

International

EUROPE

WEST EUROPEAN FISHERIES CONFERENCE SCHEDULED FOR OCTOBER 1963:

A West European Fishery Conference is scheduled to take place at Esbjerg, October 9-10, 1963. (Originally it was scheduled for September 11-12, 1963.) About 65 participants from 10 West European countries are expected. They will discuss problems involved in the extension of fishery limits, a common fishery policy in Common Market and EFTA countries, and technical matters such as the carrying of lights on vessels, destruction of gear by other vessels, crew quarters, etc. Denmark's recent experience with minimum price regulations also may be included. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, August 7, 1963.)

Note: See Commercial Fisheries Review, June 1963 p. 59.

EUROPEAN ECONOMIC COMMUNITY

DELAY SOUGHT IN PROPOSED WESTERN EUROPEAN FISHERIES CONFERENCE:

The European Economic Community (EEC) countries seek a delay of some months in the proposed Western European Fisheries Conference on access to fishing grounds and markets initiated by the United Kingdom and scheduled to take place in London in the fall of 1963, according to a July 26 report in a Copenhagen newspaper. The Common Market countries wish to wait until the end of the year in order that they may begin to develop their own common fisheries policy. At a meeting in Brussels, representatives of the six EEC Governments discussed, for the first time, the British proposal for the conference and agreed, in principle, that the EEC countries should participate, but an official response has not yet been made to the British invitation.

The permanent representatives in Brussels will discuss the question later, and it is expected that the European Common Market Commission, by the end of the year, will present the first proposal for a common fisheries policy to the Council of Ministers. The Common Market has no common policy on access to fishing grounds and access to markets, the matters to be discussed at the United Kingdom Conference.

France has the most reserved position among The Six, believing that there cannot be realistic discussions with third countries before The Six are in mutual agreement. In addition, France believes that organizing markets for fish and fish products is a question better suited to solving during next year's tariff discussions at GATT rather than at the London conference.

The French position comes as no surprise to other EEC and to European Free Trade Association (EFTA) fishery representatives. Earlier efforts to establish an EEC fisheries policy have failed because of France's unwillingness to have non-EEC nations participate in any way at a policy development meeting, and the desire of most of the other EEC countries that fishing nations such as the United Kingdom, Norway, and Denmark should be present as observers. (Regional Fisheries Attache for Europe, U. S. Embassy, Copenhagen, July 31, 1963.)

EUROPEAN FREE TRADE ASSOCIATION

FORMAL DECISIONS ADOPTED AT MEETINGS OF EFTA COUNCIL:

At the 16th and 17th meetings of the European Free Trade Association (EFTA) Council held in May 1963, nine Decisions (Decision Nos. 6 to 14) were adopted in accordance with articles of the Stockholm Convention.

Decisions concerning (1) acceleration of the Convention timetable for the elimination

of import duties, (2) acceleration of the elimination of quantitative import restrictions, and (3) establishment of an Economic Development Committee, which were adopted at the Council's 16th meeting on May 10, follow:

Decision No. 6: Acceleration of the Convention timetable for the elimination of import duties. The Council decided that the timetable in paragraph 2 (a) of Article 3 of the Convention for the elimination of the final 50 percent of the import duties concerned should be replaced by the following revised timetable:

December 31, 1963: reduction to 40% of the basic duties.

December 31, 1964: reduction to 30% of the basic duties.

December 31, 1965: reduction to 20% of the basic duties.

December 31, 1966: complete elimination of the import duties concerned.

Decision No. 7: Acceleration of the elimination of quantitative import restrictions. The Council decided to advance to December 31, 1966, the date in paragraph 2 of Article 10 of the Convention by which quantitative import restrictions on intra-EFTA trade in industrial goods should be eliminated. As a consequence of this, the date January 1, 1970, in paragraph 3 of Article 10 was changed to January 1, 1967.

Decision No. 9: Establishment of an Economic Development Committee. The Council decided to establish an "Economic Development Committee" to examine such questions in relation to economic development in Member States as the Council may refer to it, including questions in this field relating to circumstances created by the dismantling of trade barriers between Member States, and in appropriate cases to study the ways and means of promoting or facilitating collaboration among them in financial, technical and similar matters. The Committee is required to submit a report as soon as possible, and in any case before July 1, 1964. (EFTA Bulletin, July 1963.)

INTERNATIONAL PACIFIC SALMON FISHERIES COMMISSION

DIVISION OF 1963 PINK SALMON CATCH CONSIDERED:

The International Pacific Salmon Fisheries Commission met on August 20, 1963, to consider the serious problem involved in the division of the 1963 pink salmon catch in North Pacific Convention waters between the fishermen of Canada and the United States. Canadian fishermen had harvested only 840,000 pink salmon to that date in Convention waters as compared with 1,460,000 fish by United States fishermen for the same period ending August 19. Reports to the Commission for August 19 revealed that the day's catch showed a gain for United States fishermen with their catch at 215,000 pink salmon while the Canadian catch was only 155,000 fish.

The main Fraser River run was not expected to start until the last week in August when the Puget Sound run would be tapering off in Convention waters. "We can only hope to fullfill our obligation under the Pink Salmon Convention, of dividing the pink salmon catch, by further adjustment of the fishing regulations at that time," the Chairman of the Commission announced.

The Commission added one extra day to the fishing period for Canadians fishing the Juan de Fuca Strait area the week of August 11 and decided on August 20 to extend the Canadian fishing time to a total of five days for the week of August 18 in Juan de Fuca Strait only.

It was hoped that the added fishing time in the specified Canadian waters would aid in closing the gap between the catches of the two countries. The Commission planned to meet again on August 23 to review the entire situation.

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PROPER HARVEST PLANNED FOR PINK SALMON RUN IN NORTH PACIFIC CONVENTION WATERS:

The Commission met with its Industry Advisory Committee again on August 23, 1963, to work out a plan for the proper harvesting of the pink salmon run destined for both Puget Sound Rivers and the Fraser River.

A large run of pink salmon to Puget Sound Rivers has returned this year and the harvesting of that run has created a serious problem in obtaining the required division of the catch between the two countries without overfishing the Fraser River pink run.

Staff reports indicated that the severe regulatory restrictions imposed in 1961, to protect the Fraser River run, badly decimated by high water in the brood year, had brought a return to Puget Sound Rivers greater than that for many years. The problem of escapement, therefore, is not as difficult for those streams as for the Fraser River run which has not yet been brought to maximum production.

The Commission Chairman told the Commission's Advisory Committee that the Commission could not allow overfishing of the Fraser run to make up any deficit in the Canadian catch caused by the Puget Sound run. "Our primary responsibility is to restore the Fraser River pink run to full production while at the same time obtaining a practical division of the catch. When the Fraser River run is restored the problems facing the Commission and the industry this year of dividing the catch will be largely solved."

It was pointed out during the meeting that the 210,000 fish differential in favor of United States troll fishermen over Canadiantroll fishermen on the high seas would have to be made up mainly by further regulation of the United States inside net fishery. In past years, the Canadian troll catch has equalled or exceeded that of the United States troll fishermen.

After thorough consideration of the problem of obtaining the required increase in the escapement of Fraser River pink salmon now entering Convention waters in quantity and the suggestions of the Advisory Committee, the Commission ruled that fishing in Canadian Convention waters lying westerly of the William Head-Angeles Point line would not commence for the week beginning August 25 until Monday evening at 6:00 p.m., August 26 for gill nets and 6:00 a.m. Tuesday morning, August 27, for purse seines.

The Commission was scheduled to meet again on August 27 to consider further the

regulatory requirements in the various fishing areas for that week.

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PINK SALMON FISHING REGULATIONS FOR FIRST HALF OF SEPTEMBER 1963 REVIEWED:

The International Pacific Salmon Fisheries Commission met September 3, 1963, to review the fishing regulations for the first week of September in all Convention waters on the basis of the catch of pink salmon on September 2.

Staff reports indicated that the pink salmon run in the Juan de Fuca Strait area appeared to be declining, that United States catches of early Fraser pinks were not as large as anticipated, but that the number of pink salmon in the Gulf of Georgia had increased favorably.

The West Beach catches of Puget Sound pink salmon continued to be very large on September 2 even though this run had been expected to drop substantially.

The Commission issued regulations in accordance with the findings.

The problem of escapement of early Fraser River pink salmon as related to possible fishing time in the various Convention fishing areas for the week beginning September 8, 1963, was discussed by the Commission when it met September 6 with its Advisory Committee.

Staff reports to the Commission and to the Advisory Committee showed that the number of early run pink salmon available for escapement as delaying fish in the Gulf of Georgia was not yet adequate. It was indicated that the necessary harvesting of the large run of Puget Sound pink salmon had not permitted the usual surplus of Fraser pinks to be taken by the gill-net fishermen operating off the mouth or in the Fraser River proper.

In view of the large 1963 catch of pink salmon (expected to exceed 8 million fish for the fishermen of the two countries), it was agreed that every measure should be taken to assure a satisfactory escapement of pink salmon to the Fraser River.

After considering all of the data presented by its staff and the representation of the Ad-

visory Committee, the Commission recommended certain regulatory action for the week commencing September 8.

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PINK SALMON REGULATORY PROBLEMS DISCUSSED:

Regulatory problems concerned with the early Fraser River pink salmon run the week of September 1, were considered at an August 30, 1963, meeting of the International Pacific Salmon Fisheries Commission.

Catch figures through the week of August 25 indicated that the problem of the division of the catch between United States and Canadian fishermen was under control at that time and that escapement to the mouth of the Fraser River was the principal problem facing the Commission during the coming fishing period.

Catches in Georgia Strait south of Point Roberts, at Point Roberts, and off the Fraser River had not indicated a satisfactory abundance of early Fraser pink salmon in those areas for that period of the season. The Chairman of the Commission said that the Commission desired a heavy escapement of early Fraser River pink salmon which have extensive spawning grounds available to them. "The later running pink salmon to the Fraser have relatively restricted spawning areas and do not provide any great potential for increased runs to the Fraser River in future years. It is the early run that has the great potential for the future and we must obtain a minimum of 1,500,000 escapement and 2,500,000 would be more desirable.

After considering staff reports, the Commission recommended certain fishing regulations in an attempt to achieve the Commission's objectives.

The Commission also met on August 27 and considered the problem of how to harvest the heavy run of Puget Sound pink salmon escaping the Juan de Fuca Strait fishery.

The Commission staff reported that the first of the Fraser River run had appeared at Point Roberts but that it was too early to assess the actual volume of the Fraser River run. Catches at the entrance to Juan de Fuca Strait on August 27 were reported to

be good and troll catches off the West Coast of Vancouver Island indicated that the run would continue for some time.

The Chairman of the Commission said that heavy catches of Puget Sound pink salmon in United States Convention waters was making the division of the 1963 catch of pinks difficult if not impossible. He pointed out the desirability of a heavy early escapement to the Fraser River to rehabilitate this major segment of the run, and that this entailed carefully controlled fishing during the early weeks of the run.

FISH MEAL

WORLD PRODUCTION, JUNE 1963:

World production of fish meal in June 1963 showed little change from that in the same month of 1962, according to preliminary data from the International Association of Fish Meal Manufacturers. Compared with the previous month, production in June 1963 was down 22.4 percent due mainly to lower output in Peru.

Most of the principal countries producing fish meal submit data to the Association monthly (see table).

Country		June	JanJune		
	1963	1962	1963	1962	
		(M	etric Tons)	
Canada	5,966	7,471	37,910	43,279	
Denmark	11,485	10,641	47,444	38,870	
France	1,100	1,100	6,600	6,600	
German Fed. Rep.	5,821	3,857	38,949	36,121	
Netherlands	1/	200	2/1,600	2,400	
Spain	1/	2,236	2710,869	13,712	
Sweden	324	167	3,107	2,496	
United Kingdom	6,656	6,787			
United States	31,295	55,488			
Angola	$\frac{1}{1}$	2,483			
Iceland	1/	5,400			
Norway	19,469	10,739			
Peru	98,657	83,819	701,507	544,442	
South Africa (incl. South-West Africa)	34,393	23,600	3/147,997	158,196	
Total	215 166	213 988	1,207,082	1.071.657	

1/Data not available.
2/Data available only for January-May.
3/Revised.
Note: Belgium, Chile, Japan, and Morocco do not report their fish meal production to the International Association of Fish Meal Manufacturers at present.

World fish meal production during the first 6 months of 1963 was 12.6 percent greater than in the same period of the previous year. Production in the first half of 1963 was boosted by much heavier landings of anchoveta in Peru as well as increased landings of industrial fish in Denmark and Norway. But there was a sharp decline in production in the United States.

Peru accounted for 58.1 percent of total fish meal production during January-June 1963, followed by South Africa with 12.3 percent and the United States with 6.8 percent.

NORTH PACIFIC FISHERIES CONVENTION

TRIPARTITE TREATY DISCUSSIONS RESUMED AT SECOND MEETING:

Delegates of the three parties (Canada, Japan, and the United States) to the International Convention for the High Seas Fisheries of the North Pacific Ocean met in Tokyo beginning September 16, 1963, to discuss possible modifications of the Treaty.

Preliminary discussions were held in Washington, D. C., June 6-21, 1963, and at the close of those discussions it was decided to recommend to the three governments that a subsequent meeting be held, in an effort to reach agreement on the future course of the Treaty.

The Tripartite Treaty entered into force in 1953. Its objective was to insure the maximum sustainable productivity of the fishery resources of the North Pacific Ocean. The Treaty has a minimum duration of 10 years, which elapsed on June 12, 1963. After that date, any one of the three Governments may terminate the Treaty on one year's notice. The June meeting at Washington originated from a request by the Japanese Government for such discussions.

At the Washington, D. C., meetings it was a greed by the three parties that it would be desirable to give further study to means of resolving the different views of the three countries in the light of the work at that Conterence. The Conference then decided to adjourn and recommended to the three Governments that efforts to reach agreement the renewed at a second Conference.

Total See Commercial Fisheries Review, August 1963 p. 70; July 1963 p. 66.

RGANIZATION FOR ECONOMIC OPERATION AND DEVELOPMENT

Japan was invited to membership in the Organization for Economic Cooperation and Development by a unanimous vote of the DECD Council on July 27, 1963. The OECD Secretary General notified the Japanese Amassador to France of the Council's decision, and a memorandum stipulating the terms of apan's entry into that organization was signed by both those officials. The OECD will formally vote on Japan's admission as

the 21st member on November 20, 1963, and the effective date of membership will follow the Japanese Diet's approval. Japan will be requested to contribute approximately \$1 million annually to the organization.

The memorandum stipulated that Japan will be granted reservations or exemptions from the 2 OECD codes regarding 17 items, including the long-term chartering of foreign vessels. The Japanese statement which will be incorporated in the memorandum declares Japan's adherence to the terms of the OECD Code of Liberalization of Current Invisible Operations as well as the organ's Code of Liberalization of Capital Movement upon becoming an OECD member. The statement also affirms Japan's preparedness to commit herself to all the obligations derived from her endorsement of those codes.

Japan's Foreign Minister hailed the Council's action, and stated that Japan has exerted painstaking efforts to stabilize and expand the world economy in the United Nations, the International Monetary Fund, the General Agreement on Tariffs and Trade, and the Development Assistance Committee (a subsidiary organ of the OECD). The Foreign Minister added that with the admission to the OECD, Japan's economic policies will be carried out both at home and abroad under closer cooperation with the world economic organization, all of which will enable Japan to contribute in a larger measure to the consolidation of unity among the countries of the Free World and further enhance Japan's international status. (Japan Report, July 31, 1963.)

SOVIET BLOC TRIPARTITE AGREEMENT

COOPERATION IN FISHERIES RESEARCH BY SOVIET UNION, POLAND, AND GERMAN DEMOCRATIC REPUBLIC:

A plan calling for scientific and technical cooperation in fisheries research was approved on March 1, 1963, by fishery officials of the Soviet Union, Poland, and the German Democratic Republic. Those countries had previously signed a tripartite agreement on cooperation in fisheries on July 28, 1962, and established a Joint Committee on fisheries. The plan for cooperation in fisheries research was discussed at the first session of the Joint Committee which met at Rostock in the German Democratic Republic from February 26-March 1, 1963.)

Besides fishery officials from the three countries party to the agreement, the session

was attended by 20 delegates and experts of other countries.

The plan, which is to be put into effect immediately after ratification by the governments of the three countries, calls for joint research and an exchange of information in fisheries development work for 1963-1964 such as: (1) estimating fishery stocks and forecasting fishery catches in the main fishing areas for 1964, i.e. the Baltic, North Sea, Northeast Atlantic, Northwest Atlantic, and Central and South Atlantic (off the West African Coast); (2) fisheries exploration and gear research; (3) mechanizing fishing vessels and fish-processing plants; (4) studies in fish processing technology; (5) studies in fishery economics; and (6) expansion of fishing fleets and problems of appropriate operation of ports and fishing fleets.

The program of cooperation was to be realized through direct contacts between scientists and fishing industry representatives, as well as by an exchange of information and statistics. The plan also proposed joint consultations of specialists, and an exchange of fishery technicians.

The Joint Committee, composed of fishery delegates from the three countries, was to hold its second session in Poland before the end of 1963. (Polish Maritime News, vol. VI, no. 56, April 1963, p. 9.)

Note: See Commercial Fisheries Review, August 1962 p. 89.

WHALING

NORWEGIAN GOVERNMENT REJECTS APPLICATION TO SELL WHALE FACTORYSHIP TO JAPAN:

The Norwegian Government is reported to have rejected the application submitted by a Norwegian firm to sell its whale factoryship Thorshovdi to Japan. As a result, Japan is reported to be considering changes in the makeup of her Antarctic whaling fleet for the coming season. She was originally reported to be planning on sending a total of seven whale factoryships.

Japan's international whale catch quota is presently 4,600 blue-whale units. (Suisan Tsushin, August 12; Suisan Keizai Shimbun, July 24, 1963.)



Algeria

FISHERIES OFFICE ESTABLISHED:

Algeria has created a National Office of Fisheries under the jurisdiction of the Ministry of Reconstruction, Public Works and Transport. This office will have the mission of organizing and promoting the fishing industry in Algeria and the sale of its products. These functions will include "promoting and controlling the necessary groups and organizations, especially cooperatives." The office will also be charged with managing boats, canneries, and refrigeration installations declared to be vacated properties. (United States Embassy, Algiers, August 1, 1963.)



Angola

JAPANESE FISH MEAL OPERATION OFF ANGOLA TO BE DISCONTINUED:

The Japanese firm operating the fish meal factoryship Renshin Maru off Angola is reported to have decided not to continue her Angolan fish-meal operations this coming winter. This action was taken after the Angolan firm (with which the Japanese company had contracted for the delivery of fish for processing into fish meal by the factoryship during the previous two seasons) insisted that the Japanese firm enter into a partnership and establish a joint company in Angola. However, in view of the unsettled political situation in Angola, the Japanese firm has decided against the risk of investing capital in that country. (Suisan Tsushin, August 23, 1963.)



Australia

TEAM TO STUDY JAPANESE TUNA METHODS:

To investigate the possibility of further developing tuna resources in waters adjacent to Australia, the Australian Government in mid-1963 provided funds from its Fisheries Development Account.

A team of experts will visit Japan, Hawaii, and American Samoa to investigate the technical and economic aspects of introducing to Australia the deep-sea long-line method of catching tuna.

Australia (Contd.):

Tuna are known to be present in large quantities in the deep waters off the Australian coast, but the types of vessels and gear required to catch them, and especially the cost of such operations, present problems.

The live-bait-and-pole method used by Australian fishermen to catch tuna in the shallow waters close to the coast is not applicable to the deep-water fishery.

It is expected that the investigations will take about three months, and that the experts' report will indicate to the Government and to the fishing industry what are the prospects of successfully developing a deep-water tuna fishery on a commercial basis. (New Zealand periodical Commercial Fishing, July 1963.)

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YELLOWFIN TUNA CAUGHT BY LONG LINE OFF NEW SOUTH WALES:

The first commercial long-lining of yellowfin tuna in Australia was reported in June 1963, as having been successfully carried out between Ulladulla and Eden (New South Wales) by a small group of boats. Their technique, however, differed from Japanese subsurface long-lining in that they fished not far below the surface and in not more than 40 fathoms.

In one week of fishing the boats caught 20 tons of yellowfin tuna, running from 40 to 140 pounds and averaging 80 pounds. One fisherman worked up and down a drifting line. As soon as he saw a float sink, he took the fish aboard and reset the branch line.

(Commercial Fishing, New Zealand, June 1963.)



Brazil

FISHERY DEVELOPMENTS, 1963:

As of mid-1963, the Brazilian Government is directing its major efforts in fisheries toward better organizing and developing the industry's resources for the purpose of increasing national consumption of fish. To achieve this purpose, it has plans to modernize the domestic tuna, sardine, cod, and spiny lobster industries.

Besides Government plans, there are two major business developments:

- (1) A group of businessmen, including several Americans, is said to be interested in launching a fairly large-scale fishing enterprise in South American waters. According to the report, the group has sought bids on integrated fishing vessels (approximately 10 in number) from the West Germans and the Japanese. The American European, and Japanese markets are said to be the targets of this venture.
- (2) Privately sponsored is the lobster industry of the Northeast. These fisheries, with no special Government concessions, have captured a small share of the frozen spiny lobster tail market in the United States (an estimated \$4 million was exported in 1962). The yield of those fisheries will probably grow, although slowly, in the years to come. Also, a small shrimp industry in northern Brazil has as its purpose exportation of frozen shrimp to the United States. (United States Embassy, Rio de Janeiro, August 20, 1963.)

British Honduras

SPINY LOBSTER INDUSTRY:

For reasons of conservation, the British Honduras Government imposes on the spiny lobster fishery a catch quota of 800,000 pounds per season (July 15 to March 15 of the following year). The entire catch is exported. The quota is allocated among the producers.

There is a legal minimum price to be paid to the fishermen of BH\$0.25 (17.9 U. S. cents) a pound of whole lobster (30 pounds of tail are equivalent to 100 pounds of whole lobster). In practice, the fishermen receive about BH\$0.27 (19.5 cents) a pound; the price usually quoted includes ice and delivery to the buyer's plant, and is, with practically no variation, BHS\$0.30 (21.4 cents) a pound, as compared with BH\$0.22 (15.7 cents) a pound three years ago.

In view of the fully subscribed quota, prospects for expansion are not great. At present the industry engages only in shallow-water fishing, and the Government is currently studying the feasibility of deep-water spiny

British Honduras (Contd.):

lobster fishing in the hope of being able to increase the catch. A reliable source within the industry, however, reports that attempts already made to catch lobsters in deep water have been disappointing. The same source maintains that effective prohibition of catching female and undersize lobsters, and offseason catching of all lobsters, would abolish the need for any quota restrictions whatsoever. (United States Consulate, Belize, August 16, 1963.)

Note: Values converted at rate of BH\$1.40 equal US\$1.00.



Chile

GOVERNMENT'S INTEGRATED FISHERIES PLANT:

The Chilean Government's integrated fisheries corporation is now under construction in Iquique. Of its proposed fleet of 18 fishing vessels, 8 will be tuna purse seiners; the other 10 will be smaller vessels for fishing anchovy (anchovette). (United States Embassy, Santiago, August 22, 1963.)

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NEW FISH MEAL PLANT PLANNED:

A modern 25-ton fish-meal plant will be established in Iquique, Chile, by a newly organized subsidiary of a large drug-chemical industries corporation in Panama (Panama). The entire production will be exported and marketed in the large drug firm's established lines of animal-feed mixes. The company also plans to install at Iquique a small pilot plant for production of fish meal for human consumption.

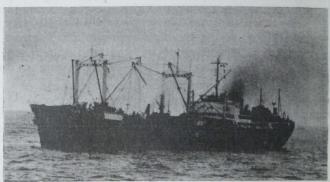
The entry of this large drug-chemical firm in the fish-meal industry, if interpreted as a breakthrough on the acceptance of fish meal for human consumption, may give new impetus to investment expansion in the industry of Northern Chile. (United States Embassy, Santiago, August 10, 1963.)

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PROSPECTS SLIGHT OF SETTING UP JAPANESE FISH-MEAL OPERATIONS IN CHILE:

A Japanese fishery firm, which had been negotiating for some months with Chilean

interests for the establishment of joint fishmeal operations in Chile, was reported to have decided to dispatch the fish-meal factoryship Renshin Maru (14,094 gross tons) to the eastern Bering Sea in 1964 instead. The reason is that prospects of a satisfactory settlement ever being reached with Chile this year are considered very slight. Originally, that company had planned on diverting the Renshim Maru to operate off Chile as soon as settlement was reached.



Japanese fish-meal factoryship Renshin Maru.

The Chilean Government is reported to look favorably on the establishment of the joint company. However, the proposal is said to be strongly opposed by some elements in the Chilean fish-meal industry, and, as a result, the Chilean Government does not now plan on approving that project. (Suisan Tsushin, August 23, 1963.)

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EXPORTS OF FISH MEAL:

Chile's exports of fish meal the last week of July 1963, according to the Banco Central, amounted to 3,150 metric tons, which represents a return of US\$587,000. Exports were mainly to France, United States, United Kingdom, Belgium, Philippines, and the Netherlands. Chilean trade sources expect that exports of fish meal and fish oil for all of 1963, will amount to US\$11 million. (United States Embassy, Santiago, August 6, 1963.)



Denmark

FISHERY LANDINGS, JANUARY-JUNE 1963:

Fishery landings in Danish ports by Danish fishing craft during the first half of 1963 were 12 percent greater than in the same period of 1962, the record year for total landings (table 1). The severe winter caused declines in some catches, mostly in the ice-covered waters supporting the inshore fisheries, but North Sea yields were unaffected. Some of the inshore losses are being regained because of better catches after fishing again became possible.

Denmark (Contd.):

Species	January- June 1963 Quantity	Change from 1962	
	Metric Tons		Minus %)
By Danish Vessels: Flatfish Cod. Herring Brisling Mackerel Hornfish Other salt-water fish 1/. Eels Pond trout Fresh-water fish Mussels Starfish Shrimp, lobsters, etc.	26,829 40,669 82,628 2,654 3,743 1,055 207,649 690 3,717 615 5,349 643 3,037	12 4 - 25 - 25 22 5 -	3 26 - 45 - - 21 17 60
Total by Danish vessels	379,278	12	-
By foreign vessels	65,555	49	-
Grand total	444,833	16	-
By Danish vessels in British, Swedish, and Dutch ports //Mainly industrial fish for fish meal and oil, ensi	1,452	-	38

Pond trout production, up 5 percent, did not decline, as had been forecast earlier.

Landings by foreign fishing vessels, mostly Swedish, increased by one-half because of their ice-blocked harbors.

Note: See Commercial Fisheries Review, August 1963 p. 86;
July 1963 p. 72.

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FISHERIES EXPORTS, JANUARY-JUNE 1963:

Denmark exported record quantities of fishery products during the first half of 1963, especially fresh and frozen fish. The quantity increased 16 percent and the value was up 9 percent from the same period in 1962. Fresh and frozen herring, fillets, pond trout, eels, and semipreserved fish products exports showed the greatest gains. West Germany, the largest buyer, increased its imports while the United Kingdom, the next largest buyer, bought slightly less. Sweden moved into third place, with substantially greater purchases, displacing the United States whose imports dropped.

Table 2 - Value of Danish Fishery Products Exports by Groups and Major Countries, January-June 1963 and Change from 1962

Destination		ne 1963 lue	Percentage Change from 196 Value		
By Groups:	1,000 Kr.	US\$ 1,000	Plus	Minus 6	
Common Market (EEC). European Free Trade As-	115,000	16,675	12	-	
sociation (EFTA) East Bloc countries Other countries	102,000 20,000 43,000	14,790 2,900 6,235	100	- 2	
Total	280,000	40,600			
Major Importers by Country West Germany United Kingdom Sweden United States	70,000 44,000 30,000 20,000	10,150 6,380 4,350 2,900	17 - 20 -	6 -	

Denmark's fishery products exports to the United States during the first half of 1963 declined 15 percent in quantity and 14 percent in value. Pond trout exports increased about one-fifth despite the severe winter and cod fillets gained slightly. However, exports of lobsters decreased by over one-half due to lower production, and canned sardines dropped 70 percent in value when the United States pack of Maine sardines returned to normal production.

Exports to secondary markets outside Europe may be expected to increase under a plan proposed by the Foreign Minister to set up new Embassies in Algeria and Kenya, and to establish 4 new commercial attache posts and 11 new consular secretaries, according to Danish newspaper reports.

Table 1 - Danish Fishery Products Exports to All Countries, January-June 1963 and Change from 1962

Product	January- June 1963				Percentage Change from 1962				January-December 1/1962		
	Qty.	Val	ue	Qt	Qty.		Value		Val	lue	
	Metric Tons	1,000 Kr.	US\$ 1,000	Minus	Plus		Plus	Metric Tons	1,000 Kr.	US\$ 1,000	
Fresh fish Frozen fish Processed fish .	97,800 23,400 8,000		9,990	- 1	18 31		9 18 5		312,000 132,500 73,500	19,213	
Fish meal, fish solubles, etc.	30,600	28,700	4,162	114	9	3	-	63,900	66,400	9,628	
Total	159,800	278,600	40,397	-	16	-	9	302,500	584,400	84,738	
Fish oils 2/	3,500	2,500	363	-	288	-	316	15,200	10,600	1,537	

2/Comparative data are available only through April 1963.
Note: One Danish krone equals about US\$0.145.

Denmark (Contd.):

y Value %				
		1/1962		
%	Quantity	Value		
-	Metric Tons	US\$1,00		
	Maria Maria			
+ 20	969	1,070		
2/	58	76		
- 18	1	12		
- 34	226	242		
+166	23	17		
+ 6	7,903	3,553		
3/	5	2		
- 32	607	31:		
- 53	308	952		
- 69	14	18		
- 11	122	35		
- 3	1	5		
- 70	1,569	906		
+ 10	209	249		
+116	24	22		
+ 15	31	22		
0	16	26		
+350	1	1		
4/	100	12		
- 14	12, 187	7,530		
	+350 <u>4</u> /	+350 1 4/ 100		

4/There were no exports in 1962.

/Less than US\$1,000.

Source: Preliminary data from Ministry of Fisheries.

In 1962, Danish fisheries products were shipped to more than 110 different countries. Exports of some importance included about 50 categories of fresh and frozen products, 8 salted and dried, 4 smoked, 19 canned, 16 semipreserved, and 4 industrial (fish meal, oil, solubles and ensilage). With foreign markets favorably inclined toward Danish fishery products and with landings running slightly ahead of 1962 record exports for 1963 are probable. Markets for Danish fishery products in Europe are expanding to the extent that United States importers can expect more competition when buying Danish fish. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, July 24, 1963.) Note: See Commercial Fisheries Review, July 1963 p 72; April 1963 p. 47; January 1963 p. 84.

FISHERY EXPORTS TO RUMANIA:

Danish exports of fishery products to Rumania increased after a visit of the Danish Fishery Minister to Rumania

* * * * *

Rumanian Imports Janua	of Fish ary-July				Denma	ark,
	Jan	July 1	963	Ye	ear 196	52
Product	Qty.	Valu	ie <u>1</u> /	Qty. Value 1		
Then and the a	Metric Tons			Metric Tons		
Frozen herring Frozen mackerel Canned brisling and	696 293	828 253	91.0 36.7		573	83.1
sardines	291	902	130.8	-	-	-
Total	1,280	1,783	258.5	637	573	83.1
1/One Danish krone equals US	\$0.145.	-				

about two years ago. The Rumanian Minister responsible for food imports was scheduled to arrive in Denmark on a visit to begin September 10. Rumanian imports of fishery products from Denmark in recent years are shown in the table.

Increased trade in fishery products with Rumania is hindered by the lack of Rumanian products which Denmark can use. The available quota for Danish fishery products has not been fully utilized some years. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, August 28, 1963.)

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U.S.S.R. FISHERY MINISTER TO VISIT DENMARK:

The Soviet Fishery Minister was expected to visit Denmark and Danish fishery operations for 12 days beginning October 9, 1963. He was repaying the visit of the Danish Fishery Minister to the U.S.S.R. in June 1963. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, August 28, 1963.



Ecuador

FISHING INDUSTRY TRENDS, JANUARY-JUNE 1963:

Fishery Products Export Value Up in First Half of 1963: Ecuador's fishery products exports in June 1963 were valued at US\$0.5 million, the same as in the previous month but 66.6 percent higher than May 1963 exports.

In the first half of 1963, Ecuador exported fishery products valued at \$1.9 million (quantity unavailable) as compared with a value of \$1.7 million in the same period of 1962 when 5,405 metric tons of fish and fish products were exported.

Whaling: A Japanese firm was authorized in June to submit a proposal for a whale-processing plant, according to reports.

Fish Protein Concentrate: There is considerable exploratory activity by an English firm in the Guayaquil area concerning the production of fish meal for human consumption and the establishment of two joint ventures in the fish and fish-distribution industry. (United States Embassy, Quito, August 8, 1963.)

* * * * *

JAPANESE STUDY ESTABLISHMENT OF WHALING ENTERPRISE IN ECUADOR:

A large Japanese fishing firm received a 10-year renewable authorization from Ecuador's Ministry of Development to establish a land-based installation in Ecuador for the hunting and processing of whales. The unpublished authorization (Acuerdo Ministerial 583, dated June 6, 1963), allows two Japanese flag vessels for one year to engage in the hunting of whales, requires employment of 75 percent Ecuadorean personnel in the land operations, imposes a special 1-percent tax the first year, and a 2-percent tax the third year in addition to normal taxes. Reportedly the Japanese firm is conducting a feasibility study of the project. (United States Embassy, August 24, 1963.)



Fiji Islands

CONSTRUCTION APPROVED OF JAPANESE COLD-STORAGE PLANT FOR TUNA IN FIJI ISLANDS:

A joint Japanese-British cold-storage plant is planned for Levuka, Fiji Islands (British). A Japanese fishing company reportedly was authorized on August 9, 1963, by the Japanese Overseas Investment Liaison Council (Government-industry advisory group) to invest its capital in the plant. Construction of the cold-storage plant, which is to be financed with a capital of 270 million yen (US\$750,000), is scheduled to begin in September 1963. The plant (with a freezing capacity of 10 tons of fish a day, a cold-storage capacity of 2,000 tons, ice-producing capacity of 25 tons per day, and ice-holding capacity of 200 tons) is expected to be completed by the end of the year.

The cold-storage plant will be operated under a cooperative arrangement with the Japan South Pacific Ocean Fishery Cooperative, which will operate 30 fishing vessels (including 13 Cooperative-owned vessels) out of Levuka. The Cooperative's annual production target is 15,000 metric tons of fish, primarily tuna. Under present plans, the Japanese will purchase 9,000 tons of tuna from the Cooperative, which it will freeze at the Levuka cold-storage plant for export to the United States. (Suisan Keizai Shimbun, August 22; Nihon Suisan Shimbun, August 12, 1963.)



France

CERTIFICATE OF WHOLESOMENESS FOR IMPORTS OF CERTAIN SHELLFISH NO LONGER REQUIRED:

Shipments of sea molluscs and shellfish (shelled and frozen), when imported into France no longer require the submission of a "certificate of salubrity" but are subject to the formality of control and payment of the sanitary fees. This change in French import regulations was contained in a French decree published in the Journal Officiel of May 21, 1963. (United States Embassy, Paris, July 26, 1963.)



German Federal Republic

FISH FRESHNESS TESTER TO UNDERGO FURTHER TESTS:

A German machine which assesses the freshness of fish electronically is to undergo a series of comprehensive tests at Torry Research Station, Aberdeen, Scotland, the station director announced the latter part of July 1963.

The machine has been developed by an electronics firm of Hamburg, and preliminary tests of the prototype were made at Torry during the latter part of last year on limited numbers of cod, herring, whiting, and lemon sole. The result of those tests, when compared with results from other objective methods and with taste panel findings for the same fish, showed promise.

In a letter which appeared in Fish Trades Gazette on July 13, however, the Torry Research Station director qualified the statement that had been made by the firm with regard to the tests thus:

"We have not made numerous enough measurements of the freshness of fish using the fish tester to reach a statistically well based estimate of the degree of correlation of the data obtained by this method with those furnished by our taste panel, as well as by objective chemical tests, to warrant the statement made by the above mentioned firm that the fish tester has been successfully tested by Torry Research Station."

Since then the manufacturers have supplied one of the instruments to the Station and it will undergo a comprehensive series of further tests during the next few months.

The performance of the instrument on whole fish stored in ice will be compared with results obtained by taste panel and from chemical tests; the experiments will at first be confined to cod.

The fish tester consists of a measuring apparatus contained in a metal case and measuring forceps which are connected to the apparatus by a cable and special plug.

The measuring apparatus contains a fully transistorized circuit using 24 semiconductor elements (transistors, etc.) which produce the measuring current and evaluates it electronically in such a way that the measured value can be read directly and immediately on the scale of an instrument on the front panel of the metal case.

The indicator has a circular scale for each of five important kinds of fish (cod, haddock, coalfish, ocean perch or redfish, and herringl, divided into "degrees of freshness." The "degrees of freshness" give the "freshness" of the measured fish in "reserve ice storage days," i.e. they indicate how many days the fish-being stored in ice immediately after the measurement-can be kept in usable condition.

The scale on top, calibrated linearly from 0 to 100, is to facilitate setting up calibration curves for types of fish other than those named, whose loss of freshness during storage in ice is found to be different and must first be determined empirically.

The metal case also contains two six-volt batteries which will last for about six months with daily use and can be exchanged by lifting off the front panel.

The measuring forceps carry a graphite electrode on each end, guided in a metal sleeve and fixed by a clamping screw so as to suit the thickness of the fish to be measured. For ease of use, a carrying case is supplied in which the apparatus can be carried so that the bearer has both hands free and can also read the indicated values on the scale of the instrument. A small pocket is attached to the case to house the forceps.

The tests carried out with the fish tester by the West German Federal Research Institute for Fisheries, Hamburg, proved that the indications of the degree of freshness were in accordance with the chemical and organoleptic statements, and that even when by means of certain alterations of storage conditions the proceedings of decay were delayed or accelerated and the kind of fish and, as to herring, also the different fat contents had no influence on the indicated degree of freshness.

The tests carried out with a fish tester by veterinary surgeons and market commissioners at the daily auctions at the fish markets at Cuxhaven, Hamburg, and Kiel have shown that the instrument indicates exactly the freshness of the fish quite subjectively according to quality.

The measuring principle on which the fish tester is based makes use of the fact that a.c. resistance of fish tissue contains capacitive components which are conditioned by the properties of the cellular skins. When, during storage of the fish, the fish albumen is removed or decomposed by enzymes of the fish and by bacterial activity (loss of freshness, advance of decay), the cellular skins consisting mainly of albumen are affected to the same extent and correspondingly lose the properties which contribute the capacitive components to the a.c. resistance of the tissue.

The same applies if the cellular skins of the tissue are more or less damaged by mechanical effects (knocks, blows, heavy pressure, etc.) or by ice crystal formation in the tissue on freezing.

Thus the tissue changes which occur with decreasing freshness (advancing decay) and mechanical damage are measured by electrical means through the reduction of the capacitive component of the a.c. resistance. Since with normal storage the mechanical effects are only of subsidiary importance, the tissue changes bear an empirically determined, direct and reproducible relationship to the freshness of the fish. (Fish Trades Gazette, August 3, 1963.)



Greece

REEFER FLEET INCREASES LANDINGS OF FROZEN FISH IN FIRST QUARTER 1963:

Landings in Greece of frozen fish by the Greek reefer fleet during the first quarter of 1963 were 36 percent over the same period of 1962. A total of 17 ocean-going fishing vessels with a total yearly capacity of 20,000 tons of frozen fish are currently in operation. This fleet is to be increased by 9 vessels by the end of 1963, and total capacity in 1964 will be 28,000 to 30,000 tons of frozen fish. (United States Embassy, Athens, August 7, 1963.)

Honduras

SHRIMP FISHERY EXPANDS:

The export shellfish industry of Honduras' north coast and Bay Islands continued to expand during the second quarter of 1963.

Honduras (Contd.)

Seven additional shrimp vessels (some of United States registry) moved into shrimp waters in the area around Caratasca. (United States Embassy, Tegucigalpa, August 5, 1963.)

Iceland

FISHERIES TRENDS, FIRST HALF 1963:

Iceland continued to be favored with good fish catches and high export prices during the first half of 1963. But the summer herring catch has been less than half of what it was at the end of July last summer, despite a longer season and additional vessels. It is probable that the value of exports will decline in succeeding months because of the decline in the summer herring catch. (Note: The period covered by this report does not include the poorer north and east coast summer herring-season since the latter season extends into September and is not reflected in statistics covering the first half of 1963.)

Excellent fish catches during 1961, 1962, and the first half of 1963 have provided a rapid increase in personal income.

Exports: Iceland's increase in exports the first half of this year as compared with the first half of 1962 was attributable primarily to the large increase (30 percent) in herring product exports, which now is Iceland's highest value export, accounting for over 30 percent of total exports. Exports of frozen herring during the first five months of 1963 amounted to 123,5 million kronur (US\$2.8 million), an increase of more than 100 percent over the same period in 1962. Sixty percent of the frozen herring exports went to the Soviet Bloc (70.9 percent in 1962). The value of herring meal exports amounted to 187.1 million kronur (\$4.4 million) the first five months, an increase of 60 percent over the same period in 1962. Exports of salted herring, half of which went to the Soviet Bloc, also increased. The value of herring oil exports dropped, however, partially due to a drop in the price received for herring oil during the first five months of 1963 as compared to 1962,

Frozen fish fillets, which account for about 25 percent of Iceland's total exports (28 percent of which go to the Soviet Bloc), amounted to 477.8 million kronur (\$11.1 million) for the first five months, a slight decrease compared to last year. Likewise, exports of salted fish (other than herring), which go primarily to Spain and Italy, declined to 128.6 million kronur (\$3.0 million), a drop of 21.2 percent for the first five months of 1963 as compared to that period in 1962. Exports of stockfish, sold primarily to Nigeria, dropped to 67.7 million kronur (\$1.6 million), a decrease of 37.0 percent during the same period. On the other hand, exports of groundfish on ice (sold mostly to Great Britain) jumped to 85.6 million kronur (\$2.0 million) for the five-months period, an increase of 46.7 percent.

Reports at the end of July indicate a relatively poor summer herring season in contrast to the exceptional catches of the last two summers. (It should be noted that new electronic equipment for locating the herring was first used in 1961 and 1962 and accounts for the substantial increase in the herring catch those years. It would seem, therefore, that the 1961 and 1962 standard is a fair comparison to indicate a poor season in 1963.) By the end of July, the North and East Coast herring catch was less than 50 percent of what it was at that time last year, despite the fact that the herring season started a month earlier this year, and there is a larger number of vessels fishing. Because of the poorer fishing season a greater proportion of the catch is being salted or frozen, thus the value of the catch may be somewhat higher than indicated merely by a comparison of the quantities

caught in 1963 and 1962. Nevertheless, the export value of herring products (salted, frozen, fish meal and oil, etc.) will be probably less than last year. In order to fulfill export contracts with eight countries for 394,000 barrels of salted herring, about 430,000 barrels (which includes domestic consumption) had to be salted this summer. (By August 10, 1963, the quantity of herring salted was more than on the same date of the peak year 1962. The quantity sent for reduction was substantially less.)

Although the total value of exports changed by only 5 percent the first six months of 1963 as compared to that period in 1962, unsold export stocks were considerably higher at the end of June than a year ago. Major shifts in the distribution of exports have occurred. Whereas exports to the United States (Icelands's largest market) and West Germany (fourth largest) increased 44,2 percent and 11,2 percent respectively, exports to the Soviet Union (Iceland's second largest market) and Great Britain (third largest) decreased 15.5 percent and 13.0 percent, respectively. The United States' share of ice-land's frozen fish fillet exports increased from 42 percent for the first half of 1962 to 63 percent for the first five months of 1963. Inasmuch as frozen fish fillets now account for 90 percent of Iceland's exports to the United States, the increase of this export was the main contributor to the large increase of total exports to the United States. Although the share of Iceland's frozen fish fillets exported to the Soviet Bloc dropped somewhat in the first half of 1963, a contract signed in April to provide the U.S.S.R. with 15,000 metric tons of frozen groundfish before the end of 1963 indicates that exports of that product to the U.S.S.R. will increase during the second half of 1963.

Bilateral Trade: Although the Government continues a policy of barter trade with the Soviet Bloc in order to insure a market for a substantial part of Iceland's fish exports, there continues to be a trend of decreasing trade with that area. In view of the increase in Iceland's herring exports, a large part of which are sold to the Bloc countries, there appears little likelihood of further decrease in trade with the Bloc unless additional markets for herring products can be developed in the Western countries. On the other hand, the Bloc, because of its own greatly increased herring operations, may soon become self-sufficient in herring products, leaving Iceland without its chief market.

Trade Agreements, Protocols and Contracts Concluded with the Bloc in 1963: A trade agreement between Iceland and Hungary was concluded in February, covering one year and providing for sales to Hungary of frozen fish, herring fish meal, fish oils, wool, sheepskins and hides and for sales to Iceland of iron and steel, sugar, textiles, household utensils, and other goods.

A trade protocol between Iceland and Poland covering one year starting October 1, 1963, was concluded July 12. The protocol provides for sales to Poland of salted herring, frozen herring, fish meal and oil, salted sheepskins and for sales to Iceland of coal, textiles, chemicals, sugar, lumber, iron and steel products, machinery, tools, household equipment, potatoes and other food products. Negotiations are presently under way for the annual trade protocol with Czechoslovakia.

The most important sales contracts concluded with the Bloc during the reporting period were: (1) a contract signed in April between the Freezing Plants Corporation and the Federation of Icelandic Cooperatives on the one hand and a Soviet trade mission on the other, to supply the USSR 15,000 tons of frozen fish fillets (This is the minimum trade level specified in the current protocol.), (2) a contract signed in February between the Icelandic Federation of Cooperatives and a Soviet trade mission to supply the USSR with 12,000 metric tons of frozen herring, and (3) a contract concluded in July between the Icelandic State Her-ring Committee and a Soviet trade mission to supply the USSR with 120,000 barrels of salted herring. The above contracts were in accordance with the three-year trade protocol between Iceland and the USSR concluded in December 1962. (United States Embassy, Reykjavík, August 23, 1963.) ---

Iran

CAVIAR PRODUCTION BY TYPES OF STURGEON, FISCAL YEAR 1962/63:

Iran is a principal producer of caviar in the world. In the fiscal year starting August 1962, a total of 210 metric tons of caviar was produced as the season neared to a close. This was an increase of 18 percent from the previous fiscal year's production, and 33.8 percent above the 1957/58 season's production. Iran's yearly average caviar production was 170 tons for each year since fiscal year 1957/58.

graphic research in the Red Sea. A small expedition of marine biologists under the direction of a Professor of the Hebrew University spent several weeks in 1956 collecting specimens from the Straits of Tiran around the south end of Sinai as far west as El Tur in the Gulf of Suez. Later, attention was turned to the south end of the Red Sea. By agreement with the Government of Ethiopia, the port of Massawa was made available to Israeli expeditions studying marine life along the coast of Eritrea. Considerable resources of edible fish were found, and an Israeli trawler fleet employing both Israeli and Ethiopian fisher-

Table 1 - Iran's	Caviar Production	on by Types of St	urgeon, Fiscal Ye	ear 1962/63 and (Comparisons				
Type of Sturgeon	FY1962/63	FY1961/62	FY1960/61	FY1959/60	FY 1958/59	FY1957/58			
Beluga	40	39	39	35	27	24			
Ossetra	70	54	52	53	43	49			
Sevruga	100	85	75	75.	75	79			
GirovaiaIkra	-		1113 H 100 30	Indicate design	Military In	5			
Total	210	178	166	163	145 -	157			

Sturgeon is the most important species caught in Iran's Caspian Sea fishery, followed by white salmon, white fish, carp, bream, pike, catfish, and herring. The production season for caviar runs from August to August of the following year because the fishing season for sturgeon begins in that month.

Tab	le 2 – Sturge Fiscal Yea	on Meat Proce r 1962/63 and	essed for Sale d Comparison	by Iran,
FY1962/63	FY1961/62	FY1960/61	FY1959/60	FY1958/59
1,700	1,439	(Metric Tons) 1,491	1,275	1, 107

The amount of sturgeon meat processed for sale has increased steadily from 1,107 tons in fiscal year 1958/59 to 1,700 tons in 1962/63 (table 2), according to the United States Embassy, Tehran, July 17, 1963.



Israe

OCEANOGRAPHIC RESEARCH IN THE RED SEA:

Since the opening to Israeli shipping of the Straits of Tiran which join the Gulf of Aqaba to the Red Sea, major efforts have been devoted to developing the city of Eilat and to promoting Israeli shipping to the East via that port. A significant effort has also been made to establish Israeli oceanomen is reported to have been operating successfully for the last six years in the vicinity of Massawa.



The first of what is expected to be a series of major international expeditions to the Red Sea under Israeli leadership was staged in April and May 1962. Operating again from the port of Massawa with logistic support furnished by the Ethiopian Navy, the 1962 expedition included 15 scientists from four nations (Israel, the United States, the Netherlands, and Ethiopia), and collected a rich

Israel (Contd.):

harvest of specimens of fish, marine plants and birds. The analysis of this collection is still under way.

A larger and more ambitious expedition is being planned for the fall of 1964. It is hoped that the number of scientists can be expanded to about 30, and that the United States and other nations will again be well represented. Negotiations are under way with the Government of Ethiopia to renew the cooperative arrangement with the Ethiopian Navy which existed at the time of the 1962 expedition.

The tentative budget for expenses (exclusive of salaries) in the 1964 expedition is IŁ150,000 (US\$50,000). Of this, IŁ45,000 (\$15,000) has already been pledged by the Israeli Academy of Arts and Sciences, and additional sums are being sought from the Ministries of Agriculture and of Development. A proposal has also been submitted by a Professor of the Tel Aviv University to the Office of Naval Research for an extension of an existing contract to permit payment of some of the expedition expenses.

The expedition's organizers are receiving numerous proposals from scientists in Israel and abroad for participation in the 1964 expedition. These are now being evaluated and coordinated with plans for the much largerscale Indian Ocean Expedition. A summary outline of the objectives and techniques of the 1964 Red Sea expedition will be published later this year.

Very small and inadequate facilities for marine biological research in Eilat have een constructed and used by the professors of Tel Aviv University and the Professor of he Hebrew University. About a year ago, Hebrew University officials drafted a plan for a much more substantial laboratory facility, costing \$200,000 to \$250,000 and including space for 4 or 5 laboratories and for auxiliary services. This expanded Marine Station would provide an excellent home base For the 1964 expedition, and would also be used on a continuing basis by Israeli and foreign scientists working in the Gulf of Aqaba. Efforts to raise the money needed for this installation include a proposal now being evaluated by the National Science Foundation. United States Embassy, Tel Aviv, August 20, 1963.)

Japan

FROZEN TUNA EXPORT MARKET IMPROVES:

The Japanese frozen tuna export market was reported in mid-August 1963, to be showing signs of recovery. Latest available price information indicates that frozen round albacore are selling at \$370 a short ton c.i.f. and frozen gilled-and-gutted yellowfin at price of \$335 a short ton c.i.f. Reportedly, those are prevailing market prices for shipments to the United States directly from Japan proper and for Atlantic Ocean transshipments.

Japanese press reports show that in late June and early July, Japanese exporters concluded agreements to deliver (in late July and in August), approximately 3,000 short tons of frozen round albacore at f.o.b. prices of \$270-280 a short ton. However, due to the sharp recovery of the export tuna market, the Japanese exporting firms have not been meeting their commitments since they would stand to lose \$60-80 a short ton on their deliveries. One large exporter is said to have already cancelled its agreement to deliver 800 short tons of frozen albacore to a large American tuna packer. Some firms are said to be seeking adjustments so that the original agreements entered into when prices were low would more closely reflect actual changes in market conditions. (Suisan Tsushin, August 15 and 21, 1963.)

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JAPANESE MINISTER PLANS TO DISCUSS UNITED STATES TARIFF ON CANNED TUNA:

The Japanese Minister of Forestry and Agriculture, who was scheduled to attend the Japan-Canada Ministerial Economic Conference in Canada on September 25-26, 1963, planned to visit the United States after that conference. Reportedly, the Minister planned to discuss with United States officials the matter of the United States tariff on canned tuna in brine and the present method of assessing duties on that product.

Japanese canned tuna canners are concerned over the low United States pack of canned tuna in 1963 because this will result in a smaller quantity of foreign-produced canned tuna in brine that can be admitted in 1964 into the United States at the lower duty rate of $12\frac{1}{2}$ percent ad valorem. Under the present United States tariff structure, an ad

valorem duty of $12\frac{1}{2}$ percent is assessed on canned tuna in brine imports amounting to 20 percent of the total United States domestic production for the previous calendar year. Imports exceeding that amount are dutiable at 25 percent ad valorem. Japanese packers are said to be seeking arrangements through their Government whereby some adjustment can be worked out for 1964 imports only. (Suisan Keizai Shimbun, August 23, 1963.)

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LARGE INCREASE EXPECTED IN OVERSEAS TUNA OPERATIONS:

The Japanese Fisheries Agency, which is planning on strengthening the management of Japan's distant-water fisheries, is reported to be making a study of those fisheries on the basis that there will be a large increase in the numbers of Japanese tuna vessels operating out of overseas bases. Figures projected

Number of Japanese Tuna Ve Operating Out of Overseas Bas			
Area	FY 1964	FY 1962	
Pacific Ocean:	(No. Vessels)		
Samoa	100	70	
Espiritu Santo, New Hebrides Is.	20	18	
Noumea, New Caledonia	35	0.1001 -1	
Levuka, Fiji Is	30		
ndian Ocean:			
Singapore	0	3	
Penang, Malaya	50	1	
Ceylon	3	3	
Atlantic Ocean	120	112	

by the Fisheries Agency for Fiscal Year 1964 (April 1964-March 1965), are shown in the table. For comparative purposes, the disposition of the Japanese tuna fleet in FY 1962 (April 1962-March 1963), is shown. (Shin Suisan Shimbun Sokuho, August 17, 1963.)

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NEW PORTABLE-VESSEL-CARRYING TUNA MOTHERSHIP COMPLETED:

The 2,800-ton Class 2 portable-vessel-carrying tuna mothership Kaikei Maru No. 58 was delivered to her Japanese owners in August 1963. The vessel is the first of its kind to be built from keel up as a Class 2 tuna mothership. As a Class 2 tuna mothership (vessel over 2,000 tons gross), she cannot engage directly in fishing, but will deck-carry six 20-ton portable vessels (each powered with a 90-horsepower engine and carrying a crew of 12) to do the actual fishing.

Specifications of the tuna mothership: length 321.4 feet, beam 48.5 feet, gross tonnage 2,801 tons, main engine 2,400 hp., cold-storage capacity 2,300 metric tons, crew 144, and 6 portable fishing boats.

The vessel was scheduled to depart for the Atlantic Ocean on August 28, and will operate out of Las Palmas, Canary Islands, for a two-year period. (Suisan Keizai Shimbun, August 22, 1963.)

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UNIVERSITY TO STUDY RELATION BETWEEN SEA BIRDS AND TUNA MIGRATIONS:

The Tokai University Fisheries Research Laboratory (Shizuoka, Japan) is conducting a study to determine the relationship of the migratory habits of sea birds to tuna migrations off the coast of Japan. The Laboratory plans to undertake this project by conducting bird-tagging experiments on the island of Hachijo located south of Tokyo. (Suisan Keizai Shimbun, August 21, 1963.)

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SALMON MOTHERSHIP FLEET ATTAINS NORTH PACIFIC QUOTA FOR 1963:

The 1963 North Pacific salmon season, which began officially on May 15, 1963, ended on August 1, with 11 Japanese mothership fleets having taken a total of 46,287 metric tons 1 of salmon of all species. This was the allowable catch quota set for Area A of convention waters by the Northwest Pacific Fisheries Commission (U.S.S.R.-Japan) for Japanese mothership operations.

The over-all salmon quota for Area A in 1963 was set at 57,000 metric tons (2,000 tons more than in 1962) on April 4, 1963, when the Commission reached an agreement on Japan's salmon quota for that year. The Commission sets the annual Soviet and Japanese catch quota for salmon and king crab in the Northwest Pacific Ocean.

The number of vessels (11 salmon motherships and 369 catcher vessels) permitted to operate in the North Pacific salmon fishery in 1963 was the same as in 1962. (United States Embassy, Tokyo, August 9, 1963.)

1/Editor's Note: This is believed to be the share of the 57,000-

ton quota assigned to the mothership fleet. Note: See <u>Commercial Fisheries Review</u>, June 1963 p. 58

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BOTTOMFISH FISHING FLEETS IN BERING SEA REPORT POOR FISHING:

The 19 Japanese bottomfish fishing fleets licensed in 1963, to operate in the Bering Sea report poor fishing and are expected to end their operations in the red. As of early July, they were reported to have met only 51 percent (137,500 metric tons) of their combined total catch target of 267,880 metric tons. Their combined total catches as of early July are estimated as follows: halibut 9,000 metric tons; sablefish 14,000 tons; cod 7,500 tons; flatfish 44,000 tons; rockfish 6,000 tons; Alaska pollock 26,000 tons; herring 10,000 tons; and shrimp 21,000 metric tons. Except for herring and shrimp, fishing is reported to be poor for the other species.

On the other hand, the four trawlers licensed to operate on an experimental basis in the summer of 1963 in the eastern North Pacific Ocean south of the Aleutian Islands and the Alaska Peninsula reported good fishing into July. Over 60 percent of their catches were reported made up of ocean perch, which are highly prized, and shrimp (Pandalus species) taken off the British Columbia coast. The shrimp reportedly has an ex-vessel market value of 600,000 yen per metric ton (US\$0.76 a pound) in Japan.

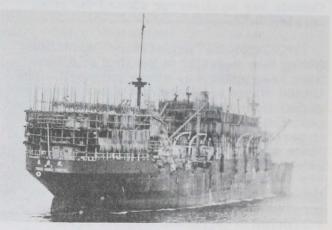
Reportedly, the trial fishing conducted by the four Japanese trawlers in the eastern North Pacific Ocean clearly indicated that full-scale commercial fishing operations are feasible. (Suisan Keizai Shimbun, July 30, 1963.)

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KING CRAB FLEETS IN BRISTOL BAY REPORT POOR FISHING:

The Japanese king crab fleets operating in Bristol Bay report poor fishing. As of July 23, 1963, the Tokei Maru (5,385 gross tons) was reported to have packed 66,500 cases (target--120,000 cases) and the Dainichi Maru (5,858 gross tons) 76,300 cases (target--115,000 cases). Catch-per-unit of effort of the Tokei Maru was 8.9 crabs per tan (shackle) and the Dainichi Maru 9.9 crabs per tan. Their net-soaking time is said to have increased and the crabs were reported to be running smaller in size this year. As a result of poor fishing, the two Japanese king crab fleets were expected to extend

their operations a month longer than anticipated.



Tokei Maru, Japanese crab factoryship.

The decline in king crab catch is attributed in part to greater fishing intensity. In addition to the two Japanese crab fleets, three Russian king crab fleets were reported to have operated in the Bristol Bay area. The Russian crab fleets are said to have also operated in the Gulf of Alaska waters. (Suisan Keizai Shimbun, July 25, 1963, and other sources.)

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SHRIMP FISHING IN GULF OF ALASKA:

Japanese trawlers exploring the fisheries resources of the Gulf of Alaska are making excellent catches of shrimp near Kodiak Island, according to the Alaska Regional Director of the U. S. Bureau of Commercial Fisheries. Catches of about ten tons of shrimp per day are being made by two Japanese trawlers operating 20 to 50 miles off the southwest tip of Kodiak Island. The catches reportedly consist of large pink shrimp with good quantities of the larger sidestripe variety.

Observations in late August and early September by a U. S. Bureau of Commercial Fisheries exploratory vessel have confirmed reports that considerable numbers of king crabs and lesser amounts of halibut are also caught in the trawl nets taking shrimp. Provisions of the license issued each vessel by the Japanese Fisheries Agency require all king crab, halibut, and salmon taken to be returned to the sea. A U. S. Bureau of Commercial Fisheries scientist is making observations of catches and handling techniques aboard one of the two Japanese trawlers.

valorem duty of $12\frac{1}{2}$ percent is assessed on canned tuna in brine imports amounting to 20 percent of the total United States domestic production for the previous calendar year. Imports exceeding that amount are dutiable at 25 percent ad valorem. Japanese packers are said to be seeking arrangements through their Government whereby some adjustment can be worked out for 1964 imports only. (Suisan Keizai Shimbun, August 23, 1963.)

* * * * *

LARGE INCREASE EXPECTED IN OVERSEAS TUNA OPERATIONS:

The Japanese Fisheries Agency, which is planning on strengthening the management of Japan's distant-water fisheries, is reported to be making a study of those fisheries on the basis that there will be a large increase in the numbers of Japanese tuna vessels operating out of overseas bases. Figures projected

Number of Japanese Tuna Vo Operating Out of Overseas Bas		
Area	FY 1964	FY 1962
	(No. Vessels)	
Pacific Ocean:	1	
Samoa	100	70
Espiritu Santo, New Hebrides Is.	20	18
Noumea, New Caledonia	35	ogour L
Levuka, Fiji Is	30	boon to-
ndian Ocean:		
Singapore	0	3
Penang, Malaya	50	1
Ceylon	3	3
Atlantic Ocean	120	112

by the Fisheries Agency for Fiscal Year 1964 (April 1964-March 1965), are shown in the table. For comparative purposes, the disposition of the Japanese tuna fleet in FY 1962 (April 1962-March 1963), is shown. (Shin Suisan Shimbun Sokuho, August 17, 1963.)

* * * * *

NEW PORTABLE-VESSEL-CARRYING TUNA MOTHERSHIP COMPLETED:

The 2,800-ton Class 2 portable-vessel-carrying tuna mothership Kaikei Maru No. 58 was delivered to her Japanese owners in August 1963. The vessel is the first of its kind to be built from keel up as a Class 2 tuna mothership. As a Class 2 tuna mothership, As a Class 2 tuna mothership (vessel over 2,000 tons gross), she cannot engage directly in fishing, but will deck-carry six 20-ton portable vessels (each powered with a 90-horsepower engine and carrying a crew of 12) to do the actual fishing.

Specifications of the tuna mothership: length 321.4 feet, beam 48.5 feet, gross tonnage 2,801 tons, main engine 2,400 hp., cold-storage capacity 2,300 metric tons, crew 144, and 6 portable fishing boats.

The vessel was scheduled to depart for the Atlantic Ocean on August 28, and will operate out of Las Palmas, Canary Islands, for a two year period. (Suisan Keizai Shimbun, August: 22, 1963.)

* * * * *

UNIVERSITY TO STUDY RELATION BETWEEN SEA BIRDS AND TUNA MIGRATIONS:

The Tokai University Fisheries Research Laboratory (Shizuoka, Japan) is conducting a study to determine the relationship of the migratory habits of sea birds to tuna migrations off the coast of Japan. The Laboratory plans to undertake this project by conducting bird-tagging experiments on the island of Hachijo located south of Tokyo. (Suisan Keizai Shimbun, August 21, 1963.)

* * * * *

SALMON MOTHERSHIP FLEET ATTAINS NORTH PACIFIC QUOTA FOR 1963:

The 1963 North Pacific salmon season, which began officially on May 15, 1963, ended on August 1, with 11 Japanese mothership fleets having taken a total of 46,287 metric tons of salmon of all species. This was the allowable catch quota set for Area A of convention waters by the Northwest Pacific Fisheries Commission (U.S.S.R.-Japan) for Japanese mothership operations.

The over-all salmon quota for Area A in 1963 was set at 57,000 metric tons (2,000 tons more than in 1962) on April 4, 1963, when the Commission reached an agreement on Japan's salmon quota for that year. The Commission sets the annual Soviet and Japanese catch quota for salmon and king crab in the Northwest Pacific Ocean.

The number of vessels (11 salmon motherships and 369 catcher vessels) permitted to operate in the North Pacific salmon fishery in 1963 was the same as in 1962. (United States Embassy, Tokyo, August 9, 1963.)

1/Editor's Note: This is believed to be the share of the 57,000-ton quota assigned to the mothership fleet.

Note: See Commercial Fisheries Review, June 1963 p. 58

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BOTTOMFISH FISHING FLEETS IN BERING SEA REPORT POOR FISHING:

The 19 Japanese bottomfish fishing fleets licensed in 1963, to operate in the Bering Sea report poor fishing and are expected to end their operations in the red. As of early July, they were reported to have met only 51 percent (137,500 metric tons) of their combined total catch target of 267,880 metric tons. Their combined total catches as of early July are estimated as follows: halibut 9,000 metric tons; sablefish 14,000 tons; cod 7,500 tons; flatfish 44,000 tons; rockfish 6,000 tons; Alaska pollock 26,000 tons; herring 10,000 tons; and shrimp 21,000 metric tons. Except for herring and shrimp, fishing is reported to be poor for the other species.

On the other hand, the four trawlers licensed to operate on an experimental basis in the summer of 1963 in the eastern North Pacific Ocean south of the Aleutian Islands and the Alaska Peninsula reported good fishing into July. Over 60 percent of their catches were reported made up of ocean perch, which are highly prized, and shrimp (Pandalus species) taken off the British Columbia coast. The shrimp reportedly has an ex-vessel market value of 600,000 yen per metric ton (US\$0.76 a pound) in Japan.

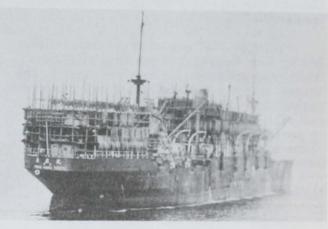
Reportedly, the trial fishing conducted by the four Japanese trawlers in the eastern North Pacific Ocean clearly indicated that full-scale commercial fishing operations are feasible. (Suisan Keizai Shimbun, July 30, 1963.)

* * * * *

ING CRAB FLEETS IN BRISTOL BAY EPORT POOR FISHING:

The Japanese king crab fleets operating in Bristol Bay report poor fishing. As of July 23, 1963, the Tokei Maru (5,385 gross cons) was reported to have packed 66,500 cases (target--120,000 cases) and the Dainichi Maru (5,858 gross tons) 76,300 cases (target--115,000 cases). Catch-per-unit of effort of the Tokei Maru was 8.9 crabs per tan (shackle) and the Dainichi Maru 9.9 crabs per tan. Their net-soaking time is said to lave increased and the crabs were reported to be running smaller in size this year. As a result of poor fishing, the two Japanese ting crab fleets were expected to extend

their operations a month longer than anticipated.



Tokei Maru, Japanese crab factoryship.

The decline in king crab catch is attributed in part to greater fishing intensity. In addition to the two Japanese crab fleets, three Russian king crab fleets were reported to have operated in the Bristol Bay area. The Russian crab fleets are said to have also operated in the Gulf of Alaska waters. (Suisan Keizai Shimbun, July 25, 1963, and other sources.)

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Canada has an observer aboard the other trawler.

The Japanese "exploratory" operations (using four vessels) in the Gulf of Alaska have been under way since last April. The United States and Canadian observers are to gather information on the effect of the Japanese fishing upon halibut stocks, of prime importance to the United States and Canada. Since operations began in early spring, fisheries specialists of both the United States and Canada have provided continual observation aboard the Japanese ships. The exploratory operations in the Gulf of Alaska were scheduled to terminate October 31.

* * * * *

PLANNING COMMITTEE ESTABLISHED FOR TRIPARTITE NORTH PACIFIC FISHERIES CONVENTION:

The Japan Fishery Association on July 11, 1963, established a committee named the "Planning Committee for the Tripartite Fisheries Convention" with terms of reference to (1) study the text of the Japanese draft treaty with reference to its effect on Japan's fishery, (2) study the effect of abrogation of the present treaty on foreign trade in exports of fish and fish products to the United States, and (3) study the effects of the United States and Canadian proposals for revision of the Tripartite (Japan, Canada, and United States) Treaty on the Japanese fishery.

The Committee held its first organizational meeting on July 15, and was scheduled to conduct meetings at weekly or ten-day intervals. Experts from the various fields of the fishing industry were to be invited to express their views on the topics under study. (Fishery Attache, United States Embassy, Tokyo, August 6, 1963.)

* * * * *

ATLANTIC TRAWLERS MAY FISH HAKE:

The large Japanese fishing companies operating stern trawlers in the Atlantic Ocean are reported showing considerable interest in fishing hake, primarily for export to Europe and Africa. Those vessels have been concentrating on fishing squid, octopus, and sea bream. One firm is already reported to have contracted to deliver 3,000 metric tons of hake to Spain in 1963.

A trial shipment of frozen hake shipped to Japan reportedly sold for the following prices: round 75,000 yen a metric ton (US\$0.095 a lb.), dressed 100,000 yen a ton (\$0.126 a lb.), fillet 150,000 yen a ton (\$0.189 a lb.).

Prices paid for the trial shipment are said to have even surprised the Japanese firms which introduced the species to Japan. Reportedly, since hake belong to the cod family and since cod are not highly prized in Japan, there was some concern regarding consumer acceptance. However, the sales results were gratifying. Opinion is that, with some promotion, a market for hake can be developed in Japan also. (Minato Shimbun, August 15 and July 26, 1963.)

* * * * *

JAPAN-COMMUNIST CHINA FISHERIES AGREEMENT:

There appeared a press report in August 1963 that a private Japanese fisheries mission is expected to go to Communist China in October to negotiate a new Japan-Communist China fisheries agreement to replace the expired 1955 agreement. That agreement, among other things, guaranteed the safe operation of Japanese fishing boats in the East China Sea, e.g. taking refuge in Communist Chinese ports in cases of emergency, the supply of water and food, etc.

At the end of August 1963 there was in Japan an eight-man fisheries delegation headed by the Vice-Chairman of the Chinese Fisheries Association. The group arrived August 14 and was scheduled to stay about three weeks. The visit was in return for the visit to Communist China last January of a Japanese group headed by the Chairman of the Board of a large Japanese fishing company. (United States Embassy, Tokyo, August 26, 1963.)

* * * *

EXPORTS OF FISHERY PRODUCTS TO THE UNITED STATES, 1962, AND APPLICABLE UNITED STATES IMPORT DUTIES:

Japanese exports of fishery products to the United States in 1962 were valued at US\$104.9 million. The general declines since 1934 in United States tariff rates on fishery products imported into the United States from Japan are shown in the table on the following page.

Item	Unit	Quantity	Value 1	Tariff July 1, 1934 2	1963 tariff
EDIBLE PRODUCTS					
or lore fresh chilled or frozen		1 000 000			Carrier Inc. Pro-
og legs, fresh, chilled, or frozen		1, 322, 863 5, 738	\$1, 354, 647 7, 638	10 percent ad valorem 20 percent ad valorem	5 percent.
go legs, prepared or preserved sh water trout, not elsewhere included, fresh and frozen		1, 845, 919	747, 447	1 cent per pound.	12 percent. 0.5 cents per pound.
s. Iresh or Irozen		300 800	131 812	20 percent ad valorem. 1 cent per pound. do. 2 cents per pound. 2 cents per pound. 2 cents per pound. 1 cent per pound. 1 cent per pound. do. 1 cent per pound. 1 cent per pound. 1 cent per pound. 1 cent per po	Do.
mon fresh or frozen		165, 753	113, 860	2 cents per pound.	Do. Do.
d, haddock, hake, pollock, and cusk, fresh or frozen libut, fresh or frozen ²		318, 500 394, 164	51, 385 107, 260	1 cent per pound	Do. Do.
ckerel, frozen		394, 164 447, 695	73, 390 47, 399	do	0.75 cents per pound,
rgeon, fresh or frozen ordfish, frozen. d, fresh or frozen. h, n.e.s., fresh or frozen. elts, fresh or frozen. elts, fresh or frozen. elts, fresh or frozen. elts, fresh or frozen, not cooked. elts, fresh or frozen, not cooked. elowfin, etc., whole, fresh or frozen, not cooked. elowfin, etc., gilled and gutted, fresh or frozen, not cooked. elowfin, etc., filleted, fresh or frozen, not cooked. elowfin, etc., gilled and gutted, heads, tails removed. elowfin, etc., n.e.s., fresh or frozen, not cooked. elowfin, etc., n.e.s., fresh or frozen, not frozen, not cooked. elowfin, etc., n.e.s., fresh or frozen, not frozen, not cooked. elowfin, etc., n.e.s., fresh or frozen, not frozen, not cooked. elowfin, etc., n.e.s., fresh or frozen, not frozen, not cooked. elowfin, etc., n.e.s., fresh or frozen, not frozen, not cooked.		130, 620 59, 316	47, 399 21, 729	1 cent per pound	0.5 cents per pound. 0.75 cents per pound.
ad, fresh or frozen		200	290	1 cent per pound	0.75 cents per pound, 0.5 cents per pound,
h, n.e.s., fresh or frozen		1, 761, 804 390, 886	338, 476 74, 348	do	1 cent per pound.
acore, whole, fresh or frozen, not cooked		52, 074, 117	0 346 616	do	Free. Do.
lowfin etc. whole fresh or frozen, not cooked		2, 464, 777 4, 057, 936	412, 254	do do	Do.
lowfin, etc., gilled and gutted, fresh or frozen, not cooked		66, 863, 020 10, 732, 820	622, 757 11, 392, 298	do	Do. Do.
lowfin, etc., filleted, fresh or frozen, not cooked		10, 732, 820	1,897,632	do	Do.
lowfin, etc., n.e.s., fresh or frozen, not cooked		10, 772, 880 963, 656	101, 857	do	Do. Do.
pjack tuna, fresh or frozen, not cooked		1, 291, 618	141, 455	do	Do.
d, filleted, fresh or frozen		1, 508, 740 21, 630	211, 371 4, 047	2½ cents per pound	Do. 1.875 cents per pound ar
andfish fillated from or from		10 405 001			216 cents per pound.
libut and salmon, filleted, fresh or frozen		18, 425, 981 4, 335, 213	6, 232, 416 1, 722, 799	do	1.5 cents per pound.3 Do.
llow pike filleted, fresh or frozen		25, 000	4, 523	do	Do.
unders, filleted, fresh, or frozen		10, 000 23, 148	3, 230 10, 338	do	Do. Do.
olffish, filleted, fresh, or frozen		8, 700	2, 697	do	1 cent per pound. 1.5 cents per pound.
ordfish, filleted, fresh or frozen. libut and salmon, filleted, fresh or frozen. llow pike filleted, fresh or frozen. sh wate fish except yellow pike, filleted, fresh or frozen. unders, filleted, fresh, or frozen. liffish, filleted, fresh, or frozen. h, filleted, boned, etc., fresh or frozen. d, haddock, etc., dried and unsalted. h, n.e.s., dried and unsalted. h, n.e.s., dried and unsalted. dines in oil, not skinned or boned—over 18, not over 23		3, 903, 804 2, 045	1, 161, 359	do.	1.5 cents per pound.
ark fins, dried and unsalted		56, 611	64, 794	1¼ cents per pound	0.2 cent per pound. 0.53 cent per pound.
h, n.e.s., dried and unsaltedover 18, not over 23		115, 796 487	82, 970 108	30 percent	0.3125 cents per pound. 20 percent.
ents per pound.				The second secon	THE RESERVE OF THE PARTY OF THE
dines in oil, not skinned or boned—over 23, not over 30 -		5, 934	2, 220	do	15 percent.
dines in oil, not skinned or boned—over 30 cents per pound,		4, 960	2, 188	do	12.5 percent.
		3, 774	990	do	A DESTRUMENT OF THE PARTY OF TH
dines in oil, not skinned or boned—over 30 cents per pound—over 30 cents per p		2, 100	1, 300	do	15 percent. 24 percent.
chovies in oil, valued over 9 cents per pound		397	163	do 45 percent	12 percent.
hite meat tunafish in oil, canned		206, 118 32, 053	91, 113 13, 335	45 percent	35 percent, Do.
nito and yellowtail in oil, valued over 9 cents per pound		36, 731	12, 522	dodo	15 percent.
moked. dines in oil, not skinned or boned—over 30 cents per pound. dines in oil, skinned or boned—over 30 cents per pound. chovies in oil, valued over 9 cents per pound. hite meat tunafish in oil, canned. her tunafish in oil, canned. nito and yellowtall in oil, valued over 9 cents per pound. oked pollock in oil, valued at over 9 cents per pound. h in oil, n.e.s., over 9 cents per pound. mon, not in oil, in airtight containers. nned albacore in brine. nned tuna in brine, n.e.s.		12, 039 390, 223	6, 653 181, 415	do	Do. 25.5 percent.
mon, not in oil, in airtight containers		4, 422, 325 26, 081, 906	2, 237, 655	25 percent	15 percent ad valorem.
nned albacore in brine		26, 081, 906	12, 053, 459		12.5 percent. ³ Do. ³
th cakes, balls, and pudding, not in oil, airtight		358, 516	7, 912, 761 125, 955	do	3 percent.
rring, smoked or kippered or in tomato sauce		998, 010 63, 499	180, 483 24, 119	do	
h, n.e.s., in airtight containers		158, 708	113, 164	dodo25 percent ad valorem	12.5 percent. ³ Do. ³
med tuns in brine, n.e.s. h cakes, balls, and pudding, not in oil, sirtight- rring, smoked or kippered or in tomato sauce- nito in brine, in sirtight containers. h, n.e.s., in sirtight containers mon, pickled or saled d, haddock, etc., pickled, salted, skinned or boned		3, 185 7, 825	3, 014 1, 594	25 percent ad valorem 2 cents per pound	8.5 percent. 0.75 cent per pound.
rring pickled or celted in centainers not over 10 pounds not		30	\$118	1 cent per pound	0.14 cent per pound.
rring, pickled or salted, in containers, not over 10 pounds, net rring, pickled or salted, in containers, over 10 pounds net- -ackerel, pickled or salted, bulk or containers, over 15 pounds in, pickled, salted, n.s.p.f., bulk or containers, over 15		250	213	do	0.1 cent per pound.1
ackerel, pickled or salted, bulk or containers, over 15 pounds.		6,500	989	1¼ cents per pound	0.2 cent per pound. 1¼ cents per pound.
ounds.		118, 759	54, 547		
sh, pickled, salted, n.s.p.f., in containers, not over 15 pounds		1,500	801	25 percent ad valorem	25 percent. 10 percent.
d, etc., filleted, smoked or kippered		122 288	420 110	3 cents per pound	0.5 cent per pound.
ounds in, plekled, salted, n.s.p.f., in containers, not over 15 pounds imon, smoked or kippered, n.e.s d, etc., filleted, smoked or kippered. ib, smoked or kippered, n.s.p.f. ib, n.e.s., in containers, not over 15 pounds bacore, loins, and disks, prepared, n.e.s., bulk or containers, not over 15 pounds		600	200	do. 3 cents per pound	6.25 percent. 12.5 percent.
bacore, loins, and disks, prepared ness bulk or containers		26, 596 1, 630, 638	23, 995 669, 423	1¼ cents per pound	12.5 percent. ³ 1 cent per pound.
				1¼ cents per pound	
na, loins and disks, n.e.s., prepared, bulk or containers, not ver 15 pounds.		8, 566, 867	3, 117, 844		
ozen blocks or slabs, uncooked fish bits, etc.		34, 800	5, 740	do	Do. Do.
her prepared or preserved fish sh paste and fish sauce		277, 862 22, 223	162, 272	30 percent	8 percent.
h paste and nsn sauce is roe, n.e.p.f., not boiled. is roe, n.e.s., for food, boiled, in airtight containers.		25, 517	56, 089	20 cents per pound	4 cents per pound.
shroe, n.e.s., for food, boiled, in airtight containers		2, 883 206, 300	4, 108	30 percent	5.5 percent. 15 percent.
abmeat, etc., fresh or frozen abmeat, etc., prepared in airtight containers		3, 441, 854	188, 634 4, 635, 347	8 cents per pound.	22.5 percent.
sters, etc., in airtight containers sters, smoked, in airtight containers		2, 777, 969	916, 272 669, 265	8 cents per pounddo	6 cents per pound. 4.5 cents per pound.
uer oysters, etc., in airtight containers		1, 402, 155 3, 109, 862	825, 326	do	6 cents per pound.
ZOF Clams canned	and the second s	1,428	631 809, 241	23 percent	7.5 percent. Free.
am chowder and clam inter and combinations		1, 354, 180 5, 441	5,009	Free 35 percent 4	17.5 percent.4
ch lobster tails. her fresh or frozen lobsters beters, canned.		299, 647	338. 160	Free	Free. Do.
bsters, canned		47, 144 914	48, 939 1, 562	do	Do.
11 (103		20	330	do	Do.
ams, anahogs not in significant containers	Charles and the Control of the Control	358, 083 1, 468, 230	76, 136 875, 366	do	Do. Do.
rimps and prawns adless shrimp, fresh or frozen		91, 369	63, 938	do	Do.
		1, 281, 491 1, 080, 953	848, 229 951, 313	do	Do. Do.
allops, fresh, frozen, and prepared		1, 080, 953	96, 353	do	Do.
rimp and prawns, n.e.s. allops, fresh, frozen, end prepared sters fresh or frozen, not in airtight containers		94, 228	53, 175	do	Do. Do.
sters, n.e.s., not in airtight containers. slone. ellfish, n.s.p.f		1, 542, 801 105, 313	162, 477 171, 897	do	Do.
ellfish, n.s.p.f		2, 669, 865	695, 434	do	Do. Do.
ellfish pastes and sauces, n.s.n.f		638	528	do	Du.

(Table continued on next page.)

Japanese Exports of Fishery Products to the United States, 1962
(By United States Import Commodity Descriptions, with Comparative United States Tariff Rates in 1963 and 1934) (Contd.)

Item	Unit	Quantity	Value 1	Tariff July 1, 1934 *	1963 tariff
NONEDIBLE PRODUCTS					
Whale oil, sperm, refined or processed	Pound	355, 555 -131, 870	85, 356	1.87 cents per pound Freedo	Free. Do.
Oral, marine, uncut and unmanufactured	Short ton	2, 385 15	4, 800 318	do	Do. 5 percent.
Goldfish and other aquarian fish, n.e.s. Ish, Inedible, ne.s. hells, mother of pearl and trocus, unmanufactured	Pound	299, 406	2, 843, 549 164, 184	do	Do. Do,
hells, n.s.p.f., unmanufactured lish solubles fallbut liver oil, advanced	Short ton	181, 618 338			Do. Do. 5 percent.
ish oils and fish liver oils, n.e.s., advancedgar-Agar	do	140, 860	914, 193 244, 944		15 percent.
permaceti wax earl ssence uttons, fresh water, pearl or shell	do	38,000	241 072	3.5 cents per pound 25 percent 1.75 cents plus 25 percent	2,5 cents per pound. 9 percent. 1.75 cents plus 25 percent
uttons, fresh water, pearl or shell	do	8, 434, 053	363, 619 17, 934, 1 <i>5</i> 9	10 percentdo	3 percent. 5 percent.
teptile and sharkskin, leather, n.e.s			59, 960	25 percent	Do. 17.5 percent.
eather manufactures, n.e.s., reptile			1, 252 7, 154 25, 427	do	
tured. I anufactures of shell and mother-of-pearl			173, 805	do	Do.
doss, sea grass, etc., dyed, manufactured, n.s.p.f				0.67 cent per pound	0.065 cent per pound.
Grand total					

1/The dollar value is defined generally as the market value in the foreign country, excluding U. S. import duties, ocean freight, and marine insurance. Figures not checked by Tariff Commission. The figures do not include 66,082,000 pounds of tuna received from the Canal Zone, Trinidad, Sierra Leone, Senegal, Chana, Canary Islands, Ivory Coast, and the Fiji Islands. It is understood that these imports consist entirely or almost entirely of tuna landed in these countries by Japanese fishing vessels for shipment to the United States.

2/Cuban rate not shown.

3/In act correspondence with tariff schedule.

4/On American selling price. Source: U. S. Department of Commerce, Bureau of the Census.

Note: Quantities are shown in pounds unless otherwise indicated.

* * * * *

COMMUNIST CHINESE FISHERIES DELEGATION EXPECTED:

According to a July 30, 1963, press report (Asahi Evening News), an eight-member fisheries delegation was expected to arrive in Japan from Communist China on or about August 10 for the purpose of attempting to work out a fisheries agreement with the Japan-China Fisheries Council. The Communist Chinese delegation, which was coming at the invitation of the Council and the Japan-China Friendship Society, was scheduled to be in Japan for about three weeks. During their visit they were to inspect fishery facilities, particularly those located in Kyushu. According to the press article, the chairman of the Council and leader of a fisheries mission to Communist China in January 1963, promised that a private agreement on fishery relations would be signed before the end of 1963.

The Fisheries Agency of the Ministry of Agriculture and Forestry corroborated the

press report, disclaimed any involvement in the visit or any knowledge of what a fisheries agreement resulting from the visit might contain, and expressed concern that the visit might further complicate the Japan-Republic of Korea fisheries negotiations.

* * * * *

FIRM CONTRACTS WITH A UNITED STATES SHIPYARD FOR CONSTRUCTION OF FOUR TRAWLERS:

A Tokyo fishing firm earlier this year contracted with a Rockport, Texas, shipyard for the construction of four 62-foot steel shrimp trawlers. As of August 1963 all four vessels were under construction. Completion of the vessels is scheduled for January 1964. Negotiations will then be opened to contract for three additional vessels to be delivered in March 1964. The trawlers are of American design, will be fitted with American manufactured equipment, and will probably operate in the shrimp fishery off the Guianas.

* * * *

LOAN POLICY TO BE LIBERALIZED TO PROMOTE FOREIGN INVESTMENT:

In accordance with the Japanese Government's policy of promoting export trade, the Japan Export-Import Bank (Government-operated) is reported to have decided to increase the amount of loans obtainable for overseas investment. Under this new policy, which was scheduled to go into effect beginning September 1963, Government loans available for investment abroad will be drastically increased from the present limit of 50 percent to a maximum of 70 percent, with interest rates on loans ranging from 5.5-8.0 percent, compared with the current flat rate of 7 percent. By liberalizing loans, the Bank hopes to facilitate Japanese plant exports and promote investments abroad.

Up to now, financial activities of the Bank were primarily centered around extension of long-term loans to Japanese exporters of manufactured products. However, with the progress of industrialization in underdeveloped countries, the Government is becoming increasingly aware of the fact that Japan's trade with those countries can no longer rely only upon export of manufactured products. Besides, the United States and European countries are exerting greater efforts toward promoting trade with underdeveloped nations through investment activities. Thus, the Japanese Finance Ministry and the Bank have reached the conclusion that the establishment of Japanese corporations and joint ventures abroad are becoming just as important as exports of merchandise.

Current Government loan conditions for overseas investments are very stringent compared with those applicable to exporters (who can obtain up to 80-percent Government loans at 4-percent interest, payable in 15 years) and importers (who can borrow up to 70-percent from the Government at 6.5 percent interest, payable in 5 years). The relaxation of loan conditions for overseas investments will permit borrowers to obtain Government loans at interest rates of 5.5, 6.0, 6.5, 7.0, 7.5, and 8.0 percent. Favorable loans for overseas investment will be granted for joint commercial ventures in cases where: (1) the majority of the facilities and raw material (semifinished products), are to be procured from Japan; (2) exports of Japanese parts can be expected to follow on a continuing basis; and (3) there are prospects of regularly remitting profits to Japan. Loans for the purchase of foreign corporation stocks (which heretofore were not authorized by the Bank) will, under the new policy, become obtainable at interest rates of 7.5-8.0 percent, since the Government feels that foreign corporations in many cases can serve as foundations from which to broaden markets for Japanese products and to extend Japanese commercial activities into foreign countries. (Nihon Keizai Shimbun, August 21, 1963.)

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IMPORTATION OF SPANISH-CAUGHT FISH OPPOSED BY JAPANESE TRAWLERS ASSOCIATION:

The announcement that a large Japanese firm is planning to import into Japan frozen fish caught by Spanish trawlers operating out of Las Palmas, Canary Islands, is said to have disturbed the Japanese Overseas Trawlers Association. The members are large fishing companies operating stern trawlers in the Atlantic Ocean. The Association claims that the importation of foreign-caught frozen fish (mainly "monko" squid, sea bream, and octopus) would disrupt the operations of the 30 or so large Japanese stern trawlers already operating in the vicinity of the Canary Islands. The Association is expected to start a campaign against their importation.

Earlier press reports indicated that the Japanese firm concluded a five-year contract with a Spanish fishing company located at Las Palmas to purchase 6,000 metric tons of fish annually from about forty 150-ton Spanish trawlers. As replacement for the Awazu Maru (8,500 gross tons) which is presently serving as a floating freezership and purchasing fish from the Spanish trawlers at Las Palmas, that company planned to dispatch in late August the 8,000-ton mothership Otsu Maru. (Minato Shimbun, August 11; Suisan Keizai Shimbun, August 13, 1963.)



Jordan

ATTEMPTS TO DEVELOP FISHING INDUSTRY IN RED SEA:

A German expert in fisheries from the University of Kiel submitted a report in 1962 on the possibilities of improving the Jordanian fishing industry at Aqaba. This study was made as part of the German technical assist-

Jordan (Contd.):

ance program to Jordan. The report recommended the purchase of modern fishing boats and equipment and the training of Jordanians in the use of those boats and equipment.

Jordan is now negotiating with a Swedish firm to obtain technical and financial help in carrying out the recommendations of this report. The Government of Sweden has been asked to provide financial assistance in the development of the industry. The consumption of fresh fish in Jordan has risen from 161 tons in 1955 to 685 tons in 1961. The Government is also pursuing the question of fishing rights through diplomatic channels with the countries that border the Red Sea. (United States Embassy, Amman, July 24, 1963.)



Republic of Korea

FOREIGN EXCHANGE TO BE AUTHORIZED FOR FISHING VESSELS UNDER ITALIAN-FRENCH CONTRACT:

The Government of the Republic of Korea intends to allocate the exchange within the required time limit in order to avoid invalidating the Italian-French-Korean contract to supply Korea with a large number of fishing vessels. A Fisheries Development Corporation has been organized to handle the program, according to reports the latter part of July. The corporation was expected to be legally registered and inaugurated before the end of July 1963.

Indicative of increasing public recognition of the continuing drawdown of foreign exchange reserves, there were rumors in July that the Korean Government might find it necessary to forego paying the US\$4.4 million installment due towards the latter part of that month on credit for fishing vessels, thereby forfeiting \$1.1 million already paid to a Franco-Italian consortium of shipbuilders and equipment manufacturers. The Economic Planning Board has been reported especially concerned about the allocation of such a large amount and the Ministry of Agriculture and Forestry equally concerned lest deferral of payment terminate the entire contract.

In January 1963, six Italian businessmen and two French representatives signed a

contract with the Government of the Republic of Korea to supply Korea with 159 modern fishing vessels valued at about \$58 million. The Italian group will provide about \$26 million of equipment including marine motors and other machinery. The French firm will supply equipment valued at about \$32 million, including the vessel hulls and equipment.

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CANNED SAURY SOLD TO BURMA:

The Republic of Korea is reported to have sold a total of 5,000 cases (1-lb. talls) of canned saury to the Burmese Government purchasing agency under a new trade agreement concluded with Burma. Reportedly, the sale was contracted at a price of 38 shillings 8 pence (US\$5.41) a case f.o.b. Korea, which is 4 shillings 7 pence (\$0.64) below the price Japan received for the most recent delivery of canned saury to Burma. The Korea-Burma contract originally called for shipment of 10,000 cases, but the quantity was reduced to 5,000 cases since Korea was unable to export that amount. (Suisan Tsushin, August 22, 1963.)



Mauritania

COMMERCIAL FISHING INDUSTRY TO BE EXPANDED:

Because of a lack of large-scale port and processing facilities, Mauritania (northwest coast of Africa) has profited very little from the productive all-year fishing grounds off its northern coast, a part of which are claimed as territorial waters. An estimated 250,000 metric tons of fish are caught in those grounds each year by other fishing nations including Japan. Fishery experts estimate that the grounds could yield up to 350,000 tons without any fear of depletion of the resource.

Although Mauritania's commercial fishery has been largely undeveloped up to the present, it is now entering a stage of intensive development with strong support from the Government. A total of US\$5.6 million in public and private investments at Port-Etienne (northernmost port) has already been committed. Facilities planned for Mauritania's fishing industry include a shipyard for construction of small vessels (one 40-foot trawler has already been launched), wharf, refrigerated fish market, freezing plant, pilot can-

Mauritania (Contd.):

nery, a drying and salting facility, and a fishmeal plant. A Canary Islands group will base 20 trawlers at Port-Etienne, and while operating, will train local people as seamen and technicians.

By 1967, the fishery complex is scheduled to be handling 100,000 tons annually of fresh fish, with a commercial value of \$12 million. Mauritania's share, in products and income from the 2,500 jobs the industry will create, is estimated at \$3.2 to \$3.6 million. This will make fishing Mauritania's second most important industry, ranking next to the MIFERMA iron mines (which are scheduled to yield Mauritania some \$8 million annually apon reaching full production in 1970).

Off Mauritania's coast, roughly between Port-Etienne and Cap Arguin, is a broad continental shelf beneath approximately 100,000 square kilometers of one of the world's important commercial fishing areas. In that area, mineral salt-laden southbound cold currents and northbound warm currents combine with the shallow depths to form breeding and feeding grounds rich in plankton for enormous quantities of species such as dorado, sole, courbine, octopus, umbrine, mullet, halibut, merou, tuna, sardines, and lobsters.

Those fishing grounds are already under or ofitable year-round exploitation. Some 50,000 tons of fish are caught annually by in international high-seas fishing fleet of rench, Polish, Italian, Japanese, and Spansh vessels. Peruvian trawlers have also een reported, as well as Greek and Portugese. The largest new exploiters are the lanary Islands Spaniards.

Studies conducted by French Government clientific organizations for the Mauritanian lovernment have established that the annual atch could be increased to 350,000 tons without harm. To protect the spawning grounds from destructive overtrawling, Mauritania as already closed off the Bay of Levrier the large inlet in which Port-Etienne is lotated) to commercial fishing operations. Ithough Mauritania cannot completely entree this ban for the time being, it has adanced a claim for extension of its terribrial waters to a limit of 12 miles, the anner 6 of which are off-limits for trawling. That step was taken to protect the spawning

beds and to guarantee its future share of the proceeds from this important resource.

Only about 15,000 tons of fish is landed in Mauritania for processing. It is processed at Port-Etienne into about 3,500 tons of dried and salted fish by two firms, using hand methods on a small scale to produce a modest output for both home and foreign (mostly West African) consumption. Processing on that small scale has been going on since 1923, although plans for its development into a major industry date back to 1931.

The reasons given for Mauritania's present limited fishing industry are that fish processing on the scale potentially possible requires not only port, canning, and freezing facilities which do not yet exist, but also large quantities of water at low cost, which up to early 1963 have been nonexistent.

A hint of the future of Port-Etienne as a flourishing fishing port and the potential of the Mauritanian fishing industry is the already accomplished fact of a completed shipyard, which in February 1963 launched its first vessel, which was built entirely at Port-Etienne and flying the Mauritanian ensign.

Independence of the Nation, and the completion of the iron ore port at Port-Etienne for shipping out that product have radically modified the fish-processing and port installations picture at Port-Etienne. First, pressed by the new responsibilities of independence to develop all possible resources, the Mauritanian Government has extended the tax and import duty benefits of its investment-encouragement law to the fisheries industry. Second, now a city of some 5,000, Port-Etienne could no longer depend on imported fresh water or expensive desalinized sea water; prospecting by technicians discovered natural fresh water 80 kilometers from Port-Etienne, sufficient not only for human needs but at least temporarily adequate for industrial use.

The result of these developments is the \$600,000 shipyard which will employ 400 Mauritanians at peak production, and firm commitments from private and public sources of another \$5 million for development of the port and of the entire fishing industry. The projects which are planned, their sources, and the amounts involved are:

1. By a French combine: \$1.2 million in private investments for a freezing plant with

Mauritania (Contd.):

a 1,500-ton storage capacity and a daily freezing capacity of 75 tons. Work was scheduled to begin in the second half of 1963, and to be completed by early 1964.

- 2. By a second French consortium, utilizing a loan of \$2.88 million advanced by the Common Market development finance organization FEDOM: An 800-foot fishing wharf, fish market area, and refrigeration system capable of handling by 1966, 30,000 to 40,000 tons of fresh fish annually. The French consortium will also undertake European distribution of a part of the Port-Etienne products.
- 3. By a Canary Islands fisheries operators group: \$1 million in investments for a pilot cannery, an advanced drying and salting facility with a 2,000-ton annual capacity, and a fish-meal plant (the latter to convert into saleable products the 70,000 tons of non-marketable fish now pulled up annually in the trawls only to be thrown back into the sea). Further, the Spaniards are to base a fleet of 20 trawlers at Port-Etienne, and to train Mauritanians aboard them as sailors and technicians.

The latest estimates were that by 1967, the projected fisheries complex will be handling 100,000 tons of fresh fish annually (compared to the present 15,000), processed into 10,000 tons of frozen whole fish, 15,000 tons of frozen fillets, 7,500 tons of salted dried fish, 11,000 tons of fish meal, and 500 tons of lobsters, most of it destined for European markets. (United States Embassy, Nouakchott, July 8, 1963.)



Morocco

CANNED FISH INDUSTRY TRENDS, SECOND QUARTER 1963:

The second quarter of the year marks the beginning of the annual fishing season in Morocco. In general the fish seemed to be biting and there was general satisfaction with the size of the catch.

In June 1963, French dockers refused to unload frozen Moroccan sardines because of the abundant catches in French waters. The same thing occurred last year, and the French

and Moroccan Governments agreed this year that Moroccan exports would be suspended from July 15 to September 15. Moroccan plants began operations earlier than usual this year in order to get the fish to France before the deadline. Unfortunately the sardines arrived early off the coast of France. As a result, Moroccan exports of frozen sardines were suspended July 5, and fish plants ceased operations the end of June.

The season for exports of canned fish ended on May 31. Although definite figures are not yet available, it seems that there was no significant improvement in exports over last season. Canned tuna exports, however. did increase substantially (229,122 cases at the end of February against 163,584 last sea son). Since there is a good market for tuna, Morocco is planning to increase its production still further. There was talk during the second quarter of 1963 of modernizing the fishing fleet, particularly by the addition of larger boats to fish tuna. Although yards exist in Casablanca where such boats could be built, the delivery time is so long that early in July an order for several boats was placed in Norway. (United States Embassy, Rabat, August 2, 1963.)



Norway

COD FISHERY TRENDS, JANUARY 1-JUNE 22, 1963:

The 1963 season's total landings of mature and young cod in Norway during January 1-June 22, 1963, amounted to 91,728 metric tons compared with 99,488 tons for the same period last year and 136,984 tons in the same period of 1961. Of the 1963 landings, 51,007 tons were sold for drying, 10,330 tons for salting, 22,436 tons for filleting, and 7,955 tons for sale fresh. The season's fishery also yielded 4,460 hectoliters (415 metric tons) of cod-liver oil and 35,761 hectoliters (3,326 tons) of salted, fresh, and canned cod roe.

The Finnmark young cod fishery ended on June 22. The total landings of the Finnmark young cod fishery reached 35,495 tons against 31,218 tons in 1962. (Fisket Gang, June 27, 1963.)

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Norway (Contd.):

EXPORTS OF CANNED FISH, JANUARY 1-JUNE 22, 1963:

Norway's total exports of canned fish January 1-June 22, 1963, were 10.3 percent less than in the same period of 1962. The decline affected all of Norway's principal canned fish products.

Product	Ī								1/1963	1962
							(Metric Tons)			
Brisling									2,304	2,393
S mall sild									6,427	6,543
Kippered herring									1,534	2,422
Soft herring roe									473	575
S ild delicatessen									202	221
Other canned fish									1,585	1,709
Shellfish									740	920
Total									13,265	14,783

This year, the small sild canning season comed on May 2. The small sild pack during May 2-July 20, 1963, amounted to 152,853 standard cases, down 34.2 percent from the pack of 232,147 cases in the same period of 1962.

The brisling packing season began June 4, 1963. By July 20, 1963, a total of 198,381 standard cases of canned brisling had been packed, a decline of 11.2 percent from the pack of 220,522 cases in the comparable period of the previous year. Brisling quality has been excellent this season. (Norwegian Canners Export Journal, August 1963.)

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NLY FOUR EXPEDITIONS FOR

ANTARCTIC WHALING IN 1963/64 SEASON: The Norwegian press reports that Norway will send four whaling expeditions to the Antarctic in the 1963/64 season. The ships are Phorshovdi, Thorshavet, Kosmos IV, and Sir ames Clark Ross, and they have the entire Norwegian quota of 2,800 blue-whale units. The decision to send Thorshovdi to the Ant-Earctic was taken after the owners had failed to obtain Government permission to sell the rmodern factoryship to a syndicate of Japanese whaling operators. The Japanese had Offered US\$1.7 million for the ship, but were primarily interested in the quota of 400 bluewhale units which would have gone with it. The Japanese have already purchased the ritish ship Southern Harvester, bringing their share of the Antarctic quota up from

41 to 46 percent, and Thorshovdi's 4 percent quota would have given them a dominant share of 50 percent.

Though there appears to be general agreement that Norway's days as a leading whaling nation are over, the Government is concerned to preserve Norway's proportionate share of the Antarctic quota to minimize unemployment problems for whaling crewmen who are now too old to adapt to other types of work. The whaling community of Sandefjord has seen the handwriting on the wall for some years, and the major whaling firms have been diversifying their industrial interests. (United States Embassy, Oslo, August 19, 1963.)



Panama

SPINY LOBSTER INDUSTRY TRENDS:

During 1962, Panama's fishermen on the Pacific side of the Isthmus were paid from 25 to 30 cents a pound for spiny lobsters (with heads on). In the Bocas del Toro area (Caribbean side of the Isthmus), fishermen were reportedly paid an average of \$1.50 per dozen spiny lobsters (with heads on).

There are no official statistics on the total catch of spiny lobsters in the Republic of Panama. During 1962, the total spiny lobster catch in all Panamanian waters was about 105,000 pounds, according to an estimate by the Panamanian Ministry of Agriculture, Commerce and Industries.

There are no official export statistics on lobsters. The same official estimates that about 50 percent of the catch was exported during 1962, the majority to the United States. (United States Embassy, Panama, August 23, 1963.)

Peru

FISH MEAL INDUSTRY FACES PROBLEMS:

Within the past several spring and summer months, the Peruvian fish-meal industry entered a difficult period. Overproduction, restricted quotas, increased costs and taxation, and a lack of discipline within the industry all have contributed. Many operators are short of working capital and local banks as of early

Peru (Contd.):

August 1963 were refusing credit, except for fish meal which can be sold immediately under the Peruvian quota. Many companies face imminent bankruptcy and it has been charged that deliberate efforts are being made by some large established producers to "break" newer and smaller enterprises. Practically all companies are overextended and numerous cases of nonpayment of debts have been reported. During July 1963, the local association of shipyard owners and the fishermen's union requested Government assistance on an urgent basis to prevent the fish-meal and collateral industries from collapsing. It has been charged that foreign interests are gaining control of the industry.

A number of United States companies presently are engaged in the fishing industry in Peru. At least five United States firms have interests in Peruvian fishery plants. (United States Embassy, Lima, August 8, 1963.)



South Africa Republic

JAPANESE VESSEL UNLOADS TUNA AT EAST COAST PORT:

Nearly 200 tons of frozen tuna, valued at about R34,000 (US\$47,400), were discharged in Durban in June 1963 from the Japanese long-line fishing vessel Nanryu Maru. This was the first of what is expected to become a regular succession of similar cargoes. The fish was to be loaded into cargo ships with refrigerated space and taken to Japan.

The tuna, deep frozen on the fishing vessel, attracted considerable attention as it was lifted out of the hold and moved by forklift trucks to a cold-storage warehouse.

Watching the discharge of the fish (which included yellowfin, big-eyed, and albacore or longfin tuna as well as swordfish and some shark fins and tails) was the representative of the Japanese fishing firm which owned the vessel. He said that the transshipment of fish from Durban was in the nature of an experiment. Other fishing craft would also bring their catches to Durban this winter and if the scheme for transshipping them to Japan was successful it would become a regu-

lar feature of the tuna season in the Indian Ocean off southern Madagascar. In the past, he said, fishing vessels had carried their catches from the tuna grounds all the way back to Japan. Consequently they were each able to make only two trips a season. By bringing the fish to Durhan, the vessels would be able to spend at least twice as long as previously on the fishing grounds.

As of mid-1963 there were only 2 vessels working off Madagascar, but 4 others were fitting out in Japan to come to those waters to fish when the season reached its height.

Tuna fishing off Madagascar was reported not good and the <u>Nanryu Maru</u> had taken nearly twice as long as normal to fill her holds. But fishing was expected to improve as the season progressed.

Most of the tuna caught off Madagascar is destined for the canneries of the subsidiary of the Japanese firm which owns the vessel.

The shark fins and tails will be sold to Chinese buyers. The next consignment of fish was not expected to reach Durban until late July or early August 1963. (The South African Shipping News and Fishing Industry Review, July 1963.)

PILCHARD-MAASBANKER FISHERY, JANUARY-MAY 1963:

The catch of the pilchard-maasbanker fishery off the Cape west coast of South Africa Republic in the first 5 months of 1963 was 299,251 short tons pilchards, 12,460 tons maasbanker, and 14,634 tons mackerel; a total of 326,345 tons. By the end of May last year 396,779 tons pilchards, 52,405 tons maasbanker, and 19,287 tons mackerel had been caught; a total of 468,471 tons. At the end of May 1961 the total catch was 419,422 tons and for the same period in 1960 it was 284,941 tons.

According to figures released by the Division of Sea Fisheries, the May 1963 catch was 61,012 tons pilchards, 4,787 tons maasbanker, and no mackerel. This compares with 43,123 tons pilchards, 46,884 tons maasbanker, and 3,732 tons mackerel in May last year; and with 60,205 tons pilchards, 14,362 tons maasbanker, and 1,986 tons mackerel in May 1961.

The May 1963 catch yielded 15,253 short tons fish meal, 1,315,114 imperial gallons

South Africa Republic (Contd.):

fish body oil, 1,246,632 pounds canned pilchards, and 383,760 pounds canned maasbanker.

During May, the pilchard industry at Walvis Bay, South-West Africa, caught 80,759 short tons and the 1963 season total to the end of May was 195,304 tons. (The South African Shipping News and Fishing Industry Review, July 1963.)

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FISHERIES DEVELOPMENT CORPORATION OF SOUTH AFRICA TO EXPAND:

Far-reaching plans to enlarge the Fisheries Development Corporation of South Africa Ltd, and to extend its activities into two more important fields-fishing harbors and resource development work-are indicated by the appointment in July 1963 of a new general manager for the Corporation.

Formed in 1944 under Section Two of the Fishing Industry Development Act, the Corporation was created as a semipublic body with half its capital of R2 million (almost US\$2.8 million) subscribed by the State.

In its history of nearly 20 years the Corporation has played a substantial part in the development of the inshore fishing industry, assisting in the financing of new factories, in housing projects, and in the purchase of fishing craft.

It has also helped the South African Division of Sea Fisheries in the financing of research vessels and laboratories, and it now moves into an important new phase by taking over the planning, building, and possibly, at a later date, the administration of fishing harbors along the South African coast.

This arrangement will at last bring near to an end the system under which the already heavily burdened Division of Sea Fisheries had to watch over harbors paid for by the Department of Commerce and Industries but designed and built by another agency. The Division of Sea Fisheries will continue at present to administer the harbors, but the work of planning and building will now be taken on by a team of engineers employed by the Corporation.

In addition to its responsibility for harbors, the Corporaon will now also embark on resource development work, saving the research section of the Division of Sea Fisheries concentrate on its long-term conservation research work.

The Corporation in its resource development work would be caused particularly on spreading the South African catching affort over more species of fish. Work would be done on inding the best possible gear and methods for tuna fishing, and early efforts would be made to find out if shrimp and archovies (known to be in Southern African waters) could be caught commercially.

From announcements of harbor projects made in May and June, the harbor section of the Corporation is going to be very pusy for years to come. Starting from the Berg River, the collowing are some of the projects planned:

A channel is to be cut through from the sea to the Berg River estuary between Laaiplek and the sandbar-choked river mouth. This will open the calm reaches of the river to dozens of large pilchard boats and will also enable catches to be discharged right alongside the Laaiplek factory of Marine Products Ltd.

Two or three sites are being considered for the placing of harbor on the southern coast of St. Helena Bay. This har-

bor will provide a shelter for many of the boats serving the factories in the area.

Improved facilities are being considered for fishing boats in Saldanha Bay.

The largest of all the harbor projects will be in Table Bay where a new fishing harbor is to be built at a cost of about R10 million (\$13.9 million). Model tests are now being carried out so that the most suitable site may be selected and this may well be in the Woodstock Beach-Paarden Eiland area of the Table Bay coast.

Extensions, costing about R1 million (\$1.4 million) at Hout Bay, will include lengthening the present breakwater, building a new breakwater out from the beach north of the jetty, and the construction of a slipway and repair quay.

Repair slipways are to be built at Hermanus and at Kalk Bay.

Gansbaai harbor, which has become too small for the growing fishing industry of the town, is to be greatly enlarged at an estimated cost of R1 million (\$1.4 million).

To further encourage the development of the fishing industry on the Cape south-west coast, investigations will be made into the possibility of building a new harbor at Stilbaai, south of Morris Point. (The South African Shipping News and Fishing Industry Review, July 1963.)

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NEW AUTOMATED FISH MEAL PLANT:

In January 1963, what is thought to be the most modern, compact, and highly automated fish-meal processing factory of its size in the world, started operations at Gansbaai in the Cape Province of the South Africa Republic. This new plant can handle 20 short tons of raw fish an hour.

Building took over five months and the equipment of the plant (most of it of South African manufacture) took four months.

Gansbaai is a small village which lies in a reasonably protected bay very near Danger Point. It is 107 miles from Cape Town and 20 miles from the fishing town and holiday resort of Hermanus, and its economy is based on fishing and fish processing. The village's harbor is already becoming too shallow and small for the large shoal fishing boats now using it.

The nearest railhead to Gansbaai is at Bot River, about 50 miles away by road. From there all requirements for the factory and the bagged fish meal and tankers of fish oil are carried to and from the factory by vehicles of the Road Motor Services of the South African Railways and Harbours. The large trucks and trailers are a common sight on the roads in the area. At present the road is tarred only as far as Hermanus but work is in progress to tar the road the whole way to Gansbaai.

Nine boats operate for the factory. Seven of them were built last year in a Cape Town shipyard and the remaining two are fairly new ex-West Coast boats.

Incoming boats with their catches come alongside a concrete quay to be discharged. The jetty is built on reclaimed land, and the catch is discharged by a pump. From the pump the fish are turned out onto a dewatering elevator, constructed of open wire mesh and metal plates, to enable the catch to be drained of water. The elevator (which comprises a conveyor belt operating at an angle of about 45 degrees) was built by personnel from the factory. This elevator raises the catch to a height of about 25 feet to the batch weigher.

Water falling from the dewatering elevator is collected in troughs which run beneath it and is passed into a storage tank for re-circulation in the system. Solids with the water are separated and returned to the batches of fish. Waste and odor are reduced to a minimum.

South Africa Republic (Contd.):

From the dewatering elevator, the fish enter the surge hopper and then the weighing hopper, and are finally discharged into one of six large concrete holding bins. While in the weighing hopper the fish batches are weighed by a large scale capable of registering up to 2,000 pounds at a time. From the scale, the fish are conveyed to the bins by means of a screw conveyor and then another conveyor. The total capacity of the holding bins is 800 tons.

From the holding bins, the fish are screw-conveyed through a gate in the bin wall (the bin in which the fish have been lying for the longest time is emptied first) to a collector conveyor and then into elevating screw conveyors which feed surge hoppers which in turn feed the two continuous screw indirect cookers.

When the mass of fish has been cooked in the cookers, it is screw-conveyed to one of the two presses where it is dewatered. (The South African Shipping News and Fishing Industry Review, July 1963.)



South Africa Republic and South-West Africa

FISHING INDUSTRY STATUS:

Fishing in South African waters has shown a marked increase in importance during recent years, a fact which is highlighted by the increasing numbers of foreign vessels seen to be operating off the coast of Southern Africa, states a report on the South- and South-West African Fishing Industry published in the July 1963 "Barclays Trade Review." The report points out:

The first census ever conducted by the Bureau of Statistics of South Africa's fishing industry brought fresh attention to the magnitude and importance of that industry to the country's economy. The census relates to the 1961 financial year.

A total of 3,882 fishing craft were included in the survey, More than two-thirds of these were rowing and sailing boats, the remainder were 702 motor boats, 69 motor trawlers; and 223 "other" craft (including dinghies with outboard motors).

Catch: A total of 1,030,331 long tons of fish worth R19.7 million (US\$27.6 million) were caught during 1961. A little less than one-third of the total catch came from South-West African waters. Processing factories took the greater portion of the fish caught (nearly 88 percent) with the remainder going chiefly to the wholesale fish trade, and a little direct to the retailers.

Statistics relating to the value of fish caught during the period under review have been analyzed by the Bureau into inshore (75 percent of the total catch) and offshore catches, the former being further subdivided according to the various types of fish caught. On the basis of value, pilchard, maasbanker, and mackerel (all inshore fish) formed the major portion of the total catch, with a valuation of R6.5 million (\$9.1 million), followed by spiny or rock lobster worth R5.2 million (\$7.3 million) and snoek valued at a little over R0.5 million (\$700,000). It may be of interest to note that sharks caught during the period were valued at R29,359 (\$41,000).

<u>Labor</u>: The fishing industry in South Africa and South-West Africa provided employment for a total of 10,503 persons during the period under review. Of that total, some 2,036 were casual employees only, while a

further 4,039 were contract workers (persons who had contracted to operate boats belonging to the owners and to deliver the catch at a stipulated price per ton). The total number of employees was made up of 1,991 whites; 6,495 colored; 1,993 Bantu; and 24 Asiatics.

Salaries and wages paid to those employees amounted to R4.7 million (\$6.6 million) in all. Whites earned R1.8 million (\$2.6 million); colored R2.6 million (\$3.6 million); Bantu R260,000 (\$364,000); and Asiatics a little over R7,000 (\$9,800). Apart from cash, employees received payments in kind valued at R310,000 (\$434,000). This total included the value of fish and other stores given to regular and casual employees as well as provisions required by trawlers and other boats.

Finances: The survey reveals that total assets of the fishing industry in South Africa and South-West Africa amounted to R11.1 million (\$15.5 million) in the period under review. Expenditure for the census year amounted to some R17.5 million (\$24.5 million), while income totaled R20.4 million (\$28.6 million), giving a profit of R2.9 million (\$4.1 million) on fishing operations of which some R2.1 million (\$2.9 million) accrued to South African operators.

New capital expenditure in the census year is estimated at a little over R2.5 million (\$3.5 million). The report also discloses that fishing boats and trawlers currently operate from 22 harbors in South Africa and from Luderitz and Walvis Bay in South-West Africa.

Other Nations Interested in Fishing Grounds off South Africa: Five foreign countries have already shown interest in the rich fishing grounds off South Africa's west coast. They have sent their trawlers and research vessels to the Cape to see what that part of the South Atlantic has to offer. The Russians were the first to arrive in 1961. They have brought with them floating factories and are said to be taking everything they can find out of the sea. They were followed by the Japanese. Early this year the Spaniards arrived, followed by the Belgians. In June Israel sent a research trawler to the Cape with a promise that they would be back next year to fish.

This might be only the beginning, for according to the head of a local fishing firm who has just returned from Europe, the Germans, the Dutch, the Scandinavians, and the British have ideas of going south, for they know that off South Africa's west coast they can supplement their present catches in the North Sea, the Barents Sea, and off Newfoundland.

Realizing the threat to the local industry, the South African Government has defined by law the territorial waters and the fishing zones of the Republic and South-West Africa. The Territorial Waters Act, recently promulgated but not yet proclaimed law, extends the territorial waters of South Africa and South-West Africa from 3 to 6 miles. It also provides for a fishing zone extending 12 miles from the shore (including South-West Africa), in which the Government will exercise the same rights and the powers as it does in the 6 miles territorial zone.

The Government's decision to extend the breadth of South Africa's territorial waters to 6 miles and its fishing zone to 12 miles, is a unilateral action. There appears to be no reason why other countries should not recognize the 12 mile zone off South African shores, but whether South Africa can determine the fishing limits off South-West Africa is another matter. There is a chance that some foreign country may dispute the right of South Africa to determine the offshore limits of a mandated territory.

Another consideration here is the enforcement ability of the small South African Navy, which must cover 2,800

South Africa Republic and South-West Africa (Contd.):

miles of coastline (including the 966-mile South-West Africa coast) with 4 antisubmarine frigates, 12 smaller minesweepers, and a dozen smaller patrol craft. Some ocal sources have indicated that the enforcement probe m is one reason for delaying proclamation of the new irmits. (United States Consulate, Cape Town, August 13, 963.)

lote: Values converted at rate of R1 equals US\$1.40.



South-West Africa

TUNA FISHING PLANNED:

Full-scale commercial tuna fishing (in Eddition to trawling for bottomfish) is to be started within the next year at Walvis Bay, South-West Africa. Negotiations are now under way with the harbor authorities to acquire ground within the harbor precincts for the erection of cold-storage facilities to handle up to 20,000 tons of fish. The plan is to export the tuna and white fish.

This year the same group that is planning to fish tuna and bottomfish was awarded an additional pilchard quota of 5,000 tons to process pilchard fillets for export in frozen form.

To catch the extra quota of pilchards, the white fish, and the tuna, the group is planning big fleet expansion program. Two boats will be built to catch the tuna and the extra filchard quota. The plan is to construct a tern trawler for white fish. (The South frican Shipping News and Fishing Industry leview, July 1963.)



ahiti

APANESE FIRM EXPLORING ROSPECTS OF TUNA BASE:

The prospects of establishing a tuna fishing base at Tahiti, Society Islands (French), the purpose of a visit to that Island by the mief of the fishing department of a large Japaese fishing company. According to earlier ress reports, the firm initially submitted application in spring 1962, to construct in whiti a tuna base (complete with large freezing facilities), together with a large United tates tuna packer and a French firm. Reportedly, the proposal was looked upon fa-

vorably by the Japanese Government and Tahitian authorities, but approval was not granted by the French Government in Paris. (Shin Suisan Shimbun Sokuho, August 21, 1963, and other sources.)



U.S.S.R.

EIGHT FISH FACTORYSHIPS ORDERED FROM WEST GERMAN SHIPYARD:

The Government -owned shipyard at Kiel, German Federal Republic, has received from the U.S.S.R. an order for eight floating fish factories with a tonnage of approximately 17,000 tons deadweight each. The total value of the order is DM 250 million (US\$62.5 million). According to several German periodicals of August 28, the contract for the order was signed in Moscow on August 26 following lengthy negotiations initiated in January 1963 and interrupted several times.

Reportedly, the factoryships will be propelled by Diesel engines with a capacity of 5,700 hp., permitting a speed of 14 knots. They will be equipped with fish processing, preservation, refrigeration, and canning plants for the production of various fish products including fish meal and fish oil. The U.S.S.R. hopes to double its fish catch once these factoryships are operating at full blast. Delivery is scheduled for 1965 and 1966. (United States Embassy, Bonn, August 29, 1963.)



United Arab Republic

INTEREST IN FISHING INDUSTRY GROWS:

At the present time, according to figures attributed to the Marine Wealth Organization, 60 percent of the fish eaten in Egypt is the product of inland lakes, while the Mediterranean and Red Sea coasts supply only 18 percent. To help correct this imbalance, the Egyptian General Marine Wealth Organization is planning a modern fishing fleet of 50 45-ton vessels, all of which will be built in United Arab Republic (UAR) shipyards. The fleet would be expected to catch 4,750 metric tons of fish yearly, thereby saving LE4 million (US\$9.2 million) presently being spent on fish imports.

The Organization also reports the signing of an agreement to form a joint Sudanese-UAR

United Arab Republic (Contd.):

fishing company and the prospects of forming a joint Yemeni-UAR fishing company. The UAR-Sudanese company will outfit a fleet to fish in Sudanese territorial waters and will establish canning, drying, and packing plants at Port Sudan. Under the proposed UAR-Yemeni agreement, a whole fishing industry would be established. (United States Embassy, Cairo, August 24, 1963.)



United Kingdom

LARGE FISHING FIRM ACCEPTS ONE OF LAST CONVENTIONAL TRAWLERS:

A new distant-water trawler, the Stella Sirius, expected to be one of the last conventional trawlers to be built by her owners, sailed from Hull, England, on July 20, 1963, on her maiden voyage. The owners of the vessel, a large British fishing firm, announced that the completion of the sister ship Stella Altair before the end of summer would conclude the firm's current interest in conventional trawler building. All future vessels, some already designed, will represent interesting new developments in stern trawling and freezing at sea.

Stella Sirius is the second distant-water trawler to be completed for the British firm

this year and the fifth in 16 months. She will be operated out of Hull by a subsidiary company of the owners.

The new vessel, built by a Selby shipyard, is the second of that yard's vessels to incorporate the German 'bang bang' type flying gear on the gallows. Launched on March 12, 1963, her completion followed within four months of launching.

The Stella Sirius has been built to Lloyds class 100 A1 specification. Her combined welded-rivetted construction embodies the latest methods of unit prefabrication. The design incorporates a flush deck, flat-bar keel, cruiser stern, flared cruiser bow, and bar stem of clipper form. The three-tier midship deckhouse structure has a forward raking wheelhouse front.

Main dimensions are: 175'0" between perpendiculars, 194'9" over-all length, 32'6" moulded breadth, and 16'9" moulded depth. Cabin accommodation for a crew of 25 has been arranged.

She has a fishhold of 17,500 cu.ft. capacity. It is insulated throughout. All shelf boards and division boards, fixed wing bulkheads, and stanchions are of aluminium alloy. Much of the space is close-shelved. A 4-cylinder, automatic, electrically-driven refrigerator compressor is fitted in the engineroom for fish-hold cooling.



The distant-water trawler Stella Sirius. Her owners, a large British fishing firm, announced that she is one of the last conventional trawlers to be built for them.

nited Kingdom (Contd.):

Propulsion is by an 8-cylinder, direct reersing 4-stroke Diesel engine. Supercharged nd intercooled it develops 1,600 s. hp. (cont.) t 265 r.p.m. utilizing a conventional straightthrough system of power transmission to the "Nikalium" propeller. The engine is freshwater cooled. Two auxiliary engine sets are provided. She is equipped with the latest electronic instruments.



THE TWELVE SEAS OF THE SOVIET UNION

The shores of the Soviet Union are washed by a unique variety of seas; they range from the fully marine, such as the Barents Sea, to brackish waters like the Sea of Azov, in which the salt content is only a third that of normal sea water; from oceanic, arctic seas to semitropical, landlocked ones such as the Caspian or the Black Sea. In depth, the smallest may average only about 30 feet, the largest (Bering) has depths of over 15,400 feet or nearly three miles.

The Barents Sea, well known to British fishermen, has bottom temperatures of less than 32° F. and a considerable ice-cover during winter. In the Black Sea the bottom temperatures do not fall much below 48° F., even in winter, although the northern coastline ices up. Both the temperature and the salt content play a decisive role in the distribution of animals and plants, and the great variety of conditions among the twelve seas ensures that no two of them are alike as to their vegetation or animal life.

Great fisheries take place in all the seas and a Moscow fish shop would display canned plaice from the White Sea alongside canned Azov anchovies, or jellied sturgeon from the Caspian, and pink salmon caviar from the Far East, besides a variety of fresh-water fish.

Since the mid-18th century, many expeditions have visited all those seas, and it can be fairly stated that the Russians have made a tremendous effort to investigate their own marine environment and fishery resources. Soviet publications dealing with all aspects of the science of their seas probably number more than 10,000. A great wealth of information on the marine flora and fauna, their distribution and abundance, commercial fisheries, physical and chemical oceanography, and marine geology has been amassed.

The twelve seas are divided into three natural groups -- the Northern Seas (Barents, White, Kara, Laptev, Chukotsk, and Baltic Seas), the Southern Seas (the land-locked Black, Caspian, and Aral Seas, and the Sea of Azov), and the Far Eastern Seas (the Bering Sea and the Seas of Japan and Okhotsk).

A fascinating recent aspect of Soviet marine biology has been the transplanation and acclimatization in different seas, particularly the southern ones, of marine fishes, and of some of their bottom-living food animals, and even of the microscopic vegetation on which these latter feed.

Some of the seas pose particularly interesting problems. For instance, there has been a general warming-up in Arctic regions over the past 40 years, present temperatures standing some 9 degrees higher than those of the period 1916-1920. This brought about great changes in the flora and fauna of the Barents Sea, and in fact heralded the return of the one-time cod fishery to the Bear Island banks. (The Fishing News, British fishery periodical, July 26, 1963.)