set the stage for the participants to draw up training programs to suit the various kinds of fishing vessels and levels of technical development in their home countries.

The tour included visits to processing plants for filleting, smoking, pickling, cooking, canning, and freezing various fishery products. The participants also saw a Soviet fishing gear plant that made various types of fishing nets for the fishing fleet.

International (Contd.):

Fig. 2 - Soviet Polar Research Institute of Marine Fisheries and Oceanography, Murmansk.

Soviet fisheries management was illustrated by visits to the administrative board for the northern fisheries basin of the U.S.S.R. at Murmansk (Sevriba) and the administrative board for Kaliningrad. Visits were made to some of the Soviet organizations responsible for research in various geographical areas: PINRO (Arctic, Norwegian Sea, White Sea, and Barents Sea); ATLANTNIRO (Baltic Sea, Atlantic Ocean, and North Sea); and VNIRO, which coordinates the research of other fishery institutes. Special meetings were held with gear research personnel at PINRO and ATLANTNIRO to discuss bottom and midwater trawls, acoustic equipment, and fish identification techniques.

Countries sending delegates to the seminar and study tour were: Ceylon, India, Iran, Israel, Japan, Malaysia, Nigeria, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Yugoslavia, and Zambia. A U. S. fishery expert attended as a consultant for FAO.

FISH MEAL

WORLD PRODUCTION, AUGUST 1965:

World fish meal production in August 1965 was down 18 percent from the previous month due mainly to the closed anchoveta season in Peru and seasonally declining output in South Africa.

World fish meal production in January-August 1965 was slightly less than in the first 8 months of 1964. Peru accounted for about 45 percent of total output in January-August 1965. Most of the principal countries producing fish meal submit data to the International Association of Fish Meal Manufacturers monthly (see table).

World Fish Meal Production by Countries, August 1965 with Comparisons

Country	August		Jan.-Aug.	
	1965	1964	1965	1964
	. . . . . (Metric Tons)			
Canada	9,193	5,999	53,252	36,711
Denmark	14,475	16,398	79,921	69,951
France	1,100	1,100	8,800	8,800
German Fed. Repub.	6,706	7,757	44,867	50,655
Netherlands	488	700	3,863	4,700
Spain	1/	1/	2/13,247	1/
Sweden	408	581	4,890	4,411
United Kingdom	6,406	5,770	54,567	53,038
United States	36,730	30,414	3/160,612	159,051
Angola	2,818	4,199	26,561	35,697
Iceland	17,505	13,389	85,194	86,552
Norway	43,056	19,703	232,845	134,558
Peru	369	56,112	893,022	1,009,592
So. Afr. (including S.-W. Afr.)	17,271	24,480	250,093	214,492
Belgium	375	375	3,000	3,000
Chile	3,703	6,161	50,845	103,459
Morocco	1/	4,200	2/1,100	13,250
Total	160,603	197,338	1,966,679	1,987,917

1/Data not available.
2/Data available only for January-May 1965.
3/Revised.
Note: Japan does not report fish meal production to the International Association of Fish Meal Manufacturers at present.

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PRODUCTION AND EXPORTS FOR SELECTED COUNTRIES, JANUARY-AUGUST 1965:

Member countries of the Fish Meal Exporters' Organization (FEO) account for about 90 percent of world exports of fish meal. The FEO countries are Chile, Angola, Iceland, Norway, Peru, and South Africa/South-West Africa.

Table 1 - Exports of Fish Meal by Member Countries of the FEO, January-August 1965

Country	August		Jan.-Aug.	
	1965	1964	1965	1964
	. . . .(1,000 Metric Tons). . . .			
Chile	4.7	10.2	56.0	98.2
Angola	2.9	4.9	30.1	37.1
Iceland	16.2	11.4	80.5	77.8
Norway	30.3	9.4	147.5	130.4
Peru	46.5	104.4	1,076.0	1,016.4
So. Africa (including S.-W. Africa)	22.1	23.1	154.8	150.2
Total	122.7	163.4	1,544.9	1,510.1

Peru accounted for about 70 percent of the 1.5 million metric tons of fish meal exported by FEO countries in January-August 1965.

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Table 2 - Production of Fish Meal by Member Countries of the FEO, January-August 1965

Country	August		Jan.-Aug.	
	1965	1964	1965	1964
	. . . .(1,000 Metric Tons). . . .			
Chile	3.7	6.2	50.8	103.5
Angola	2.8	4.2	26.6	35.7
Iceland	17.5	13.4	85.2	86.5
Norway	43.1	19.7	232.8	134.6
Peru	0.4	56.1	893.0	1,009.6
So. Africa (including S.-W. Africa) . .	18.2	23.7	249.9	213.1
Total	85.7	123.3	1,538.3	1,583.0

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

12TH ANNUAL MEETING:

The 12th Annual Meeting of the International North Pacific Fisheries Commission (made up of representatives from Canada, Japan, United States) held at Seattle, Wash., was concluded November 12, 1965. The Commissioners representing each country spent a week in daily plenary and committee sessions studying the conservation problems of the international fisheries of the North Pacific. Two weeks of scientific committee meetings preceded the plenary sessions and furnished the reports and data on which the Commission based its deliberations.

The Commission reviewed the results of conservation programs and scientific research on North Pacific fishery resources and discussed their implications for the fishing industries of the three countries. Each national delegation included a large number of scientific and industrial advisors and government fishery administrators who assisted the Commissioners in their task of ensuring that the valuable fishery resources of the North Pacific continue to be developed with due regard to the requirements of conservation.

As in the past two years, the Commission did not recommend at this meeting any change in the stocks of fish which are subject to the "abstention" provisions of the North Pacific fisheries convention.

A major task of the Commission at this meeting was to recommend to the Contracting Parties conservation measures for the halibut fishery in the Bering Sea, in which fishermen of all three countries participate. The stringent controls recommended for that fishery in 1964 were continued with only a two-day extension of fishing time over the seven-day open season of 1965. The legal size for halibut and other conservation measures were also included in the Commission's recommendations for the Bering Sea fishery. The area of the northeastern Bering Sea will remain open until November 15, 1966, for exploratory and experimental long-line fishing for halibut.

The Commission also studied the effects of the trawl fisheries for other species on the halibut stocks in the Gulf of Alaska. The Commission recommended more intensive research on that problem and noted that efforts are being made to minimize the incidental catch of halibut in that area.

In response to requests from the Governments of Japan and the United States, the Commission will continue its studies on Bering Sea king crab and will report the results to those two governments for their guidance in drawing up conservation measures for the crab fishery. The Canadian members of the Commission also expressed an interest in that fishery and requested that their government be kept informed of the results of research on the king crab stocks.

The matter of the high-seas salmon fishery in the area of intermingling of Asian and North American stocks west of 175° W. longitude was discussed. No agreement was reached concerning that problem.

The Commission reviewed at the 12th Annual Meeting the progress of publication of its scientific reports and noted that a number of major studies on salmon had been added to its list of bi-lingual bulletins during 1965. A nine-part comprehensive report on salmon of the North Pacific, written jointly by scientists of the three countries, will be one of the Commission's major contributions. This report is nearly completed and is scheduled for publication some time in 1966.

The 13th Annual Meeting of the International North Pacific Fisheries Commission will be held in Vancouver, B.C. The new chairman will be A.W.H. Needler of Canada, with Iwao Fujita of Japan as vice-chairman, and Edward W. Allen of the United States as secretary.

Note: See Commercial Fisheries Review, January 1965 p. 56.

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INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA

53RD STATUTORY MEETING IN ROME:

The 53rd Statutory Meeting of the International Council for the Exploration of the Sea (ICES) was held in Rome, October 3-13, 1965. About 160 delegates and experts attended from the 16 Member Countries (Denmark, Finland, France, Iceland, Ireland, Norway, Spain, Sweden, the United Kingdom, West Germany, the U.S.S.R., Belgium, Italy, Netherlands, Poland, and Portugal). Total attendance was about 220 persons including observers from many nonmember countries. About 20 committees and several additional working groups considered about 170 papers in separate meetings and presented their reports to the 7-man Bureau of ICES.

ICES acts as scientific adviser to the Northeast Atlantic Fisheries Commission (NEAFC) through a special Liaison Committee. In the past, ICES has confined itself largely to the eastern part of the North Atlantic, primarily off Europe and Iceland. However, a new proposed ICES Convention, drawn up in 1964 and now awaiting complete ratification, would broaden the scope of ICES.

The 53rd Statutory Meeting of ICES began with a joint meeting with the International Commission for the Northwest Atlantic Fisheries (ICNAF) to discuss ways of achieving greater uniformity in sampling and measuring fish during fishery surveys. Such standardization is of interest to all those concerned with the management of North Atlantic fisheries.

The main work of the ICES Annual Meeting was carried out during the sessions of various permanent and ad hoc committees. A Comparative Fishing Committee recommended that more countries should experiment with cod-ends not needing top-side strengthening and large mesh chafers. That committee also asked for research reports on hydroacoustic methods from all Member Countries at the next ICES Meeting.

Of particular interest was the work of committees concerned with herring and salmon.

Herring: In view of the spectacular development of herring fisheries in the northern part of the North Sea, it was recommended that:

Member countries should compile complete herring statistics and intensify sampling; an international tagging program should be launched; and a "Symposium on the Herring and Herring Fisheries in the Northern North Sea" should be held one day prior to the 1966 ICES Meeting. The Joint Norwegian-Soviet Investigation in the Barents Sea and adjacent waters should be continued and extended, and similar investigations should be conducted in Icelandic waters and on the Continental Slope from the British and Faroese Isles to the Norwegian Deep. The International Young Herring Service should be revived in the spring of 1967.

Salmon: The fishery for Atlantic salmon off West Greenland stirred wide general interest at the ICES Meeting. The Greenland inshore salmon catch increased from 15 metric tons in 1959 to 1,400 tons in 1964. A smaller Greenland salmon catch was forecast in 1965, due mainly to a diversion of fishing effort to other species. (See page 75 of this issue.)

Tag recoveries indicate that the Greenland salmon catch includes some fish spawned in rivers of Europe and North America. Salmon taken off Greenland have been quite fat, indicating they have been in or passed through an area of abundant food. Scientists at the ICES Rome meeting were in general agreement that more information is needed on the nature of Atlantic salmon stocks before any sound recommendations on management of the fishery can be made. It appeared especially important to tag salmon caught in Greenland to determine whether they return to home rivers in Europe and North America and, if so, in what numbers. The scientists also pointed out the need to further investigate the absence of Norwegian tagged salmon in the Greenland catches. During 1958-1965, Norway tagged 61,833 young salmon, 512 spawning salmon, and 7,435 "clean" salmon. The failure to recover any of those tagged salmon off Greenland may indicate the existence of some other important feeding area to which North Atlantic salmon migrate.

The discussion at the ICES meeting intensified interest in the proposed salmon research program previously drawn up by the Assessment Subcommittee of the International Commission for the Northwest Atlantic Fisheries

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(ICNAF) at its June 1965 meeting in Halifax. The ICNAF Assessment Subcommittee had pointed out that present data are insufficient to determine what effect, if any, the Greenland salmon fishery is having on "home" fisheries. To determine the influence of the Greenland fishery, studies should be planned to find out the potential yield of the salmon stocks in Europe and North America, taking into account estimated natural losses at sea.

The ICNAF Assessment Subcommittee recommended the following studies in affected areas of North America, Europe, and Greenland: (1) collection of monthly salmon catch and fishing effort data, preferably by river of origin; (2) sampling of catches for length, weight, and age data; and (3) tagging of salmon as intensively as possible. It was also recommended that efforts should be made to indentify the North American and European components of the Greenland catch by analyzing various biological characteristics.

Those ICNAF recommendations were endorsed by the ICES Salmon and Trout Committee, which also proposed a joint ICNAF/ICES Working Party on Atlantic Salmon. The proposed joint Working Party, composed of a representative from each concerned member country, would review, plan, and report on Atlantic salmon research. It was recommended that the proposed Working Party should meet in Spain in May 1966 prior to the ICNAF meeting for 1966.

Cooperation With International Organizations: It was recommended that: (1) ICES should participate in the SCOR/UNESCO Working Group on Carbon 14 Methods, and inform the Scientific Committee on Ocean Research (SCOR) of ICES work on intercalibration and standardization of chemical methods in oceanography: (2) a Working Group for a Joint Skagerrak Sea Expedition in 1966 should be established by ICES in cooperation with the Intergovernmental Oceanographic Commission (IOC) and SCOR; (3) ICES and ICNAF groups should explore the possibilities of preparing a "List of Fishing Craft Fishing in the North Atlantic"; (4) ICES should request the Food and Agriculture Organization (FAO) to keep ICES informed of progress on its "World Fishing Craft Register" for vessels over 500 GRT; (5) ICES should initiate through FAO a worldwide study of methods used and problems involved in collection of fishery statistics from long-distance factory-trawler fleets, meanwhile Member countries should introduce effective systems; and (6) ICES should encourage UNESCO and SCOR to organize a "Symposium on the Hydrodynamics of Plankton Nets" to meet in Australia early in 1966.

Miscellaneous Symposia: In addition to those mentioned above, the ICES Meeting proposed future symposia on the following subjects: (1) "Ecology of Pelagic Fish Species in Arctic Waters" (principally capelin, silver smelt, smelt, and small gadoids)--scheduled immediately prior to the 1966 Meeting of ICES in Copenhagen; (2) "Study of Living Resources of the African Atlantic Continental Shelf, the Stocks of Such Resources, and Their Fisheries Between the Straits of Gibraltar and Cape Verde"--scheduled to be held in Spain in June 1967, subject to information available in 1966; (3) "Herring Recruitment"--scheduled to be held in 1968; and (4) "Food Chains in the Sea"--scheduled to be held in 1968.

ICES Meeting in 1966: The 54th Statutory Meeting of ICES will be held in Copenhagen, October 4-12, 1966.

New ICES Convention: On September 12, 1964, delegates from 15 Member Countries of ICES--Portugal was unrepresented--signed a Final Act of the Conference on ICES, providing for a new Convention for the International Council for the Exploration of the Sea. As of November 1, 1965, the new Convention had been ratified or approved by deposition of documents with Denmark by Denmark, Finland, Federal Republic of Germany, France, Iceland, Ireland, Norway, Spain, Sweden, the United Kingdom, and the U.S.S.R. At that time, Belgium, Italy, the Netherlands, Poland, and Portugal had not yet ratified the Convention. The Convention enters into effect on the July 22 next following ratification or approval by all signatory Governments. However, if that has not occurred by January 1, 1968, it may enter into force by mutual agreement if not less than three-fourths of the Governments have ratified or approved it. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, October 11 and November 17, 1965, and other sources.)

Note: See Commercial Fisheries Review, December 1964 p. 80.

INTERNATIONAL LABOR ORGANIZATION

MEETING ON CONDITIONS OF WORK IN THE FISHING INDUSTRY:

A preparatory Technical Conference on Fishermen's Questions was held October 18-

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28, 1965, by the International Labor Organization (ILO) at its headquarters in Geneva, Switzerland. (ILO is a United Nations specialized agency devoted to improving the lot of the workingman.) Fifteen nations, including the United States, sent delegations; there were observers from three other nations and several international organizations such as FAO, IMCO, etc. The three subjects concerned with conditions of work in the fishing industry considered at the meeting were: (1) vocational training of fishermen; (2) crew accommodation on board fishing vessels; (3) certificates of competency.

Draft instruments on the three subjects were prepared and will be presented to the ILO Conference which meets in June 1966.

Vocational Training: Vocational training of fishing vessel personnel was the first subject discussed. After the election of officers and the organization of the Conference on October 18, a member of the ILO staff made opening comments on the subject. He summarized the principles which were involved and made suggestions as to how the Conference might proceed. Representatives of employer, worker, government, and observer delegations made statements regarding the aims, objectives, and methods of vocational training. Then, a working party prepared a draft instrument which makes recommendations on various aspects of vocational training and which was approved by the Conference. Such things as planning, administration, financing, training standards, types of programs, methods of training, and international cooperation are covered in the draft instrument.

Accommodation on Board Fishing Vessels: This was the second subject taken up by the Conference. On October 20, initial discussions were begun in the plenary session. A member of the ILO staff described the history of ILO's work concerning crew accommodations on both merchant and fishing vessels. Representatives of the worker, employer, government, and observer delegations offered their views and made suggestions for improving the draft instrument which had been prepared by the 1962 Committee on Conditions of Work in the Fishing Industry convened by ILO. This Committee's draft was in the form of a proposed international convention, but it left open the specific minimum tonnage of vessel below which its provisions would not be applicable.

A second working party of the Conference then began the review of the draft instrument on accommodations. In the opening discussions of the working party, the workers' spokesman requested that the draft instrument take the form of a convention and that it be applicable to all fishing vessels 25 gross tons and larger. However, he did indicate that they might accept a limit of 50 tons if this would facilitate an agreement. The employers countered that they were not convinced the instrument should be a convention and that they were for a 100-gross-ton minimum. Then the workers' vice-chairman turned to the government members and asked them to state their opinions. The government members from the United Kingdom and Denmark (who were naval architects) strongly asserted that the provisions in the proposed draft instrument on this subject could not be applied reasonably to a fishing vessel under 100 gross tons. Necessary cargo space, stability of the vessel, and other factors made a 25- to 50-gross-ton minimum impractical. The United Kingdom also indicated a preference for a minimum level of 80 feet in length which was roughly 100 gross tons in size.

The United States member indicated that its representatives at the 1962 Committee meeting had stated a preference for the 100-gross-ton minimum and that after review by technicians there was no reason to change that position. However, if the Conference decided on a different minimum tonnage to exempt small fishing vessels, the United States would work constructively with the majority provided that all subparts of the draft instrument called for crew accommodations which could be reasonably accomplished from a technical standpoint on a vessel of the size specified. It was also indicated that the United States preferred the recommendation form of instrument but would also work constructively with the group if a majority favored the convention form. The naval architects from the United Kingdom and Denmark were then asked to meet separately with a few of the workers' and employers' representatives to thoroughly review this problem.

On October 22, after the select group had reported back to the working party, it was decided to provide for a 75-gross-ton minimum with the provision that the instrument may be applied to vessels between 25 and 75 gross

International (Contd.):

tons where the competent authority determines after consultation with the fishing vessels owners' and fishermen's organizations, where such exist, that this is reasonable and practicable. Then the employers acceded to the workers' desire to prepare the instrument in the form of a convention and with no dissent from any of the members present it was agreed to unanimously. (Later in plenary it was also agreed the proposed instrument would not be applicable to vessels and boats which normally remain away from port for periods of less than 36 hours and in which the crew does not live on board.) Then the technical aspects of the wording of all the other principal subparts of the instrument were completed. The revised draft instrument was presented to the Conference and except for some minor revisions was approved. The draft instrument details specifications for sleeping rooms, including size of bunks, lockers, etc., galleys, messrooms, and sanitary accommodations, including wash basins, tub and/or showers, and water closets. The specifications would apply to all new or reconstructed fishing craft except the smaller exempt sizes.

Certificates of Competency: This was the third subject considered. After an initial presentation by the ILO staff which also referred to ILO Convention No. 53 concerning the Minimum Requirement of Professional Capacity for Masters and Officers on Board Merchant Ships, the subject was given to the first working party to iron out technical details of a proposed draft instrument. There was a prolonged debate in the working party as to the size of vessel on which the licensing requirements would be applicable. The workers group insisted on 25 gross tons and larger. The United States Government delegate and employer's delegate objected. Then reservations were made by those two delegates which appeared in the record and show that in the United States, officers are certified only on board fishing vessels of over 200 gross registered tons.

In many northern European countries certification is already required for officers on smaller fishing vessels. A majority of the nations indicated approval of the 25-gross-ton minimum, and the draft instrument was presented to and approved by the Conference with that exemption provision. The draft instrument covers skippers, mates, and engineers. It prescribes minimum age of personnel, requirements for examinations, and enforcement requirements.

Summary: Each of the draft instruments will now be considered by the 1966 ILO Conference. They will be voted on and if approved will be sent to member nations for ratification. When this occurs, the instruments will have to be approved by the U. S. Senate if they are subject to ratification, at which time the public will have an opportunity to present its views.

NORTH AMERICA

SHARE OF WORLD FISH CATCH DROPS IN 1964:

The North American countries caught less fish in 1964 than in the year before--4.28 against 4.37 million metric tons--and 8 rather than 9 percent of the world total, according to the Food and Agriculture Organization (FAO). For fishery statistical purposes, FAO classifies Central America, Greenland, and the Caribbean Islands as well as Canada, Mexico, and the United States as North American countries. North America's percentage of the world catch has dropped consistently since 1948, when it was 19 percent of the world total.

The United States catch in 1964 was 2,638,000 tons, a drop of 138,700 tons from

International (Contd.):

1963. In terms of catch, the United States still ranked fifth among the world's fishing countries.

Canada's catch was a record 1,210,700 tons, up 13,300 tons from 1963. Canada ranked ninth among fishing nations in 1964 compared with seventh in 1963.

Mexico also reported a record catch of 258,400 tons as compared with 244,300 tons in 1963.

Greenland's 1964 catch came to 38,300 tons, an increase over 1963's 33,300 tons, but less than the record 43,300 tons caught in 1962.

Cuba reported a new high of 36,300 tons compared with her 1963 catch of 35,600 tons. Panama's 25,600 tons was almost double the 13,400 tons of 1963. Jamaica also reached a new high of 16,000 tons compared with 13,900 tons in 1963. All other North American countries and territories caught less than 10,000 tons. (FAO Yearbook of Fishery Statistics, Catches and Landings, 1964.)

NORDIC COUNTRIES

NEW FISHING LIMITS RECOMMENDED:

In October 1965, Nordic fishing industry organizations of Denmark, Norway, and Sweden met in Stockholm and recommended an extension of international fishing limits to 12 nautical miles. However, the Nordic associations also proposed that their own fishing vessels should be subject to fishing limits of only 4 miles in Nordic waters of Denmark, Norway, and Sweden. The Governments of those countries were expected to give prompt consideration to the industry recommendations.

The extension of fishing limits to 12 nautical miles by Denmark and Sweden in the Kattegat Sea would practically exclude fishing by the Soviet, Polish, and East German fleets which have been actively fishing for herring in that area in recent years. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, October 21, 1965.)

Note: See Commercial Fisheries Review, Dec. 1965 p. 48, and Sept. 1964 p. 54.

SALMON

PACIFIC FISHERIES DISCUSSED AT UNITED STATES-CANADIAN MEETING:

United States and Canadian fishery experts from Government and industry met in Washington, D. C., October 12-14, 1965, to exchange preliminary views on problems of mutual concern related to United States and Canadian coastal fisheries on the west coasts of the two countries. Technical consultants from the International Pacific Salmon Fisheries Commission were also present.

Discussions centered on problems arising from the intermingling in the United States and Canadian salmon fisheries off southeastern Alaska and northern British Columbia of salmon bound for both Canadian and United States streams; and on the adequacy of the provisions of the 1956 Protocol to the 1930 Sockeye Salmon Convention, which brought pink salmon in the Convention area within the responsibilities of the International Pacific Salmon Fisheries Commission.

Delegates to the meeting in Washington in October 1965 made no specific proposals. However, tentative agreement was reached on a further meeting on those two questions in the spring of 1966 in Ottawa when specific proposals for joint action will be considered. Joint United States-Canadian committees of scientists have been appointed to examine and report on technical aspects of those problems. (U. S. Department of State, October 14, 1965.)

INTERNATIONAL PACIFIC SALMON FISHERIES COMMISSION

ANNUAL MEETING ANNOUNCED:

The International Pacific Salmon Fisheries Commission announced that its Annual Meeting would be held in Bellingham, Wash., on December 17, 1965. On that date the Commission expected to meet with its Advisory Committee and the public to report on the 1965 Fraser River sockeye and pink salmon runs and to discuss prospects for the 1966 sockeye run.

Australia

SPINY LOBSTER PRODUCTION DROPS IN FY 1964/65:

Australia's spiny lobster catch in fiscal year 1964/65 (July 1-June 30) was estimated to be 26.6 million pounds (live weight), about 1.3 million pounds less than the previous year. Most of the drop was in the State of Western Australia, the main producing area. That State's catch was estimated at 17 million pounds, or about one million pounds below 1963/64.

About 14 million pounds of the Western Australian catch was from the coastal fishery as compared with 15.1 million pounds in the previous year. Production in that State's Abrolhos area increased from 2.9 million pounds in 1963/64 to 3.1 million pounds in 1964/65. The weather in March 1965, when the Abrolhos season opened, was much more favorable than in 1964 which permitted fishing on some reefs not previously accessible.

The spiny lobster catch in the State of South Australia was estimated at more than 4.8 million pounds, and could be a record, according to the South Australian Director of Fisheries and Fauna Conservation. Favorable weather and a larger fleet during 1964/65 accounted for the increase.

Two larger specimens of Australian spiny lobster.

The catch in Tasmania was estimated to have been about 3.2 million pounds, a drop of 400,000 pounds from the previous year. Adverse weather during the main fishing season was believed partly responsible for the decline. The number of new spiny lobster fishing grounds located during the year also was less than in previous years.

The catch in Victoria for 1964/65 was estimated at about 1.2 million pounds, a drop of 5.8 percent from the previous year. Spiny lobster catches in other waters were up from the previous year. (Australian Fisheries Newsletter, October 1965.)

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SHRIMP FISHERY TRENDS, FISCAL YEAR 1964/65:

Australia's total shrimp landings in fiscal year 1964/65 (July-June) amounted to 12.6 million pounds, down only slightly from the record 13.0 million pounds landed in 1963/64. The trend has been upward in the past 10 years, with shrimp landings almost doubled since 1954/55.

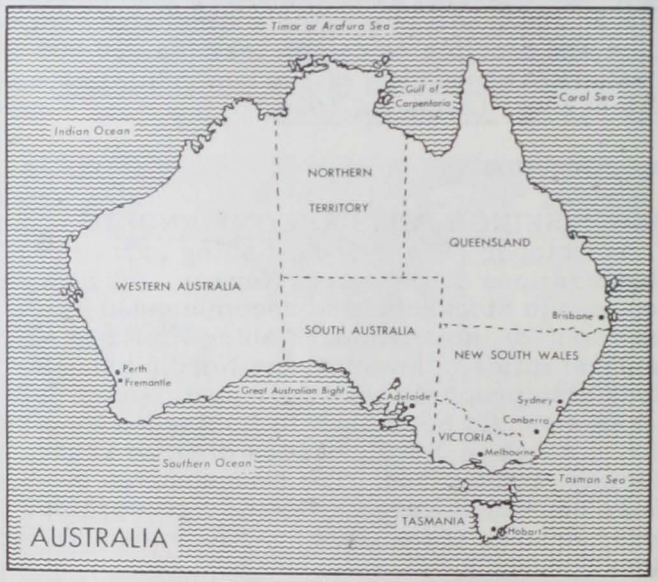

Fig. 1 - Map of Australia.

The principal shrimp-producing states are: Queensland with landings in 1964/65 of 5.7 million pounds; New South Wales, 4.4 million pounds; and Western Australia, 2.5 million pounds. Landings for other states (Victoria and Northern Territory) were not available but are not likely to make any significant difference in the total.

The 1964/65 shrimp landings in Queensland were up 12 percent from the previous year due largely to the development of the

Australia (Contd.):

fishery in deeper waters off the southern Queensland coast. Those grounds have produced giant king shrimp, most of which are exported.

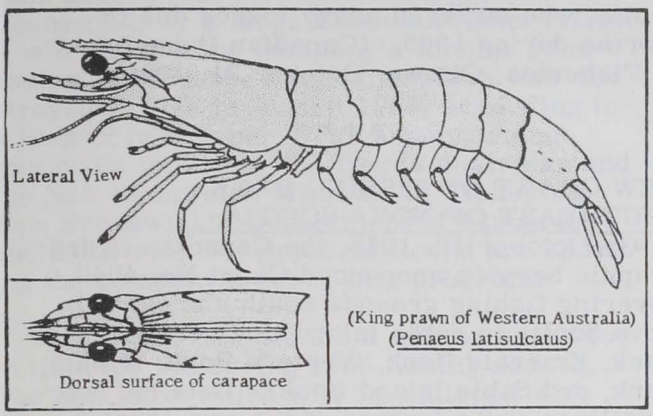

Fig. 2 - King prawn (Penaeus latisulcatus) of Western Australia.

Western Australia's shrimp landings were up 18 percent from 1963/64 because of development of the shrimp fishery in northern waters of that state which also produces large shrimp for export.

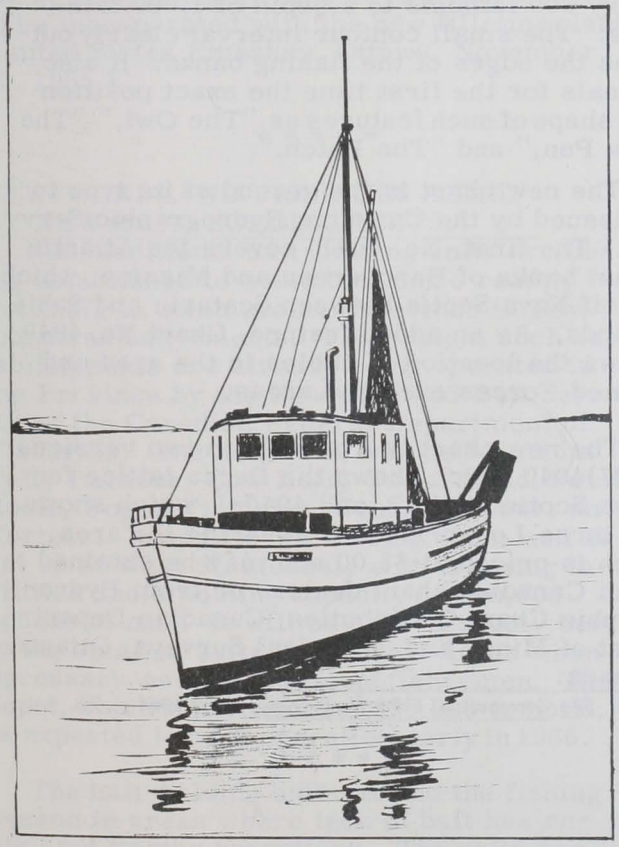

Fig. 3 - Australian shrimp trawler.

Shrimp landings of 4.4 million pounds in New South Wales dropped 28 percent from the 6.1 million pounds in 1963/64. Shrimp production of that state is about evenly divided between the estuarine and inshore fisheries that yield smaller shrimp which are mainly consumed locally and the deep-sea fishery which produces larger shrimp, the bulk of which is exported. In 1964/65, shrimp landings were down for all those fisheries.

Drought conditions in the estuaries were believed responsible for the drop in the New South Wales estuarine shrimp catch, and also affected the movement of shrimp stocks to the offshore shrimp grounds resulting in lower catches by trawlers. When drought conditions there ease, it is believed that shrimp landings in that state will resume the upward trend which started in 1961. Combined with efforts being made to develop a shrimp fishery in northern Australia, it is anticipated that shrimp production will increase in the future. (Australian Fisheries Newsletter, November 1965.)

Note: See Commercial Fisheries Review, November 1965 p. 46.

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RESULTS OF SHRIMP SURVEY OFF NEW GUINEA:

A fisheries survey vessel operated by the Australian Federal Government Fisheries Division returned to Madang in October 1965 after completing a two-week shrimp survey in the Ramu River area of New Guinea. The vessel caught 1,800 pounds of shrimp from about 95 short trawls. The catch included banana (Penaeus merguiensis) and tiger (Penaeus esculentus) shrimp, red-tailed and green shrimp, and a new unidentified bluish-green hardback type of shrimp.

The best fishing areas found during the survey were north and south of the river at distances up to three miles from shore. At times trawling was difficult because strong tides dragged the trawl nets and caused "mudding up," and an accumulation of mud at the river mouth put added strain on the trawl nets. (Australian Fisheries Newsletter, November 1965.)

Canada

BRITISH COLUMBIA HERRING FISHERY LABOR NEGOTIATIONS:

British Columbia herring fishermen were reported to be asking processors to pay C$20.48 per short ton for herring landed during the 1965/66 season (as compared with C$14.48 paid in 1964/65).[1/] The fishermen also asked the processors to provide vacation pay, contribute to a pension plan, and increase contributions to medical and welfare plans.

The fishermen and processors had not reached an agreement by mid-October 1965. The fishermen then declared a 2-week holiday from fishing during October 17-31, 1965.

A work stoppage on herring vessels employed in operations of the British Columbia Fisheries Association was approved November 1, 1965, by the British Columbia United Fishermen and Allied Workers Union.

Meanwhile, in Prince Rupert, British Columbia, a share agreement was reached covering most of the herring vessels employed in operations of the Prince Rupert Fishermen's Cooperative Association. (Editor's Note: The Prince Rupert Coop is at least partly a Union operation. Therefore, the Prince Rupert agreement was, in effect, a negotiation between fishermen and vessel owners, rather than a negotiation between fishermen and processors.) The Prince Rupert agreement provides the vacation and welfare benefits asked by fishermen and gives the fishermen 56¼ percent of the net proceeds from the sale of processed herring after operating and overhead costs of the Coop are deducted. The settlement at Prince Rupert cleared the way for herring vessels in that area to resume fishing in early November. The Prince Rupert herring fishermen were to contribute part of their earnings after December 1, 1965, to the Union's emergency fund, if the herring labor dispute elsewhere in British Columbia was not settled by that date. (The Fisherman, Vancouver, B.C., November 5, 1965.)

1/Editor's Note: Ex-vessel prices for herring in British Columbia are not comparable to prices in certain other countries because British Columbia processors furnish much of the equipment used in the fishery.

Notes: (1) US$1.00 equals Canadian $1.08.
(2) See Commercial Fisheries Review, Feb. 1965 p. 53.

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NOVA SCOTIA LOBSTER FISHERMEN RECEIVE GOVERNMENT AID FOR STORM DAMAGE:

The Canadian Federal Government and the Nova Scotia Provincial Government have each provided $16,000 to assist lobster fishermen in Halifax and Guysborough Counties, Nova Scotia, who suffered heavy losses due to storms during 1965. (Canadian Department of Fisheries, Ottawa, October 21, 1965.)

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NEW CHART OF FISHING BANKS SOUTHEAST OF NOVA SCOTIA:

On October 19, 1965, the Canadian Hydrographic Service announced Chart No. 4040, covering fishing grounds south and east of Nova Scotia to Sable Island (including Sambro Bank, Emerald Bank, Western Bank, Middle Bank, and Sable Island Bank). Detailed contour lines are a feature of the new chart.

Drawn on a scale of 1:300,000, or about 4 miles to the inch, the new chart illustrates depths primarily by blue contour lines. The contour lines on the chart are spaced at 10-fathom intervals to a depth of 100 fathoms, at 20-fathom intervals to 200 fathoms, and at every 100 fathoms to a depth of 1,000 fathoms. The small contour interval clearly outlines the edges of the fishing banks. It also reveals for the first time the exact position and shape of such features as "The Owl," "The Cow Pen," and "The Patch."

The new chart is the second of its type to be issued by the Canadian Hydrographic Service. The first, No. 4041, covers the Atlantic Coast banks of Banquereau and Misaine, which lie off Nova Scotia between Scatarie and Sable Islands. As an added feature, Chart No. 4040 shows the location of cables in the area and Armed Forces exercise areas.

The new chart is available in two versions: L(D7)4040 which shows the Decca lattice for Nova Scotia chain 7, and 4040-L which shows the three Loran-A rates covering the area. Each is priced at $2.00 and may be obtained from Canadian chart dealers or from Hydrographic Chart Distribution, Canadian Department of Mines and Technical Surveys, Ottawa, Canada.

Note: See Commercial Fisheries Review, Nov. 1964 p. 79.

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Canada (Contd.):

NEW FISH-PROCESSING PLANT TO BE BUILT IN SHIPPIGAN, NEW BRUNSWICK:

A $1 million fish-processing plant capable of handling 20 million pounds of fresh fish each season will be built in Shippigan, New Brunswick, by a large Canadian fishery firm. It will replace the company's former processing plant on the same site which was destroyed by fire in August 1965, according to a Halifax newspaper. The announcement, was made jointly by the firm's chairman and the New Brunswick Minister of Fisheries. New Brunswick's Department of Fisheries and Industrial Development Board are assisting the company's rebuilding program.

It is hoped that the plant will be operative in time for the spring 1966 fishing season. The new plant which will be equipped with the most recently developed machinery available to the Canadian fish-processing industry, will employ 175 men and women to start--about the same number employed in the former plant. The number of plant workers is expected to increase as production rises. Plans call for a fish meal plant capable of processing 10 tons of raw fish an hour to be incorporated with the new filleting plant. (United States Embassy, Ottawa, November 15, 1965.)

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NEWFOUNDLAND FISHERIES AIDED BY NEW BAIT-HOLDING UNITS:

Nine additional bait-holding units are being established to make bait more readily available to commercial fishermen in Newfoundland settlements. Forty-eight such establishments are already being operated in the Province by the Newfoundland Bait Service of the Canadian Federal Department of Fisheries. The new units will be located at Petty Harbour, Cow Head, Pass Island, Point Rosie, Fogo, Winterton, Cooks Harbour, and Forteau. In addition, a holding depot will be set up at West St. Modeste with freezing facilities and a holding capacity of 100,000 pounds of bait. It will be able to supply bait to the smaller units in adjacent areas when necessary, as well as to local fishermen. The depot, which is to cost about $56,000 to build, is expected to be in operation early in 1966.

The bait-holding units extend the fishing season in areas where lack of bait has restricted fishing operations. The units are supplied with frozen bait by refrigerated trucks and the M/V Arctica, the Bait Service's refrigerated vessel.

Since 1949, when the Newfoundland Bait Service was transferred to the Canadian Federal Government, the number of distribution outlets has been increased from 20 to 57, in order to extend the facilities to areas where sufficient bait was not previously available from private or public sources. (Canadian Department of Fisheries, Ottawa, October 21, 1965.)

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NEWFOUNDLAND SEEKS JAPANESE HELP TO DEVELOP OFFSHORE FISHERY:

Newfoundland's Provincial Government was reported seeking Japanese participation in developing its offshore bottom fishery. Reportedly, a formal request for Japanese technological assistance was made by Newfoundland's fishery delegation at the completion of a three-week Japan tour sponsored by a large Japanese fishing company and fish net manufacturing firm. Newfoundland was said to be primarily seeking to develop its offshore cod and herring fisheries, and showed particularly keen interest in developing the abundantly available but unused resources, such as herring roe, for export to Japan. (Suisan Keizai Shimbun, November 3, 1965.)

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CONFERENCE ON ATLANTIC OFFSHORE FISHING VESSELS:

A Canadian Atlantic Offshore Fishing Vessel Conference will be held February 7-9, 1966, in Montreal, P. Q., Canada. It is sponsored by the Federal-Provincial Atlantic Fisheries Committee made up of Deputy Ministers of Fisheries of the Canadian Federal government and the five Atlantic coast provinces. Naval architects and government officials from Canada, the United States, and Europe, and operators of large fishing vessels will attend.

The Canadian Atlantic deep-sea fishing fleet is undergoing rapid expansion, and there is a need for vessel designs suited to the specific requirements of the offshore fisheries. This, together with a need for improving living and working conditions for Canadian fishermen in the light of the progress being made by shore industries, has prompted the conference. It will be the first opportunity for rep-

Canada (Contd.):

resentatives of all groups with an interest in offshore fishing to discuss the problems of deep-sea operations in the Northwest Atlantic.

Between 25 and 30 papers will be presented. Some of them will deal with mechanized fishing operations, navigation and propulsion systems, fish processing and handling equipment on board ship, and vessel design.

The fishing industry's viewpoint on the development of Canadian Atlantic offshore fishing vessels will be given by representatives of fishing companies. Naval architects, engineers, and builders will discuss combination side trawlers and purse seiners, wooden and steel side trawlers, fish carriers, vessel stability, the comfort of fishermen, and layout of accommodation on fishing vessels. Steel stern trawlers, particularly those of Canadian design, will be the subject of several papers. Factory trawlers, motors, deck machinery, and automation generally will also be discussed, and there will be papers on scallop draggers, sealing and whaling vessels, fish holds, the economics of fishing vessels, and the relationship between such economics and naval architecture.

The chairman of the conference will be Dr. A.W.H. Needler, Deputy Minister of Fisheries of Canada. He and the provincial government officials on the committee will speak on the development of Canadian offshore fishing operations in the Atlantic. (Canadian Department of Fisheries, Ottawa, November 10, 1965.)

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FISHERIES TRADE MISSION VISITED ITALY, SPAIN, AND PORTUGAL:

A 5-man fisheries mission left Canada October 22, 1965, for a 20-day tour of Italy, Spain, and Portugal. Sponsored by the Canadian Department of Trade and Commerce, the mission assessed the long-term export possibilities for Canadian fishery products in those countries. The three countries are important customers for Canadian salt cod.

The mission also examined fishery developments in Italy, Spain, and Portugal and studied their respective methods of production and marketing.

The mission planned to prepare a report of its findings for distribution to the Canadian fisheries industry. (Canadian Department of Trade and Commerce, October 21, 1965.)

Chile

FISHERY TRENDS, THIRD QUARTER 1965:

As a result of continued poor anchoveta fishing throughout the third quarter of 1965, Chilean fish meal production in the first 9 months of 1965 totaled only 51,906 metric tons. That was 75,000 tons less than in the same period in 1964, and some 25,000 tons below 1963. More than 25 plants, 250 vessels, and several thousand workers have been largely idled by the continued anchoveta shortage. The financial position of a number of firms is critical. More failures would certainly result if loan payments were insisted on by the Production Development Corporation of Chile (CORFO) and foreign creditors.

As part of its program to tide the stricken industry over during the prolonged resource shortage, the Chilean Government has proposed new fisheries legislation that would (1) encourage integration among the firms and (2) allocate funds for the payment, in part, of export subsidies due under the 1960 Fisheries Law. However, those proposals were still waiting for final approval by the Chilean Legislature in late October 1965.

The prolonged period of depression in the anchoveta fishery has brought economic hardship to many. There are indications, however, that the bitter experience may help the future development of Chile's extensive marine resources. Fish meal firms threatened with closing have diversified into freezer and canning. Boatyards are successfully converting purse seiners into trawlers. New plants and supporting facilities are moving in along the central and southern Chilean coasts to catch and process shrimp and frozen hake fillets. The Government, as well as the industry, is in general adopting a more flexible attitude toward development of the fishing industry. In addition, the introduction of meatless days is having a pronounced effect on domestic consumption of fish (increases of 50 percent and more have been reported) which should assist in broadening the limited domestic market for fish and shellfish. All of those moves should brighten the long-range outlook for Chilean

Chile (Contd.):

fisheries. (United States Embassy, Santiago, October 29, 1965.)

Cuba

TRAWLERS AND TUNA VESSELS ORDERED FROM SPAIN:

The Cuban Government has ordered 20 tuna vessels and 6 bottomfish trawlers from Spanish shipyards. Specifications of the order call for trawlers of 800 to 1,000 gross registered tons and an overall length of 60 meters (197 feet). The 500-ton tuna vessels ordered are an improved version of the "Gipsa-type" vessel with refrigeration units.

Bilboa shipyards were reported to be building 18 of the tuna vessels; Vigo shipyards were to build 2 of the tuna vessels and all of the trawlers.

As of mid-October 1965, it was believed that none of those vessels had been delivered, although 5 of the tuna vessels and 1 of the trawlers had been launched. Construction had started on 7 or 8 of the remaining tuna vessels. (United States Embassy, Madrid, October 14, 1965.)

Republic of Dahomey

GOVERNMENT FORBIDS TRAWLING WITHIN 12-MILE FISHING LIMITS BY UNLICENSED FOREIGN VESSELS:

By law No. 65-10 of June 23, 1965, the Government of the Republic of Dahomey forbid trawling by unlicensed foreign vessels within Dahomean territorial waters, now set at 12 miles. It has been reported that foreign vessels based in Dahomey may obtain without cost the necessary license.

The law was apparently passed in anticipation of the development of a shrimp industry in the Gulf of Guinea off Dahomey. (United States Embassy, Cotonou, November 2, 1965.)

Denmark

FISHERY TRENDS, JANUARY-SEPTEMBER 1965:

Landings: Fishery landings in local ports by Danish vessels in the first nine months of 1965 were up 5 percent from the same period in 1964. Substantial increases in landings of cod, cod-like species, pond trout, shrimp, mussels, and industrial fish more than offset lower landings of flatfish, brisling, Norway lobster, and starfish. Landings by foreign vessels, mainly Swedish, were 11 percent higher. Total landings by foreign vessels could increase if the Danish Minister of Fisheries approves an industry request to permit Norwegian vessels to land industrial fish, primarily herring, in Danish ports. Landings by Danish vessels in foreign ports were below the same period in 1964 because of delays earlier in 1965 in landing their catches in English ports.

Ex-vessel prices for the main species landed continued mostly higher than in 1964. The combination of higher prices and increased landings point to a very profitable year for most Danish fishermen. Salmon prices and those for several other species were down from the higher prices in 1964.

Table 1 - Danish Fishery Landings, January-September 1965 with Comparisons

Species	January-September 1965	January-September 1964
	(Metric Tons)	
Landings in Denmark by Danish vessels:		
Flatfish 1/	46,485	55,859
Cod	61,780	52,641
Cod-like fish 2/	55,962	38,137
Herring	258,601	256,185
Brisling	2,900	6,887
Mackerel	5,297	5,180
Eels	1,630	1,678
Salmon	936	777
Pond trout	8,248	6,405
Other fish 3/	208,187	196,250
Norway lobster	1,422	1,782
Shrimp	4,581	2,965
Mussels	12,299	11,058
Other shellfish	124	52
Starfish	1,819	2,449
Total	670,271	638,305
Landings in Denmark by foreign vessels	150,131	135,739
Total landings in Danish ports	820,402	774,044
Landings in foreign ports by Danish vessels	2,993	3,649

1/Plaice, flounder, dab, common sole, etc.
2/Haddock, coalfish, hake, ling, etc.
3/Mostly industrial fish such as sand eels, Norway pout, etc.

Denmark (Contd.):

Pond trout prices in 1965 were also lower due to a sharp production increase.

Processing: Production of most processed fishery items was higher in the first nine months of 1965. The increased demands for frozen fish fillets and fish blocks from the United States and herring fillets from West Germany resulted in more production of those products. Production of fish meal, solubles, and oil were up because more herring, sand eel, and other industrial fish were landed at higher prices. Production of plaice fillets was off slightly as the supply of that species did not respond to a strong demand and higher prices. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, November 17, 1965.)

Note: See Commercial Fisheries Review, October 1965 p. 72; February 1965 p. 54.

Table 2 - Danish Production of Processed Fishery Products, January-September 1965

Product	January-September 1965	January-September 1964
	. . (Metric Tons) . .	
Canned:		
Herring & sprats	2,010	2,216
Mackerel	1,088	1,114
Other fish	3,298	3,800
Mussels	438	821
Other shellfish	1,206	351
Total	8,040	8,302
Semi-preserved:		
Herring & sprats	3,954	3,301
Other fish	347	305
Mussels	557	489
Total	4,858	4,095
Fresh & frozen fillets:		
Cod	21,475	17,871
Cod-like fish 1/	2,626	1,002
Plaice	13,852	14,108
Other flatfish	1,559	787
Herring	35,421	25,584
Other fish	104	163
Total	75,037	59,515
Smoked:		
Herring & sprats	1,700	1,554
Mackerel	1,466	1,486
Eels	502	520
Salmon & trout	558	345
Other fishery products	196	152
Total	4,422	4,057
Miscellaneous:		
Force meat 2/	1,437	1,259
Salted herring	121	92
Dry-salted cod	174	398
Other fishery products	1,323	5,731
Total	3,055	7,480
Industrial products:		
Meal	92,326	78,529
Oil	28,597	20,856
Ensilage 3/	4,172	6,106
Solubles	13,997	8,188
Total	139,092	113,679

1/Haddock, coalfish, hake, ling, etc.
2/Ground fish, milk, and flour.
3/Chemically treated raw fish.
Source: Ministry of Fisheries.

Faroe Islands

BRITISH QUOTA ON FAROESE LANDINGS LIBERALIZED:

In March 1964, an unofficial quota on Faroese deliveries of iced and frozen fish to the United Kingdom was imposed by British fishing organizations. (The action followed the extension of Faroese fishing limits to 12 nautical miles.) Under that quota, the combined annual value of Faroese landings of iced fish in British ports and Faroese exports of frozen fish to Britain was limited to £850,000 (US$2.38 million), and only one-quarter of that amount could be landed in any 3-month period. Landings in British ports from Faroese vessels had been rising rapidly and had reached a value in 1963 of £1.25 million ($3.5 million).

The quota restrictions have been unpopular with British fish merchants, especially in the ports where Faroese vessels normally unload. Therefore, a British fishing industry committee signed a new agreement with the Faroese, effective October 1, 1965, for a 5-year period which raises the quota to £1 million ($2.8 million) a year. Other major revisions in the quota include: (1) relaxation of the seasonal limitations to permit the entry of the entire quota between October and March, when British domestic landings are lightest; (2) changes in the species of fish that can be imported; and (3) removal of all quota restrictions on herring and salt fish landed in Britain for re-export.

The new agreement does not provide for a change in the Faroese fishing limits. It does, however, renew contacts between industry leaders of the two countries. (United States Embassy, London, October 21, 1965.)

Notes: (1) See Commercial Fisheries Review, May 1964 p. 49.
(2) British £1.00 equal US$2.80.

France

PROMOTIONAL CAMPAIGN URGES INCREASED FISH CONSUMPTION:

A promotional campaign urging the French people to eat more fish was under way in October 1965 in 17 of the main cities and towns of France. The aim was to help the country's fishermen who were reported experiencing a poor demand for their catches.

By means of special announcements on television and radio, together with newspaper advertisements, it is hoped to persuade the French to eat fish on Tuesdays as well as on Fridays. (Fish Trades Gazette, October 16, 1965.)

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FISHERIES EXPOSITION PLANNED IN LORIENT, MAY 12-22, 1966:

An international fisheries exposition is scheduled to be held in Lorient, France, May 12-22, 1966. The exposition is designed to display fishing vessel designs and equipment. including the latest developments in engines, electronics, and refrigeration. Additional information may be obtained from Biennale Internationale des Peches, Chambre de Commerce et d'Industrie, Lorient (Morbihan) France.

German Federal Republic

FISH MEAL MARKET AT HAMBURG, OCTOBER 26, 1965:

The International Fish Meal Export Organization reported the following quotations in Hamburg, Germany, October 26, 1965, for fish meal futures (in dollars per metric ton): US$190 for supplies afloat; $193-194 for November 1965; $191 for December 1965; and $184-185 for January-June 1966. Hamburg sellers are reluctant to give monthly lots of more than 100 to 200 tons. On the other hand, quotations from Peruvian producers for January-June 1966 are $191-194. Consuming countries outside West Germany are showing buying interest at those levels for fairly large monthly quantities. (Regional Fisheries Attache, United States Embassy, Copenhagen, November 3, 1965.)

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TWO NEW FACTORY TRAWLERS DELIVERED:

Exemplifying the trend towards large factory trawlers in the West German fleet are two new stern trawlers which were delivered in the fall of 1965 to owners at Bremerhaven and Hamburg by Bremerhaven shipyards.

The larger of the two is the Sagitta Maris, a 2,145-gross-ton vessel with an overall length of 78.3 meters (257 feet) powered by a 3,000-horsepower diesel engine giving a top speed of 16 knots.

The Sagitta Maris is an all-welded stern trawler capable of carrying fresh or frozen fish. In addition, the vessel can be equipped for herring fishing. She is designed for operations in either arctic or tropic waters.

In the processing section of the Sagitta Maris, fish are sorted, headed, filleted, washed, and then passed to a battery of vertical plate freezers which have a daily output of 30 metric tons of frozen fillets. The frozen blocks are then stored in the two fish rooms and kept at temperatures as low as -30° C. (-22° F.). Total capacity of the two holds is about 620 tons of frozen fillets. One of the holds is capable of being used as a fresh fish or frozen fish hold and has a capacity of either 165 tons of fresh or 200 tons of frozen fish.

On the factory deck there are three processing lines which include filleting and heading machines for large and small cod and ocean perch. The movement of fish through the processing section is entirely mechanized.

The vessel also has fish oil tanks with a capacity of 80 cubic meters (104.6 cubic yards) and fish meal holds with a capacity of 330 cubic meters (431.6 cubic yards) with reserve space for an additional 30 tons. A full supply of electronic equipment is carried including gyro compass and autopilot, Loran, direction-finder, Echograph, speed and warp speed indicators, two 60-mile-range radars, two fish-finders, one horizontal finder, and radio equipment.

The second vessel, which sailed on her maiden voyage early in October 1965, is the 1,800-ton stern-trawler Hamburg. Main dimensions of the Hamburg are length overall 82.1 meters (269.4 feet), moulded breadth 13.6 meters (41.4 feet), depth 8.3 meters (25.3 feet), and draft 4.3 meters (13.1 feet).

German Federal Republic (Contd.):

Main power unit is a diesel engine of 3,000 horse power at 350 r.p.m. which drives a single propeller to give a speed of about 15.25 knots. Accommodation is for a maximum of 60. The refrigerated fish rooms have a total capacity of about 870 cubic meters (1,137.9 cubic yards) maintained at a temperature of -28° C. (-18.4° F.).

The vessel has an operating range of about 60 days and is fitted with high-powered long-range radio communications apparatus. Her bridge equipment includes gyrocompass with automatic pilot, electric log, echo-sounder, two fish-finders, and two 60-mile radars. (The Fishing News, London, October 22, 1965.)

East Germany

DEEP-SEA SUBMARINE OPERATED BY REMOTE CONTROL DEVELOPED:

A submarine for deep-sea fishing has been developed by a ship-designing firm in Stralsund, East Germany. It works by remote control from a parent ship. It can be manned if required and is equipped with hydraulic spars to spread or contract a net in front of it. It is maneuverable and can switch depths quickly.

The fish catch is taken into the net as the submarine moves forward and passes through the net into a container in the craft. Greater catches can be achieved because greater depths can be fished than by conventional methods. An added advantage, according to the designers, is that little noise and wave movement to scare the fish are evident when the submarine is working. (Fishing News, October 8, 1965.)

Greece

FREEZER-TRAWLER FISHERY TRENDS, JANUARY-JULY 1965:

Landings: The Greek fleet of Atlantic freezer trawlers landed 14,437 metric tons of frozen fish during January-July 1965 as compared with 11,985 tons in the same period of 1964.

Fleet Expansion: VESSELS ORDERED FROM SOVIETS: A Greek shipowner has ordered 5 factory trawlers from Soviet shipyards at an estimated cost of US$2.25 million for each vessel. It is understood that the order, arranged through Sudoimport, Moscow, calls for vessels of the "Maiakovskii class" with the following main specifications: length overall 84.7 meters (278 feet), breadth 14 meters (46 feet), depth 5.7 meters (19 feet), main engine 2,000 horsepower, and speed (loaded) 14 knots. Each vessel is to have storage capacity for 750 tons of frozen fish, 60 tons of canned fish, 150 tons of fish meal, and 50 tons of fish oil. The vessels are to be equipped with processing machinery for filleting, canning, and reduction. Freezing equipment on each vessel will include a blast-freezing tunnel with a daily capacity of 15 tons, and 6 horizontal plate freezers with a total daily capacity of 20 tons. The vessels are to be air-conditioned and designed to fish in tropic as well as Arctic areas. Electronic equipment will include radar, echo-sounders, and other fish-finding gear. The vessels should be able to remain at sea for 120 days. Delivery of 2 of the factory trawlers is scheduled for the first half of 1966, with the other 3 to be delivered by the fall of 1967.

Meanwhile, another Greek factory trawler, the Rea (formerly the Soviet Krylov) has already begun operations in the Northwest Atlantic off Newfoundland. A Greek firm acquired that vessel from the Soviets and dispatched it to the Atlantic grounds in the summer of 1965 with a mixed Soviet and Greek crew. In late summer 1965, the vessel was reported catching about 10 tons of ocean perch a day, and it was expected to return to Greece in early October 1965 with 600 tons of frozen fish and 100 tons of fish meal.

VESSELS ACQUIRED FROM ICELAND: A Greek operator has acquired three Icelandic steam trawlers. One of those was being rebuilt to serve as a refrigerated transport. It is believed the other two will be used as Atlantic trawlers after being outfitted with freezing equipment. (Alieia, August 1965.)

Note: See Commercial Fisheries Review, Dec. 1965 p. 55.

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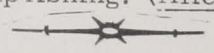
SHRIMP FISHING IN PERSIAN GULF:

The Greek freezer-trawler Evangelistria I was scheduled to sail in late August 1965 with four shrimp trawlers for the Persian Gulf to begin shrimp fishing. (Alieia, August 1965.)



Greenland

SALMON FISHERY TRENDS, OCTOBER 1965:

Inshore: The 1965 Greenland salmon catch in inshore waters should be considerably below the 1,400 metric tons taken in 1964. It was estimated that the Greenland inshore salmon catch did not exceed 770 tons in January-October 1965. During that period in 1964, about 68 percent of the total catch for the year was taken. The decline was due, at least in part to lower prices on the European market for Atlantic salmon on the one hand, and an improvement in the Greenland cod fishery on the other. For example, the average price received by Danish fishermen for salmon in August 1965 was 85 U. S. cents a pound as compared with $1.32 in August 1964. Greenland salmon face a handicap in some markets because they are a deeper shade of red when smoked than Baltic salmon. However, the Greenland salmon are fatter, and it appears that about 65 percent of Greenland salmon approach the average weight of Baltic salmon which is about 3.5 to 4.5 kilos (7.7-9.9 pounds).

Salmon fishing in the inshore waters of Greenland is practiced in the coastal areas inside the banks along a stretch of coastline running from about latitude 60° N. to 69° N. As the crow flies, the length of that stretch of coastline is about 600 nautical miles, but in actual fact it is much longer because of its many bends, inlets, and fiords. The settled areas are few and far between, and their total number of inhabitants amounts to about 23,000, of which an estimated 11 percent might be classified as salmon fishermen. Others may make occasional catches.

The only fishing vessels available to most of those Greenland fishermen are rowing boats or small open motorboats. The sole equipment used has consisted of set nets reported to have a stretched mesh size of 10-16 centimeters (3.9-6.3 inches) from knot to knot.

Offshore: A Faroese vessel and a Norwegian vessel fished offshore from Greenland with gill nets in 1965. The catch of the Faroese vessel was reported to be 20 tons by November 1965, at which time the vessel was still fishing. The Norwegian vessel returned home with a catch of 12 tons. (Regional Fisheries Attache, United States Embassy, Copenhagen, October 20, November 4 and 24, 1965; and other sources.)

Note: See Commercial Fisheries Review, November 1965 p. 58.

Honduras

SHRIMP LANDINGS DOWN IN 1965:

Catches of white shrimp during the late summer run were reported down sharply in the Honduran shrimp fishery. According to shrimp packers there, total shrimp landings for 1965 may be only half the quantity landed in 1964.

As of the end of September 1965, there were 30 shrimp vessels operating in Honduran waters--15 of them United States vessels and the remainder Honduran. At the same time a year earlier, 50 shrimp vessels were operating in the same waters. (United States Embassy, Tegucigalpa, November 6, 1965.)

Iceland

EXPORT STOCKS OF PRINCIPAL FISHERY PRODUCTS, SEPTEMBER 30, 1965:

As of September 30, 1965, Iceland's stocks of frozen groundfish (fillets) for export to the United States totaled 4,129 metric tons, an increase of 321 tons from the stocks on hand August 31, 1965. (United States Embassy, Reykjavik, October 26, 1965.)

United States imports of frozen groundfish fillets from Iceland in the year 1964 totaled 17,812 metric tons of groundfish blocks and

Iceland (Contd.):

Icelandic Export Stocks1/ of Principal Fishery Products, September 30, 1965

Item	Qty.	Value	
	Metric Tons	Million Kr.	US$ 1,000
Groundfish, frozen:			
For export to:			
U. S.	4,129	90.8	2,108.7
Other countries	5,478	94.8	2,201.6
Stockfish	2,500	70.0	1,625.6
Herring, frozen	1,122	6.4	148.6
Industrial products:			
Fish meal:			
Herring	22,658	163.1	3,787.7
Other fish	1,811	12.2	283.3
Herring oil	33,566	278.6	6,470.0

1/Includes only stocks intended for export.
Note: Icelandic kronur 43.06 equal US$1.00.

slabs, 4,669 metric tons of cod fillets, 2,791 metric tons of haddock fillets, and 548 metric tons of ocean perch fillets.

Ireland

FISH MEAL INDUSTRY EXPANSION TRENDS:

An Irish company is examining the possibilities of setting up a fish meal factory on the west or northwest coast of Ireland. As existing Irish fish meal factories sometimes have difficulty in obtaining supplies, the company is also considering the purchase of a number of trawlers.

For preliminary test fishing, the Irish firm chartered a Polish "B-25-type" trawler in the fall of 1965 to make a survey of Irish waters and the Atlantic shelf. The Polish vessel was chosen because of its low price, and also because of its apparent suitability for the waters to be investigated. The "B-25," in standard form, has a 15-day range, a cargo capacity of 43 tons, is 81 feet long, and has a beam of 21½ feet.

All the fish caught during the survey were to go to existing Irish fish meal factories.

Meanwhile, a new Irish fish meal plant opened in Millstreet in southern Ireland. That plant is expected to draw supplies from southwest and southern ports. (The Irish Skipper, No. 21, October 1965.)

Ivory Coast

FISHERY TRENDS, JANUARY-JUNE 1965:

Plans of the Ivory Coast Government for development of Abidjan's fishery facilities suffered a temporary setback in the first half of 1965 when invitations for bids for construction of a new 3,000-ton cold-storage facility were withdrawn. However, it was reported that the invitations were to be reissued with an additional proposal for a 50-ton per day tuna cannery. The cannery had previously been planned for a later date. Meanwhile, funds (about US$2 million) for construction of a second Abidjan fish dock of 430 meters (1,410 feet) were committed. Construction of the new dock, which will double current berthing space, should begin early in 1966.

Landings by the Abidjan-based fleet of about 35 trawlers and 35 purse seiners totaled 21,984 metric tons for the first 6 months of 1965, an increase of 27 percent over the same period in 1964. Of that total, 44.3 tons were shrimp, an increase of 50 percent over the same period in 1964. Although shrimp landings are still small, they are a sign of the growing Ivory Coast shrimp production and the possibility of later exports to the U.S. market. Tuna landings of 6,208 tons in January-June 1965 (mostly for transshipment) were up 11 percent from those in the same period of 1964. Since the second 6 months of the year are traditionally more productive in Ivory Coast fisheries, it can be expected that the total for the year will be substantially greater than for 1964.

An event looked forward to with anticipation by Ivory Coast fishing interests, both Government and private, was the expected arrival in December 1965 of the fisheries research and training vessel President John F. Kennedy, which was financed by the U. S. Agency for International Development. (Fisheries Attache, United States Embassy, Abidjan, October 13, 1965.)

Japan

FROZEN TUNA EXPORTS TO U. S. AND PUERTO RICO, JULY-SEPTEMBER 1965:

Japan's exports of frozen tuna to the United States and Puerto Rico in September 1965 dropped 39 percent in quantity and 32 percent in value from those in the previous month.

Japan (Contd.):

Exports to the United States were 19 percent lower than in August. Shipments to the United States were lower for all species of tuna, with the biggest drop in yellowfin exports which were down 32 percent from the quantity shipped in August.

Japan's Exports of Frozen Tuna by Species to the United States and Puerto Rico, July-September 1965

Species	September		August		July	
	Quantity	Value	Quantity	Value	Quantity	Value
	Short Tons	US $1,000	Short Tons	US $1,000	Short Tons	US $1,000
Albacore:						
United States	2,387	798	2,603	824	4,910	1,424
Puerto Rico	1,688	501	2,878	825	5,183	1,492
Total	4,075	1,299	5,481	1,649	10,093	2,916
Yellowfin:						
United States	1,460	462	2,159	694	2,361	803
Puerto Rico	712	400	2,745	843	2,258	637
Total	2,172	862	4,904	1,537	4,619	1,440
Big-eyed:						
United States	2	1	5	1	-	-
Puerto Rico	100	19	35	7	252	34
Total	102	20	40	8	252	34
Total United States	3,849	1,261	4,767	1,519	7,271	2,227
Total Puerto Rico	2,500	920	5,658	1,675	7,693	2,163
Grand total	6,349	2,181	10,425	3,194	14,964	4,390

Source: Japan's Bureau of Customs.

The September exports to Puerto Rico were down 56 percent from the previous month. Exports of yellowfin tuna were down sharply--74 percent less than the previous month. Shipments of big-eyed tuna to Puerto Rico in September were about three times the quantity shipped in August. (Fisheries Attache, United States Embassy, November 11, 1965.)

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EXPORT VALIDATIONS OF FRESH AND FROZEN TUNA AND TUNA LOINS, APRIL-SEPTEMBER 1965:

Japan's export validations of frozen tuna and cooked frozen tuna loins to the United States and Canada in September 1965 were down 30 percent from the same month in 1964. Albacore and yellowfin tuna accounted for 89 percent of that month's export approvals to those countries. Included in the September 1965 shipments were 2,286 short tons from Japanese transshipment bases including American Samoa.

For the 6 months April-September 1965, Japan's frozen tuna export validations for the United States and Canada (included 5,799 tons from Japanese transshipment bases) were about 2 percent less than in the same 6 months of 1964. (Fisheries Attache, United States Embassy, Tokyo, November 11, 1965.)

Japan's Export Validations of Fresh and Frozen Tuna and Tuna Loins by Country of Destination, April-September 1965

Item	To U.S. & Canada		To Other Countries		Total	
	Sept.	Apr.-Sept.	Sept.	Apr.-Sept.	Sept.	Apr.-Sept.
	(Short Tons)		(Metric Tons)			
Albacore, round	5,385	37,602	1,375	5,130	6,260	39,243
Yellowfin:						
Round	1,004	3,821	60	96	385	1,757
Gilled & gutted:						
20/100 lbs.	2,472	17,077	785	2,392	3,028	17,884
100 lbs. up	75	1,708	-	-	68	1,550
Drsd. with tail	408	4,083	1,586	14,326	1,956	18,031
Fillets	-	3	-	5	-	6
Total	3,959	26,692	2,431	16,819	5,437	39,228
Big-eyed:						
Dressed	381	821	811	5,411	885	5,650
Other	4	48	46	424	49	468
Total	385	869	857	5,835	934	6,118
Skipjack	414	4,475	-	517	375	4,675
Bluefin:						
Dressed	-	-	117	2,586	117	2,586
Fillets	-	-	75	947	75	947
Total	-	-	192	3,533	192	3,533
Loins:						
Albacore	341	1,543	-	9	310	1,409
Yellowfin	30	1,055	5	24	32	981
Total	371	2,598	5	33	342	2,390
Grand total 1965	10,514	72,236	4,860	31,867	13,540	95,087
Grand total 1964	15,089	74,039	3,858	27,858	17,547	95,026

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FROZEN ALBACORE TUNA PRICE FOR EXPORT TO U. S. FROM JAPAN PROPER:

The export price of round frozen albacore tuna for shipment to the United States from Japan proper reached in late October 1965 US$385-390 a short ton c.i.f., and that of frozen tuna loins $780-800 a short ton. Trade in loins was reported brisk.

Also, towards the end of October the ex-vessel price of albacore at Tokyo climbed to 133-135 yen a kilogram ($335-340 a short ton) and at Yaizu reached a high of 140 yen a kilogram ($353 a short ton). It was reported that at those prices Japanese traders would not be able to procure supplies for export to the United States in a large quantity unless export prices climbed up to $400 a ton c.i.f. (Suisan Tsushin, October 29, 1965.)

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ATLANTIC TUNA MARKET AND FISHING TRENDS:

The export market of Atlantic-caught tuna firmed up during August-October 1965. Albacore tuna (frozen round), which at one time sold for US$270 a short ton f.o.b. Las Palmas,

Japan (Contd.):

as of October 1965 was being exported extensively to Spain for the equivalent of $340 a short ton f.o.b. Las Palmas. Similarly, the price of dressed big-eyed tuna exported to Italy rose considerably, and Italian tuna buyers in October were willing to pay as much as $340 a metric ton c.i.f. Italy, or about $70 a ton more than a few months prior to October. Dressed yellowfin tuna exported to Italy brought the top price of $450 a metric ton c.i.f. Italy.

The ex-vessel price of dressed big-eyed tuna landed in Japan proper was so high (about 150 yen a kilogram or $378 a short ton) in October that it would pay for those engaged in the Atlantic tuna fishery to transship their big-eyed catches to Japan. This development in turn served to push up the export price of Atlantic big-eyed. Reportedly, the export price of $350 a metric ton c.i.f. Italy worked out to about ex-vessel 100 yen a kilogram ($252 a short ton). The cost of transshipping Atlantic-caught tuna to Japan (including other miscellaneous costs) amounted to about 25 yen a kilogram ($63 a short ton). On the basis of those figures, the price of Atlantic big-eyed transshipped and landed in Japan amounted to about 125 yen a kilogram ($315 a short ton), or about $63 a short ton below the reported prevailing price in Japan of about $378 a short ton.

A large United States west coast tuna packer had offered to buy 1,500 short tons of Japanese-caught Atlantic albacore tuna for delivery in January 1966. The firm offered to pay the prevailing price in January but attached the condition that Japan pay $10 a ton of the transportation cost.

This offer is the first of its kind received by Japan since Japan decided to adopt a policy of seeking to redistribute the supply of Atlantic albacore to markets other than Puerto Rico so as to avoid supply gluts (such as that which occurred in 1964 at Puerto Rico) and to assess industry members a fee to defray part of the increase in transportation costs. Frozen tuna prices firmed up and supplies were short. With fewer vessels operating in the Atlantic and Spanish market demand increasing, there does not seem to be any foreseeable marketing problem. The Japanese trading firms felt strongly that they should not, at that time, accept the offer.

Japanese albacore fishing in the Atlantic Ocean continued good during October in the vicinity of 30° N. latitude and 20°-30° W. longitudes, with daily catches ranging between 3.5-5 metric tons a vessel. Over one-half of the landings made in October were sold to Spain at frozen round c.i.f. prices of US$420-430 a metric ton (said to equal $330-335 a short ton f.o.b. Las Palmas). As per the last week in October, over 5,000 metric tons of albacore were estimated to have been contracted for sale to Spain.

While it was not known how much longer albacore tuna exports to Spain would continue in 1965, Japanese tuna suppliers were of the opinion that further purchase offers from that country for fairly large quantities could be expected since Spain's tuna requirements definitely have not been met; hence, they expected the albacore export market to continue firm for some time. (Suisan Tsushin, October 22, 25, 27, & 28, 1965.)

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CANNED TUNA IN BRINE SALES TO U.S.:

The Japan Canned Tuna Sales Company announced October 22, 1965, that a total of 280,000 cases of canned tuna in brine (230,000 cases of whitemeat tuna and 50,000 cases of lightmeat) for export to the United States was to be offered for the October sale. The promotional allowance for the whitemeat pack (US$0.50 a case) was to be the same as in the previous sales, but the premium on the lightmeat 7-oz. and 13-oz. packs was raised by 100 yen ($0.277) to 200 yen ($0.55) a case. Closing date for the sale was announced as October 28. (Katsuo-Maguro Tsushin, October 25, 1965.)

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INDUSTRY OFFICIAL'S VIEW ON U. S. TUNA TOUR:

The Japan Canned Foods Exporters Association's Vice President returned to Japan October 13, 1965, after attending the New York City Japanese tuna conference (September 30-October 1). He was one of the 14 Government-industry representatives who participated in the New York tuna conference sponsored by the Japanese Ministry of International Trade and Industry. His comments on the recent U. S. tour were as follows:

The New York conference was held in the form of a briefing session, with local Japanese

Japan (Contd.):

trade representatives explaining developments to the group (consisting of representatives from the Japanese Government, canned food exporters, food packers, frozen food producers, and can manufacturers). The conference was significant and left a strong impression with the attendants that similar meetings should be held again in the future.

Members of the party met and spoke with local American importers, who requested that Japan supply canned tuna, particularly lightmeat tuna, on a continuous basis. They cited instances of heavy shipments during the slow year-end season and occurrences of supply shortages during the important Lenten season, and strongly urged that such things do not happen again. They also pointed out the quality deterioration of Japanese products. The resident Japanese trade representatives expressed the desire that particular attention be given to the quality of institutional tuna packs. American importers and resident Japanese traders agreed that excess competition among Japanese trading firms has disappeared and that the big problem now was competition with the products packed by major U. S. packers.

The group visited Puerto Rico. We were all impressed by the equipment and efficient operations of the local tuna canneries, fish unloading facilities, cold storages, and receiving and shipping plants. We felt we have much to learn from their rationalization efforts. Two canneries were busily packing tuna in brine.

Owing to shortage of Japanese canned lightmeat tuna, 2 or 3 Japanese trading firms were reported buying U. S. products to fill the gap.

The present canned tuna sales system should be continued and sales should be expanded within the framework of that system. In the last three months or so, measures have been adopted whereby trading firms have been able to sell any quantity they ordered as long as supplies were available and, at the same time, avoid excessive competition. Should excessive competition occur, it may be necessary to strictly enforce the administration of the Exporters Agreement but, at the present time, we wish to see the adoption of flexible measures which will help expand sales. In this context, we would like to see the Agreement extended through March 1966. (Note: Present Agreement expired November 1965.)

Brands are an important factor in the sale of small-size canned tuna on the U. S. market. In the case of Japanese products, advertised brands handled by 3 or 4 trading firms are gaining more shelf space, although they still do not have the power to produce volume sales. Therefore, to increase sales, their production costs would have to be reduced to the level where they can be sold at the price of private labels.

The production ratio between canned whitemeat tuna and canned lightmeat tuna should not be drastically changed. Canned whitemeat tuna will not sell well in a predominantly lightmeat tuna market. We should not allow the U. S. market for Japanese canned lightmeat tuna, which Japan has built up so far, to vanish. (Suisan Tsushin, October 15, 1965.)

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TUNA PURSE-SEINING TO BE TRIED NEAR GUAM:

A joint experimental tuna purse-seine operation in the central west Pacific by the two Japanese purse seiners Kenyo Maru (240 gross tons) and Taikei Maru No. 23 (212 gross tons) was planned by their owners. The two vessels expected to fish off Guam Island from late 1965 until the end of February 1966 to determine the feasibility of establishing a year-round purse-seine fishery in the central west Pacific. Both the Kenyo Maru and the Taikei Maru were equipped with power blocks. (Shin Suisan Shimbun Sokuho, October 19, 1965.)

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GOVERNMENT TAKES DIM VIEW OF INDUSTRY'S TUNA FISHERY RATIONALIZATION PROPOSALS:

The Japanese Fisheries Agency is studying the establishment of a semigovernment corporation proposed by the National Federation of Tuna Fishermen's Cooperative Associations (NIKKATSUREN) to help the depressed tuna fishery. But the Government is reluctant to approve that plan in its present form. Under NIKKATSUREN's plan, the corporation would systematically carry out fleet reduction by liquidating fishery enterprises considered hopeless of financial recovery and assist tuna vessel owners in modernizing their vessels and in rationalizing their management. An estimated nine billion yen (US$25 million) needed to operate this corporation would be financed entirely by the Government. Reportedly, the Agency's

Japan (Contd.):

basic attitude towards NIKKATSUREN's plan is as follows:

(1) The Government cannot consider bearing the full financial burden of the corporation. (2) Extension of interest-free loans for modernizing fishing vessels and rationalizing fishery management will create problems, although financial assistance should be provided within the existing framework of the law. (3) Payment of separation allowances to vessel crews affected by the vessel reduction plan will present problems. (4) Rehabilitation loans should not be granted to vessel owners other than those afflicted by sea disaster. (Minato Shimbun, October 23, 1965.)

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CRAB MEAT EXPORTS, SEPTEMBER 1965:

Japanese exports of canned crab meat in September 1965 amounted to 66,308 cases (48 ½-lb. cans) as compared with 77,702 cases during the previous month and 70,534 cases in September 1964. Of the total canned crab meat exports in September 1965, 14,645 cases were shipped to the United States, 13,700 cases to the United Kingdom, 3,215 cases to Canada, and 34,748 cases to other countries.

In September 1965, king crab meat exports amounted to 43,727 cases or 66 percent of total canned crab meat exported. Of the total king crab exported in September 1965, 11,472 cases went to the United States, 11,025 cases to the United Kingdom, and 21,230 cases to other countries.

The September 1965 Japanese canned crab meat exports also included: Kegani crab--9,516 cases of which 2,423 cases went to the United States: Zuwai crab--13,015 cases of which 750 cases went to the United States; and 50 cases of Hanasaki crab. (Fisheries Attache, United States Embassy, Tokyo, October 22, 1965.)

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CANNED SHRIMP EXPORTS, SEPTEMBER 1965:

Japan's exports of canned shrimp (24 ½-lb. cans) during September 1965 were very light, falling far below those in August 1965 and September 1964. Limited shrimp fishing in the Bering Sea was said to be the reason for the decline. (Fisheries Attache, United States Embassy, Tokyo, October 22, 1965.)

Japan's Exports of Canned Shrimp by Country of Destination, August and September 1965 with Comparisons

Country of Destination	1965		1964	
	Sept.	Aug.	Sept.	Aug.
	. . . (Cases of 24 ½-Lb. Cans). . .			
United States	3,000	5,600	16,275	20,146
United Kingdom . .	3,000	19,870	37,100	16,790
Canada	5,900	5,600	6,836	6,002
Other	2,900	8,315	5,358	1,604
Total	14,800	39,385	65,569	44,542

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EXPORT PRICES OF CANNED SARDINE AND MACKEREL RAISED:

The Japan Canned Sardine and Saury Packers Association, at the October 21, 1965, directors' meeting, voted to raise the export prices for canned mackerel and sardine. The new prices for canned sardine went into effect immediately, while those for canned mackerel became effective November 1. (Suisan Tsuchin, October 23, 1965.)

Japanese Canned Sardine and Mackerel Export Prices, f.o.b. Japan (Previous prices shown in parentheses)

Japanese Can and Case Size	Equivalent U.S. Can Size	Price Per Case		Country of Destination
		Yen	US$	
Sardines in tomato sauce:				
No. 1 oval (24 cans)	1-lb. oval (24's)	1,450 (1,325)	4.03 (3.68)	United States
No. 3 oval (48 cans)	1/2-lb. oval (48's)	1,575 (1,525)	4.38 (4.24)	" "
No. 1 oval (24 cans)	1-lb. oval (24's)	1,400 (1,275)	3.89 (3.54)	Other Countries
No. 3 oval (48 cans)	1/2-lb. oval (48's)	1,525 (1,475)	4.24 (4.10)	" "
No. 1 small (100 cans)	5-oz. tall (100's)	2,350 (2,200)	6.53 (6.11)	" "
No. 4 (48 cans)	1-lb. tall (48's)	2,500 (2,200)	6.94 (6.11)	" "
Mackerel in tomato sauce:				
No. 1 oval (24 cans)	1-lb. oval (24's)	1,175 (1,125)	3.26 (3.13)	Other Countries
No. 3 oval (48 cans)	1/2-lb. oval (48's)	1,350 (1,250)	3.75 (3.47)	" "

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FROZEN SWORDFISH EXPORT VALIDATIONS TO THE U. S. AND CANADA, APRIL-SEPTEMBER 1965:

Japanese export validations of frozen broadbill swordfish (mostly fillets and chunks) to the United States and Canada in September 1965 totaled 591 short tons valued at US$479,857. This compared with approvals of 569 tons valued at $438,551 in the previous month and 569 tons valued at $343,569 in September 1964.

Japan (Contd.):

For the 6 months April-September 1965, Japan's export validations of frozen swordfish to the same countries totaled 2,285 tons valued at $1.7 million. Fillets of that species accounted for 66 percent of the total, with the remainder consisting of chunks and swordfish processed in other forms. For the same 6 months in 1964, the frozen swordfish export approvals totaled 1,723 tons valued at $984,655. (Fisheries Attache, United States Embassy, Tokyo, November 2, 1965.)

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EXPORTS OF FROZEN RAINBOW TROUT, SEPTEMBER 1965:

Japan's exports of frozen rainbow trout in September 1965 were up 23 percent in quantity and 20 percent in value from the previous month's exports. As in August, the United States was the principal buyer of Japanese

Japan's Exports of Frozen Rainbow Trout by Country of Destination, September 1965 with Comparisons

Destination by Country	September		August		July	
	Qty.	Value	Qty.	Value	Qty.	Value
	Short Tons	US$	Short Tons	US$	Short Tons	US$
United States . .	131	97,869	108	82,042	112	79,731
United Kingdom	41	25,500	32	21,155	29	18,994
Belgium	11	7,903	14	11,547	27	22,575
Canada	26	19,447	11	7,792	29	20,589
Australia	2	1,689	5	4,142	1	1,114
Other	18	13,411	16	11,233	2	1,712
Total . . .	229	165,819	186	137,911	200	144,715

Source: Japan's Bureau of Customs.

frozen rainbow trout, accounting for 57 percent in quantity and 59 percent in value of the total September 1965 exports. (Fisheries Attache, United States Embassy, Tokyo, October 20 and November 9, 1965.)

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EXPORTS OF FROZEN FISHERY PRODUCTS OTHER THAN TUNA, APRIL-SEPTEMBER 1965:

Japanese exports of frozen fishery products (excluding tuna) in April-September 1965 amounted to 12,391 short tons valued at US$4.1 million. Of that total, 1,431 tons valued at a little more than $1.2 million were exported to the United States. Principal items shipped to the United States were frozen rainbow trout (356 tons, value $274,000), swordfish steaks (277 tons, value $245,000), shrimp (155 tons, value $243,000), and frog legs (140 tons, value $199,000).

Exports to countries in West Africa during the period totaled 4,082 tons valued at $497,000, made up completely of overseas trawl fish. Shipments to other principal countries included South Africa with 1,596 tons valued at $250,000 (overseas trawl fish); Australia, 949 tons valued at $468,000 (mostly overseas trawl fish, some cod, shrimp, and oysters); and United Kingdom, 563 tons valued at $558,000 (shrimp, rainbow trout, some salmon, overseas trawl fish). (Fisheries Attache, United States Embassy, Tokyo, November 2, 1965.)

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POOR 1965 SAURY SEASON FORECAST:

The 1965 saury fishery in Japan continued extremely poor as of the latter part of October 1965. It is forecast that the season's total catch may fall far below the poor season of 1964, when landings totaled about 200,000 metric tons. In 1963 the saury catch totaled 384,000 tons; in 1962, 483,000 tons. Light landings in early October at one point forced ex-vessel prices up to a high of 180 yen a kilogram (US$0.227 a pound). Fishing improved for a few days in mid-October, with about 6,000 tons landed, and prices dropped to 20-40 yen a kilogram ($0.025-0.05 a pound). (Suisan Keizai Shimbun, October 22; Suisan Tsushin, October 21, 1965.)

(Note: About 500 Japanese fishing vessels were reported fishing for saury in 1965. The Soviet Union is also engaged in this fishery, having entered it about seven years ago. The Soviet fleet (exact size not known but Japanese sources indicate fleet to be large) starts fishing for saury off the Kurile Islands about a month before the season opens in Japan, following the schools southward. In 1964 and again in 1965, Soviet fishing vessels were sighted operating as far south as the waters off Kinkazan (38° 15' N. latitude), northeastern Japan.

In addition to the Soviet Union, the Republic of Korea (ROK) has entered the saury fishery. The Korean fleet in 1965 consisted of two 80-ton fishing vessels and a 180-ton carrier vessel. The vessels operated out of Onahama, Fukushima Prefecture. The two fishing vessels reportedly were constructed at Onahama and exported to South Korea.

The entry into the saury fishery by the Soviet Union and South Korea (but especially the Soviet Union with her large, efficient fishing

Japan (Contd.):

vessels), the appearance of the Soviet fleet farther south each year near grounds traditionally fished by Japanese fishermen, the possibility that both the Soviet Union and South Korea may increase their fleets in the future, the failure of the Japanese saury fishery in 1964, and prospects of a worse season in 1965 do not present a very bright picture for Japanese saury fishermen.

The poor saury season is also expected to work difficulties on the Japanese tuna fishermen. Saury are used extensively as bait by the tuna long-line fishermen (the annual demand of which is estimated at 40,000-60,000 metric tons by one periodical), who will, as in 1964/65, be compelled to pay high prices for saury bait. Due to the shortage and high price of bait saury, some long-line fishermen early in 1965 experimented with small mackerel, which proved quite satisfactory.)

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BERING SEA FISHING TRENDS:

The 11,500-ton Japanese factoryship Tenyo Maru ended operations in the Bering Sea on October 3, 1965, and returned to Yokohama October 15. The factoryship produced 5,574 metric tons of minced fish meat and 4,781 tons of fish meal. The minced meat was contracted for sale at over 100,000 yen (US$278) a metric ton and the fish meal 73,000 yen ($203) a ton. (Suisan Tsushin, October 7 & 15, 1965.)

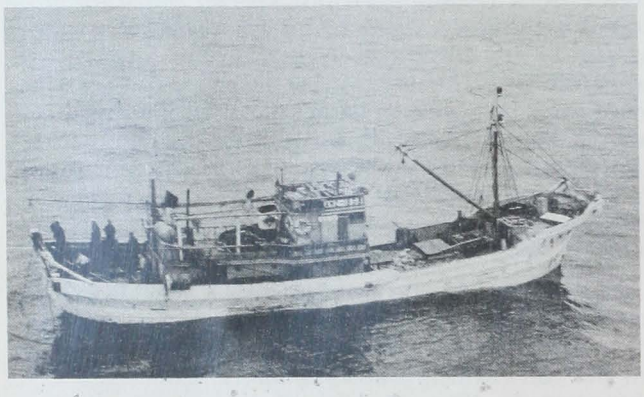

Fig. 1 - Japanese trawler fishing in the Bering Sea for the factoryship Tenyo Maru.

Another Japanese firm is reported planning to install on its fish meal factoryship Gyokuei Maru (10,357 gross tons) equipment to process about 30 metric tons of minced fish meat a day. That firm is also planning on sending the factoryship to the Bering Sea earlier in the season, about March of 1966. (Shin Suisan Shimbun Sokuho, October 9, 1965.)

Fig. 2 - Nets used by a Japanese trawler in the Bering Sea.

The factoryship Chichibu Maru (7,472 gross tons) ended fishing operations in the Bering Sea on October 15. The factoryship was scheduled to arrive in Hakodate October 22-23 with about 4,500 metric tons of processed fish, mainly Pacific ocean perch. (Suisan Tsushin, October 19, 1965.)

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VIEWS ON NORTH PACIFIC WHALE STOCKS:

In preparation for the 4-nation North Pacific whale conference (Japan, U.S.S.R., Canada, and the United States) scheduled to convene in Honolulu in early 1966, Japan is consolidating its views on the state of the North Pacific whale resources. Opinion reportedly is that the condition of the North Pacific whale stocks is such that prompt measures must be taken to protect the resources. On October 12, 1965, the Director of the Japan Whale Research Institute expressed the following views on the need to restrict whaling operations in 1966:

"It may be said that the problem of the North Pacific whale stocks concerns only Japan and the Soviet Union. We are now studying Soviet catch data which the Russians finally forwarded to Japan in June this year. According to their data, considerable quantities of humpback and fin whales have been taken

Japan (Contd.):

Fig. 1 - Japanese whale catcher boat in North Pacific.

by the Soviet Union. With regard to humpback whales, the Scientific Committee on North Pacific Whales has recommended that the capture of that species be prohibited for one year in 1966 and that subsequent recommendations be made after assessing the results of that measure. The fin whale stock has declined considerably, so I believe further catch reduction is necessary. That leaves us with the sei whales, but that stock also shows a declining trend. The North Pacific whales should be considered as having declined in abundance commensurate to the increased catches made by the two additional Soviet whale fleets. Depletion of whale stocks

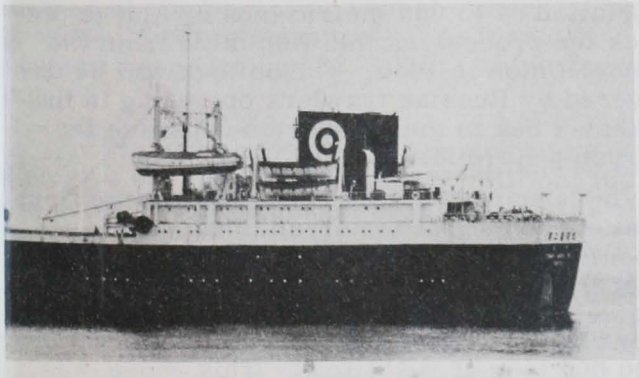

Fig. 2 - Japanese whale factoryship operating in North Pacific.

would also adversely affect the Soviet Union so it is most important that both Japan and the Soviet Union reach accord at the forthcoming scientific meeting. In working out arrangements, it is desirable that catch limits be set according to species. It will probably be difficult for Japan to continue harvesting whales in the quantity taken this year.

North Pacific whaling involves operations from land stations, which makes it more complex than the Antarctic operations." (Suisan-cho Nippo, October 13, 1965.)

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NORTH PACIFIC SPERM WHALE STUDY:

The Japan Whale Research Institute, in cooperation with a large Japanese fishing company, undertook a sperm whale study in fall 1965 to establish a scientific basis for supporting Japan's proposal to relax the size restriction (imposed by the International Whaling Commission) on harvestable sizes (over 35 feet) of sperm whales. It is reported that four whale catchers (belonging to the fishery firm), operating under contract to the Whale Institute, assembled off eastern Hokkaido and on September 29 located a herd of 25 sperm whales eight miles off Akkeshi. The catchers simultaneously closed in on the herd and killed 21 whales, one of which was not recoverable. The 20 whales were hauled to Akkeshi where they were examined as to length, sex, and sexual maturity. The 20 whales consisted of 16 females, 3 males, and 2 calves (one of which was lost at sea).

The whaling expedition to collect scientific data is reported to be the first of its kind undertaken by any nation. Another expedition is expected to be launched in or after 1966.

On November 10, 1965, the Japan Whale Research Institute and the fishing company presented a report on their findings to a group of 20 government and industry officials. The study revealed that (1) sperm whales are still abundant, (2) whale herds differ in size and sexual composition (although the species is polygamous in nature), (3) females below the present minimum harvestable size limit (35 feet in case of base-type whaling operations) are sexually capable of reproduction, and (4) natural mortality appears high.

It was reported that the findings lend support to Japan's claim in seeking a relaxation of international whaling regulations. However, it was decided at the meeting that conclusions should not be hastily drawn on the basis of the one study conducted to date and that further studies should be undertaken. (Suisan Keizai Shimbun, October 8 and November 10, 1965.)

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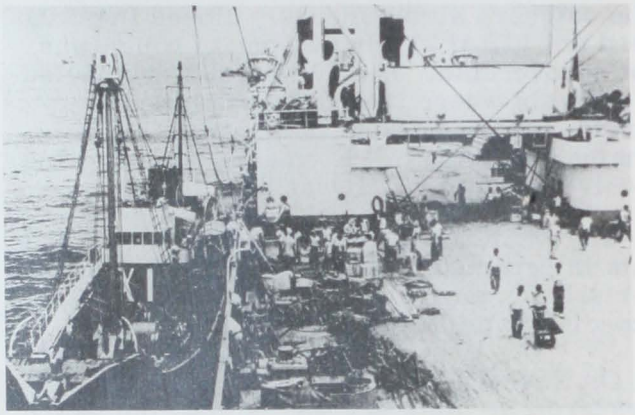
Japan (Contd.):

ANTARCTIC WHALING OPERATIONS AND OUTLOOK FOR 1965/66 SEASON:

The three Japanese whaling firms scheduled to participate in the Twentieth (1965/66) Antarctic Whaling Expedition were to operate a total of 5 whaling fleets, 2 less than on the Nineteenth (1964/65) Expedition. Owing to the reduction of the international catch quota to 4,500 blue-whale units for the 1965/66 Antarctic whaling season, as compared with 8,000 blue-whale units for 1964/65 informally agreed to by the four whaling countries (Japan, Soviet Union, Norway, the Netherlands), Japan's national quota (52 percent) for the 1965/66 season is 2,340 blue-whale units; in the 1964/65 season it was 4,160 blue-whale units. (Suisan Keizai Shimbun, October 18, 1965.)



Japanese whale catcher alongside factoryship to receive supplies and fuel.

To compensate for those cuts, Japan is striving to increase its catching and processing efficiency on the whaling grounds. This season, the Japanese fleets include a larger proportion of catcher vessels and freezer-ships. Japanese whaling companies plan to increase their yield per whale by processing whale meat to the fullest extent possible. The fleets will concentrate on catching sei whales for their high meat yield. The catch of sperm whales (used mainly for oil extraction) will be kept at a low level.

The five Japanese Antarctic whaling fleets departed in late October 1965 for the whaling grounds which were scheduled to open December 12, 1965. The production goals in 1965/66 for the Japanese Antarctic whaling fleet are 47,109 metric tons of baleen whale oil, 450 tons of sperm oil, 106,854 tons of frozen whale meat, 3,827 tons of salted whale meat, 2,496 tons of fish meal, and 250 tons of whale extract.

The Japanese expect good prices for both whale oil and whale meat in 1966, and estimate that the value of a blue-whale unit taken in the 1965/66 Antarctic season will be 7.5 to 8 million yen (US$20,800 to $22,200) as compared to 6 million yen ($16,700) in the previous season.

The motherships in the Japanese 1965/66 Antarctic fleet are the 16,810-ton Nisshin Maru, the 23,406-ton Nisshin Maru No. 3, the 19,319-ton Tonan Maru, the 13,815-ton Tonan Maru No. 2, and the 20,300-ton Kyokuyo Maru No. 3. The fleet also includes 13 freezer vessels (ranging from 3,846 to 11,193 gross tons), 20 carrier vessels (958 to 7,492 gross tons), 4 tankers (12,048 to 13,156 gross tons), 44 catcher vessels (375 to 758 gross tons), and 8 search or collection vessels (399 to 723 gross tons). (Nihon Keizai, October 19, 1965.)

Note: See Commercial Fisheries Review, October 1965 p. 91; August 1965 p. 85; and June 1965 p. 44.

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POLLOCK TO BE IMPORTED FROM U.S.S.R.:

The Japanese Ministry of Agriculture and Forestry announced on October 7, 1965, that the Government had decided to permit the importation of 45,000 metric tons of Alaska pollock for processing into fish meal from the Soviet Union in 1966. The pollock will be delivered by Russian trawlers operating in the Okhotsk Sea to the 14,000-ton Japanese factoryship Hoyo Maru.

In January-March 1965, the Japanese firm that operates that factoryship had purchased about 36,000 tons of Alaska pollock from Soviet trawlers. Subsequently, the same firm as well as several others submitted applications to the Government to import in 1966 over 100,000 tons of pollock. This move was strongly opposed by the land-based fishermen and processors in Hokkaido. Settlement of the issue was on a political level. (Suisan Keizai Shimbun, October 12, 1965, and other sources.)

Note: See Commercial Fisheries Review, November 1965 p. 67; October 1965 p. 83.

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Japan (Contd.):

JAPAN-COMMUNIST CHINA FISHERY AGREEMENT TO BE RENEGOTIATED:

The Japan-Communist China Private Fishery Agreement, a two-year pact concluded November 8, 1963, to regulate Japanese and Communist Chinese fishing activities off the mainland China coast, was scheduled to be renegotiated in Peiping, China, in late November 1965. On October 20, the Communist Chinese Fishery Association informed the Japan-Communist China Fishery Association of Japan that it considered the Agreement inadequate in protecting fishery resources and requested that negotiations be held in Peiping in late November. The Japanese Association met October 28 and selected a delegation of 10 members to represent Japan at that conference. (Suisancho Nippo, October 30; Minato Shimbun, October 21, 1965.)

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GOVERNMENT TO COMPENSATE FISHERMEN FOR VESSELS SEIZED BY SOUTH KOREA:

The Japanese Fisheries Agency and the Finance Ministry, which have been conferring on measures to provide financial assistance to fishing vessel owners who suffered losses as a result of having their vessels seized by South Korean patrol boats, reached agreement on the amount of compensation and method of compensating vessel owners. The proposed funding measures were formally adopted at an October 22, 1965, Cabinet meeting.

(1) The Government will appropriate a sum of 4,000 million yen (US$11 million) in the supplementary budget as a special aid fund.

(2) The Agriculture-Forestry-Fisheries Cooperative Bank will make available a total of 1,000 million yen ($2.8 million) for long-term, low-interest loans to affected vessel owners.

(3) The Government will give special tax consideration in matters involving special financial assistance given to the fishermen.

(4) Sums already paid by the Government to vessel owners in the form of insurance payments will be deducted from the total compensation fund. (Suisan Tsushin, October 23, 1965.)

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REPORT ON OVERSEAS FISHERY INVESTMENTS:

The Japanese Fisheries Agency released in October 1965 a 77-page report on the status of Japanese investments in overseas fishery enterprises. The report reveals that Japanese fishery investments in foreign countries as of March 1962 amounted to 1.5 percent of total Japanese overseas capital investments in production enterprises. Mining investments led all overseas investments with 48 percent, followed by lumber with 14 percent. Capital investments in overseas fishery enterprises presently total in value about 20,000 million yen (US$55.6 million) invested by 19 Japanese companies in 28 cooperative fishery enterprises in 22 foreign countries. Japan's capital investments in the 28 cooperative enterprises average in value over 70 million yen (US$194,444) per enterprise (45 percent in capital goods) and investment share per enterprise about 61 percent.

Of the 28 cooperative fishery enterprises, 11 (40 percent) are located in South and Central America, 10 (35 percent) in Southeast Asia, 3 (10 percent) in Africa, and 4 (15 percent) in other areas. The 28 enterprises operate a total of 76 fishing vessels, consisting of 51 (67 percent) trawlers mostly in the 50- to 100-ton class; 17 (22 percent) tuna vessels in the 50- to 500-ton class; 6 whale catchers; and 2 other fishing vessels. A total of 42 vessels (including 30 trawlers and 9 tuna vessels) operate out of Central and South America; 26 vessels (20 trawlers and 6 tuna vessels) operate out of Southeast Asia; 3 vessels out of Africa; and 5 (all whalers) from other areas. Of the 76 vessels, 28 vessels (37 percent) were built by or imported from countries other than Japan, 16 vessels (21 percent) imported from Japan, 14 vessels (18 percent) financed by Japan, and 18 (24 percent) chartered from Japan.

Production in 1964 of those overseas enterprises (for which catch data are available) engaged in fishing operations totaled 27,396 metric tons, declining slightly from 1963's production of 28,460 tons. Production of trawl-caught fish, for the second successive year, declined slightly, totaling 13,630 tons as compared to 1963 landings of 14,275 tons. Tuna

Japan (Contd.):

production, which totaled 1,248 tons in 1960, reached a peak of 9,151 tons in 1963 but declined drastically (34 percent) in 1964 to 6,053 tons. Shrimp production, which totaled 347 tons in 1961, jumped from 5,034 tons in 1963 to 7,714 tons in 1964, up 53 percent. The harvest of whales in 1964 totaled 1,184 whales as compared to 850 whales in 1963.

With respect to the financial condition of the overseas enterprises, the Agency's report shows that returns from investments are still very small. Financial reports submitted to the Agency by 23 enterprises showed that in 1964 only 11 firms recorded a profit (after deducting depreciation), and among those 11 firms only three declared dividends and remitted an estimated 3 million yen (US$8,333) to Japan. The financial status of five enterprises is unknown due to the fact that some of them are not yet in operation or have suspended operations. (Source: Present Status of Japanese Overseas Capital Investments in Cooperative Fishery Enterprises, Production Division, Japanese Fisheries Agency, October 1965.)

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SCIENTISTS SEE NEED TO RE-EXAMINE DISTANT-WATER FISHERIES POLICY:

It is reported that an increasing number of Japanese scientists are beginning to feel that the present Japanese Government fishery policy on distant-water fisheries cannot cope with changes occurring in those fisheries, which rapidly developed after the war and which subsequently have undergone tremendous structural changes. They are said to feel that the continued administration of measures based on the existing policy has arrested Japan's growth of the distant-water fisheries and there is a definite need to re-examine and clarify policies for those fisheries from a fresh and different point of view. These views cropped up at the meetings sponsored by the Japan Fishery Resource Conservation Association.

The views of the scientists are shared by some members of the Government. Industry is also moving in this general direction, as witnessed by the developments in Japan related to the promotion and stabilization of Japan's international fisheries. (Katsuo-Maguro Tsushin, October 29, 1965.)

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VESSEL MANAGEMENT AND OPERATION TRENDS, FY 1964:

The Statistics and Survey Division of the Japanese Ministry of Agriculture and Forestry released in October 1965 a preliminary report on fishery statistics for fiscal year 1964 (April 1964-March 1965) showing trends in management, vessel operations, and labor employment. According to that report, Japanese fishery enterprises numbered 297,087 management units, declining 8,284 units or 2.7 percent from fiscal year 1963. The decline occurred in enterprises operating without fishing vessels, enterprises operating unpowered vessels, those operating 1- to 3-ton and 5- to 30-ton powered vessels, and in the beach-seine fishery. Fishery enterprises which increased in number were those employing 3- to 5-ton, 100- to 200-ton, and over 500-ton powered vessels, as well as those engaged in shallow-seas culture fisheries (primarily seaweed culture). The survey showed that withdrawals from the fisheries are continuing as in earlier years at a high rate rarely observed in any other industry. In agriculture, another primary industry which is always used for comparison, withdrawals are also high but the number of farming families has not shown a declining trend. In the fisheries, the decline in management units was greatest in the unpowered vessel category, where the decrease totaled 8,415 units. However, this decline was due in large part to management units installing outboard motors on their vessels, as in the shallow-seas culture fisheries.

Essentially, the survey revealed the following trends in fishery management:

Decrease in management units: (1) Among the family-type managements, on the whole, those in the category employing vessels in the fishery showed a large decrease. A particularly large decrease occurred in the unpowered vessel category where the decline totaled 8,415 management units (14 percent). This was due, in addition to such factors as withdrawals and transfers, to vessel reclassification resulting from conversion to powered vessels. The reduction of 2,328 management units (5 percent) in the category of enterprises not operating vessels, such as those engaged in shellfish and seaweed collecting, largely contributed to the decline in family-type managements. (2) The beach-seine fishery showed a steady decline, the number of management units dropping to 1,616 units in fiscal year 1964. This is less than half the

Japan (Contd.):

number in operation in 1953. (3) Enterprises operating powered vessels over 10 gross tons primarily for distant-water fishing generally showed an increase over 1963, but those operating 10- to 30-ton and 200- to 300-ton vessels declined somewhat.

Increase in management units: Enterprises showing an increase were those in the categories of powered vessels under one gross ton, and powered vessels of 30-200 tons and over 500 tons, as well as those engaged in shallow-water fish culture (primarily seaweed culture). (1) The increase in management units operating powered vessels under one ton was due primarily to vessel transfers to this category from the category of unpowered vessels as a result of extensive use of outboard motors. (2) The increase shown in the category of 3- to 5-ton powered-vessel operators, along with the increase in under 1-ton powered-vessel operators, represents an unusual trend in family-type operations, which have shown a decline in all other categories. The number of management units in that category, totaling 14,450 units, represents an 80-percent increase over 10 years ago. (3) Management units in the category of 30- to 200-ton powered-vessel operators engaged in offshore or distant-water fisheries, which had shown a declining trend in earlier years, showed a slight increase in 1964. (4) Management units in the category of over 500-ton vessels operating primarily in distant-water fisheries showed an annual increase--the number of units in 1964 totaled 329. (5) The number of shallow-seas culture enterprises has annually increased, totaling 70,200 units in 1964, close to a threefold increase over 1953. (Suisan Keizai Shimbun, October 27, 1965.)

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ONE-PERCENT TAX ON EXPORTS TO NIGERIA:

The Japanese Government has decided to levy a one-percent assessment on Japanese exports to Nigeria and to use the revenue to promote imports of Nigerian products. This measure was developed as a result of the Nigerian Government's adoption of a policy to prohibit entry of Japanese products unless Japan took steps to promote imports from Nigeria. It was reported that the Japanese Government will not issue export licenses to those firms engaged in trade with Nigeria unless they pay this assessment.

The one-percent levy is expected to greatly affect the Japanese trawl operators inasmuch as Nigeria is an important market for Japanese Atlantic trawl-caught fish. In Fiscal Year 1964 (April 1964-March 1965) Japan's export of trawl-caught fish to Nigeria totaled 14,413 short tons, valued at US$2,037,314, far surpassing exports to other countries. (Suisan Tsushin, November 2, 1965.)

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RADAR-BUOY FOR TRACKING FISHING GEAR AT SEA:

A Japanese firm has developed a radar-buoy with which a fishing vessel can locate fishing nets, long lines, and other vessels. The device is made so that the buoy receives impulses transmitted by a radar and sends them back to a vessel's receiving set. Therefore, a net or fishing line marked at sea with the buoy can be relocated by radar. The current source of the buoy is set so that it works only when a radar is transmitting. Thus one battery for the buoy will last 150 hours.

The price is 200,000 yen (US$556) for the buoy, and 600,000 yen ($1,667) for the receiving set and adjuster for the vessel.

The Japanese firm developing the radar-buoy has also developed a small or medium-size marine radar which it claims is almost equal in capacity to larger radar equipment. By using a variable sweep apparatus in the new radar, a distance 50 percent greater than the graduated distance can be detected. The maximum range claimed for the new radar is 75 nautical miles. If an off-center apparatus is used at the same time, it is said to be possible to shift the center of the reflection so that a sphere three times as large as the field can be caught. The new radar is priced at 2 million yen ($5,556) for an alternating-current radar and 2.2 million yen ($6,111) for a direct-current unit. (Nihon Keizai, November 10, 1965.)

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FISH-FINDER FOR TRAWL GEAR DEVELOPED:

A new wireless remote-control fish-finder for deep-water trawling, reputed to be the first of its kind has been developed by the

Japan (Contd.):

Furuno Electric Company of Japan. The equipment consists of a 200-kilocycle ultrasonic wireless transmitter (attached to the trawl net) which probes the adjacent area and transmits signals to the trawl vessel through a 50-kilocycle ultrasonic receiver, which is towed ahead of the net. Readings are taken by a recorder on the vessel. This new gear (which is said to enable continuous shipboard observation of fish entering the net, condition of net, obstacles, and clearance of the net above the bottom) was tested successfully by several large Japanese stern trawlers operating in the North Pacific Ocean. It is reported that use of this equipment makes it possible to eliminate net damages caused by overcatch, reduce operating time, avoid snagging, as well as recover lost nets (by tracing signals). The gear, which is made to withstand water pressure to a depth of 1,200 meters (3,936 feet), has a range of 2,000 meters (6,560 feet), and is said to perform without fault at vessel speeds of up to 8 knots. (Suisan Keizai Shimbun, October 21, 1965.

Republic of Korea

TUNA FLEET EXPANSION CAUSES CONCERN IN JAPAN:

Japanese tuna industry circles are concerned about the possibility of fishing competition, particularly in the Atlantic, from South Korea's expanding tuna fleet, according to an article in the Japanese periodical Nihon Keizai, October 31, 1965. The article stated:

(1) At least 21 tuna vessels are being built in South Korean shipyards with financial aid from United States interests.

(2) At least 76 tuna vessels are to be imported by South Korea from a French-Italian group.

(3) Many of the new Korean vessels are expected to enter the Atlantic tuna fishery, causing competition in an area which has been monopolized by Japan.

(4) Japanese tuna fishing interests are concerned about their declining catch rates and would prefer that other countries not expand their tuna fisheries.

(5) The proposed Japanese fishery aid funds (US$90 million) for Korea under the pending normalization agreement between the two countries could increase competition rather than cooperation between Japanese and Korean fisheries.

The article concluded by calling on the Japanese Government to consider the competitive position of the Japanese tuna industry in any adjustment measures that might be proposed.

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TUNA VESSELS IMPORTED FROM JAPAN:

Since 1962 Japan has exported to South Korea a total of 42 tuna long-line vessels, consisting of 24 145-ton, 8 175-ton, and 10 215-ton vessels. Of those, 14 145-ton vessels were delivered as complete vessels and the remaining 28 exported in knockdown form for assembly in Korea. Of the 42 vessels, 27 were exported to South Korea in 1965. Included were 11 145-ton refrigerated carrier vessels which were later converted into tuna long-liners at the Japanese port of Shimonoseki. Those vessels were reported operating in the South Pacific out of Espiritu Santo, New Hebrides. The 16 other vessels, consisting of six 175-ton and ten 215-ton vessels, were exported in knockdown form. The six 175-ton vessels were expected to be based at American Samoa. (Suisancho Nippo, November 4, 1965.)

Mexico

SHRIMP FISHERY TRENDS, JANUARY-SEPTEMBER 1965:

The Mexican West Coast shrimp industry ended the 1964/65 season in mid-July 1965 with the lowest catch in many years. Excellent fishing in the Gulf of Mexico did not offset the decline on the Pacific, and exports to the United States dropped sharply. United States imports of shrimp from Mexico totaled 35.2 million pounds in January-September 1965 as compared with 42.9 million pounds in the same period of 1964.

The outlook for the 1965/66 Mexican shrimp season is uncertain. The West Coast lagoons opened to shrimp fishing on September 1, 1965. For that minor segment of the fishery the ini-

Mexico (Contd.):

tial catches were better than in the previous year.

Fig. 1 - Part of Mexican shrimp fleet at the dock in Mazatlan.

Ocean fishing commenced on September 15, 1965, with indifferent catches through the end of the month. Contract negotiations between vessel owners and fishermen's cooperatives kept most vessels in port during September. Agreement was reached only as a result of Presidential intervention. The cooperatives now receive 54 percent of the proceeds instead of 45, but pay a larger share of the operating expenses.

With the agreement signed, the West Coast fleet was ready to put to sea September 30,

Fig. 2 - Unloading heads-on shrimp from tender-skiffs at Mazatlan. Shrimp trawlers in right background; general-purpose fishing vessel from Manzanillo in left background.

1965, although many vessels were still repairing damage from the hurricane which struck Mazatlan. The storm sank over 20 vessels. (United States Embassy, Mexico, D.F., October 23, 1965.)

Note: See Commercial Fisheries Review, December 1965 p. 73.

Mozambique

SHRIMP FISHERY OFF COAST SHOWS PROMISE:

Commercial fishing operations have been started on a modest scale to exploit the rich shrimp grounds off the Mozambique coast. Those grounds have been carefully studied and tested by French fishery consultants for several months and the results show that they have an impressive potential.

This new fishing enterprise is being initiated by a Portuguese-South African backed company. A substantial part of the shrimp catch will be exported to restaurants and hotels in South Africa, the United States, and on the Continent of Europe. The company also hopes to become a major supplier of fishery products to Mozambique, including a wide range of canned and frozen fish and shellfish.

Two of the four specially equipped trawlers which have been chartered by the firm started fishing off the coast at the beginning of July 1965. The other two vessels were to join them by the end of August.

Research and test trawling has shown that the shrimp beds are extremely rich and average catch rates were reported comparable with those in the Gulf of Mexico. Catches off the Mozambique coast were reported consistent over the whole area trawled, and test fishing results have suggested that the shrimp trawling season could extend for 9 months of every year. (The South African Shipping News and Fishing Industry Review, September 1965.)

Note: See Commercial Fisheries Review, June 1965 p. 65.

Pakistan

STATUS OF FROZEN FOODS INDUSTRY UNDER SECOND FIVE YEAR PLAN:

Under Pakistan's Second Five Year Plan (1960-65), an expenditure of 10.6 million rupees

Pakistan (Contd.):

(US$2.2 million) was proposed for the construction of processing and freezer plants and canneries for shrimp and other fishery products. That sum was later increased to 20.5 million rupees ($4.3 million).

Some 20 shrimp freezing and processing plants are either operating or in the planning stage for the entire country, most of them located in or around Karachi. Since each plant has a daily freezing capacity averaging 10 long tons (2,240 pounds) when operating 6 days a week, the combined annual capacity has a potential of about 50,000 tons.

Pakistan exports frozen shrimp and other fishery products mostly to the United States, India, and the United Kingdom. In fiscal year 1963/64 Pakistan exported about $15 million worth of frozen fishery products (including shrimp) and canned foods.

Pakistan's import controls are based on the Imports and Exports (Control) Act of 1950 which empowered the Government of Pakistan to "prohibit, restrict, or otherwise control the import or export of goods of any specified description." Commercial imports into Pakistan are subject to import licensing regulations, with the import policy announced semiannually, and the size and composition of imports governed by the country's balance of payments position. Except for single country licenses issued under bilateral trade agreements, or barter or loan arrangements, import licenses are valid for all countries.

There are five can and carton manufacturing firms in Pakistan that produce containers of acceptable quality. However, most canneries and processors of shrimp and other fishery products for export prefer to import their container and packaging supplies because of superior finish, and their foreign sales representatives generally arrange to supply them with printed labels and other packaging materials.

With continued industrialization and development a prime goal of Pakistan's Third Five Year Plan, there is a large and steadily growing market for canning machinery and packaging materials. Pakistani industrialists welcome investment capital and joint ventures with United States firms interested in setting up manufacturing facilities in a country in which both investment climate and inducements appear to be favorable.

Note: See Commercial Fisheries Review, October 1965 p. 91.

Peru

FISH MEAL PRODUCTION AND EXPORT FORECAST FOR 1965:

Peruvian fish meal stocks at the start of 1965 were estimated at 270,000 metric tons. In 1965, Peruvian fish meal production is forecast at 1.1 million tons and exports at 1.3 million tons. (United States Embassy, Lima, November 16, 1965.)

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FISH MEAL INDUSTRY--SHORT- AND LONG-TERM OUTLOOK:

Summary: Peruvian fish-meal production was expected to drop sharply in the last quarter of 1965 due to a relatively poor anchoveta spawning season in 1964. The projected decline seems to indicate the need for a conservation program which will probably take the form of a closed fishing season that might vary in length from year to year, depending on spawning results. With stocks being fully exploited, the Peruvian fish-meal industry will no longer be the growth industry that it has been. For the industry, still burdened with excess capacity, the expected drop in output in 1965 and the dimmed longer term prospects for growth point to a continuing process of consolidation and concentration.

Despite high prices for fish meal, there will be some difficult problems ahead. Even at the record output levels of 1964, Peruvian fish-meal plants overall worked at only an estimated 65 percent of capacity. With fixed costs very high, any significant drop in plant use drives unit costs up sharply. Thus it seems that the prospect is for continued plant closings, some decline in employment, and a continuing trend toward more concentration of ownership within the industry.

Production Prospects: Scientists at the Peruvian Instituto del Mar base their catch forecasts on the following reasoning: The life cycle of the anchoveta is about 18 months. Under current conditions of heavy fishing, the quantity of fish landed is a function of the "spawning recruitment." About 4 months are

Peru (Contd):

required for anchoveta spawn to reach commercial size. The extraordinarily large catch of 1964, when meal output rose 38 percent, was attributed to a heavy spawning recruitment in 1963. But the 1963 year-class was fished out when the normal seasonal slump arrived in June 1965. So the anchoveta catch in late 1965 depended on the 1964 year-class, which was about 50 percent below the record 1963 level. Fourth quarter catches in 1965 were therefore expected to be only half of those in the same period of 1964. In January 1966, anchoveta from the 1965 class will bolster the available supply, but to what extent is not yet known.

In the Peruvian fish meal industry, the end of an era may have been reached. From 1965 through 1964, Peruvian fish meal production expanded at a compound annual rate of more than 50 percent. Peruvian fish meal production is now expected to level off with annual production volume probably varying from around 1963's 1.1 million tons to 1965's (forecast) 1.5 million tons. (United States Embassy, Lima, September 22, 1965.)

Poland

NORTHWEST ATLANTIC FISHERY TRENDS, JULY-AUGUST 1965:

The largest concentration of Polish vessels on Georges Bank during the summer of 1965 appeared in September when 5 Polish stern trawlers and 1 side trawler were seen fishing on Cultivator Shoals. Earlier in the summer, 11 Polish stern trawlers were operating off Labrador. The buildup of the Polish fleet on Georges Bank may indicate a trend toward an increased Polish fishing effort in waters off the United States coasts. Poland's largest fishery research vessel, the 800-ton Wieczno, completed a 35-day survey off Labrador in May 1965 and was scheduled to conduct a similar survey on Georges Bank.

Following are excerpts from the Polish Maritime News, September 1965, describing Polish North Atlantic fishery activities in July-August 1965:

In early August 1965, the Polish research vessel Wieczno left Gdynia for an exploratory trip to fishing grounds in the northwest Atlantic. A team of Polish scientists planned to test new types of trawls. (Editor's Note: The Wieczno's exact area of operations during the August cruise is not known.)

The Polish freezer trawler Finwal left on her maiden voyage for the Atlantic grounds of Georges Bank. The vessel is the second Polish "B-18-type" trawler of 1,300 deadweight tons dispatched to the area. Poland's ODRA Deep-Sea Fishing Enterprise intends to start systematic fishing on Georges Bank with large freezer-trawlers.

Polish factory trawlers operating on the northwest Atlantic grounds had daily catches of only about 15 to 20 metric tons during July and the first half of August 1965.

On her maiden voyage to the northwest Atlantic, the Polish freezer-trawler Andromeda (B-15 or Leskov class) caught a total of 2,235 tons of ocean perch, cod, and flatfish.

Polish advisers are employed on two Rumanian factory trawlers built in Japan. On each of the vessels the following 5 Polish specialists are employed for a period of 6 months: captain, fishing officer, processing-machines engineer, and 2 fishermen. The Rumanian factory trawlers are operating on the Atlantic grounds.

Note: See Commercial Fisheries Review, Nov. 1965 p. 32; Oct. 1965 p. 41 and 94; May 1965 p. 85.

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LANDINGS AND FISHERY TRENDS, JANUARY-JUNE 1965:

In the first half of 1965, the Polish fishing fleet gained 1 new factory trawler, 3 freezer trawlers, and several cutters. Polish landings of salt-water fish in January-June 1965 amounted to almost 127,000 metric tons, a gain of about 14,000 tons over the same period of 1964. The increase was due mainly to heavier landings of flatfish, ocean perch, North Sea herring, and unclassified fish from African fishing grounds. Landings were down somewhat for mackerel and sprat. During the first half of 1965, Polish vessels supplied the their home market with 63,000 tons of fish and fishery products--a gain of 1 percent over the same period of 1964.

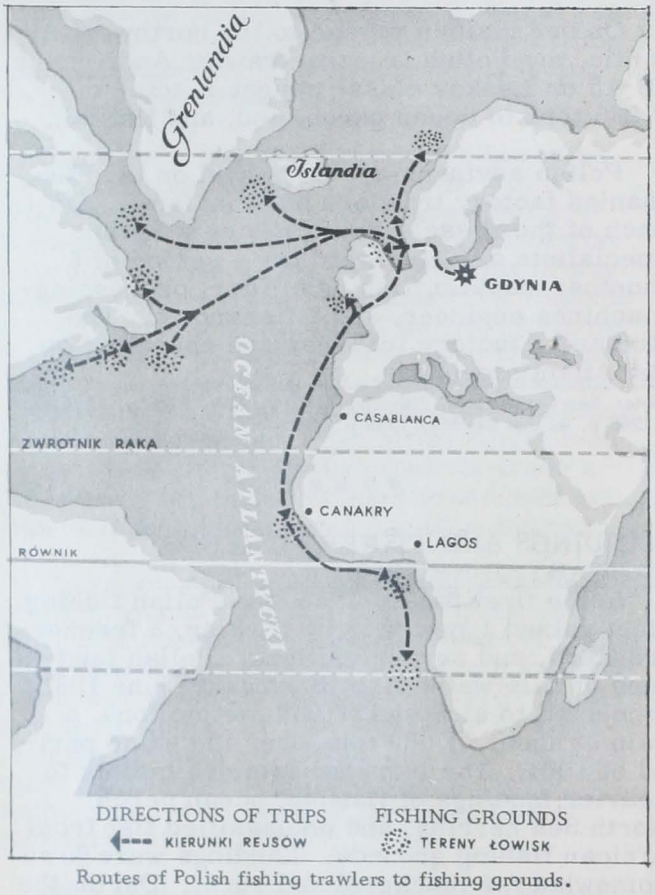
A new fishery cold-storage and processing plant as well as a repair yard for cutter vessels are being built at the Polish harbor of

Poland (Contd.):

Polish Landings of Salt-Water Fish, January-June 1965[1] with Comparisons

Species	State-Owned Enterprises	Cooperatives	Private Fishermen	Total First Half 1965	Total First Half 1964	Total Year 1964
	(Metric Tons)					
Salmon	0.5	59.9	32.6	93.0	129.5	355.9
Eel	0.1	13.0	62.2	75.3	68.0	153.7
Baltic herring	3,954.4	1,783.3	297.2	6,034.9	6,201.8	18,844.2
North Sea herring	25,784.4	-	-	25,784.4	21,273.6	94,371.8
Sprat	12,029.7	2,188.5	729.0	14,947.2	15,520.9	17,693.4
Cod	28,951.3	5,916.8	4,033.8	38,901.9	39,618.4	53,563.5
Flatfish	5,761.0	216.4	355.3	6,332.7	2,406.7	6,472.0
Mackerel	4,559.0	-	-	4,559.0	6,696.4	10,653.9
Ocean perch	14,483.6	-	-	14,483.6	11,388.2	21,414.6
Other salt-water fish[2]	14,641.4	36.1	96.5	14,774.0	8,305.3	18,116.3
Brackish-water fish	-	826.9	168.5	995.4	1,099.6	2,745.5
Total	110,165.4	11,040.9	5,775.1	126,981.4	112,708.4	244,384.8

1/Preliminary.
2/Includes catch off Africa.



Routes of Polish fishing trawlers to fishing grounds.

Ustka at a cost of about 100 million zloty (US$4.17 million).

Polish vessels of Gryf cooperative of Szczecin planned to land about 500 tons of herring in the summer of 1965 at the Norwegian port of Hangesund, for Norwegian buyers. (Polish Maritime News, No. 85, September 1965.)

Notes: (1) Polish zloty 24.0 equal US$1.00.
(2) See Commercial Fisheries Review, June 1965 p. 74, and Dec. 1964 p. 110.

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FISHING VESSELS MAY BE ORDERED FROM DENMARK AND EAST GERMANY:

Factory stern trawlers may be built in Denmark for Poland's fishing fleet. Negotiations to that end were being conducted in the fall of 1965 under the new Danish-Polish trade agreement. The discussions were concerned with the construction of 6 to 10 "B-22-type" factory stern trawlers--an improved version of the "B-15." (The latter has an overall length of about 279 feet, breadth 45 feet, draft 18 feet, gross tonnage 2,670, speed 12.5 knots, cruising range 70 days, and a crew of 110.)

Reports indicated that a final decision on the construction of the Polish trawlers might be made in January 1966. The contract might call for 10 B-22's or, as an alternative, 6 B-22's and 2 or 3 refrigerator transport vessels, the total cost being the same in each instance.

Specific data on the B-22 design are not available, but it has been suggested that they might carry four lines of filleting machines--to handle cod, haddock, pollock, ocean perch, and flatfish--and contact plate freezers with a capacity of 20 tons in 24 hours as well as blast freezers with a capacity of 10 tons in 24 hours. It is possible that Poland may wish to build their first vessels with contact freezers in a foreign yard where such equipment as plate freezers might be easier to obtain.

Poland (Contd.):

Blast freezers on current Polish factory trawlers are unable to produce satisfactory the precisely dimensioned fish blocks needed to meet the terms of a contract a large Polish State fishing enterprise has with a United States firm. The main reason, however, for the proposal to build Polish vessels in Denmark is said to be the Danish-Polish trade agreement which requires that Poland buy Danish products in return for the coal and other products it sells to Denmark.

It has also been mentioned that Poland might order five fishing vessels similar to the B-22's from East Germany in exchange for the equivalent in trading, or transport vessels to be built in Poland. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, November 17, 1965.)

Portugal

TUNA FISHERY TRENDS, 1961-64:

Although Portugal is in an excellent geographic location for fishing tuna in waters around the Madeira Islands, Azores, Cape Verde, and in the South Atlantic off the Angola coast, landings of that species represent only a small fraction of Portugal's total commercial fishery landings. The reason is because tuna fishing and facilities have not been modernized.

With the establishment of the Tuna Fishing Guild in November 1960, efforts have been made to change this situation by interesting fishery operators in organizing companies for carrying out plans for the construction of an oceangoing fleet and shore refrigerated plants. Construction of a refrigerated plant was completed this past year at Porto Novo, Madeira, with a warehousing capacity of 250-750 tons, and studies were under way for the construction of a similar plant at Vila Real de Santo Antonio in Portugal. In the Azores, the low prices for tuna have not yet given the industry the necessary incentive to carry out a plan of this nature. There are, however, plans for the construction of a refrigerated plant at Horta in the Azores which will be built by a company recently formed. The new company will also build two tuna vessels with refrigerated holds.

Table 1 - Portuguese Landings of Tuna and Similar Species by Areas, 1961-64

Areas	1964			1963			1962			1961		
	Quantity	Value		Quantity	Value		Quantity	Value		Quantity	Value	
	Metric Tons	1,000 Es.	US$ 1,000	Metric Tons	1,000 Es.	US$ 1,000	Metric Tons	1,000 Es.	US$ 1,000	Metric Tons	1,000 Es.	US$ 1,000
Algarve	521	4,916	1,699	640	5,929	2,049	805	7,442	2,572	1,541	12,211	4,219
Madeira	3,438	12,818	4,429	2,847	11,246	3,886	2,799	11,125	3,844	1,123	5,904	2,040
Azores	1/4,472	11,587	4,004	9,226	23,867	8,247	6,138	14,317	4,947	5,196	11,829	4,087
Total	2/8,431	29,321	10,132	2/12,713	41,042	14,182	2/9,742	32,884	11,363	2/7,860	29,944	10,346

1/Data are for 11 months.
2/Does not include tuna caught by two vessels for which data are unavailable.
Note: 1,000 escudos equals about US$35.00.

Work on the construction of two other steel-hulled tuna vessels, with a cargo capacity of about 150 tons, was expected to begin shortly. Their home ports will be in the Province of Algarve in the southern part of Portugal and in Madeira.

According to preliminary data from the Tuna Fishing Guild, landings by registered operators in 1964 (5 fixed traps in the Algarve, 48 vessels in Madeira, and 72 vessels in the Azores) of tuna and tuna-like species dropped 34 percent from the previous year's landings, and the value was down 29 percent.

Table 2 - Metropolitan Portugal's Use of Tuna Landings, 1963-64

By Areas	1964	1963
	. . . (Metric Tons)	
For Canning:		
Algarve	461	507
Madeira	1,834	1,444
Azores	4,471	9,226
Total for canning	6,766	11,177
Local Consumption:		
Algarve	61	133
Madeira	1,604	1,403
Total for local consumption	1,665	1,536
Total landings	8,431	12,713

Data show that the five traps in the Algarve continued to yield smaller and smaller catches from year to year, and that the 1964 land-

Portugal (Contd.):

ings in Madeira increased 20.7 percent from the previous year. A sharp drop of 52 percent in landings at the Azores is largely attributed to bad weather which kept many of the vessels from leaving port. (United States Embassy, Lisbon, May 29, 1965.)

South Africa Republic

PELAGIC SHOAL FISH CATCH, JANUARY-JULY 1965:

South Africa Republic: The Cape west coast shoal fish catch for the 7-months season through July 1965 was 222,920 short tons pilchards, 44,753 tons maasbanker, 43,967 tons mackerel, and 129,457 tons anchovy. The total catch was 441,097 tons. In the same period of 1964 the total catch was 387,353 tons, made up of 282,301 tons pilchards, 22,121 tons maasbanker, 57,222 tons mackerel, and 25,709 tons anchovy.

The January-July 1965 Cape shoal catch yielded 102,117 short tons of fish meal, 4,276,194 gallons of fish body oil, 1,453 short tons of canned pilchards, 4,761 short tons of canned maasbanker, and 4,933 short tons of canned mackerel.

South-West Africa: In the Territory of South-West Africa, the shoal catch in January-June 1965 totaled 516,163 short tons and consisted of 515,879 tons pilchards and 284 tons anchovy. (South African Shipping News and Fishing Industry Review, August and September 1965.)

U.S.S.R.

SHRIMP FISHING ACTIVITY IN GULF OF ALASKA INCREASED:

A Soviet shrimp fishing fleet has been sent to the Gulf of Alaska for the first time by a Vladivostok marine products trading company controlled by the Soviet Far Eastern Main Fisheries Administration. At the end of October 1965, that fleet (made up of 7 medium freezer trawlers and some support vessels) started operations east of the Shumagin Islands, with additional vessels scheduled to join them later. Most of the shrimp caught were to be exported, mainly to Japan. Up to that time, commercial shrimp fishing in the eastern Bering Sea supervised by that Soviet Administration was mostly intermittent.

Extensive scientific research by the Soviets had shown abundant resources of shrimp throughout the eastern Bering Sea and Northeast Pacific but they lacked proper fishing vessels to start that fishery. In 1962-63 the Soviets began mass production of a new type of medium trawler with freezing capacity (the so-called Maiak or SRTM class of trawler), and decided to enter the shrimp fishery on a worldwide basis.

The first SRTM's were added to the Soviet Pacific fishing fleet in late 1963. By spring 1964, two vessels of that type began shrimp fishing operations north of the Pribilof Islands in an area normally fished by the Japanese. The Pribilof operations, however, were soon discontinued and in late October 1964 the Soviets began a limited shrimp fishery near the Two Headed Island southwest of Kodiak Island in an area also fished by the Japanese. That was the first known Soviet commercial shrimp fishery in the Gulf of Alaska.

In 1965, the Soviets continued their sporadic shrimp fishing operations in the Gulf of Alaska from February until August. The two principal fishing areas were off Kodiak Island (until early May) and east of the Shumagin Islands. It was not until October 1965 that commercial operations on a larger scale were begun.

The Maiak class side trawlers were originally built to chill and freeze herring and bottomfish. But with the constantly decreasing demand for herring, many of them were assigned to shrimp fishing. With a crew of about 30, those 167-foot long vessels with a gross tonnage of 700 tons can freeze up to 6 metric tons a day. Frozen products are kept at 0° F.

The Soviets are also reported to be fishing for shrimp in the Atlantic Ocean off the African coast, in the Indian Ocean (Gulf of Aden and Persian Gulf), and in the South Atlantic and Antarctic Oceans.

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U. S. S. R. (Contd.):

DEEP-WATER TRAWLING IN BARENTS SEA:

In 1964, the fishing vessels of the Soviet Northern Fisheries Administration (with headquarters at Murmansk) began to fish in the Barents Sea for halibut at depths of from 700-900 meters (2,300-2,950 feet). From February to mid-June 1965, Soviet catches taken by deep-water trawling in the Barents Sea amounted to 26,700 metric tons of which halibut catches amounted to 8,000 metric tons. At least 18 large trawlers were involved in that fishery. (Rybnoe Khoziaistvo, No. 8, 1965.)

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TRAWLING FLEET OFF SOUTH-WEST AFRICA IN JULY 1965:

About 40 Soviet fishing vessels were reported to be operating about 100 miles north of Walvis Bay in South-West Africa during July 1965. The Soviets have maintained trawling operations off South-West Africa since 1961. (The South African Shipping News and Fishing Industry Review, September 1965.)

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OFFSHORE FISHING FLEET STATUS, MAY 1965:

In May 1965, the Soviet Union operated over 80 base and motherships in support of her fishing vessels, according to available reports. More than 70 percent of all large ocean-going Soviet fishing vessels are less than 10 years old. The Soviet trawler fleet alone numbers an estimated 4,000 units employing about 180,000 men. The total number of persons employed in the Soviet fishing industry reportedly exceeds 600,000.

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PAIR FISHING INCREASES HERRING CATCHES IN 1964:

In 1964, the Soviet Far East Fisheries Administration introduced pair fishing on a large scale. In the entire Soviet Far East Fisheries Administration, 34 pairs of vessels fished in 1964 and caught about 30,000 metric tons of herring. The Soviets claim pair fishing increases catches and reduces costs. For instance, Kamchatka fishermen caught 50,000 tons of herring in 1964 instead of the planned 33,400 tons. In the Kamchatka fisheries, the cost of catching 100 kilograms (224 pounds) of herring was reported to be 1.01 rubles (US$1.12) for pair fishing as compared with 3.24 rubles ($3.60) for drift-net fishing. In the entire Far East Fisheries Administration, savings of about 669,000 rubles ($742,590) were reported as a result of the introduction of pair fishing in 1964.

The Soviets also introduced pair fishing in the Western Fisheries Administration, which has headquarters at Riga on the Baltic Sea. In 1964, that Administration caught 70,000 metric tons of herring by pair fishing, and the cost decreased from 12 rubles ($13.32) per 100 kilograms of herring caught with drift nets to 2.5-3 rubles ($2.78-3.33) per 100 kilograms when herring was caught by pair fishing. (Rybnoe Khoziaistvo, No. 8, 1965.)

Note: 0.9 Soviet ruble equals US$1.

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EXPLORATORY FISHERY EXPEDITION TO EASTERN PACIFIC:

To find new fishing grounds for tuna, mackerel, sardines, and other fish, the Soviets have begun a major expedition known as the "First Joint Oceanographic and Fishery Research Expedition to the Eastern and Tropical Pacific." Two of the six research vessels participating left the Soviet Far East port of Vladivostok in mid-October 1965. They are the Lira and the Vnushitelnii. The remaining four vessels, among them the Iskatel and the Kanopus, were to leave before the end of October.

Over 40 fishery scientists and oceanographers belonging to the Soviet Pacific Scientific Research Institute for Fisheries and Oceanography (TINRO) at Vladivostok, or to the Institute of Zoology at Leningrad are participating. The main purpose of the expedition is to find new fishing grounds for the rapidly expanding Soviet fishing fleet.

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SOVIET FISHING WITH LIGHTS AND ELECTRICITY TO BE EXPANDED:

In 1960, the Soviet Union caught less than 200,000 metric tons of fish by electric-light and electric-field fishing. Much greater use of those fishing methods is outlined in the Soviet 5-year plan for 1966-1970. According to that plan, by 1970 over 700 Soviet vessels are to be fishing with electrical current and/or electric lights. They are expected to catch almost one million metric tons of fish. The largest expansion with those two methods will

U.S.S.R. (Contd.):

Pump fishing with light attraction for sprat (kilka) in the Caspian Sea off Baku aboard a Soviet vessel. The man on the left stands on the drive-shaft housing between the electric driving motor (left) and the fish pump (near his right foot). The suction hose can be seen passing under the fish box and over the railing on the right. The man is holding on to the water/fish separator; the fish trickle down the chute into a hopper (center) while the water flows back into the sea.

come in the Pacific saury fishery and the Atlantic tropical sardine fishery. Electric-light fishing for Black Sea kilka (sprat) is already heavily exploited. (Rybnoe Khoziaistvo, No. 8, 1965.)

United Arab Republic

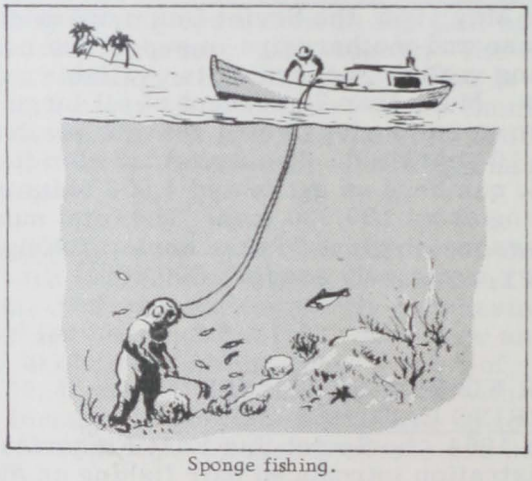
FISHERY TRENDS, 1965:

Summary: Major developments in the fishing industry of the United Arab Republic (U.A.R.) in 1965 included the signing of the U.A.R-U.S.S.R. fishing agreement on June 1, 1965; the opening of the Anfoushy Secondary School for Aquatic Resources in Alexandria; the planning of an institute of marine sciences at university level; and the Egyptianization of sponge fishing off the country's Mediterranean coast.

Anfoushy Secondary School for Aquatic Resources: The Anfoushy Secondary School for Aquatic Resources opened in Alexandria on September 18, 1965, with a student body of 150. Preparatory work for the school had been done by a fisheries advisor loaned to the Egyptian General Organization for Aquatic Resources (GOFAR) by the U. S. Ford Foundation. Plans for the school envision a 3-year course including studies in general science, mathematics, languages, and social sciences as well as technical subjects relating to the fishing industry such as navigation, mechanics, marine biology, and meteorology. The Ford Foundation has provided a grant of US$90,000 for the school.

Institute of Marine Sciences and Fisheries: According to press reports, the U.A.R. Ministry of Scientific Research has prepared a plan for a new Institute of Marines Sciences and Fisheries. Further planning for the Institute is being done by the University of Alexandria and the GOFAR, working with a scientist from Iowa State University assigned to the project by the Ford Foundation.

Sponge Fishing: In past years the U.A.R. Government gave Greek fishermen exclusive rights to fish the Egyptian coast of the Mediterranean for sponges. The Greeks were allowed to keep 80 percent of the catch, turning over the balance to the Egyptians. In 1965, the Egyptians took over all sponge fishing in their coastal waters, and the concession for the area between Alexandria and the Libyian border was given to an Alexandria firm which is affiliated with GOFAR. That company owns and operates 9 sponge fishing vessels, 4 supply ships and 1 survey launch. They are manned entirely by Egyptians, each vessel having a crew of 10 or 11 men.



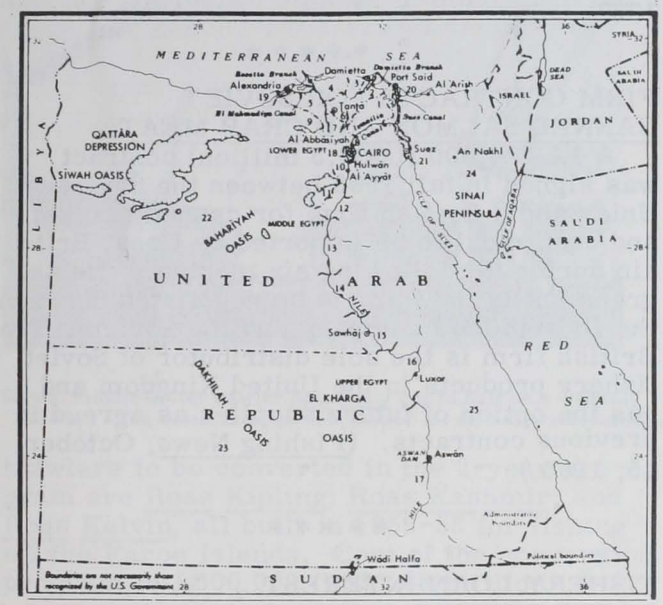
Sponge fishing.

The company has divided its concession area into 4 parts, fishing only 2 sections each year in order to allow sponges to mature. A new sponge bed has been discovered east of Sidi Abd el Rahman, where the most valuable of the three types of Egyptian sponges, the "Turkey cup," is found. For that type of sponge, Japanese buyers are prepared to pay $90 a kilo. For the "Zimoga" sponge, the Japanese offer $76 a kilo.

United Arab Republic (Contd.):

The Egyptian sponge season lasts from May until October. By mid-September 1965, according to an official source, the Egyptian sponge catch amounted to 3.5 tons and it was hoped that another 1.5 tons would be added before the end of the season.

Although the sponge has been replaced by the synthetic article, Egyptian sponges are still highly prized for polishing china and tanning leather.



Lake Fisheries: There has been a lengthy dispute between the proponents of drying up the Egyptian coastal lakes and reclaiming the land for agriculture on the one hand, and on the other those who argue that the lakes should be kept for fishing and stocked. It now appears that the argument, at least as far as Lake Mariut is concerned, has been resolved in favor of the fishermen since it has been proved conclusively that the value of fish caught in the lake far exceeds what could be earned by reclaiming and farming the land.

In 1962, the catch in Lake Manzala near Port Said was estimated at 170 metric tons and that in Lake Idku at 17 tons. It was estimated that the 1965 catch in Lake Burullus (east of Rosetta) would reach 1,000 tons of fish, and that the Lake Burullus catch could be increased to 2,000 tons.

Experts in the Hydrobiological Institute in Alexandria have been studying ways of acclimatizing marine fish to life in Lake Qarun, since fresh-water fish in Lake Qarun are now almost extinct due to the increasing salinity of the water. An officer of the Institute stated that the salinity of the lake has now reached 28 parts per thousand as opposed to 38 per thousand in the Mediterranean. He reported that mullet and sole fry have been introduced in Lake Qarun with excellent results.

The Institute has also prepared a study on the "Lake Nasser Fisheries Development Plan." Lake Nasser will be created by the Aswan High Dam.

In order to increase the fish population in existing lakes, the Hydrobiological Institute has established a fish farm on Lake Mariut, and £E 35,000 (US$80,500) was devoted to that project in 1965. Of a total of 1,000 feddans (1,038 acres) in the fish farm, 300 feddans (311 acres) have been set aside for fry.

On November 5, 1964, the Progres Egyptien reported that large blue crabs originating in the Indian Ocean have now migrated north up the Red Sea, into the Mediterranean, and thence into the Egyptian coastal lakes where they have multiplied and become a serious threat to the fish of the lakes. The Hydrobiological Institute has now embarked on a dual program to teach fishermen how to catch those crabs on the one hand and to teach the Egyptian public how to cook them on the other.

Coastal Fisheries Development: In a ceremony in Alexandria on September 4, 1965, the Governor of Alexandria turned over to representatives of the city's Fishermen's Cooperative Society 10 motorized fishing boats. The press reported that 60 such boats had been distributed to fishermen's cooperatives in Koseir, Hurghada, and Tor in line with a Government effort to convert the Egyptian fishing fleet from sail to motor.

In the planning stage are the construction of a fishing port at Damietta, fishing projects in the Red Sea and Rosetta, and a plant for the extraction of oil from fish of the Red Sea.

Marketing: In mid-July 1965, the press reported complaints about the reduced quantity of fresh fish offered in the Alexandria market. Le Progres Egyptien announced on July 14 that the supply had fallen 36 percent in the first 4 months of 1965 from that in the same period of 1964. Perhaps because of that shortage as well as because of reported increases in the price of fish, the Govern-

United Arab Republic (Contd.):

ment announced in September 1965 that fish would henceforth be marketed through Government-controlled cooperatives. Prices were uncontrolled during the month of October, but ceilings were placed on them in November to be revised every 2 weeks. (United States Consulate, Alexandria, November 10, 1965.)

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FOREIGN TRADE IN FISHERY PRODUCTS, 1964:

Imports: In 1964, imports of fishery products by the United Arab Republic (UAR) totaled 6,201 metric tons valued at ŁE604,458 (US$1,390,253). Canned and preserved fishery products accounted for 57 percent of the quantity and 98 percent of the value of the 1964 fishery imports. Included in that category were 756 tons of canned tuna, 607 tons of cured herring, 212 tons of other cured fish, and almost 2,000 tons of other canned or preserved fishery products.

Exports: Fishery exports by the UAR in 1964 totaled 2,210 tons valued at ŁE805,823 ($1,853,393). The 1964 shipments of fresh and frozen shrimp, the main fishery export item, totaled 1,355 tons valued at ŁE613,651 ($1,411,397). The exports also included 111 tons of salted or dried shrimp, 572 tons of fresh or frozen fish, and 118 tons of cured fish. (United States Consulate, Alexandria, November 10, 1965.)

United Kingdom

SALES COMPANIES IN UNITED STATES FORMED BY BRITISH FOOD FIRM:

The overseas marketing organization of a large British food firm is to form two fishery sales companies in the United States. The two new companies will be mainly concerned with the marketing of frozen spiny lobster tails and shrimp from the parent company's fishery operations in Australia and the Middle East.

The two companies in the United States will have their headquarters in New York City and Los Angeles, Calif. The New York unit, being formed in association with a U.S. firm, will handle all United States East Coast and Midwest sales. The unit in Los Angeles, also in association with a U. S. firm, will be responsible for West Coast sales.

The managing director of the British food firm's International Division says that 1966 sales are estimated at over $5 million. In 1967, sales are expected to increase substantially as expansion programs in Australia and the Middle East get under way. Also, frozen fishery products of the British firm's subsidiary in St. Johns, Newfoundland, will be available for marketing in the United States in 1967.

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FIRM CONTRACTS FOR SOVIET CANNED SALMON AND CRAB MEAT:

A Ł1,250,000 (US$3.5 million) contract was signed in fall 1965 between the Soviet Union and a British firm for canned salmon and crab meat to be imported by Great Britain during the following six months. The agreement is the third to be negotiated between the British food company and the Soviets. The British firm is the sole distributor of Soviet fishery products in the United Kingdom and has the option of future supplies as agreed in previous contracts. (Fishing News, October 15, 1965.)

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FISHERY LOAN INTEREST RATES REVISED:

The British White Fish Authority rates of interest on loans made after October 2, 1965, are:

Fishing vessels of not more than 140 feet, new engines, nets, and gear: on loans for not more than 5 years, $7\frac{1}{4}$ percent (decrease $\frac{1}{8}$ percent); on loans for more than 5 years but not more than 10 years, $7\frac{1}{8}$ percent (decrease $\frac{1}{8}$ percent); on loans for more than 10 years but not more than 15 years, $7\frac{1}{8}$ percent (no change); on loans for more than 15 years but not more than 20 years, $7\frac{1}{8}$ percent (decrease $\frac{1}{8}$ percent).

The rate to processing plants for loans of not more than 20 years is unchanged at $7\frac{3}{4}$ percent.

The rates on loans made before October 2, 1965, are unchanged. (Fish Trades Gazette, October 16, 1965.)

Note: See Commercial Fisheries Review, Dec. 1965 p. 82.

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United Kingdom (Contd.):

NEW TRAWLERS FROM OLD HULLS:

Four middle-water trawlers are being lengthened and converted from steam to diesel power for distant-water fishing by a large British fishing company. In the fall of 1965, the Ross Kelly was cut in half in a Grimsby shipyard to enable a 23.5-foot prefabricated section to be inserted. The new section will lengthen the vessel to 163 feet. The other

Shows middle-water trawler Ross Kelly cut in half on a Grimsby slipway. The vessel is being lengthened for distant-water fishing.

trawlers to be converted in the 2-year program are Ross Kipling, Ross Kashmir, and Ross Kelvin, all built in 1956-58 for fishing off the Faroe Islands. Cost of the conversion program is £600,000 (US$1.68 million).

Since 2 other trawlers were similarly lengthened in 1963, their earnings have increased by 50 percent.

Yugoslavia

NEW TUNA VESSELS OUTFITTED FOR ATLANTIC FISHING:

In the fall of 1965, it was announced at a Yugoslav conference in Izola that three new Yugoslav tuna vessels would be outfitted as soon as possible for their maiden voyage to the Atlantic (probably off the West Coast of Africa). Previous reports indicate that those vessels are 145-foot purse seiners with a carrying capacity of 475 metric tons of tuna. They were built at Pula for a Yugoslav fishing company, also of Pula.

In 1963, Yugoslavia imported over 12,000 tons of Japanese frozen tuna, most of which was canned for re-export, according to Japanese reports.

In the past, Yugoslavia has been limited mainly to Adriatic fishing, and the country's annual catch has been only 20,000 to 25,000 tons of fish. A proposed 1964-1970 Development Plan calls for Yugoslavia to add 40 ocean fishing vessels to its fleet and to increase its annual catch to 120,000 metric tons by 1970.

Note: See Commercial Fisheries Review, Jan. 1965 p. 96; Sept. 1964 p. 115; Mar. 1964 p. 56.

JAPAN'S CULTURED PEARL INDUSTRY

Production of cultured pearls in Japan has risen to US$55.5 million a year. About 90 percent of the pearls are exported, and in 1963 exports totaled $46.6 million, double those in 1959. The United States now takes about 40 percent of exports, and Switzerland 20 percent. The remainder go to West Germany, Hong Kong, France, Italy, and India. (Australian Fisheries Newsletter, November 1964.)