ternational

HING LIMITS

ITISH-NORWEGIAN DISCUSSIONS:

An account of discussions between the ited Kingdom and Norway on fishing limits peared in the British Hansard (Parliamen- y Debates), volume 697, no. 134, of July 2, 64, as follows:

"Officials of the United Kingdom and Nor- y met in London from 17th to 23rd June to scuss the arrangements to be made, in ac- rdance with the Note supplementary to the glo-Norwegian Fishery Agreement of 17th vember, 1960, when the New United King- m fishery limits are introduced. In that te Her Majesty's Government undertook to ake for Norwegian vessels off the United ngdom arrangements corresponding to those de under the Agreement for British vessels Norway.

"Subject to the conclusion of a formal A- eement between their Governments in this tter, officials recommended that until 31st cember, 1984, Norwegian vessels which uld otherwise be excluded from the new hery limits might continue to fish in the ne between six and twelve miles from the selines of the territorial sea of the United ngdom (a) for dogfish, in the area extend- g from a line due west of Ard an Runair rth Uist) northwards to a line due east of rt Point (Orkney) including the areas a- und the Flannan Islands, the Shetland Is- ds and Fair Isle and the off-lying islands the St. Kilda Group, North Rona and lisker, Sule Skerry and Stack Skerry; d (b) for basking sharks, in the same ea as for dogfish and also in the area tween a line due west of the Mul of Oa (Is- y) and a line due west of Ard an Runair.

"Norwegian vessels might also continue to sh for dogfish and basking sharks in these eas up to a limit of three miles from Unit- Kingdom baselines until 31st December 65, or, where straight baselines or bay closing lines more than ten miles long are drawn, until 31st December, 1966.

"If any fundamental change were to take place in the character of Norwegian fishing in these areas, Her Majesty's Government would review the position with the Norwegian Government. Any right to fish for dogfish or basking sharks in these areas extended to a third country would also be extended to Norway. The Government of the United Kingdom would enforce for Norwegian vessels fishing in these areas rules of conduct which for the time being would be those of the North Sea Fisheries Convention, 1882; the Government of the United Kingdom would not require Norwegian vessels to observe any conservation measures which might have the effect of abridging their right to fish for dogfish or basking sharks, unless such measures were accepted by the Government of Norway." (United States Embassy, London, July 8, 1964.)

Note: See Commercial Fisheries Review, May 1964 p. 70; March 1964 p. 35; February 1964 p. 59.

FISH MEAL

PRODUCTION AND EXPORTS FOR SELECTED COUNTRIES, JANUARY-APRIL 1963-1964:

Member countries of the Fish Meal Exporters' Organization (FEO) account for about 90 percent of world exports of fish meal. The FEO countries are Chile, Angola, Iceland, Norway, Peru, and South Africa/South-West Africa. Production and exports of fish meal by FEO countries during January-April 1964 were up substantially from that same period of the previous year.

Table 1 - Exports of Fish Meal by Member Countries of the FEO, January-April 1963-1964

Country	April		Jan.-Apr.		Total
	1964	1963	1964	1963	1963
	(1,000 Metric Tons)				
Chile	10.1	1/	53.0	1/	1/
Angola	2/	1.7	2/	9.1	30.0
Iceland	8.7	4.7	40.5	26.8	99.1
Norway	24.1	6.0	77.9	28.6	102.1
Peru	142.5	96.3	531.0	451.5	1,159.4
So. Africa (including S.W. Africa)	18.1	13.7	62.7	42.2	198.8
Total	203.5	122.4	765.1	558.2	1,589.4

International (Contd.):

Table 2 - Production of Fish Meal by Member Countries of the FEO, January-April 1963-1964

Country	April		Jan.-Apr.		Total
	1964	1963	1964	1963	1963
	(1,000 Metric Tons).				
Chile	13.3	1/	60.8	1/	86.8
Angola	2/	1.3	2/	8.5	31.5
Iceland	10.1	8.7	31.1	30.2	87.2
Norway	31.6	4.0	74.9	15.0	132.2
Peru	158.5	129.2	654.4	442.6	1,159.2
So. Africa (including S. W. Africa)	32.9	34.5	96.6	81.5	238.0
Total	246.4	177.7	917.8	577.8	1,734.9

1/Data not available. Chile became a member of FEO at the end of 1963.
2/Data not reported. January 1964 exports were 4,800 tons; January 1964 production was 5,600 tons.

During the first 4 months of 1964, Peru accounted for 69.4 percent of total fish-meal exports reported by FEO countries, followed by Norway with 10.2 percent, South Africa with 8.2 percent, Chile with 6.9 percent, and Iceland with 5.3 percent. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, July 15, 1964.)

FISH OIL

WORLD EXPORTS, 1963:

World gross exports of fish oil (including fish-liver oil) reached a record 480,500 short tons in 1963, reflecting the expansion in fish-oil shipments from the United States. World fish-oil exports in 1963 were up about 5 percent from those in 1962 and were more than twice the 1955-1959 average.

Peru, the United States, Iceland, and the South Africa Republic are the most important world suppliers of fish oil, accounting for nearly 75 percent of the world's gross exports and about 95 percent of the world's net exports of fish oil in 1963. Although several European countries export sizable quantities of fish oil, the area as a whole is a net importer and takes most of the world's exports of fish oil. Much of the domestic production of fish oil in Europe is retained for domestic consumption, normally in the country of origin, or exported to other European countries as in the case of Iceland, Portugal, Western Germany, and Denmark, In addition, Norway, Western Germany, and the Netherlands import large quantities of fish oil for further processing and export largely to other European countries.

Exports from the United States reached a record 131,200 tons in 1963, more than double the exports of 1962. The increase enabled the United States to surpass Peru and become

World Gross Exports of Fish Oil (Including Fish-Liver Oil)1/ Annual 1958-1963 and 5-Year Average 1955-1959

Continent and Country	2/1963	1962	1961	1960	1959	1958	Avera 1955-
	(1,000 Short Tons).						
North America:							
Canada	6.4	3.2	4.4	15.2	14.8	6.0	8.
Mexico	.2	.3	.8	3/	.7	.7	
United States	131.2	61.5	61.2	71.8	72.2	47.0	64
Total No. America	137.8	65.0	66.4	87.0	87.7	53.7	73
South America:							
Argentina	.5	.4	.6	1.0	.4	.8	
Chile	12.7	12.0	5.1	6.6	.1	-	4/
Peru	121.3	166.0	112.8	38.6	18.9	1.8	5
Total So. America	134.5	178.4	118.5	46.2	19.4	2.6	6
Europe:							
Denmark	22.9	16.8	10.5	7.4	16.1	12.6	12
France	4.0	2.8	2.7	2.4	1.6	.4	1
Germany, West	19.7	22.9	25.3	26.2	31.6	17.9	17
Iceland	71.2	72.5	35.2	54.5	18.9	27.4	21
Netherlands 5/6/	2.8	2.6	5.2	7.8	16.0	13.0	10
Norway 6/	21.2	18.6	24.0	18.4	21.8	19.8	21
Portugal	10.5	6.7	7.4	4.9	5.7	5.5	5
Sweden	3.4	2.0	3.4	2.5	3.0	2.0	2
United Kingdom	2.7	2.6	3.2	3.7	3.7	3.6	3
Other countries (incl. U.S.S.R.) 7/	2.6	2.9	2.8	2.0	2.3	1.4	1
Total Europe	161.0	150.4	119.7	129.8	120.7	103.6	97
Africa:							
Angola	3.4	2.9	3.3	7.3	5.6	9.4	8
Morocco	5.7	4.9	4.5	5.7	4.3	4.5	2
So. Africa Republic 8/	35.3	50.4	50.3	37.4	26.6	18.5	15
Total Africa	44.4	58.2	58.1	50.4	36.5	32.4	26
Asia and Oceania:							
Japan	2.0	3.2	2.7	3.8	3.6	6.6	5
Other countries 7/	.8	.7	.8	1.0	1.7	1.2	1
Total Asia and Oceania	2.8	3.9	3.5	4.8	5.3	7.8	7
World total	480.5	455.9	366.2	318.2	269.6	200.1	209

1/Hardened fish oils have been included wherever separately classified in export statistics.
2/Preliminary.
3/Under 50 tons.
4/1959 only.
5/May include some whale oil prior to 1960.
6/Excludes sizable quantities of hardened fish oils exported annually which are not separately classified in trade returns.
7/Includes estimates for minor exporting countries.
8/Including the territory of South-West Africa.

the leading world supplier. Exports from t other major suppliers, except Iceland, de- clined substantially. (World Agricultural P duction and Trade, June 1964, U. S. Depar ment of Agriculture Foreign Agricultural Service.)

FOOD AND AGRICULTURE ORGANIZATION

TUNA RESEARCH MEETING HELD IN ROME:

A meeting of the Expert Panel for the F cilitation of Tuna Research of the Food an Agriculture Organization (FAO) was held f the first time on June 8-12, 1964, in Rome

The Panel, which was set up in 1963 by FAO's former Director-General, is made u of 11 tuna research scientists from 9 coun tries. The scientists are appointed in thei individual capacities and not as representa tives of organizations or governments.

One of the Panel's principal tasks will b to stimulate governments to implement rec

rnational (Contd.):

mendations passed at the World Scientific eting on the Biology of Tunas and Related cies held in La Jolla, Calif., in 1962. The ommendations, most of them technical, e already been transmitted to member ntries.

he Panel will seek to develop internation- andards for collection, collation, and pub- ion of data, as well as cooperative pro- ns for tuna research. While the tuna is most important fish species in interna- al commerce, there are still many factors erning it which are unknown. The Panel, formed for the purpose of bringing those own factors to light. (Food and Agricul- Organization, Rome, June 3, 1964.)

* * * * *

EATER INTERNATIONAL DISCIPLINE GED IN HARVESTING WORLD'S OCEANS:

Governments have been called on to try der to work out an international code of ipline for harvesting the world's oceans. call came from the former head of the d and Agriculture Organization's (FAO) heries Division. Writing in the May/June e of the Freedom-From-Hunger Cam- gn (FFHC) News, he says: "Any appeal the establishment of such a code should be directed to men's sentiments or to r fears, but to their enlightened self-in- st, or even selfishness if you like."

he title of the article by the former FAO ial is "The Warning of the Blue Whale." one of 9 articles, all concerned with d fishing, that appear in the May/June e of the FFHC News.

ccording to the article, the blue whale, largest mammal known to have appeared arth, is now commercially extinct. "It all but vanished from the seas because nations that hunted it were unable to agree common and enlightened conservation cy for the world's whale resources," he tes.

Other articles in this issue of FFHC News er modern methods of finding and catching , whaling, inland water fishing in Syria, hanization of small fishing craft with out- rd motors, fishing boat design, tuna fish- preservation of fish and fish products, pearl farming.

The article on the blue whale refers to the inability of the whaling nations to agree a few years ago to limit their catches of that whale species. The article says, "In the future, if we are to protect the sea's natural resources intelligently, we must have better treaties than the one that governed the hunting of the blue whale." (Food and Agriculture Organization, Rome, June 8, 1964.)

GEAR

SOVIET AND U. S. DELEGATIONS DISCUSS FISHING GEAR CONFLICTS IN NORTHEASTERN PACIFIC OCEAN:

Delegations of the United States of America and the Union of Soviet Socialist Republics concluded a two-week meeting in Juneau, Alaska, June 24, 1964, on fishery problems of mutual interest. The meeting was convened in accordance with an agreement between the two Governments, the basis for which was established in a meeting in Moscow in early March 1964.

The purpose of the meeting in Juneau was to work out detailed arrangements for preventing or diminishing conflicts between United States and Soviet fishing gear in the northeastern Pacific Ocean.

The United States Delegation was headed by William C. Herrington, Special Assistant to the Under Secretary of State; Governor William A. Egan was a member of the United States Delegation, together with Admiral George Synon, Commandant, 17th Coast Guard District, and representatives of the Department of the Interior, the Alaska Department of Fish and Game, and representatives of the United States fishing industry.

The Soviet Delegation was headed by A. S. Babaev, Chief Specialist of the Union of Soviet Socialist Republics State Production Committee of the Fishing Industry, and included Dr. V. G. Lafitsky, Senior Expert of this Committee, Viktor Novasb, Third Secretary of the Soviet Embassy in the United States of America, and a number of experts from the Soviet fishing industry.

The meeting resulted in the development of a draft agreement which the two Delegations recommended their Governments conclude through appropriate channels. The agreement provides for the establishment of a number of areas in the vicinity of Kodiak Island in which mobile gear will not operate during the period

International (Contd.):

July-October, inclusive, and establishes the procedures for amending (by mutual agreement between the Chief of the Soviet Fleet and local United States fishery officials) the boundaries of those areas or the periods during which they are reserved for fixed gear. It also provides for establishing new areas by mutual agreement.

The draft agreement establishes, in addition, a system of direct radio communication between the Soviet fleet and fishery officials in Alaska. This system can be used for reporting to the Soviet fleet the positions of the United States king crab vessels outside of the areas mentioned above in order that special precautionary measures can be taken to avoid damage to the vessels.

Under the provisions of the agreement the United States will undertake special research in cooperation with the Union of Soviet Socialist Republics in order to develop more effective means of marking and detecting fixed gear of various types.

The agreement would not prejudice existing rights of either Government.

During the meeting the representative of the United States raised the question of precautionary measures to avoid possible damage to fishing gear when the United States long-line fleet and the Soviet trawl fleet are operating in the same areas at the same time. The United States representative noted the urgency of the problem.

Because of technical difficulties and because the meeting was not prepared to deal definitively with this problem, the representatives of the United States of America and the Union of Soviet Socialist Republics agreed that the problem should be referred to the two Governments for their consideration by appropriate means.

The report of the meeting, including the recommendations, was signed by the two representatives in the office of Governor William A. Egan on June 24, 1964.

GREAT LAKES FISHERY COMMISSION

ANNUAL MEETING HELD AT ANN ARBOR, MICHIGAN:

The Great Lakes Fishery Commission held its annual meeting at Ann Arbor, Mich., June 17-18, 1964. The Commission is an international body (United States and Canada) formed to find means of protecting, and in the case of some species, rehabilitating the commercial stocks of the Great Lakes.

Under the chairmanship of Dr. D. L. Prichard, Canadian Department of Fisheries, the Commission reviewed current sea lamprey control and lake trout rehabilitation programs and held discussions on future use of Great Lakes fishery resources.

At the meeting, continued low levels were reported in Lake Superior barrier catches of the sea lamprey, a predator that has decimated lake trout populations in the upper Great Lakes since it moved into them shortly before World War II. As of June 12, 196 a total of 9,184 lampreys had been trapped at barriers in United States and Canadian spawning streams as compared with 7,246 lampreys taken by the same date a year earlier. Both figures are a great reduction from the 52,4 lampreys taken in 1961, when chemical treatment of spawning streams had not been completed. It was reported that the spawning run also appeared to have started earlier this year.

In reviewing the program of chemical treatment of Lake Superior spawning streams the Commission's Chairman said, "Last year two new lamprey-producing streams in northern Lake Superior were treated and a number of treated streams on both shores containing ammocetes (lamprey larvae) were re-treated. We cannot be sure, at the moment, that the treatments have caused a further overall reduction in the lamprey population because their effect will not be evident until next spring (when the lamprey again come into streams to spawn).

"A question which we must consider is - what level must lamprey be reduced for the program to be successful? Can lake trout be expected to recover and provide a significant fishery if the population is not reduced further than is presently indicated by the barrier catches? The questions cannot be answered properly at this time, since we do not know enough about the relationship between lamprey abundance and the loss of lake trout. We are therefore, at a point in our program where while we continue to see improvement in Lake Superior, we cannot predict without qualification the final result."

rnational (Contd.):

The Chairman said programs of treatment being continued in Lake Michigan streams, 90 Lake Huron streams have been located possible future treatment.

The Commission's Lake Trout Rehabilita- Committee again reported favorable find- on lake trout survival in Lake Superior. 10.7 million hatchery-reared fish have planted there since 1958 in an organized t to re-establish an adequate breeding lation.

he Chairman of the Rehabilitation Com- e reported that information obtained from re waters indicated a further increase in ize and abundance of marketable lake on both sides of the lake in 1963. "Pro- sive increases in the abundance of the r and older trout has apparently resulted a continuation of the improved survival in 1962," he said. "On the other hand, ction in the numbers of native fish in the ler and mid-size range has continued due e progressive decline of natural spawning 1959. The scarcity of young native fish any of the inshore areas of the lake, how- has been offset by the introduction of tantial numbers of hatchery-reared fish."

he incidence of lamprey-wounded lake in catches on both sides of the lake re- ed generally close to the low levels es- shed in 1963, the report added.

increase in the proportion of hatchery- d fish in the 1963 catches was reported. h Wisconsin and Michigan waters planted rout provided about 50 percent of the portion of the catch and 90 percent or of the undersized portion. The contribu- f hatchery-reared trout to the Canadian es rose from 33 percent in 1962 to 58 nt in 1963. In 1963, a total of 2,311,000 ed lake trout were planted into Lake Su- r, an increase of nearly a half million 1962. The 1964 stocking consisted of a ng of some 2.6 million yearling lake --about 472,000 fish for release in Ca- n waters and over 2.1 million in United s waters.

an election of new officers, D. L. Mc- an (Director of the U. S. Bureau of Com- ial Fisheries) was elected chairman of ommission for the next two years and Dr. D. L. Pritchard was elected vice-Chair- man.

Note: See Commercial Fisheries Review, February 1964 p. 62.

INTERNATIONAL ATOMIC ENERGY AGENCY

RECOMMENDATIONS MADE ON RADIATION CONTROL OF HARMFUL ORGANISMS IN FOODS AND ANIMAL FEEDS:

The following recommendations were made by a Panel of the International Atomic Energy Agency (IAEA) on "Radiation Control of Harmful Organisms Transmitted by Food and Feed Products with Particular Reference to Salmonellae:"

A. As international trade with food and feed products increases, the transmittance of pests and diseases by such commodities tends to become an ever increasing problem. Concern has already been felt for some time about the spread of salmonellae and other pathogenic microorganisms, partly due to the international distribution of food and feeds produced in areas where it is difficult to maintain satisfactory sanitary conditions. However, even where good sanitary conditions are maintained contamination by harmful organisms remains a problem.

The Panel thoroughly reviewed various control measures, with particular attention to the use of ionizing radiation. Control was considered in the light of the present situation concerning the epidemiology of salmonellosis and a detailed assessment was made of the products that are known or potential sources of salmonellae and other harmful microbes.

B. It was the unanimous opinion of the Panel that salmonellosis constitutes a serious problem and that conventional methods such as heat treatment, the use of chemicals, and improved hygiene are not always satisfactory in dealing with this problem. It was also the unanimous opinion of the Panel that radiation treatment of some infected products is a promising alternative and in some cases the most practical way of freeing such products of salmonellae and similar organisms. It was pointed out that irradiation or any other treatment of the final product is supplementary to and does not replace good hygiene and that the best possible sanitary conditions should always be maintained.

C. The Panel drew attention to the lack of information regarding contamination of fish meal and other meals and that more detailed knowledge is needed with regard to number and types of microorganisms present in those products from different countries. It was recommended that IAEA should inform the World Health Organization (WHO) and the Food and Agriculture Organization (FAO) about the situation and ask them to stimulate research on this problem in their Member States.

D. It was also recommended that IAEA should call the attention of WHO to the need to investigate and set up international standard methods for sampling and for detecting salmonellae and other harmful organisms present in foods and feeds.

E. The Panel unanimously agreed that additional research, both of a fundamental and applied nature, is

International (Contd.):

still needed and that the best way in which IAEA can further the field of radiation control is to provide financial support for such research via its research contract program. More specifically, the Panel recommended research along the following lines:

(1) In Microbiology:

(a) Study of radiation resistance of additional serotypes of Salmonella;

(b) Study of the effects of water activity and of the lipid content of the irradiated products on radiation resistance of Salmonella;

(c) Effect of media and temperature on recovery of irradiated salmonellae with special reference to the use of Salmonella selective media.

This is an initial program for basic information. When a particular product is being studied it would be desirable to investigate also radiation inactivation of other pathogens, e.g. Bacillus anthracis.

(2) In Wholesomeness:

(a) More direct experiments should be made on the effect of radiation on the nutritive value of protein with particular reference to animal feeds. Animal tests as well as chemical and microbiological estimates of protein value should be made.

(b) More attention should be given to the effect of the dose levels being considered here (0.5 - 1 Mrad) on vitamin destruction in the individual foods where vitamin content might be important.

The Panel wishes to draw the attention of the "Expert Committee on Wholesomeness of Irradiated Food" being set up by FAO/WHO/IAEA to the problem of the possible toxicity of irradiated animal feeds and to its suggestion that the use of such feeds should be permitted.

(3) In Technology:

(a) When dose requirements for particular products have been fixed, detailed cost studies should be made in terms of a particular situation so that the best way of treatment can be established.

(b) A detailed on-the-spot analysis should always be made in each situation before deciding on location of an irradiation plant at import or export.

F. The Panel also recommended that IAEA support requests for the training of scientists from countries where radiation control of salmonellae and other pathogens might be considered. Long-term training as well as shorter study periods in laboratories where active research in this field is underway is highly desirable. It is essential that such training should be linked with the possibility for the trained scientist to perform research work on return to his home country.

G. The Panel finally recommended that the lectures presented at the meeting, as well as an edited version of the discussions should be published by IAEA in its Technical Bulletin Series. The publication should be given as wide a distribution as possible in order to draw international attention to the problem of transmittance of pests and diseases by food and feed products and to the potential use of atomic energy for its contro (Irradiation des Aliments--Food Irradiation, January-March 1964.)

INTERNATIONAL WHALING COMMISSION

16TH ANNUAL MEETING HELD:

The 16th Annual Meeting of the International Whaling Commission was held at Sandefjo Norway, June 22-26, 1964. The Commissio (established in 1948 to preserve dwindling whale stocks through scientific study and re ulation of catches) at this meeting reviewed progress in the program of scientific studie of whale resources which is intended to se as an objective basis for effective conservatio measures. At the 17-nation meeting, no agree ment was reached on the Nineteenth Antarctic whale catch quota. After the meeting, the four whaling nations--Japan, U.S.S.R., Norway, and the Netherlands--informally agreed on a catch quota of 8,000 blue-whale units for the 1964/ Antarctic pelagic whaling season. That quot was a reduction of 2,000 units from the 1963 season catch limit of 10,000 units.

This further reduction in the catch limit demonstrates the concern felt over the dimi ishing whale stocks in the Antarctic. Out of the total 10,000 blue-whale units allocated the four countries in the 1963/64 season, on 8,425 units were caught. In the 1962/63 sea son, the pelagic expeditions caught 11,306 bl whale units out of a total quota of 15,000 unit

Under the quota for the coming season, Ja pan's share is 3,680 blue-whale units; Norw 2,240 units; U.S.S.R. 1,600 units; and the Ne erlands 480 units.

Japan's share is based on 46 percent of t international whale catch quota. Japanese whaling firms were reported to have begun organizing their whaling fleets. Negotiation had been pending for the purchase by 3 Japa nese firms of the Dutch whaling factoryship Willem Barendsz (26,830 gross tons), but in view of developments it appeared that the ne gotiations might be terminated.

Note: See Commercial Fisheries Review, August 1963 p. 78.

NORDIC COUNTRIES

NINTH NORDIC FISHERIES CONFERENCE

At the Ninth Nordic Fisheries Conferenc held in Reykjavik this past summer, Norway Director of Fisheries stressed the necessit

rnational (Contd.):

egulating total fishing operations in the th Atlantic to insure good and constant ing in the future. He said that if coopera- cannot be obtained among the parties con- ed, then individual countries will have to their own measures.

he conference was attended by the fish- s committees of the respective govern- s and representatives of the various ches of the fishing industry of each coun- (Denmark, Finland, Norway, Sweden, and nd).

he opinion of Norway's Director of Fish- s was that trawl fishing is the major cause e lower stocks of fish in all age groups. opean fishing nations, he said, must find s to guard the fish stocks. He said that rnational measures taken in that field have been effective because the preliminary parations for implementing them took too g. This state of affairs, he claimed, is ecially true in the North Atlantic where a iod of 9 years of no rules at all was fol- ed by 9 years of unsatisfactory rules. He ommended regulations regarding the size e mesh of nets and the necessity for in- national supervision of fishing vessels, rictions on the number of fishing boats, ecial quota to be allowed for each kind of for all fishing areas, and individual coun- quotas. He recalled the demands made by tal nations at the Geneva Conference in and 1961.

cording to the chief of the Icelandic eries Institute, the major purpose of the ries conference was to provide a meet- lace for the Nordic fisheries specialists t together and exchange ideas, views, experiences on common problems. His ess to the conference stressed the impor- e and wealth of fishing to Icelanders. He ribed it as a "rich natural resource" and arked that Iceland's fishery catch has in- sed 19 times in the past 50 years. Ice- 's share in the total fish catch in her wa- has also grown (presently about 60 per-) since few other nations fish in Icelandic ers. The only countries in Europe that e larger fish catches at the present time the U.S.S.R., Norway, Spain, and Great tain. But while Iceland's fishery catch is er in quantity than that of many other ntries, in value it is not as great because uch of Iceland's catch goes into reduc- tion or into semiprocessed stages which are used by other nations as raw material to produce the more valuable finished food products. He suggested that perhaps Iceland concentrates too much on building the size of her fishing fleet so as to increase the catch instead of concentrating on the construction of fish-processing facilities and thus increase the value of the existing catch.

The Fisheries Institute chief conceded that this raises the problem of ever-increasing tariff restrictions of consumer nations placed on finished fish-food products which prevent Iceland from finding adequate markets and from competing with domestic production. Iceland has often asked those countries to help Iceland solve this problem and in turn Iceland will buy industrial products from those countries. Iceland also is becoming increasingly worried about the direct subsidies being paid by many countries to their fishing industries which fosters an "unnatural development" of fish marketing and hinders the natural development of fishing, such as in Iceland. Iceland's position among fishing nations will depend on the development of such trends in the future.

Other speakers at the conference included Sweden's Director of Fisheries who spoke on the Swedish Salmon Research Institute, and a representative from Denmark who spoke on international standardization of fish and fish products. (United States Embassy, Reykjavik, July 14, 1964.)

Note: See Commercial Fisheries Review, October 1962 p. 41; June 1962 p. 46.

NORTH PACIFIC FISHERIES CONVENTION

PARTIES TO THE CONVENTION WILL SEEK AGREEMENT AT MEETING IN OTTAWA, SEPTEMBER 9, 1964:

Talks begun in Washington and continued in Tokyo last year for revision of the International Convention for the High Seas Fisheries of the North Pacific Ocean will reopen in Ottawa, Canada, September 9, 1964. The Parties to the Convention (Canada, Japan, and the United States) are seeking agreement on modification of the treaty under which the International North Pacific Fisheries Commission was established in 1953 and charged with developing recommendations for the conservation of the high-seas fisheries of the North Pacific.

The treaty had a guaranteed minimum life of 10 years and thereafter until 1 year from

International (Contd.):

the date on which any member country should give notice of termination. No such notice has been given, but in 1963, at the request of Japan, two rounds of negotiations took place among the Contracting Parties. The first round was held in Washington in June and the second in Tokyo during September and October. Progress toward an agreement was made at those meetings but further negotiations are required. (Canadian Department of Fisheries, Ottawa, June 25, 1964.)

Note: See Commercial Fisheries Review, Feb. 1964 p. 64, Jan. 1964 p. 41, Dec. 1963 pp. 52 and 71.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

FISHERIES COMMITTEE MEETS:

The Fisheries Committee of the Organization for Economic Cooperation and Development (OECD) met at Paris, France, June 29-30, 1964. At the meeting, the Committee considered a Report on Subsidies and other financial support to the fishing industries of member countries. Other topics on the agenda were: (1) country notes on study of price systems, (2) a note on the influence of recent changes in custom duties for fish fillets, and (3) a progress report on the execution of the Committee's programs.

Note: See Commercial Fisheries Review, Aug. 1963 p. 76; May 1963 p. 54; Feb. 1963 p. 62.

SHRIMP

INTERNATIONAL SHRIMP COUNCIL PLANNED TO PROMOTE SHRIMP CONSUMPTION:

A resolution authorizing the creation of an International Shrimp Council was adopted in May 1964 by the Board of Directors of the Shrimp Association of the Americas. Chas. E. Jackson, Fisheries Consultant of Washington, D.C., has been employed by the Association to direct the Council's development.

The new Council is intended to be a world-wide organization with a membership which will consist of the countries which produce shrimp. Its major objective will be the promotion and expansion of the shrimp market and the increased consumption of shrimp in the United States and elsewhere through advertising and publicity. Something similar to the international institute that was organized by the world-wide coffee producers several years ago is contemplated in the creation of the International Shrimp Council. (Shrimp Tales, Bulletin No. 294, Shrimp Association of the Americas.)

WHALING

WHALE DISTRIBUTION IN NORTHEAST PACIFIC SHOWN ON SOVIET MAP:

A map showing the distribution of whales in the Northeast Pacific Ocean and the Bering Sea was on show at one of the sessions in Vladivostok, U.S.S.R., of the scientific council of the Pacific Fishing and Oceanography Research Institute. It sums up results of the North Pacific expedition of the Institute from 1958 to this year.

The map marks main areas of distribution of sperm, humpback, and finback whales, and also their summer and winter habitats. It shows the northern boundary of the distribution of sperm whales which has been determined for the first time.

The map is considered important for organizing rational whaling, and Soviet expeditions use it as an aid to safeguarding stocks and fulfilling international conventions restricting whaling. (The Fishing News, March 26, 1964.

Australia

TUNA FISHERY HAS GOOD SEASON:

Late in May 1964, South Australia's record-breaking tuna season was still going strong. Up to May 20 total landings at Port Lincoln were 6,059 short tons, pushing the Australian catch for 1963/64 (July-June) up to 8,974 tons. This was 3,475 tons more than in 1962/63, thus making tuna the leader in the Commonwealth's annual finfish catch.

A record single day's landing at Port Lincoln was 430 tons on February 22, 1964, which would have been greater had not a sudden storm resulted in 40 tons of tuna being lost overboard by the fleet of 20 vessels. (Australian Fisheries Newsletter, June 1964.)

* * * * *

TUNA COULD TOP FISH CATCH:

Tuna appears certain to head the list in the Australian finfish catch by weight for fiscal year 1963/64. By April 24, the Australian tuna catch was a record 8,215 short tons, and

ralia (Contd.):

xceeded the 1962/63 year's total by
tons.

past seasons' trends are maintained, it
timated that the 1963/64 tuna catch will
8,670 tons (17,340,000 lbs.). It will be
an estimated Ł500,000 (US$1.1 million)
ssel.

e New South Wales tuna season ended
uary with a record catch of 2,915 short
hile in South Australia the total was a
l 5,300 tons by April 24, 1964.

cept for 1956/57, when Australian salm-
d top place, mullet has been the leader
annual finfish catch by weight for the
0 years, and production has remained
y at between 12.0 to 13.0 million pounds.
962/63 mullet catch was 13,734,696 lbs.,
an estimated Ł572,279 (US$1.3 million)
ssel.

otal of 600 short tons of frozen whole
n tuna caught off the South Australia
was exported to the west coast of the
l States in March 1964. (Australian
ries Newsletter, May 1964.)

* * * * *

ON SHRIMP IMPORTS:

duty of 1s. (about 11 U.S. cents) a pound
ports of frozen shrimp and prawn, and
meat from both British preferential
ost-favored nation sources came into
on April 24, 1964. Previous duty was
bout 0.9 cent) a pound. Frozen shrimp
awn of New Zealand origin will be sub-
a duty of 4d. (about 3.6 cents) a

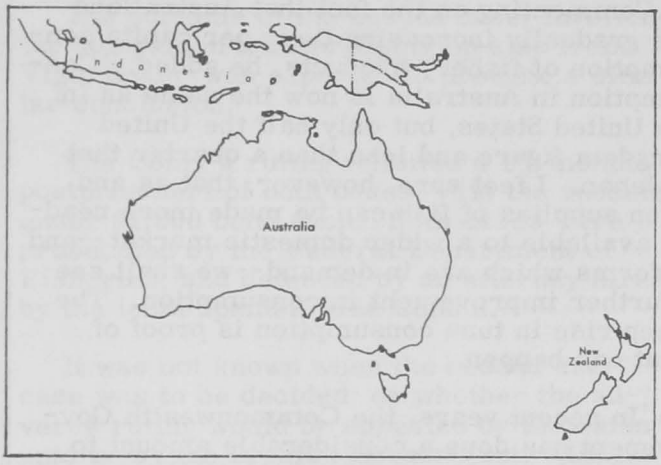
ouncing the new tariff, the Minister
enting the Minister for Customs and
said the protection afforded was ap-
nately at the level enjoyed by the indus-
or to the removal of the sales tax in
1963.

ensland Gold Coast trawlers reported
g king-size shrimp more than a foot
nd up to half a pound each on a reef 14
offshore. (Australian Fisheries News-
May 1964.)

* * * * *

FISHERIES LANDINGS, 1962/63:

Australia's fish and shellfish landings of 153.8 million pounds in fiscal year 1962/63 (July 1-June 30) set another record, announced the Australian Minister for Primary Industry. Exports and imports of fishery products rose slightly, and home consumption was at 11 pounds per capita annually. The larger landings for the year were attributed to a 26-percent increase in shrimp landings, a spiny lobster catch that was 6 percent above the previous year, and a small increase in finfish landings.



In the past 8 years, Australia's fishery landings climbed steadily from 104 million pounds in fiscal year 1955/56 to where they reached the much larger amount in 1962/63--an increase of 48 percent. At the same time, Australia's per capita consumption of fishery products kept pace with the growing population and rose from 10 to 11 pounds annually.

The leading species in the 1962/63 finfish landings was mullet with 13.7 million pounds, followed by tuna with 11 million pounds (an increase of 400,000 pounds from the previous year). The increase in tuna landings was considered only moderate because of the relatively small tuna catch in New South Whales. In the past 8 years, however, Australia's tuna landings have increased by more than one million pounds.

Australia's shark catch is growing in importance having increased 17 percent from the previous year to 10.5 million pounds in 1962/63. Victoria was again the leading shark producer, although New South Wales and South Australia both increased their shark landings significantly.

Australia (Contd.):

Australian salmon and barracouta landings dropped 32 percent and 29 percent, respectively, from the previous year.

The Minister said fishery products exports had increased in the past 8 years from 5.4 million pounds to 13.6 million pounds, or by more than 150 percent and imports had moved up from 52.5 million pounds to 64.3 million pounds, an increase of 23 percent.

Commenting on the fact that Australians are gradually increasing their per capita consumption of fishery products, he added, "Consumption in Australia is now the same as in the United States, but only half the United Kingdom figure and less than a quarter that of Japan. I feel sure, however, that as and when supplies of fish can be made more readily available to a wider domestic market--and in forms which are in demand--we shall see a further improvement in consumption. The steep rise in tuna consumption is proof of what can happen.

"In recent years, the Commonwealth Government has done a considerable amount to help the Australian fishing industry by way of surveys, the encouragement of new techniques, improved fisheries management, and research into the habits of important species. This work will continue." (The Fishing News, March 1964.)

Note: See Commercial Fisheries Review, March 1964 p. 41.

* * * * *

TASMANIA SCALLOP SEASON EXTENDED:

On the recommendation of the Sea Fisheries Advisory Board, the 1964 Tasmanian scallop season on all beds opened on May 14, 1964. The ban on Sputnik (Baird) dredges remains, but night fishing will be allowed.

The Tasmanian Minister for Fisheries said that it was intended to leave the season open for as long as possible to encourage and maintain a stable industry. (Australian Fisheries Newsletter, May 1964.)

Canada

NEW FISH-PROCESSING PLANT OPENS IN NOVA SCOTIA:

A new Canadian fish-processing plant, built at a cost of US$8 million, was opened Lunenburg, Nova Scotia, on June 24, 1964. The plant covers an area of 5½ acres. Wit an estimated production capacity of over 8 million pounds of fishery products and by-products a year, the plant will require mo than 20 trawlers to keep it supplied with r material. About 400 persons will be empl ed on shore, and nearly 500 more at sea.

The plant is capable of handling up to 50,000 pounds of fish an hour, and will hav a maximum filleting rate of 35,000 to 45,0 pounds an hour. Smoked fish production c pacity is 30,000 pounds in 12 hours, and fi meal production of 150 long tons each 2 hours.

The plant's cold-storage holding capaci is 6 million pounds and it can make 180 to of ice a day. A wharf fish-holding room c accommodate 300,000 pounds of fish.

* * * * *

NEW FISHERIES RESEARCH VESSEL PLANNED:

A 130-foot fisheries research vessel e ped with a number of unusual features is t added to the Atlantic Coast research ves fleet of the Fisheries Research Board of C ada, announced Canada's Fisheries Minis on July 3, 1964. This will aid Canada's D partment of Fisheries in the national deve ment program and in fulfilling its interna al commitments in fisheries conservatio

The Canadian Department of Transpor has invited bids for a pelagic fisheries re search vessel to be equipped for stern tr ing and scallop dragging, with a range of 3,000 miles at a cruising speed of 11 kno She will have a 27-foot beam, a draft of 1 feet 9 inches, and a complement of 21 (in cluding scientific personnel and crew).

The vessel will be equipped with a pas sive antirolling "flume stabilization" syst to provide a steady platform while in ope tion at sea, and a bow-thruster will be in stalled well below the low-water line for s speed maneuvering. The design is the fir of its kind to have a "flume stabilization"

da (Contd.):

a bow water jet-thrust system, and the nce of bilge keels.

he vessel specifications call for all-ed construction with a steel hull strength-for navigation in ice, and an aluminum house and wheelhouse amidships. An ex-d foc'sle, raked stem, and reverse tran-will enhance the appearance of the ves-Provision is made for fish pounds and g equipment and gear to be located on per deck aft. One of the unusual fea-will be the installation of specially-de-d hinged gallows for lowering and re-ng trawls. The propulsion machinery e amidships.

he steering gear will be of the electro-ulic rotary vane type with emergency hydraulic operation. An electro-hy-ic anchor windlass capable of a one-half-ull at 110 feet per minute will be fitted e forward deck. Two hydraulic trawl es, each capable of exerting a pull of 4 at 240 feet per minute will be fitted to te in synchronization or independently quired. An oceanographic winch is to be to permit the taking of samples which e processed in the vessel's laboratories.

he most modern navigational aids avail-are to be installed and will include 2 s, gyro-compass, automatic pilot, 3 sounders, Loran, navigator, and radio-hones. The propulsion machinery will st of a nonreversing, two-stroke direct Diesel engine rated 600 b.hp. cont. at .p.m. and coupled to a four-bladed, con-ble, pitch, stainless steel propellor. ric power will be provided by 3 Diesel n generators.

e vessel is expected to be put into serv-the spring of 1966. (Canadian Depart-of Fisheries, Ottawa, July 3, 1964.)

* * * * *

ISH TRAWLER CONVICTED FOR ATION OF TERRITORIAL WATERS:

vo Spanish fishing trawlers were arrest-the Canadian Government at St. John's, oundland, in October 1963, for fishing in-Canadian territorial waters at Trepassey n southeastern Newfoudland. On July 15, one of those two trawlers was convicted St. John's Magistrate Court. The cap-tain of the trawler Estornino was sentenced to one month in jail or $200 fine for unlawfully fishing inside Canadian waters. Both trawlers had been arrested at the same time and place--45°35' N. latitude, 53°22'5" W. longitude, 6 miles from Cape Pine at the western tip of Trepassey Bay.

The St. John's Magistrate based his decision on these points: (1) Trepassey Bay is defined as a bay under international law; (2) the headland to headland rule for measuring territorial waters is applicable.

The outcome of the second case, involving the companion trawler Esturion also from Vigo, Spain, was expected to produce a similar conclusion.

The Court's ruling followed a 10-months postponement of both cases, with the vessels under $1,000 bond each. Both cases were prosecuted by the Federal Department of Fisheries, and defended by an attorney hired by the local Spanish Vice Consul.

It was not known when the second court case was to be decided, or whether the adverse ruling would be appealed by the defendants or by the Spanish Government. (United States Consulate, St. John's Newfoundland, July 21, 1964.)

* * * * *

BOUNTY PAYMENTS ON PACIFIC HARBOR SEALS DISCONTINUED:

The discontinuance of bounty payments on harbor seals on Canada's Pacific Coast became effective July 31, 1964, announced the Canadian Minister of Fisheries on July 17. As a means of control of the predatory harbor seal population, the Canadian Government has, for many years, paid a bounty of C$5.00 on each proven kill.

The recent introduction of new processes in preservation and treatment of harbor seal skins has contributed to the development of markets for the skins, particularly in Europe. The demand has grown steadily and prime harbor seal skins have been bringing more than $50.00 each on the local market.

The commercial production of harbor seals has now reached a point where population control by the bounty payment method no longer is necessary. The decision to cease bounty payments follows a careful study of

Canada (Contd.):

all factors involved by personnel of the Department of Fisheries and scientists of the Fisheries Research Board of Canada. (Canadian Department of Fisheries, Vancouver, July 17, 1964.)

Chile

TUNA FLEET TO BE EXPANDED:

Chile is planning to progressively expand her tuna fishing fleet, according to information received by the Japan Frozen Tuna Producers Association. Of the 3 Chilean fishing firms presently operating 4 tuna vessels from bases in that country, one firm is said to be planning on increasing its tuna fleet to a total of 10 vessels by the end of 1965. Many Chi-

lean "surrounding net" or purse-seine fishing vessels (170-180 gross tons in size), which are fishing for anchoveta, reportedly can be converted into tuna vessels. (Suisan Keizai Shimbun, July 11, 1964.)

* * * * *

DEVELOPMENTS ON THE PROPOSED JAPANESE-CHILEAN KING CRAB VENTURE:

A Japanese fishing company, which plans to establish a joint king crab fishing venture with Chilean interests, is studying the results of the experimental crab operations conducted off the Chilean coast December 1963-April 1964. Its findings so far indicate the need t conduct another series of exploratory opera tions before full-scale commercial operati can be started. Therefore, indications are that the proposed joint venture may not become an established commercial enterpris until the fall of 1965. (Suisan Tsushin, Jul 13, 1964.)

Communist China

PURCHASE OF LARGE TRAWLERS PLANNED:

The Central Trust Corporation of Main (Communist) China planned to accept bids September 4, 1964, for the construction of three 1,000-ton trawlers. The Corporatio

plans to use the trawlers in the Yellow Se fishery and hoped to purchase the vessels Japan. (Suisancho Nippo, July 4, 1964.)

Cuba

IMPORTS OF FISHERY PRODUCTS FROM JAPAN, JANUARY-APRIL 1964:

Japan exported 586 metric tons of froz tuna and swordfish to Cuba during Januar April 1964, with an f.o.b. value of US$180, (65,276,000 yen). The principal product w 535 tons of yellowfin tuna with a value of $166,000 (average of $310 a ton), followed 20 tons of albacore valued at $6,500 (aver $325 a ton), 6 tons of unclassified tuna va at $1,700 (average $238 a ton), and 25 ton

a (Contd.):

rdfish (excluding broadbill) valued at
00 (average of $240 a ton). (Customs
ision of Japanese Ministry of Finance.)

nmark

HERIES TRENDS, FIRST QUARTER 1964:

andings: Danish fisheries landings in home ports during ary-March 1964 were about 9 percent below those in the period of 1963 due to a sharp drop in landings of industfish which more than offset increased landings of most fish items. On the other hand, foreign vessels increased landings in Danish ports in early 1964. (Danish imports hery products consist mostly of fresh fish, mainly herlanded by Swedish fishing craft in the Danish ports of n and Hirtshals.) The limited landings of Danish vessels eign ports (mainly England) consisted mostly of cod.

Table 1 - Danish Fisheries Landings, January-March 1963 and 1964

Species	Jan.-Mar. 1/1964	Jan.-Mar. 1963
	(Metric Tons).	
ings in Denmark by Danish vessels:		
fish	13,145	7,833
	25,766	20,412
ring	69,436	54,709
sling	1,868	1,419
kerel	215	191
	26	49
d trout	1,835	1,570
er fish 2/	19,885	66,202
sels	4,657	578
fish	1,466	10
rimp, lobsters, & other shellfish	1,104	800
Total	139,403	153,773
ings in Denmark by foreign vessels	50,374	41,240
sh landings in foreign ports of United gdom, Sweden, and the Netherlands	688	290

inary.
Industrial fish.
Danish Ministry of Fisheries.

Processing: Danish production of processed fishery products in January-March 1964 was reported by the Danish Ministry of Fisheries as follows:

Canned products: 1,395 metric tons of herring and sprats, 74 tons of mackerel, 184 tons of mussels, 175 tons of other shellfish, and 1,960 tons of other fish products.

Semipreserved products: 1,225 tons of herring and sprats, 103 tons of other fish products, and 108 tons of mussels.

Fresh and frozen fillets: 7,281 tons of cod, 292 tons of "cod-like" (haddock, coalfish, hake, ling, etc.) fish, 2,738 tons of plaice, 254 tons of other flatfish, 10,175 tons of herring, and 35 tons of other fish.

Smoked products: 229 tons of herring and sprats, 114 tons of mackerel, 169 tons of eels, 105 tons of salmon and trout, and 62 tons of other fish.

Industrial products: 14,511 tons of fish meal, 5,316 tons of fish oil, 1,405 tons of fish solubles, and 1,214 tons of ensilage (chemically treated raw fish).

Miscellaneous products: 391 tons of "force meat" (ground fish mixed with milk and flour) and 280 tons of other miscellaneous fishery products.

Fig. 1 - Fishing cutter docked at Kalundborg, one of the smaller Danish fishing ports.

Fig. 2 - Plaice hung out for drying--dried plaice is a specialty known all over Jutland.

Denmark (Contd.):

Exports--General: Danish exports of fishery products in the first quarter of 1964 were down about 2 percent in quantity but up 12 percent in value from those in the same period of 1963. Higher prices for fresh and frozen fishery products accounted for the gain in value in spite of declining shipments. (Exports of fresh fishery products were down 8 percent in quantity, but up 11 percent in value.)

In January-March 1964, shipments to the European Economic Community accounted for about 46 percent of the value of Danish fishery exports, shipments to the European Free Trade Association accounted for 39 percent, shipments to the Communist Bloc countries accounted for 4 percent, and shipments to other countries accounted for the remaining 11 percent. West Germany was the leading buyer of Danish fishery products in the first quarter of 1964 with receipts valued at Kr. 47.2 million (US$6.8 million), followed by the United Kingdom with receipts valued at Kr. 23.5 million ($3.4 million), Sweden with Kr. 21.0 million ($3.0 million), Italy with Kr. 11.3 million ($1.6 million), Switzerland with Kr. 10.7 million ($1.5 million), France with Kr. 6.9 million ($1.0 million), and the United States with Kr. 6.8 million ($1.0 million).

Table 2 - Danish Exports of Fishery Products, Jan.-March 1963 and 1964

Product	January-March 1/1964 Qty. (Metric Tons)	1/1964 Value (US$ 1,000)	1963 Qty. (Metric Tons)	1963 Value (US$ 1,000)
To all countries:				
Fresh products	53,829	12,323	58,500	11,138
Frozen products	12,435	5,864	11,600	4,808
Processed fishery products	3,998	2,713	5,100	2,911
Fish meal & solubles 2/	12,762	1,673	9,300	1,246
Total exports to all countries	83,024	22,573	84,500	20,103
To the United States:				
Fresh & frozen products:				
Fillets:				
Cod	1,016	458	1,884	869
Other fillets	36	23	111	63
Pond trout	104	117	313	362
Norway lobster	65	177	24	76
Others	29	23	14	11
Cured prod. (smkd. & salted)	9	6	15	5
Canned products:				
Herring & sprat	161	106	176	134
Shrimp	41	57	3/	3/
Others	19	15	47 64	47 73
Semipreserved products	4	7	2	4
Fish solubles	-	-	-	-

1/Preliminary.
2/Does not include marine oils.
3/Included in "other canned products" classification.
4/Includes canned shrimp.
Note: Values reported in Danish kroner and converted to U. S. dollars. Data for 1964 were converted at rate of Kr. 6.908 equals US$1.00; data for 1963 were converted at rate of Kr. 6.906 equals US$1.00.

Exports to the United States: Danish shipments of fishery products to the United States in the first quarter of 1964 were down 43 percent in quantity and 38 percent in value from those in the same period of 1963. Declines were especially large in items which have a good European market (such as pond trout). Shipments of cod fillets in the form of blocks decreased because of an early lack of interest by United States importers. Later, a renewed United States demand could not be met because stocks had been committed to British and Continental buyers. Norway lobster shipments are becoming more significant.

On June 17 and 18, 1964, the Danish Fisheries Minister initiated a campaign in New York City to sell more fish from Denmark and Greenland in the United States. Luncheons were held for importers and food editors at the Danish Pavilion at the World's Fair. Denmark expects to continue the drive for greater sales of fishery products in the United States. (United States Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, June 24, 1964.)

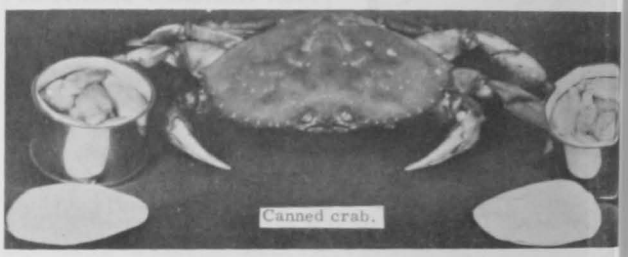
Note: See Commercial Fisheries Review, July 1963 p. 73.

* * * * *

IMPORTS OF FISHERY PRODUCTS, 1962-63 AND EARLY 1964:

Danish imports of fishery products consist mostly of fresh fish (mainly herring) landed by Swedish fishing craft in the Danish ports of Skagen and Hirtshals. Much of the herring is filleted and reexported, especially to West Germany.

Canned fishery imports consist mainly of sardines from Portugal; salmon from Japan, Canada, and Alaska; tuna from Peru, Yugoslavia, and Malaysia; shrimp from Sweden, crabs from the United States and the U.S.S.R. and lobster meat from Canada.


Canned crab.

Fish meal is imported mainly from Iceland and Norway, and fish oil from Peru and the United States.

The value of edible fishery products imported by Denmark from all countries during January-April 1964 totaled 44.9 million kroner (US$6.5 million), an increase of 18 percent compared with the same period in 1963. Danish imports of edible fishery products from the United States for the similar period were valued at 1.5 million kroner ($213,000), up 9 percent from the same period in 1963.

Imports From United States--1963: Danish imports of fishery products from the United States in 1963 totaled 1,524 metric tons valued at US$618,400. The value was more than double that of 1962. In that year, imports were largely canned fish and did not include any industrial fishery products. Canned fish and industrial products accounted for about 90 percent of the total value of the 1963 imports.

Denmark's fishery products imports from the United States are diversified and are generally significant except for fish oil, frozen and canned crab meat, canned shrimp

rmark (Contd.):

Table 1 - Danish Imports of Fishery Products from the United States, 1962-1963

Product	1963			1962		
	Quantity	Value		Quantity	Value	
	1,000 Lbs.	Kr. 1,000	US$1,000	1,000 Lbs.	Kr. 1,000	US$1,000
h and frozen:						
rnon, fresh or chilled	21.2	83.6	12.1	1/	1.0	0.1
rnon, frozen	32.8	142.7	20.7	-	-	-
b meat	28.4	191.4	27.7	19.0	133.0	19.3
ssels	1.0	3.7	0.5	2.6	7.0	1.0
er molluscs	2.0	7.4	1.1	-	-	-
er	3.3	43.2	6.3	0.7	25.2	3.7
Total fresh and frozen	88.7	472.0	68.4	22.3	166.2	24.1
ed:						
rnon	47.7	144.3	20.9	26.9	107.0	15.5
a	5.5	22.3	3.2	2.9	12.0	1.7
imp	53.1	216.2	31.3	1/	0.2	1/
b meat	256.4	1,962.8	284.6	233.7	1,598.0	231.7
ter meat	2.3	34.7	5.0	2.0	23.0	3.3
ier	3.4	4.2	0.6	2.4	4.0	0.6
Total canned	368.4	2,384.5	345.6	267.9	1,744.2	252.8
d:						
mon	-	-	-	5.1	23.0	3.3
preserved:						
viar, etc.	2.0	7.7	1.1	-	-	-
trial products:						
h oil, raw	2,693.7	1,160.9	168.3	-	-	-
h meal, etc.	206.2	238.7	34.6	-	-	-
h glue	0.7	2.8	0.4	0.7	2.0	0.3
Total industrial products	2,900.6	1,402.4	203.3	0.7	2.0	0.3
Grand total	3,359.7	4,266.6	618.4	296.0	1,935.4	280.5

ss than 100 kilos and $100.
e: One kroner equals US$0.145.

en and canned salmon. A potential mar- may exist in Denmark for frozen bluefin from the New England fishery. Danish ers this past summer bought Japanese wfin or big-eyed tuna (headed and gutted) from Italy at about $400 a ton delivered Skagen. Frozen tuna from New England might be shipped to Denmark on the small refrigerator vessels which transport cod blocks to Gloucester, Mass. There is also some interest in Denmark

Table 2 - Danish Imports of Fishery Products by Commodities, 1961-1963

Commodity	QUANTITY			VALUE					
	1963	1962	1961	1963	1962	1961	1963	1962	1961
	(Metric Tons)			(Kr. 1,000)			(US$1,000)		
nd roe	132,432	103,723	57,675	98,151	102,771	49,320	14,232	14,902	7,151
acea, squid, and octopus	555	391	424	3,372	2,836	2,134	489	411	309
ls	33	121	74	445	525	225	65	76	33
ng, spiced	4,511	3,767	4,074	9,124	7,379	7,022	1,323	1,070	1,018
wet and dry	1,530	498	863	4,194	1,219	2,466	608	176	358
d	113	126	156	318	336	474	46	49	69
l	1,479	1,331	1,247	11,126	9,173	7,759	1,613	1,330	1,125
i, processed	32	26	29	280	151	151	41	22	22
rial:									
rmeal	12,309	15,520	27,759	11,914	16,613	24,857	1,728	2,409	3,604
ng oil, etc.	2,545	1,861	924	2,399	1,505	990	348	218	144
cinal oil	2,557	2,439	1,926	3,837	3,218	3,000	556	467	435
r fish oil	19,032	17,738	20,379	12,212	14,213	21,606	1,771	2,061	3,133
glue	12	17	8	38	54	32	5	8	5
s	25,745	15,986	10,805	10,344	6,818	3,883	1,500	988	563
rand total	202,885	163,544	126,343	167,754	166,811	123,919	24,325	24,187	17,969

Products originating in Greenland and the Faroe Islands not included. Seaweed and agar not included.

Denmark (Contd.):

in importing live lobsters from Maine. Denmark's lobster catch is only about 150,000 pounds a year, but in 1963 lobster ex-vessel prices were high--an average of about $1.10 a pound.

Frozen industrial fish or fillet waste is in demand in Denmark and could be exported from New England for animal feeding on Denmark's mink farms. The f.o.b. price in New England would have to be about 1.8 cents a pound.

Imports from All Countries--1963: Denmark's fishery products imports from all countries in 1963 totaled 202,885 metric tons valued at 167.8 million kroner ($24.3 million).

Danish imports of seaweed and agar (not included with fishery products) in 1963 amounted to 403 metric tons valued at 721,100 kroner ($105,000). Portugal, Canada, and Malaysia were the largest shippers of those products--seaweed mostly from Portugal and Canada, and agar from Portugal and Japan. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, June 24, 1964.)

* * * * *

MEETING PLANNED ON STRUCTURAL RESEARCH FOR SMALL VESSELS:

A meeting on Structural Research for Small Vessels is planned to be held in Copenhagen, Denmark, September 15-18, 1964, by the Danish Wood Council (Traeraadet) in cooperation with the Fishing Boat Section of the Food and Agriculture Organization (FAO). Preliminary response by member Governments of FAO to such a meeting was reported to be favorable.

A paper on the construction of fishing boats presented at FAO's Second World Fishing Boat Congress in 1959 stimulated considerable discussion among the delegates when it was discovered that wide differences existed between building rules of nearly all member nations. As a result, the need for more investigations in the matter was expressed by nearly all delegates.

In December 1962, the Danish Wood Council undertook work along those lines in the light of further information on the Danish building rules. The purpose of the work of the Danish Wood Council is to propose more suitable use of the material than the present rules prescribe, and in this way liberalize the rules to the extent possible. FAO has been interested in the work and has asked the Wood Council to arrange a special scantlings (timber measurements) meeting this year so that construction problems can be taken up in a smaller group before the Third Fishing Boat Congress is held in 1965 in Goteborg, Sweden.

Papers on the following subjects will be read and discussed at the September meeting on Structural Research for Small Vessels:

September 15: (a) Functional demands for small ships.
(b) Principles of design, especially fishing-boat constructions.

September 16: (c) Properties of materials, especially wooden materials.
(d) Methods of construction of wooden fishing boats.

September 17: (e) Can functional demands be decided through analysis of existing rules?
(f) Utilization of existing rules and methods of construction in developed areas, for use in developing countries.

September 18: Visits to Danish wooden shipyards, manufacturing plants for glued-laminated elements, etc.

It was felt that the United States should be interested in this meeting because it has no rules for scantlings of fishing vessels under 150 feet long. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, June 24, 1964.)

Ecuador

TUNA INDUSTRY TRENDS, 1963:

Ecuador's tuna industry continues to expand. A fleet of over 40 vessels with a combined gross registered tonnage of 1,500 tons now fishes for tuna from local ports. Ecuador's tuna and tuna-like landings in 1962 were estimated at 21,050 metric tons (landed weight) of which 13,260 tons were distributed fresh or frozen and 7,790 tons were absorbed by the canning industry. Skipjack made up about 80 percent of the catch and the remainder was yellowfin tuna. Most of Ecuador's tuna vessels are centered Manta, but some hail from Santa Rosa-Salinas. Generally, the vessels make one-day trips and fish with live bait. Two small purse-seine vessels have joined the Ecuadoran tuna fleet. One of the purse-seiners is a Peruvian "bolichero" (formerly used in the Peruvian anchovy fishery) and the other is a power-block seiner with an 80-t capacity. The purse-seiners should substantially increase Ecuadoran tuna landings. Both of the new vessels will deliv their catch to a subsidiary of a United States firm which op ates the only large tuna cannery in Ecuador. The cannery completed a $178,500 expansion program in mid-April 196 which increased freezing capacity to 200 tons a day. The c pany has a cold-storage holding capacity of 2,000 tons. It b tuna from private vessels at about $65 a ton. The cannery ported domestic sales in Ecuador in 1963 of almost 200,00 cases, an increase of 35,000 cases over 1962. Data on dom tic consumption of fresh and frozen tuna are not available.

Exports of canned tuna from Ecuador in 1963 were dow 11 percent in quantity, but only 2 percent in value from th previous year. The United States received about 92 perce the Ecuadoran canned tuna exports in 1963 with most of th mainder going to the United Kingdom, Sweden, France, an Jamaica.

Exports of frozen tuna from Ecuador in 1963 were dow percent in quantity and 21 percent in value from the previ year. The United States (including Puerto Rico) received percent of the frozen tuna exports from Ecuador in 1963 w the remainder going to Costa Rica.

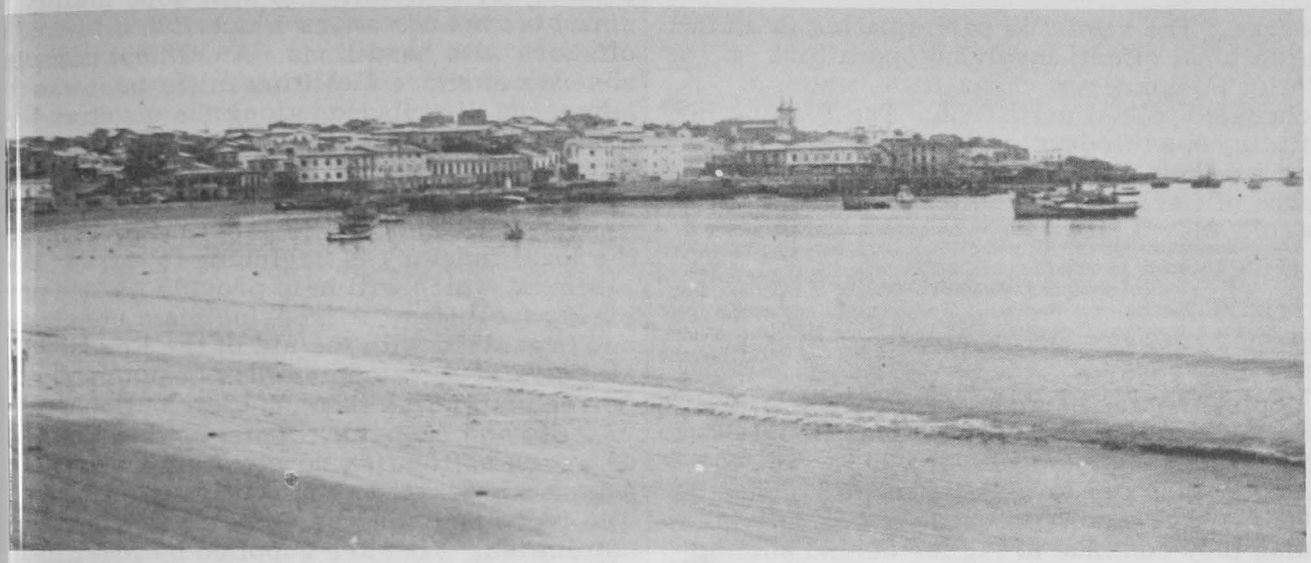
The tuna industry in Ecuador expects to benefit from th action of the Ecuadoran Ministry of Development which au thorized a Puerto Rican fisheries company to purchase tu

Ecuador's Tuna Exports, 1961-1963

Item	1/1963		1/1962		1961	
	Qty.	Value	Qty.	Value	Qty.	Val
	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000	Metric Tons	US 1,0
Frozen tuna	3,371	540	5,267	685	4,243	5
Canned tuna	1,587	975	1,787	995	2,840	1,6

1/Preliminary.

uador (Contd.):



General view of the port of Manta, Ecuador.

n Ecuadoran fishermen for shipment to Puerto Rico
ard the company's 700-ton freezership Western King.
its part, the Puerto Rican company has pledged to make
2,000 available for Ecuadoran fishing cooperatives and
nstruct a land-based freezing plant in Ecuador within 5
s. The firm has already financed the construction of at
5 small bait boats to help guarantee supply. The Puerto
n firm pays fishermen about $65 a ton for tuna. Ecua-
n Government charges for a license and matricula in-
se the Puerto Rican company's tuna buying costs by an
tional $5 a ton. A Government Decree relieved the com-
from payment of export taxes.

everal other companies have been incorporated to fish for
off Ecuador but no actual investment has yet been made.

clash between foreign tuna fishermen and the Govern-
of Ecuador occurred in mid-1963 over Ecuadoran
ms to extensive territorial waters and Ecuadoran licens-
procedures. Foreign-flag fishing vessels have been re-
d to purchase an Ecuadoran matricula and license before
ing Ecuadoran fishing waters. (United States Consulate,
quil, May 5, 1964.)

* * * * *

IMP INDUSTRY TRENDS, 1963:

Exports of frozen shrimp from Ecuador
963 amounted to 2,583 metric tons valued
US$1.7 million as compared to shrimp ex-
ts in 1962 of 2,330 tons valued at $3.0
lion, according to preliminary data. The
rp drop in the value of the shrimp exports
963 was due to declining prices in the
ted States which absorbed 99 percent of
ador's shrimp exports. The only other
er in 1963 was Japan which took about 16
s. The export market is the most impor-
t factor in the Ecuadoran shrimp industry.
962, production of fresh and frozen shrimp
Ecuador amounted to 3,200 tons, but only
tons of that supply was consumed locally.

Shrimp freezing and processing in Ecuador are done by 7 firms, most of which are located in the Guayaquil area. The largest firm can process 80 tons of shrimp a month. Total direct shrimp industry employment is about 3,000 persons. In spite of the United States price decline, all the firms processing shrimp for export seem to have survived.

No major investments were made in the shrimp industry during 1963. A fleet of 150 shrimp vessels, most of which work in the Gulf of Guayaquil, has overcrowded the prime fishing grounds for the white, striped, and brown shrimp found near the surface. According to the Ecuadoran National Fishing Institute, between 70-80 percent of the catch is white shrimp (Penaeus occidentalis). Some of the shrimp vessels have moved up the coast to ports such as Manta. In 1963, the gross registered tonnage of the Ecuadoran shrimp fleet totaled 7,150 metric tons. Inadequate refrigeration equipment and underpowered winches keep the fleet from seeking red shrimp off the coast in deeper water. However, red shrimp explorations will be conducted by the Ecuadoran National Fishing Institute research vessel Huayaipe. The 73-foot vessel underwent its final sea trials late in February 1964, and began its first research trip, to the Galapagos, shortly thereafter.

The Huayaipe will also be used to chart the little understood changes which occur when the major ocean currents (which bathe the continent and the Galapagos periodically) change

Ecuador (Contd.):

course. The vessel is participating in an international effort, involving operations in Chile, Panama, and Costa Rica, which is scheduled to last until 1966. The Fishing Institute hopes to develop information which will be useful in charting the migratory patterns of fish. (United States Consulate, Guayaquil, May 5, 1964.)

* * * * *

SPINY LOBSTER INDUSTRY TRENDS, 1963:

Spiny lobster exports from Ecuador have shown a consistent and rapid rise (from 33 metric tons valued at US$47,000 in 1961 to an estimated 123 tons valued at $185,000 in 1963), although both in quantity and dollar value they continue to lag far behind shrimp and tuna exports. In 1963, spiny lobsters accounted for about 5 percent of Ecuadoran fishery exports by value. The total 1963 spiny lobster catch in Ecuador has been estimated at about 500 tons (landed weight).

Ecuadoran spiny lobsters are caught off the Santa Elena Peninsula and the Galapagos Islands. Fishing is done by net or by primitive hand methods. Satisfactory lobster traps for Ecuadoran waters have not yet been devised. Fishermen receive between $0.30 and $0.50 for each lobster, depending upon its size. On the Galapagos the going price is $0.40. Several persons have said that the Santa Elena area has been damaged by overfishing.

Ecuador's "mechanized" lobster fleet, including fishing and freezer vessels, consists of 6 vessels totaling 542 gross registered tons.

Most of the spiny lobster catch is exported as frozen lobster tails. Freezing and packing generally take place in local shrimp plants. A small freezing plant in the Galapagos processes up to 3 tons a month of spiny lobster tails. At least one exporter ships live spiny lobsters to Peru. Live spiny lobster shipments totaled 5 metric tons in 1963. (United States Consulate, Guayaquil, May 5, 1964.)

* * * * *

BOTTOMFISH INDUSTRY DEVELOPMENT:

Domestic landings of bottomfish in Ecuador are estimated at about 25,000 metric tons a year with a value of about US$4 million. Fishing for bottomfish is still done mainly by small boats and canoes which fish a few miles offshore with hand lines. An almost complete absence of shore facilities in the past has hampered distribution along the coast and hampered the marketing of bottomfish in the mountainous interior of Ecuador.

With the aid of the Ecuadoran Government the local industry is beginning to attract investment which will help provide needed processing facilities. A freezing plant constructed and organized with the aid of the Ecuadoran Ministry of Development has begun marketing frozen bottomfish through distribution centers in Quito and Ambato. Domestic consumption of frozen bottomfish now averages about 7,000 pounds a week and should increase rapidly. The freezing plant can store 80 tons of frozen bottomfish. Fish are supplied by local fishermen organized into a cooperative. A 17- to 18-ounce plastic package of white fish retails in Ecuador at 4.60 sucres (approximately 25 U. S. cents).

Trucks without special refrigeration equipment carry loads of frozen fish to Quito. Reportedly, there is little deterioration during the 10-hour trip. The distribution system is to be expanded to other cities in the mountains during 1964, and eventually the Government plans to finance freezing cooperatives in several other coastal villages.

A group of Ecuadoran and United States businessmen plan to invest about $280,000 in a company located at Manglaralto, Ecuador, which will construct facilities to prepare frozen bottomfish fillets for export to the United States. Later the company may expand to process canned tuna and frozen shrimp. The company plans to conduct a feasibility study to determine the extent of the white fish stock and to examine the industrial problems involved in the project. (United States Consulate, Guayaquil, May 5, 1964.)

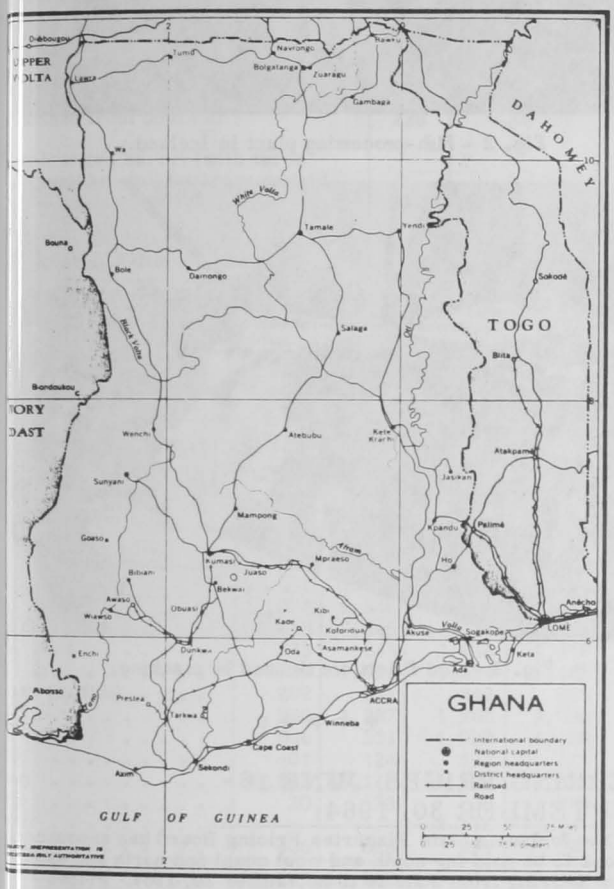
Ghana

GOVERNMENT CONTROL OF TWO PRIVATE FISHING FIRMS:

Two private fishing companies in Ghana announced in April 1964, a reorganization of their activities which results in placing them under substantial Government control. The

na (Contd.):

ions stem from a Government announcement in late 1963 that all fishing activities in na were to be consolidated into one of e sectors--State, cooperative, and small asant" fishermen.



One of the two private Ghanaian-owned fish- companies has sold 40 percent of its shares he Ghana Government. Twenty-five per- t of the remaining shares are to be held rust for the workers of the company; 10 cent of the shares are to be held in trust the people of Mankoadze village in the tral region of Ghana. A new board of di- tors is to be appointed by the Government. other private firm, formerly owned by naians, began to trade on March 31 under fferent name in line with the Government's solidation plans.

It was reported that the changes brought ut by the reorganizations appear to rep- ent a loss of control by private ownership. ited States Embassy, Accra, April 15, 1964.)

Iceland

HERRING FISHERIES TRENDS AS OF JULY 13, 1964:

Iceland's summer herring catch as of July 13, 1964, was about 153,057 metric tons, an increase of 135 percent compared with the catch of 65,392 tons in the same period of 1963. If fishing were to continue good until the end of the season (about mid-September), the summer herring catch will be considerably better than last season.

The main summer herring fishing grounds are along the northeast and east coasts of Iceland (from Glettingarnesgrunni to Gerpisflaki). Unloading facilities at those ports are not adequate to handle the seasonal peak loads and the fishing vessels either have to wait their turn or take the herring to more distant ports. Some transport ships are taking herring from the fishing vessels for transport from the east coast to less congested harbors on the north coast. Herring factories now pay 3 kronur or 7 U.S. cents per mal (about 330 pounds) into a special fund used to compensate boats for transporting herring for unloading in less congested harbors. When a harbor in a congested area is "closed," the transport to herring factories in less congested harbors brings the seller a higher price--about 37 cents more per mal. Part of this higher price (about 23 cents) is paid out of the special fund and the balance of the extra amount is paid by the buying factory.

The prices of herring meal and oil are much better than last year (1963). The main buyers are, as formerly, the United Kingdom, Norway, the Netherlands, West Germany, and Sweden. A considerable amount of herring oil has been sold ahead at £70 (US$196) a metric ton compared with £45 ($126) last year. Market conditions also are better for herring meal for which presales have been made at between 15 shillings 9 pence ($2.20) and 16 shillings 6 pence ($2.31) per protein unit. The 1963 prices ranged from 14 shillings to 14 shillings 6 pence ($1.96-2.03) a protein unit.

Advance sales of Icelandic salted herring by country as of July 13, 1964, were estimated as: Sweden 213,000 barrels; Finland 60,000; United States 22,000; Denmark 13,000; Norway 11,000; and West Germany 10,000; for a total of 329,000 barrels of about 220 pounds each.

The Soviet Union had not yet agreed to pay the prices which the Icelandic negotiators claim are the prices paid by other buyers of their herring, and the negotiations were being continued in Reykjavik. Government officials concerned with the negotiations, however, indicated they expected an agreement would be reached at existing world market prices. The current protocol between Iceland and the U.S.S.R. specifies a maximum quantity of 15,000 metric tons of salted herring.

Iceland's Catch and Utilization of Summer Herring as of July 13, 1964

How Utilized	1963	1962
	(Metric Tons)	
Salting	4,128	15,056
Freezing	2,025	1,658
Reduction (meal & oil)	146,904	48,678
Total	153,057	65,392

This year salting was begun late in the season partly because advance sales were delayed for price agreement and because the fat content of the herring, while high enough, was not firm enough for salting and such herring had to be used for reduction. (Herring is only sent to salting in quantities covered by advance sales.) Those factors, in addition to the greatly increased catch, account for the much larger quantity used for reduction during the first part of the 1964 season than in the same period of 1963. (United States Embassy, Reykjavik, July 15, 1964.)

Note: Values converted at rate of I. Kr. 43.06 equal US$1; 1 mal equals 150 kilos; barrel of salted herring 220 pounds; barrel of herring for salting 135 kilos; barrel of herring for freezing 120 kilos; barrel of herring for reduction 150 kilos.

* * * * *

Iceland (Contd.):

EXPORTS OF FISHERY PRODUCTS, JANUARY-MARCH 1964:

During January-March 1964, there was a considerable increase in exports of frozen fish fillets, fish meal, and herring meal as compared with the same period in 1963, according to the Statistical Bureau of Iceland's Statistical Bulletin, May 1964. Exports of herring on ice, frozen herring, and herring oil showed a considerable decrease in the first 3 months of 1964.

Icelandic Fishery Exports, January-March 1964 with Comparisons

Product	Jan.-Mar. 1964			Jan.-Mar. 1963		
	Qty.	Value f.o.b.		Qty.	Value f.o.b.	
	Metric Tons	1,000 kr.	US$ 1,000	Metric Tons	1,000 kr.	US$ 1,000
Salted fish, dried	535	13,714	318	1,084	21,649	502
Salted fish, uncured	2,067	32,976	765	2,003	26,252	609
Salted fish fillets	463	6,703	156	293	4,313	100
Wings, salted	219	2,937	68	100	1,215	28
Stockfish	2,390	68,820	1,597	2,258	60,553	1,405
Herring on ice	19	140	3	6,608	21,880	508
Other fish on ice	10,303	58,710	1,362	11,598	56,980	1,322
Herring, frozen	7,721	45,987	1,067	14,556	77,953	1,809
Other frozen fish, whole	792	8,773	204	1,077	13,382	310
Frozen fish fillets	11,832	252,282	5,853	9,797	190,934	4,430
Shrimp and lobster, frozen	165	16,022	372	124	12,040	279
Roes, frozen	316	6,831	158	123	2,383	55
Canned fish	45	2,235	52	93	5,716	133
Cod-liver oil	1,351	12,536	291	1,917	14,213	330
Lumpfish roes, salted	3	81	2	24	335	8
Other roes for food, salted	981	15,195	353	1,005	14,077	327
Roes for bait, salted	-	-	-	-	-	-
Herring, salted	13,905	138,314	3,209	14,180	135,257	3,138
Herring oil	4,807	38,233	887	11,044	42,276	981
Ocean perch oil	28	188	4	64	207	5
Whale oil	2,101	18,675	433	985	3,658	85
Fish meal	5,486	29,429	683	2,344	14,515	337
Herring meal	26,564	149,237	3,462	20,970	130,084	3,018
Ocean perch meal	109	621	14	-	-	-
Wastes of fish, frozen	257	1,081	25	347	1,072	25
Liver meal	143	943	22	130	908	21
Lobster and shrimp meal	87	346	8	-	-	-
Whale meal	630	3,514	82	-	-	-
Whale meat, frozen	49	378	9	6	46	1

Note: Values converted at rate of 1 krona equals 2.32 U. S. cents.

Fig. 1 - Fishing vessels alongside the main fishing pier in the Westman Islands (off southwest coast of Iceland).

Fig. 2 - Fish-processing plant in Iceland.

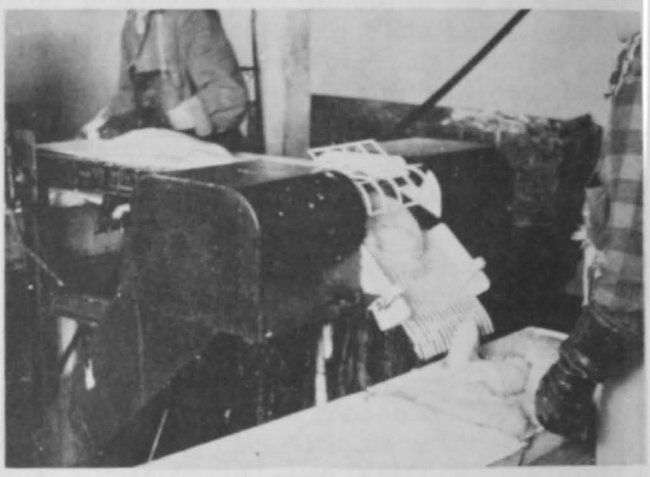


Fig. 3 - Cod fillets are skinned by machine.

* * * * *

HERRING PRICES, JUNE 16-SEPTEMBER 30, 1964:

The Icelandic State Fisheries Pricing Board has announced prices to be paid for south and west coast and north and east coast herring from June 16 to September 30, 1964. Prices are based on the quantity going into production. 1/

	I.Kr. Kilo	US¢/ Lb.
South and West Coast Herring (from Hornafjordur west to Rit):		
Herring for salting	1.42	1.50
Iced herring for export 2/	1.40	1.18
Herring for filleting (pickling, freezing or salting) 2/	1.12	1.48
Herring fodder	1.00	1.05
Frozen herring, 10 percent minimum fat content (3-6 herring per kilo) 1/	1.60	1.69
Herring for reduction:		
Less than 12 percent fat content	0.81	0.85
More than 12 percent fat content	3/1.12	1.18

1/Quantity going into production is the weighed herring less quantity going into reduction. Sellers receive lower prices for that quantity going into reduction.
2/Weighed quantity.
3/Seller delivers herring to factory for I.Kr. 0.03 per kg.

Prices for June 16-September 30, 1964, are the same as those paid March 1-June 15, 1964, except that herring for reduction has been separated into 2 types. (United States Embassy, Reykjavik, July 7, 1964.)

eland (Contd.):

	I.Kr.	US$/bbl.
rth and East Coast Herring rom Rit north to Hornafjordur):		
For each "mal" or barrel (150 liters or 298 lbs.) for reduction (Price is based on delivery into the factory's loading equipment or in loading equipment on special herring transport ships) 1/	182	4.23
Each measured barrel (120 liters or 32 gals.) for salting as unloaded from boats 2/	230	5.34
Each salted barrel (with three layers around) (average weight 135 kgs. or 298 lbs.) 2/	313	7.27
Herring for freezing (barrel containing 120 liters or 32 gals.)	230	5.34

addition, the State Herring Factories pay I. Kr. 3.00 per "mal" into a special fund used to compensate boats for unloading herring in distant harbors when main harbors cannot accept the herring owing to full capacity.
rice is based on delivery into salting boxes.

* * * * *

SHERY LANDINGS BY PRINCIPAL PECIES, JANUARY-FEBRUARY 1964:

Species	January		January-February	
	1964	1963	1964	1963
	(Metric Tons)			
d	11,074	9,546	31,077	23,773
Hock	5,618	7,545	10,615	12,265
he	533	843	2,656	1,410
g	789	1,098	1,834	2,185
ffish (catfish)	202	251	842	948
k	930	1,387	1,968	3,030
an perch	646	511	1,920	1,668
lbut	101	124	197	235
ring	30,313	48,176	64,139	61,818
mp	20	73	20	131
elin	-	-	3,716	-
er	466	328	893	594
Total	50,692	69,882	119,877	108,057

e: Except for herring which are landed round, all fish are wn weight.

* * * * *

LIZATION OF FISHERY LANDINGS, NUARY-FEBRUARY 1964:

How Utilized	January		January-February	
	1964	1963	1964	1963
	(Metric Tons)			
rring1/ for:				
l and meal	24,376	31,220	51,542	43,720
eezing	4,828	8,406	9,366	8,697
lting	1,109	4,396	3,231	4,497
esh on ice	-	4,154	-	4,904
undfish2/ for:				
esh on ice	3,687	3,832	7,594	7,177
eezing and filleting	10,030	10,604	25,583	23,493
lting	3,608	3,107	11,002	7,341
ckfish (dried unsalted)	1,807	2,502	5,215	5,333
me consumption	992	1,365	2,079	2,350
l and meal	235	223	529	413
pelin for:				
eezing	-	-	133	-
l and meal	-	-	3,583	-

(Table continued on next column)

How Utilized	January		January-February	
	1964	1963	1964	1963
	(Metric Tons)			
Shrimp for:				
Freezing	20	64	20	113
Canning	-	9	-	19
Total production	50,692	69,882	119,877	108,057

1/Whole fish.
2/Drawn fish.
Source: Aegir, May 1 and 15, 1964.

Ireland

FISHING INDUSTRY SURVEYED BY UNITED STATES FISHERY SCIENTISTS:

A survey of the Irish fishing industry was made during April-June 1964, by a team of fishery scientists from the U.S. Bureau of Commercial Fisheries. An independent appraisal of the fishing industry in that country was requested by the Government of Ireland in order to determine its potential for future growth. A draft report prepared by the Bureau's scientists was submitted to the Prime Minister of Ireland.

The Bureau's team members reported that excellent cooperation was received in the conduct of their survey and are optimistic about the future development and expansion of the

Ireland (Contd.):

Irish commercial fishing industry. Ireland has a relatively young industry. Most of the fishing vessels are less than 65 feet long, and the fishermen usually make trips of only one day. Larger vessels would increase production efficiency and stimulate trip fishing. Ireland's domestic markets are limited because of the relatively small population of 2.8 million people, but they can be expanded considerably by development of new products, introduction of improved marketing practices, and market promotion. In the past two years, the sales of newly introduced fishery products such as "fish fingers" (fish sticks) have tripled in the Irish market.

The team felt that shellfish production, catching, and processing methods could be improved so that Ireland could produce more fishery products for export to markets on the European continent, and that a fish-processing industry could be established to provide processed fishery products for domestic and foreign markets. One of the major recommendations made by the United States team was the establishment of a complete quality program that would provide for grading into sizes on the vessel and inspection of fish during all phases of the marketing chain.
Note: See Commercial Fisheries Review, May 1964 p. 46.

Ivory Coast

NEW DEVELOPMENT IN SARDINE FISHERY:

A new development in the sardine fishery of the Ivory Coast was indicated with the arrival on July 7, 1964, of the purse seiner Cap Lopez with a full load of 130 tons of sardinella. This 107-foot (550 hp.) vessel built in La Rochelle, France, in 1958, was rigged for purse seining and is equipped with a ring net of 750 meters (about 810 yards) in length, 65 meters (about 70 yards) in depth, with mesh of a stretched length of 28 millimeters (about 1.1 inches). She is the first vessel in this fishery to be equipped with brine-cooling facilities, and this maiden voyage was in the nature of an experiment to determine the feasibility of that method of holding fish for a considerable number of days. Due to seasonal movements of the Gulf of Guinea sardinella, it was necessary to go as far as the waters off Dakar, Senegal, for this catch, a distance of some 5 days. The fish were in brine a matter of 7 to 12 days on this trip, and the results were considered excellent. negligible number of fish were bruised or chafed, but for all practical purposes the e tire catch was in good condition and readil marketable.

The catch was sold by the 40-kilogram (about 88 pounds) to eager "mammy" buyer for distribution in the Abidjan area, for dr ing and smoking by the many small fish-s ing houses in the area, and for overnight t distribution to a distance of about 200 mil in the country's interior. Due to the relat scarcity of sardines at this season, the fis sold at wholesale for 2,500 CFA francs (a US$10) a box. It was estimated there wer between 3,000 and 3,500 boxes, for a gros value of some 7 million CFA francs (abou $28,000). This is a top price, however, a with the entry of more vessels into the fi ery it is expected that a more normal pri will be about 1,200 CFA francs (about $4. a box. The price has been known to drop 800 CFA francs (about $3.20) a box durin periods.

Improvements planned by the owners Cap Lopez, a Franco-Ivoirien company, clude the installation of a power block (w will permit reduction of the vessel crew its present 4 Europeans and 17 Africans Europeans and 10 Africans), and use of a pump for loading and unloading the vesse

Fishing circles in the Ivory Coast are thusiastic about the success of this ventu both the results obtained by the use of an shore purse seiner in the sardine fishery the success of the brine-cooling method holding the fish over a relatively long per of time. It is expected that additional ves

ry Coast (Contd.):

larly rigged will follow shortly. (Fish-
s Attache, United States Embassy, Abi-
, July 7, 1964.)

an

PORT VALIDATIONS FOR FROZEN A AND TUNA LOINS U. S., APRIL-MAY 1964:

an's export validations of frozen tuna and tuna loins to ited States for April-May 1964 totaled 14,047 short tons, d at US$5,046,945 as compared with shipments of 9,348 tons valued at $3,039,039 for the same period in 1963, rease of 51 percent in quantity and 129 percent in value. n tuna and tuna loins authorized to be shipped directly Japan during April and May 1964 were 31 percent above vel exported during the same period in 1963; authorized shipments were 5 percent less than those of the previous

Japan's Export Validations for Frozen Tuna to U.S., April-May 1964

	Direct Shipment			Transshipped			Total Direct and Trans-shipped		Total
	April	May	Total	April	May	Total	April	May	Validated
	(Short Tons)								
e:	2,190	2,068	4,259	1,579	1,181	2,760	3,769	3,249	7,020
rin:	-	-	-	146	60	206	146	60	206
and gutted:									
00 lbs.	1,583	1,081	2,664	383	397	780	1,966	1,478	3,445
lbs. up	86	194	280	-	-	-	86	194	280
ed with	7	-	7	426	294	720	433	294	726
	-	-	-	1	-	1	1	-	1
al	1,676	1,275	2,951	956	751	1,707	2,632	2,026	4,658
ed:									
and	-	-	-	5	-	5	5	-	5
ed with	-	-	-	24	-	24	24	-	24
	2	3	4	-	-	-	2	3	4
al	2	3	4	29	-	29	31	3	33
c:	-	-	-	408	419	827	408	419	827
re	569	256	825	-	-	-	569	256	825
fin	578	106	684	-	-	-	578	106	684
	1,147	362	1,509	-	-	-	1,147	362	1,509
otal	5,015	3,708	8,723	2,972	2,351	5,323	7,987	6,059	14,047
ay									
x-	2,336	1,435	3,770	3,924	1,652	5,577	6,260	3,087	9,347
in- or se	+115	+158	+131	+24	+42	-5	+28	+96	+51

an Frozen Food Exporters Association.

Albacore and yellowfin accounted for 83 percent of the validated exports of frozen tuna and loins, of which cent were albacore and 33 percent yellowfin. (Fish-Attache, United States Embassy, Tokyo, June 29, 1964.)

* * * * *

VESSEL PRICES FOR ALBACORE A STILL HIGH IN JUNE 1964:

t Ishinomaki and Nakaminato, Japan, ex-el prices of 120 yen a kilogram (US$302 ort ton) were being paid for 22-pound al-re. At Yaizu ex-vessel prices of 140 a kilogram ($353 a ton) were being offer-r 33-pound albacore.

But Japanese frozen albacore export trade with the United States began to show signs of activity in June 1964, with offers from United States buyers coming in at $380 a ton c. i. f. However, export trade in albacore was still at a low level because of the high ex-vessel prices offered in Japan. (Suisan Tsushin, June 26, 1964.)

* * * * *

SUMMER ALBACORE TUNA FISHERY:

The Japanese summer albacore fishery was virtually over by mid-July 1964, with practically all fishing vessels either getting ready to return or already en route home. This year's (1964) summer albacore fishing conditions followed a very unusual pattern. Fishing was very slow at the outset of the season, but an unusually heavy run developed toward the end of the season. In early July, a sizable albacore run suddenly developed 350-400 miles off the Sanriku (northeastern Honshu) coast, where water temperatures measured 17°-18° C. (62.6°-64.4° F.). This resulted in record catches for albacore vessels operating out of Kesennuma, Onagawa, and Ishinomaki.

Ex-vessel albacore prices in Japan for 22-pound fish were reported in mid-July at 116-120 yen a kilogram (US$292-302 a short ton) at Shimizu and Yaizu; 115-118 a yen a kilogram ($290-297 a ton) at Kesennuma and Ishinomaki; and 110-116 a yen a kilogram ($277-292 a ton) at Nakaminato. Prices of summer albacore contracted for export to the United States averaged $375 a ton c. & f.). (Suisan Tsushin, July 15, 1964.)

* * * * *

SOUTH PACIFIC TUNA MOTHERSHIP FISHERY TRENDS, JUNE 1964:

The Japanese Yuyo Maru (5,040 gross tons) and Nojima Maru (8,800 tons) tuna mothership fleets fishing in the South Pacific were operating profitably as of late June 1964. Catches consisted largely of albacore and yellowfin tuna, but fishing was slowing down in late June.

The Yuyo Maru fleet, operating in the vicinity of the Fiji Islands, in early June was catching an average of about 5 metric tons a day per catcher vessel. In late June, she was averaging between 2.1-2.5 metric tons. The Nojima Maru fleet, operating in the fishing grounds south of Tahiti, averaged close to 3 metric tons a day in early June. In late June

Japan (Contd.):

it was taking an average of 2.5 tons a day per catcher vessel. (Suisancho Nippo, June 20, 1964.)

* * * * *

JAPANESE TUNA EXPORTERS SEEKING MORE TRADE WITH SPAIN AND CUBA:

Japanese frozen tuna exporters, who are presently confronted with marketing problems owing to the sluggish export trade with European countries (particularly Italy), are discussing the possibility of expanding the tuna markets in Spain and Cuba. Tuna exports to Spain are presently restricted under a quota system enforced by that country, but the Japanese tuna exporters hope to seek greater trade through diplomatic negotiations. Tuna exports to Cuba are presently handled by only two Japanese fishing firms, but due to depressed tuna sales to other countries in recent months, other Japanese trading firms reportedly are showing interest in the Cuban market. However, because Cuba is a Communist country, some observers in Japan foresee difficulties in expanding trade with that country in view of the adverse effect it may have on the trade with the United States. (Nihon Suisan Shimbun, July 10, 1964.)

* * * * *

JAPANESE FROZEN TUNA EXPORTS TO CUBA INCREASING:

The Japan Export Frozen Tuna Producers Association, at a meeting held on June 30, 1964, to develop measures to overcome the slump in the sales of Atlantic-caught tuna, reported that tuna exports to Cuba have sharply increased in recent months. Sales to that country contracted during April-June 1964, totaled about 3,000 metric tons. During the same period, exports of Atlantic tuna to the United States amounted to 7,397 short tons, to Italy 5,225 metric tons, Yugoslavia 4,509 metric tons, and Czechoslovakia 940 metric tons. (Suisan Tsushin, July 2 & 4, 1964.)

* * * * *

FROZEN TUNA SALES TO ITALY SLOW IN JUNE 1964:

Japanese frozen tuna sales to Italy were extremely slow in June 1964 due to the tight money situation existing in Italy, coupled with the Italian packers' insistence upon yellowfin tuna. Italian packers were reluctant to buy big-eyed and bluefin tuna. This situation is said to be presenting marketing difficulties for Japanese tuna suppliers, particularly since Japanese Atlantic tuna catches have been predominantly big-eyed and bluefin tuna.

Export prices paid for yellowfin (gilled-and-gutted) deliveries to Italy in June were at US$395 a metric ton c.i.f., compared with $410 offered early this year. Dressed big-eyed tuna, which earlier this year sold for $360 a metric ton in the Italian market, has declined to around $270 a ton, with very few offers being made even at that price. Bluefin price was $330 a metric ton c.i.f. in June compared with $380 offered early this year. (Suisancho Nippo, June 29, 1964, and other sources.)

* * * * *

ESTABLISHMENT OF OVERSEAS TUNA BASE COUNCIL UNDER STUDY:

The Japanese Fisheries Agency is studying the possibility of establishing an overseas tuna base council to assure the stable operation of overseas-based fisheries. The plan under study is aimed at organizing, under the Agency's guidance, a council consisting of overseas-based fishery operators to promote liaison among the operating firms and to resolve problems related to fish prices, labor and other problems of common interest.

Reportedly, the Japanese overseas tuna bases at American Samoa, Espiritu Santo (New Hebrides), Noumea (New Caledonia), Levuka (Fiji Islands), and Penang (Malaysia) are faced with growing economic difficulties resulting from declining hook catch rates, rising labor demands, unsatisfactory price agreements, and unfavorable arrangements for settling claims arising from green-meat tuna deliveries. Those problems are said to be imposing difficulties in managing overseas base-operated tuna fisheries. (Suisan Keizai Shimbun, June 28, 1964.)

* * * * *

JAPANESE NEGOTIATE WITH PORTUGUESE FIRM FOR TUNA BASE OFF WEST AFRICAN COAST:

A Japanese fishery company announced its plans to export tuna caught by Japanese vessels in the Atlantic Ocean under a business agreement with a firm in Portugal and with a United States tuna packer.

n (Contd.):

nder the plan, the Portuguese Territory abo Verde, a group of islands off the west t of Africa, will be used as an operating from which frozen tuna will be shipped rope, the United States, and Japan.

s of mid-June 1964, the Japanese fishery pany was operating 2 tuna vessels in the tic Ocean. Under an arrangement with anagawa Tuna-Bonito Fisheries Feder- in Africa, 10 additional tuna vessels to be added to the fleet. As of June those vessels were en route to the At- Ocean area.

e annual catch of the Japanese fishing is expected to total 10,000 tons. Of the 6,000 tons will be shipped to the United s tuna-packing firm's cannery in Puerto 2,000 tons to European markets, and emaining 2,000 tons to Japan.

e Japanese firm has sent its represent- to Sao Vicente Island of the Cabo Verde p to handle the fisheries business there. e basis of the business negotiations, the guese will provide refrigeration and facilities at the fishing base at Sao Vi- as well as act as agent for the Japanese ng vessels. The Japanese firm will pro- the fishing vessels and handle the sale na to the United States, Europe, and Ja- The United States firm will supply ships nsport the tuna to its cannery at Puerto

til now, most of the Japanese fishing els in the Atlantic Ocean area have op- d mainly from bases in the Canary and Palmas Islands. (Fisheries Attache, d States Embassy, Tokyo, June 16,

* * * * *

-AND-LINE SKIPJACK FISHERY BEING STUDIED:

ajor Japanese fishing companies, which onfronted with the problem of declining catch rates in the tuna long-line fishery, ooking into the possibility of expanding ole-and-line skipjack fishery. In view e abundance of the skipjack resource he stability of skipjack prices, several g firms see unlimited possibilities of ding the pole-and-line skipjack fishery gh improvement in gear and fishing methods. One possibility they are considering is to replace the pole-and line fishing method with purse-seining. (Suisan Keizai Shimbun, July 5, 1964.)

* * * * *

TUNA BEHAVIOR NEAR DRIFTWOOD STUDIED:

The Tokai University Fisheries Research Laboratory, which has for some time been studying the behavior pattern of tuna associated with driftwood, was planning to release 300 manmade small yellow-colored planks and logs east of the Philippine Islands in late June 1964. Commercial tuna fishing vessels (which have been cooperating in the study were on their way to the Indian Ocean) to release the manmade driftwood. The pieces of driftwood are expected to drift off the Japanese mainland between late July and December. The study is being financed by research funds from the Ministry of Education. (Suisan Keizai Shimbun, June 16, 1964.)

* * * * *

TUNA FISHING LICENSES DECLINE IN VALUE:

Tuna fishing licenses in Japan in early June 1964 were selling at a premium of 350,000-360,000 yen (US$972 to $1,000) per vessel (gross) ton, or about 70,000-100,000 yen ($194-278) less than a year earlier.

The decline in market value of fishing licenses is attributed to the less promising outlook for the tuna fishery. (Suisan Keizai Shimbun, June 2, 1964.)

Note: The entry of fishing vessels in the Japanese tuna fishery is closely regulated by the Japanese Government and fishing licenses (or "rights" as they are commonly referred to) are openly traded on the open market. The premium that a license fetches depends on demand and supply.

* * * * *

FISHING COMPANY TO FLY REPLACEMENTS FOR TUNA LONG-LINE CREWS:

A Japanese fishing company, which is operating five 112-ton tuna long-liners in the Atlantic Ocean and the Caribbean Sea from the base at Trinidad, is planning to fly crew replacements from Japan for its Atlantic tuna vessels. Negotiations with an airline for special rates were said to be under way, and the fishing company may start flying replacements before the end of this year.

Japan (Contd.):

The fishing company estimated that air transportation of replacements would result in additional earnings of about 10 million yen (US$27,778) per vessel. This is because each vessel would, under the plan, be able to make 3 more fishing trips for additional landings worth 15 to 16 million yen ($41,667-44,445). Deducting 6 million yen ($16,667) for round-trip flight expense for replacements (22 per vessel), the vessel would net around 10 million yen ($27,778). Moreover, air transportation would benefit the fishermen, who would be spared the discomfort of a long sea journey.

Under a similar arrangement, another Japanese fishing company, in the summer of 1963, flew 51 fishermen to the Canary Islands as replacements for crew members aboard its trawler operating in the Atlantic Ocean. (Suisancho Nippo, July 2, 1964, and other sources.)

* * * * *

TANKER REFUELS TUNA LONG-LINERS AT SEA:

The Japanese oil tanker Tofuku Maru (1,983 gross tons), which departed Japan on May 13, 1964, as of mid-June had refueled on the high seas a total of 23 tuna long-line vessels. The tanker is supplying to each fishing vessel about 50-100 kiloliters of oil, 10 tons of drinking water, and provisions. She was scheduled to refuel 20 more tuna vessels at sea before proceeding to Balboa, Panama, on July 13, for fuel and provisions. (Suisan Keizai Shimbun, June 16, 1964.)

* * * * *

TUNA MOTHERSHIP IN INDIAN OCEAN CONFRONTED WITH LABOR DISPUTE AT SEA:

The Japanese portable-boat-carrying tuna mothership Showa Maru No. 1 (1,076 gross tons), which had been fishing in the Indian Ocean on a six-months trip schedule, was compelled to terminate her operations one month earlier due to a labor dispute which broke out between the crew members and vessel owners. The vessel, upon returning to Shimizu, Japan, on June 25, 1964, was being investigated by the Shimizu Maritime Safety Regional Headquarters. Investigations thus far indicate the possibility of low wages and overworking of crew members as having led to the labor dispute at sea.

Under a labor agreement concluded between the owners of the mothership and the Japan Seamen's Union, crew members of the Showa Maru No. 1 were guaranteed a minimum wage of 300,000 yen (US$833.30) a trip plus a share of the catch, with adjustments to be made if earlier withdrawal of operations became necessary or if the catch was poor. One crew member aboard the vessel expressed strong discontent over the wages paid. He felt they averaged below those paid by other smaller vessels when considering the great output of labor demanded by large motherships.

The Japanese Ministry of Transportation concerned over this development and other occurrences of wage disputes in the distant-water tuna fishery, directed the Maritime Transportation Bureau to develop appropriate administrative measures to ensure harmonious labor-management relations and discipline aboard fishing vessels. (Suisancho Nippo, June 29; Suisan Keizai Shimbun, June 21, 1964.)

* * * * *

SOUTH KOREA ASKS JAPAN TO LIBERALIZE VESSEL EXPORTS:

At an informal conference held between the Republic of South Korea and Japan on July 24, 1964, at Tokyo, the Korean Government delegation submitted to the Japanese delegation a plan for economic cooperation between the two governments. The Korean proposal called for the liberalization of regulations governing exports of fishing vessels to South Korea, and for an increase in the Japanese import quota for Korean marine products.

Japan is reported to have taken the position that the export of vessels will not be liberalized as long as South Korea continues to seize Japanese fishing vessels. As for increasing the quota for Korean imports, Japan plans to further study the matter.

Concerning the matter of fishing vessel exports, Japan is reported as having adopted the basic policy to (1) first discuss the matter with concerned governmental agencies; (2) limit exports to wooden vessels over five years old; and (3) restrict exports to vessels which will not create an adverse effect on Japan's fishery; but South Korea must first stop seizing Japanese fishing vessels.

an (Contd.):

The Republic of Korea is said to be interested in purchasing from Japan over 30 tuna vessels, not to mention other types of fishing vessels, as part of the economic trade agreement. (Suisan Tsushin, June 26 & July 1, 4.)

* * * * *

TH PACIFIC SALMON CATCH F MID-JUNE 1964:

The Japanese salmon catch in the north- waters (North Pacific, Bering Sea, etc.) otherships as well as by land-based gill-

f a catch aboard a Japanese high-seas salmon mothership e North Pacific area.

nd long-line fleets was as of mid-June below the catch for the same period year. The catch, as of June 15, totaled 00 metric tons for motherships, 15,000 ic tons for land-based gill-netters, and) metric tons for land-based long-liners. mothership catch was running about 50 ent red salmon, followed in order by s and pinks. (Suisancho Nippo, June 22, 4.)

* * * * *

THERSHIP SALMON CATCH IN TH PACIFIC REPORTED POOR:

The salmon catch by the 11 Japanese non motherships operating in Area A th of 45° N. latitude) in the North Pacific an was reported poor. Landings up to y July 1964 amounted to about 24,000 ric tons as compared with the catch quota of 44,665 metric tons allotted to the mothership-type fishery. The catch is said to be running about 40 percent red salmon and 50 percent chum. At that rate, the Japanese salmon industry fears the red salmon catch for the season may be more than 10 percent below that for 1963, when red comprised about 40 percent of the total mothership salmon catch. (Shin Suisan Shimbun; Sokuho; July 9, 1964.)

* * * * *

RECORD LOW SALMON CATCH EXPECTED FOR AREA B:

The 1964 Japanese land-based gill-net and long-line salmon fishing in Area B (south of 45° N. latitude) of the Northwest Pacific was brought to a close on June 30, 1964, in accordance with the agreement under the Japan-U. S. S. R. Fisheries Treaty. There is a possibility that this season's catches will be at a record low for that area. Based on 31,000 metric tons of salmon taken in Area B as of June 25, the Japanese Fisheries Agency estimates the salmon catch for that area to total about 40,000 metric tons. The estimated catch is far behind the 55,000-ton quota established for that area, and also below the 1962 poor pink salmon catch. (Suisan Keizai Shimbun, July 1, 1964.)

* * * * *

HOKKAIDO CANNERS HARD HIT BY POOR SALMON CATCH:

Hokkaido, Japan, salmon canners are said to be extremely hard hit by the unprecedented poor salmon catches taken from Area B (south of 45° N. latitude) in the North Pacific this year. Of the 8 salmon packing plants located in Kushiro, Hokkaido, all but 1 had suspended operations as of June 20, 1964. Normally Hokkaido canneries are operating at full capacity in June-July, packing the "dollar-earning" pink salmon, but this year, with the scarcity of raw material pushing up pink salmon prices as high as 245 yen per kilogram (30 cents a pound), the Kushiro canners could no longer continue their operations without large losses. (Minato Shimbun, July 9, 1964.)

* * * * *

PACK OF LAND-BASED SALMON CANNERS DOWN:

The canned salmon pack (for export) of the land-based salmon canners in Japan as of early July 1964 was estimated to total 200,000

Japan (Contd.):

cases of $\frac{1}{4}$-lb. pack and 50,000-60,000 cases of $\frac{1}{2}$-lb. pack. For the 1964 season, the pack of $\frac{1}{4}$-lb. cans was expected to total 225,000 cases and for $\frac{1}{2}$-lb. cans, 100,000 cases. In 1963, the pack of export canned salmon totaled 370,000 cases. (Suisan Tsushin, July 6, 1964.)

* * * * *

MOTHERSHIP BOTTOMFISH AND SHRIMP FISHERY IN EASTERN BERING SEA, JUNE 1964:

The 14 Japanese mothership-type bottomfish fishery fleets operating in the eastern Bering Sea had landed from 120,000-130,000 metric tons of fish as of early June 1964, exceeding last year's catch for the same period by 25 percent. The vessels operating trawl gear were doing well, but some of those fishing with long-line gear were not. Alaska pollock, cod, rockfish, and flatfish were the principal finfish landed.

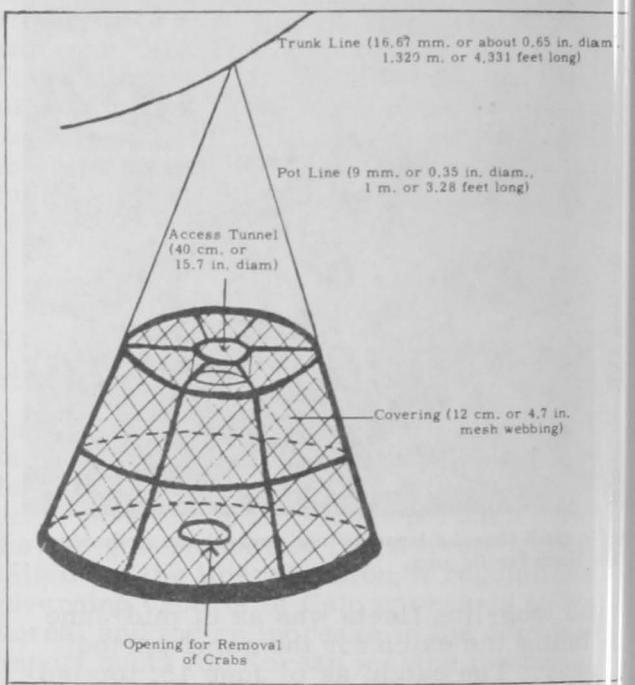
Japanese factoryship Einin Maru.

The factoryships fishing for shrimp were having good fishing as of mid-June 1964. The Chichibu Maru (7,421 gross tons) arrived in Hakodate on June 16 with about 62,000 cases of canned shrimp and 7,000 metric tons of frozen shrimp. She was scheduled to return to the eastern Bering Sea in August. The Einin Maru (7,482 gross tons) had canned 90,000 cases of shrimp, or one-third of its production target as of that date. (Suisan Keizai Shimbun, June 16, and Suisan Tsushin, June 18, 1964.)

* * * * *

NEW CRAB FISHERY DEVELOPED IN JAPANESE COASTAL WATERS:

In mid-December 1963, commercial concentrations of a crab known as ibara-gani (Lithodes species of the family Lithodidae) were discovered 40-50 miles off the northeast coast of Japan. During January-March 1964, a total of 12 Japanese vessels fished t newly discovered grounds from base ports i Fukushima and Miyagi Prefectures. Operations were centered 30-50 miles off Shioyaz in depths ranging from 480-500 meters (1,5 1,640 feet). Complete catch data are not a vailable, but it has been reported that duri January-March 1964, 7 vessels (ranging fr 37 to 97 gross tons) of the fleet landed at O hama Port, Fukushima Prefecture, a total 45,482 ibara-gani crabs with a total ex-ves sel value of US$17,126. Wholesale prices ranged from 100 yen ($0.28) per crab for th weighing less than 1 kilo (2.2 pounds) to 15 160 yen ($0.42-0.44) per crab for those wei ing over 1 kilo.



Crab pot used in ibara-gani fishery. The truncated-cone-sh pot is 60 centimeters (23.6 inches) high, with a base diam of 160 centimeters (63 inches), and a top diameter of 75 c meters (29.5 inches). Framework is constructed of iron ro mm. (0.35 inch) in diameter with the rod in the base ring centimeters (4.7 inches) in diameter. The top ring is mad vinyl chloride tubing 15 mm. (0.59 inch) in diameter.

Crab pot gear is used in the ibara-gani fishery. The pots are fished in units of 3 40 pots to a string. A string of pots is fis using round bottles 12 inches in diameter fit with bamboo poles 18 feet long as marke buoys. The buoys are equipped with radio transmitters as an aid in locating the gear single buoy serves as a marker for one str of pots. Rope 16.67 millimeters (0.65 inch in diameter is used for the trunk and buoy lines. The length of the trunk line for a si string of pots is approximately 1,320 mete long. The pots are fastened to the trunk li

an (Contd.):

-to 35-meter (98-118 feet) intervals with 1 meter (3.28 feet) in length and 9 mil-ters (0.35 inch) in diameter. Two an-s, either of iron or stone, secure the of the trunk lines to the seabed. The is hauled on deck amidship and, after val of the catch, the pots are reset from fterdeck. The total cost of rigging 4 gs of pots (40 pots per string), including acement pots, trunk and buoy lines, buoys, nchors, is estimated at 2-2.5 million ($5,555-6,944). Vessels in the fishery e port early in the morning and return ame day. The time required for hauling resetting 100-160 pots is approximately 12 hours. It is reported that the larger els in the fishery carry 12 to 13 crew bers.

t first, 3 or 4 saury were hung in the as bait but because of the loss of bait to rtebrates and other sea animals, this od of baiting was discontinued. A per-ted polyethylene cylinder (with screw was later devised to protect cut-up s of bait consisting of frozen saury or d. Two such baited cylinders are hung ch pot from a point near the access tun-

n February 29, 1964, ibara-gani fisher-of Fukishima Prefecture organized the shima Crab Pot Fisheries Association he purpose of protecting the stocks of s in the area. The following regulations adopted:

Female crabs shall be released. How-female crabs may be retained if not in s of 5 percent of the total catch.

Vessels are required to shift opera-when female crabs exceed 30 percent total catch per string of pots.

Regulations 1 and 2 above are applica-the catch of male crabs having a car-of less than 10 centimeters (3.9 inches).

The number of crab pots fished per l shall not exceed 160.

The maximum tonnage of a vessel en-in the fishery shall not exceed 100 tons.

6. Fishing shall be conducted in waters outside the range of the trawl fishery.

The production potential of the new fishery cannot be determined from the limited data now available. (Fisheries Attache, United States Embassy, Tokyo, July 13, 1964.)

* * * * *

ATLANTIC TRAWL FISHERY, 1963:

In calendar year 1963, 34 Japanese trawlers operated in the Atlantic Ocean off West Africa. They produced a total of 92,000 metric tons of bottomfish, consisting of 39,000 tons of sea bream, 18,000 tons of "monko" squid, 7,000 tons of octopus, and 28,000 tons of miscellaneous fish (including mackerel and "merluza"). Of that total 38,300 metric tons were exported to European and African countries, as follows (in metric tons): Ghana 11,500, Italy 5,500, Nigeria 5,500, Greece 4,000, Spain 3,500, others (including Rumania, Liberia, and Sierra Leone) 8,300. These data were reported by the Japanese Fisheries Agency. (Shin Suisan Shimbun, June 22, 1964.)

* * * * *

REFRIGERATED CARRIERS BEING BUILT FOR ATLANTIC TRAWL FLEET:

A large Japanese fishing company as of early July 1964 had under construction two 1,800-ton refrigerated fishery carrier vessels, scheduled to be employed for transporting Atlantic trawl catches back to Japan. The same firm is also planning to build two more similar carrier vessels for the Atlantic run. Upon completion of those 4 vessels, the firm will have a total of 6 refrigerated carrier vessels serving its Atlantic trawl fleet, including the two 1,800-ton carrier vessels (Banshu Maru Nos. 11 & 12), built earlier this year and now assigned to the Atlantic Ocean fishery. (Minato Shimbun, July 8, 1964.)

* * * * *

STERN-TRAWLER CANNERY BUILT FOR SHRIMP FISHERY:

Another Japanese fishing firm is building a 3,500-ton stern trawler equipped with a canning plant, the first Japanese trawler to be equipped with canning facilities. The trawler, which was scheduled to be launched on July 23, 1964, will have a daily production capacity of 500 cases (24 8-oz. cans) of canned shrimp. Unlike factoryships which require a fleet of catcher vessels, the new vessel will be capa-

Japan (Contd.):

ble of operating independently. The firm plans to assign the trawler to the shrimp fishery in northern waters (Bering Sea, North Pacific Ocean, Okhotsk Sea) where factory-ship-type shrimp operations have often proved to be unprofitable due to the high operating costs of factoryship-type fleet operations. (Minato Shimbun, July 4, 1964.)

* * * * *

FISHING VESSEL CONSTRUCTION PERMITS ISSUED JUNE 16, 1964:

On June 16, 1964, the Japanese Fisheries Agency issued permits for the construction of 21 fishing vessels: 8 wooden vessels (totaling 378 gross tons) and 11 steel vessels (totaling 6,931 gross tons). Included were permits for a 999-ton steel trawler, two 2,530-ton fish carriers, two 99-ton tuna long-liners, a 499-ton portable-boat-carrying tuna mothership and a 19-ton portable boat. (Suisan Keizai Shimbun, June 17, 1964.)

* * * * *

FISHERY PRODUCTION IN 1963:

The 1963 Japanese fishery production totaled 6,697,000 metric tons (excluding whale production), according to data released by the Fisheries Statistics Section, Japanese Ministry of Agriculture and Forestry. The 1963 production was down about 160,000 metric tons from 1962 landings (which totaled 6,860,000 metric tons). For the first time since 1955, fishery production in Japan failed to maintain the steady annual growth that had been recorded until 1962.

Tuna long-line catches in 1963 totaled 532,000 metric tons, a 0.6-percent decrease from 1962. Pole-and-line tuna fishery production in 1963 with 158,000 metric tons declined 16 percent below 1962.

The distant-water trawl fishery with 793,000 metric tons of landings in 1963, showed a 14-percent decrease from 1962. This decline was primarily ascribed to reduced mothership fleet operations in the "northern waters" (North Pacific, Bering Sea, etc.) bottom trawl fishery in 1963. Catches of 113,000 metric tons from distant-water trawl operations in the Atlantic Ocean and in waters off New Zealand and Australia, on the other hand, were reported to have almost doubled those for 1962.

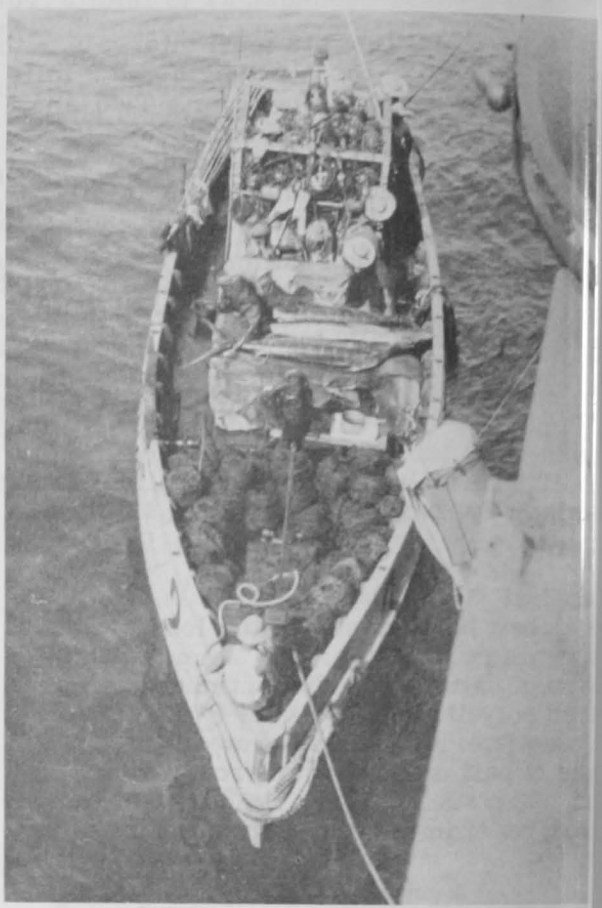


Fig. 1 - A 30-foot long-liner bringing the morning's catch marlin and tuna to the mothership. Note skates of line for

A review of Japanese fishery producti trends shows that from 1957 to 1961, the tant-water fisheries (pole-and-line and l line tuna fisheries, bottom trawl fishery mothership-type salmon and crab fisher

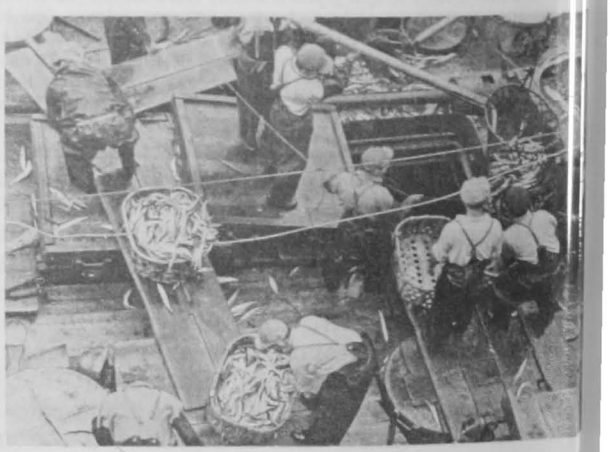
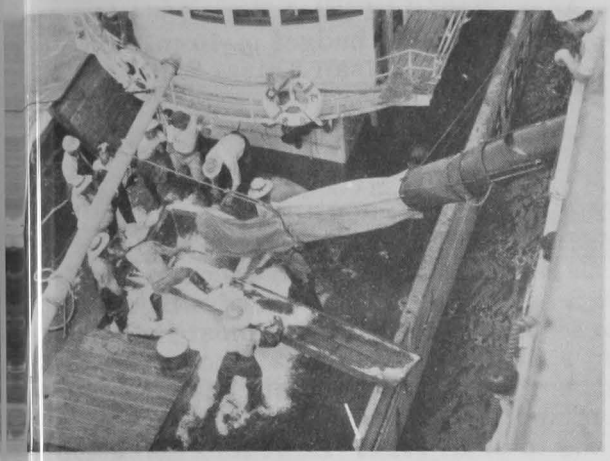
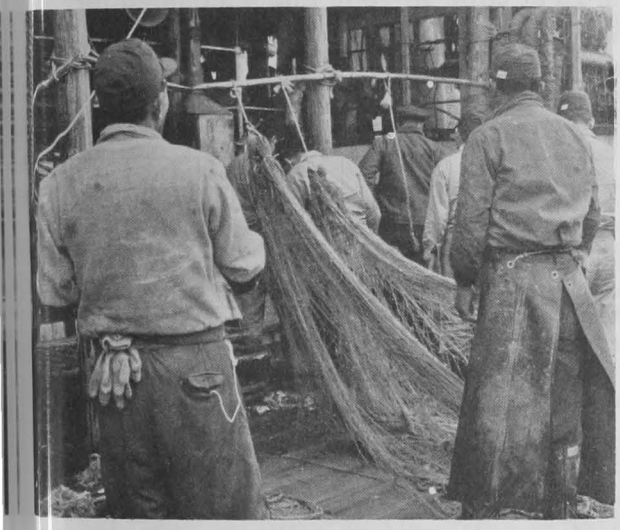


Fig. 2 - Washing and packing mackerel aboard a Japanese vessel.

n (Contd.):



- Icing a catcher boat alongside a Japanese mothership.



g. 4 - Repairing nets aboard a Japanese mothership.

rily accounted for Japan's yearly pro-
on growth. Those fisheries combined
ed an annual average increase of 14 per-
as compared with only 5.4 percent for
re fisheries and 2.7 percent for offshore
ries. However, the distant-water fish-
roduction after 1961 began to decline at
of 13 percent each year, and in 1963,
roduction of 1,520,000 metric tons was
cent below 1962. (Suisan Keizai Shim-
July 4; Nihon Keizai Shimbun, July 4,
.)

* * * * *

T US OF 1963 OVERSEAS-BASED
ERIES TO BE STUDIED:

he Finance Committee of the Japanese
e of Councilors (Upper House) is expected to begin a study of the status of the Japanese overseas-based fisheries in connection with tariff and labor problems. The Committee has called on the Japanese Fisheries Agency to furnish data on those fisheries, and the Agency has supplied the following data to that Committee:

Status of Japan's Overseas-Based Fisheries, 1963					
Area	Vessels	Fishermen	Catch	Value	
	. . . (Number) . . .		Metric Tons	Yen (Million)	US$ (Million)
Pacific Ocean	147	3,100	21,000	2,000	5.6
Indian Ocean	35	850	4,300	400	1.1
Atlantic Ocean:					
Tuna fishery	127	4,900	95,300	11,900	33.1
Trawl fishery	34	1,900	92,000	11,200	31.1

The amount of foreign exchange earned by the overseas-based fisheries is reported to be: Pacific Ocean 1,850 million yen (US$5.1 million); Indian Ocean 230 million yen (US$0.6 million); Atlantic Ocean (tuna) 11,380 million yen (US$31.6 million); and Atlantic Ocean (trawl) 2,640 million yen (US$7.3 million). (Minato Shimbun, June 5, 1964.)

* * * * *

NEW FISHING PORT IN
OSAKA PREFECTURE:

The relatively minor port city of Izumisano in Osaka Prefecture will become one of Japan's largest fishing ports if plans under consideration are developed. With the intention of reducing the transportation costs for fresh fish consumed in the Kobe-Osaka area, Osaka Prefecture has begun building a completely new fishing port at Izumisano City just south of Sakai. That area's supply of fresh fish now comes from such distant ports as Shizuoka and Shimonoseki with the result that transportation costs are high. Following the completion of Izumisano Port, fishing vessels would be able to deliver their catches practically to Osaka's doorstep.

In December 1963, Osaka Prefecture began to reclaim about 300 acres of land from the sea. It is planned that the land will be used by about 5 private fishing companies for their processing plants, refrigeration facilities, and ship maintenance buildings. The Japanese Government also plans to build a large refrigerated storage facility. Four large refrigeration factoryships of 15,000 gross tons each and 10 fishing vessels in the 3,000-ton class would be able to dock in the port at one time. Prefectural officials estimate that 170,000 metric tons of fish would

Japan (Contd.):

pass through the port annually. Railway and road connections will be constructed to connect the port with Osaka City and the rest of the Kinki.

It was reported that Japan's five largest fishing companies have informally agreed to establish plants in Izumisano, but final negotiations cannot be undertaken until the Prefecture determines the cost of the land. Such a determination is to be made upon completion of the reclamation work in about four years. Prefectural officials say the project is certain to be a success.

The cost of the reclamation project is estimated at 800 million yen (US$2.2 million) of which about $425,000 is to be financed by the national Government and the balance covered by public bonds.

Concern for the high cost of transportation and distribution of food products is reported to be growing in Japan and the Izumisano project would doubtless be a forerunner for other moves to centralize food production nearer the centers of consumption. Such developments should favorably affect prices, but they will also have the effect of bringing more people and industries into the already congested metropolitan centers.

Izumisano Port, with its centralized modern facilities, would be a further contribution, to the productivity of the already highly efficient Japanese fishing industry. This proposed project is seen as further evidence of Osaka's strong push to develop new seaboard industrial complexes and renew the area's economic strength by diversification. (United States Consulate, Kobe-Osaka, June 24, 1964.)

* * * * *

FROZEN FISH SALES PROMOTION PLANNED:

The Japan Frozen Fish Association, whose objective is to promote domestic sales of frozen fishery products, held its first inaugural meeting at Tokyo on June 1, 1964. The Association plans to employ the mass media for promotional purposes and seek to improve the quality of frozen fishery products. It also plans to establish 20 model frozen fish stores in Tokyo.

The Association members include the six largest fishing companies in Japan and the National Federation of Fishermen's Cooperative Associations (ZENGYOREN). The Japanese Government is subsidizing one-half of the Association's Fiscal Year 1964 (April 1964-March 1965) budget of 40 million yen (US$111,000). (Suisan Keizai Shimbun, June 2, 1964.)

* * * * *

FISH MEAL AND SOLUBLES USED IN MIXED FEED, 1958-1963:

Japan's use of protein concentrates (all sources) in the production of mixed feed for livestock has increased almost fivefold in the last six years. Fish meal accounted for 35 percent of the total protein concentrates used in mixed feed in 1958, but only 27.9 percent of the total in 1963. However, fish solubles were used as an ingredient in mixed feed for the first time in 1963 and accounted for 5.8 percent of the total (see table).

Japan's Consumption of Protein Concentrate in the Mixed Feed Industry

Commodity	Year					
	1963	1962	1961	1960	1959	19
	(1,000 Metric Tons)					
Fish meal and cake	286,4	225.7	213.3	149.4	101.3	7
Fish solubles	59.4	-	-	-	-	
Vegetable oil seed meals	680.1	526.5	435.9	292.0	187.2	13
Total	1,025.9	752.2	649.2	441.4	288.5	20

The increase in usage of protein concentrates reflects the sharp upward trend that has occurred in Japan's mixed feed industry as a result of increased demands by the fast growing livestock industry. (Foreign Agriculture, June 29, 1964, U. S. Department of Agriculture.)

* * * * *

ANTARCTIC WHALE CATCH AND PRODUCTS PRODUCED, 1963/64:

Japan's seven whaling fleets caught 4,5 blue-whale units during the 1963/64 Antarctic whaling season, reported the Japanese Fisheries Agency this past July. Japan thus attained its quota of 4,600 units of the 10,0 blue-whale units set by the International Whaling Commission.

The baleen whale catch yielded 12 per more oil than the target set. Other products exceeding the target were frozen whale meat (up 4 percent), salted meat (up 1 percent), sperm whale oil (up 19 percent). (Fisheries Attache, United States Embassy, Tokyo, July 15, 1964.)

pan (Contd.):

Japan's Antarctic Baleen Whale Catch, Products Produced, and Sperm Whale Oil Output, 1963/64 Season
(Figures in Parentheses Indicate Targets of Catch and Production)

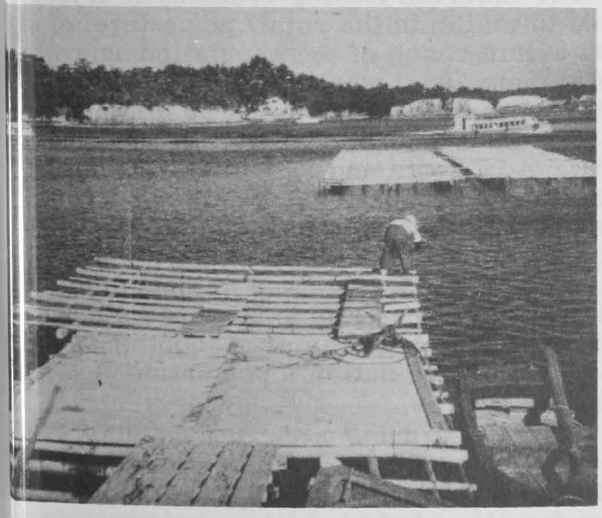
Fleet	Products Produced					Yield of Sperm Whale Oil
	Catch	Baleen Oil	Frozen Meat	Salted Meat	Meal	
	Blue-Whale Units	(Metric Tons)				Pounds
ian Maru	706.00 (706.10)	13,923 (12,708)	26,190 (21,180)	1,307 (1,151)	120 -	17,017 (14,786)
n Maru No. 2	715.33 (706.11)	15,218 (12,708)	25,709 (21,180)	1,270 (1,151)	120 -	15,957 (14,786)
in Maru	787.50 (761.66)	17,480 (14,471)	23,196 (21,438)	1,194 (1,164)	531 (410)	21,098 (16,790)
in Maru No. 2	746.66 (761.66)	15,250 (14,741)	21,525 (21,438)	1,178 (1,164)	1,625 (1,582)	21,281 (16,790)
in Maru No. 3	110.00 (111.15)	1,645 (2,111)	3,790 (3,128)	67 (52)	70 (64)	4,464 (2,449)
uyo Maru No. 2	848.18 (761.66)	18,210 (14,091)	23,584 (20,184)	668 (800)	1,343 (1,249)	33,510 (18,470)
uyo Maru No. 3	686.16 (761.66)	13,650 (14,091)	20,424 (20,184)	559 (692)	1,268 (1,249)	8,320 (18,470)
Total	4,599.83	95,376	144,418	6,243	5,077	121,647
Target	(4,600.00)	(84,921)	(138,734)	(6,174)	-	(102,541)

See Commercial Fisheries Review, May 1964 p. 62; Jan-y 1964 p. 60.

* * * * *

LTURED PEARL QUALITY IMPROVED USE OF ANTIBIOTIC:

Modern science has come to the aid of Ja-'s 500-year old cultured pearl industry, the result is healthier oysters and bigger better pearls. The key to increased pearl duction is a new technique using the anti-ic aureomycin chlortetracycline.



Pearl oyster rafts in Kaskiojima Ago Bay, Japan.

scientist on the staff of the Fisheries ol of Mie Prefecture in south central n, in an article in the Japanese publica-Fishery Science Monthly, described extending over 4 years in which the antibiotic boosted production of top-quality pearls by as much as 30 percent. These are the brilliant "hanadama" or "moon tear" pearls, perfect in shape and without a stain, and which over the past 70 years have been hardly 5 percent of the total yield, the scientist said.

The special aureomycin formulation, developed by an internationally known drug firm, also led to an important increase in total pearl yield, a decrease in the percentage of valueless blemished pearls, and lowered the "death rate" among weak pearl oysters.

In the new technique, both oysters and the instruments used to insert the nucleus are dipped in a solution composed of 10 parts aureomycin to one million parts of sea water. The mantle piece is dyed with 2 percent mercurochrome solution which has been diluted by sea water containing 20 parts per million of the antibiotic.

The Japanese scientist attributed the improved rate of pearl production and the higher quality of pearls harvested from treated oysters to the broad-spectrum action of aureomycin against bacteria. He decided that bacteria, which enter the oyster at the time of impregnation with the nucleus and mantle piece, adversely affect pearl formation. (Australian Fisheries Newsletter, March, 1964.)

日本

Republic of Korea

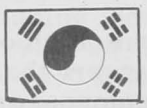
NEGOTIATIONS FOR ADDITIONAL TUNA VESSELS:

On May 28, 1964, the Economic Ministers of the Korean Government approved an arrangement for a newly established company in Seoul, Korea, to import ten 300-ton tuna fishing vessels from a Japanese firm. Since the Korean Government decided in February 1964 not to issue repayment guaranties for private commercial loans, Cabinet approval of the transaction will be required. The value of the contract was cited as US$2.7 million in principal; terms are repayment in 10 years (after a grace period of a year and a half); with interest of 6 percent per year.

On June 2, 1964, the Foreign Investment Promotion Committee of the Korean Government approved an arrangement whereby a shipbuilding firm in Pusan, Korea, is to obtain a loan of $380,000 from a Japanese firm which will be used for the construction of 10 vessels. Two of the vessels are to be freighters of 500 tons each, while 4 are to be 140-ton long-line tuna vessels, and 4 are to be 100-ton trawlers. The Japanese loan for the Pusan shipbuilding firm must be approved by the Economic Ministers as well as the Cabinet of the Korean Government. It is understood that the Korean shipbuilding firm plans to import some components from the Japanese firm and to construct the vessels in Pusan yards. Terms call for the Japanese firm to meet its obligation within seven months after final approval of the loan by the Korean Government. Payment is to be in annual installments in the 5 years following the approval of the imported materials.

By July 1964, the Korean shipbuilder in Pusan was scheduled to complete six 145-ton tuna vessels which the company has been constructing for a Korean company under a loan from a United States tuna canning company.

The current reluctance of the Korean Government to guarantee repayment may prevent conclusion of the tentative agreements described above. The proposed new vessels would be a significant addition to the 40 vessels (totaling 5,855 tons) which private Korean companies have undertaken to procure and for which the Korean Government has guaranteed loans in the past year. Also, initial deliveries are due early in 1965 of the 91 vessels covered under the first phase of the contract with the Italian-French Consortium. (United States Embassy, Seoul, June 16, 1964.)



Liberia

FISHING INDUSTRY UNDERGOING MODERN EXPANSION:

The Liberian commercial fishing industry has experienced a spectacular development since mid-1963, the impact of which is being felt throughout the country. Liberia's largest fishing company recognized the need for increased quantities of low-priced fishery products, as well as the need for modern distribution methods in order to reach the country's inland areas. That fishing company and its affiliates is made up of Liberian interests, some members of the Liberian Government, and Danish interests. Affiliated companies in other countries include firms in Sierra Leone and Nigeria. To achieve its goals, the Liberian fishing company has taken the following major steps:

1. Contracted with about 11 foreign-flag offshore trawlers (mostly Japanese) to deliver fish that is frozen at sea to Monrovia. The frozen fish will be in boxes of 20 kilograms (44 pounds) each. Species will includ mackerel, red snapper, black snapper, herting (sardinella), and sole. Monthly landings in May 1964 reached an average of close to 700 metric tons. The landings are expected to reach 1,000 tons by the end of 1964.

2. Invested in a fleet of insulated and, in some cases, refrigerated trucks for delive of frozen fishery products in good condition to inland areas.

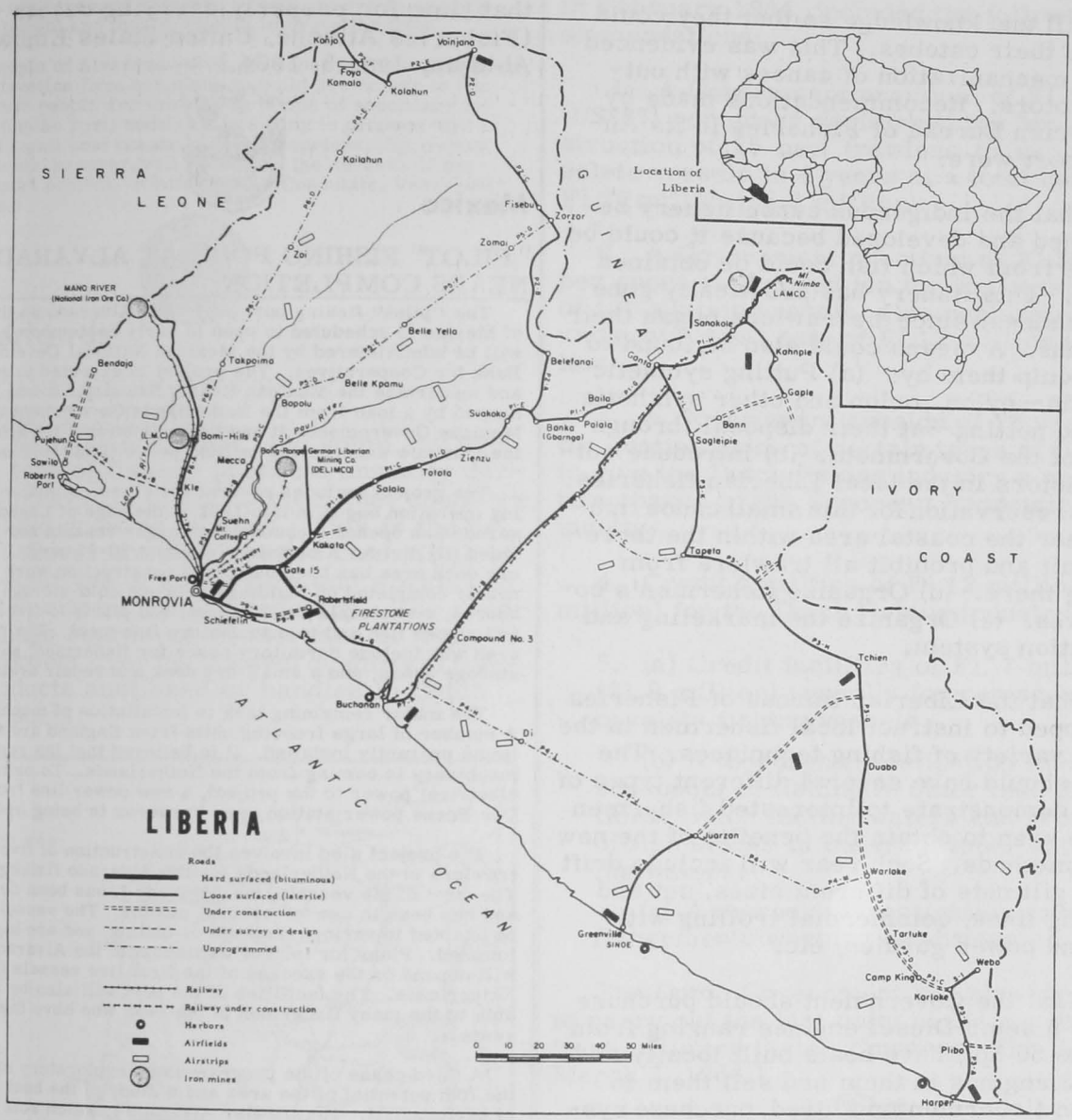
3. Built a new and modern freezing, cold storage and ice plant at Monrovia capable o storing up to 1,500 tons of frozen fishery pr ucts, freezing up to 100 tons of fish a day a producing 30 tons of block ice a day. The c storage plant was to be expanded to a capac of 4,000 tons.

4. Built 6 inland cold-storage depots (a seventh is planned) at strategic locations throughout Liberia, with storage capacities from 20 to 120 tons each (mostly 20 to 25 t Those are located at the population centers cover all of the interior of Liberia with the ception of parts of the Eastern Province, w are inaccessible until the road construction project being planned is completed.

The Liberian fishing company is trying hard to maintain the retail price level of its fish within reach of the population as a whol As of June 1964, wholesale prices ranged f US$4.50 to $7.00 a carton of 20 kilos (10 t U.S. cents a pound), with average retail pri between 15 cents and 20 cents. The demand for fishery products has been very strong, the quantity distributed inland from the co storage depots was climbing steadily. Som 50 percent of the total was being distribute inland and the remaining 50 percent was co sumed in the Monrovia area (containing ab one-third of the nation's population of abou million).

Fishery landings of 700 tons in May, or 8,400 tons a year, compares with only 795 tons for all of 1963, which was a poor year and about 1,700 tons for each of 1962 and 1961. One of the reasons for the low 1963 landings was that all of the fishing vessels Liberia's foremost fishing company, which landed the bulk of the local catches, were transferred to Sierre Leone for repairs an servicing. Another reason was that the Li

ria (Contd.):



fisheries were undergoing a transition at the formerly higher landings suddenpped due to a number of factors inher- a transition period.

of mid-1964, three smaller inshore ers were operating in nearby waters nding their catches fresh. Those landnd those from the local canoe fisheries arketed almost entirely in the Monrorea.

other aspect of the Liberian fisheries was about ready to start was the landing ransshipment of tuna at the new freezerge plant in Monrovia. In cooperation with a United States tuna packer, the freezer plant will handle frozen tuna landed by vessels of the Republic of China (Nationalist Chinese) and Spain which are under contract to the United States tuna packer. The first of such landings were to start early in June. While most of the tuna will be frozen at sea, provision has been made to brine-freeze up to 100 tons a day in the plant to handle tuna that may be landed iced but not frozen. It was expected that most of the tuna landed there would be by bait boats.

In its Annual Report for 1963, the Liberian Bureau of Fisheries stated that there is an intense desire by local fishermen to increase

Liberia (Contd.):

their skill and knowledge so that they could increase their catches. This was evidenced in their mechanization of canoes with outboard motors. Recommendations made by the Liberian Bureau of Fisheries in its Annual Report were:

1. That the indigenous canoe fishery be maintained and developed because it could be a source from which fish could be obtained cheaper. This fishery has practically gone out of business since the trawlers began their operations. A means could also be found to better equip them by: (a) Putting synthetic materials--nylon, orlon and other synthetic lines and netting--at their disposal through the aid of the Government. (b) Introduce outboard motors in the local Liberian fisheries. (c) Set a reservation for this small canoe fisheries near the coastal area within the three-mile limit and prohibit all trawlers from trawling there. (d) Organize fishermen's cooperatives. (e) Organize the marketing and distribution system.

2. That the Liberian Bureau of Fisheries be equipped to instruct local fishermen in the greater variety of fishing techniques. The Bureau should have several different types of gear to demonstrate to interested fishermen who are keen to obtain the benefits of the new fishing methods. Such gear will include drift and set gill nets of different sizes, set and drift long lines, commercial trolling with poles and power gurdies, etc.

3. That the Government should purchase at least 6 semi-Diesel engines ranging from 25 hp. to 50 hp., have boats built locally and install 3 engines in them and sell them to Liberian fishermen on a hired, purchase system basis.

4. That local fishing boat-building projects be encouraged in Liberia. To effect this important project a foreign ship builder should be employed by the Government either in the Bureau of Fisheries or elsewhere to teach Liberians how to build seaworthy fishing boats. Also to obtain scholarships for Liberians to study in Europe or in some foreign parts.

It should be noted that the Liberian Government has been operating on an "austerity" basis because of limited funds. Government finances are expected to be much improved in about two years and the Liberian Bureau of Fisheries will receive additional funds at that time for properly carrying out its work. (Fisheries Attache, United States Embassy, Abidjan, June 5, 1964.)

Mexico

"PILOT" FISHING PORT AT ALVARADO NEARS COMPLETION:

The "pilot" fishing port project at Alvarado on the Gu of Mexico is scheduled to open in early September 1964. will be administered by the Mexican National Developmer Bank for Cooperatives. The project is expected to expan and modernize the Mexican fishing industry. It was financed by a loan from the Netherlands Government to the Mexican Government. It has been stated that the amount the loan now exceeds 100 million pesos (US$8 million).

The project includes several activities. A major dredg ing operation begun in late 1962 at the edge of Laguna Alvarado has opened a channel for larger vessels and provided fill dirt for a port area of about 20-25 acres. A mo ern dock area has been built, and construction work is nearly completed on buildings to house cold-storage wa re houses, a wholesale market area, and plants to freeze, ca and smoke fish and to manufacture fish meal. The port area will include dormitory space for fishermen, supply storage areas, and a small dry dock and repair area.

The major remaining task is installation of machinery A number of large freezing units from England are the on items presently installed. It is believed that the remainin machinery is coming from the Netherlands. To bring add electrical power to the project, a new power line from th Dos Bocas power station near Veracruz is being installed

The project also involves the construction of five mod trawlers in the Netherlands for the Alvarado fishing fleet The first of the vessels, the Alvarado I, has been deliver and has been in use for several months. The vessels can be adapted to various methods of fishing, and are highly a tomated. Plans for further expansion of the Alvarado fle will depend on the success of the first five vessels from Netherlands. The facilities of the port will also be avail able to the many fishermen in the area who have their o vessels.

A third phase of the program is an exploratory surve the fish potential of the area and a study of the best mea of exploiting it. The trawler Alvarado I, which acts as training vessel for local fishermen, has been making a s vey of the fish stocks in various areas of the Gulf of Me and has experimented with various fishing methods. Th ploratory program has succeeded in locating commerci quantities of fish, including tuna, which were not previou sold on the local market. Various techniques of fishing which are useful elsewhere have been tried and modifica tions have been adopted. Exploratory work will continu for some time after the new port is opened.

Relatively few new permanent jobs will be created di rectly by the port project, as the new trawlers will have crews of only six, and the port will be highly automated. is claimed, however, that the indirect effects will be of c siderable importance. Fishermen in the area were form dependent on the demands of the immediate market for a limited variety of fresh fish. They now will have a mea of disposing of their catch even during periods of reduce demand. Many fish caught but not previously used, such sardines, can now be canned and marketed. Thus, even no change in fishing techniques, the individual fisherman can improve his earnings. Proponents of the project cla

ico (Contd.):

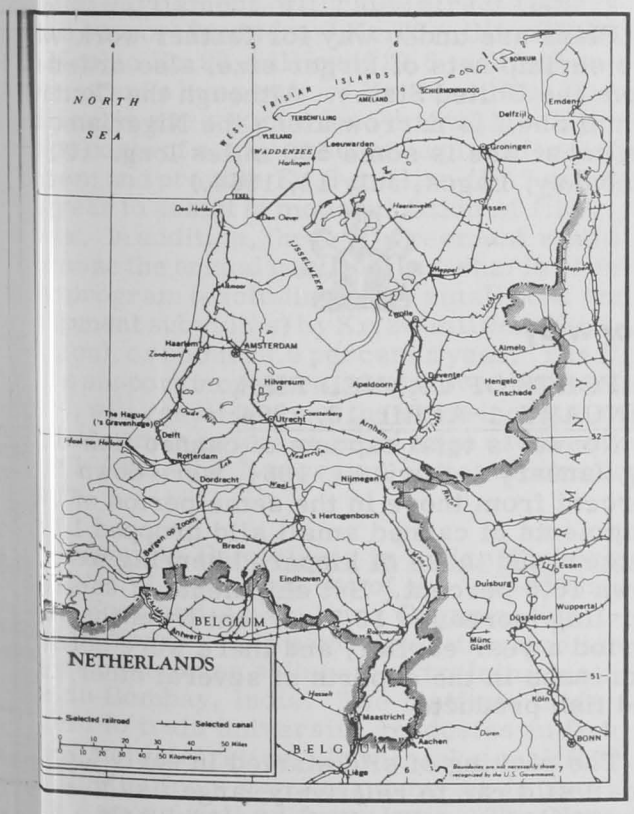
uch improvement will lead vessel owners to upgrade equipment and thus gradually improve the fleet.

e people of Alvarado have high hopes for the project. onstruction firm has plans to build 200 homes in the Other people are thinking in terms of secondary in- s for the port, such as a company to produce tin and small boat construction enterprises. Secondary pments, however, will depend on the success of the y port project. (United States Consulate, Veracruz, 964.)

herlands

RGANIZATION OF FISHING STRY PROPOSED:

he Netherlands must land some 250,000 ic tons of fishery products annually dur- 968-1970, in order to meet that country's cipated growing demand. This is the be- of a Government-appointed committee of resentatives of employers and workers in Dutch marine fishing industry. The need- andings represent an increase of from 20 5 percent over the present quantity of fish- products auctioned or handled in Dutch ing ports.



he committee was set up in 1959 to study report on the Dutch fishing industry. The committee's report, submitted to the Netherlands Minister of Agriculture and Fisheries in February 1964, included the following recommendations:

1. A Government premium of Fl.350 (US$97) per gross registered ton for the construction of 25 new trawlers to replace obsolete vessels in 4 years at a total cost of Fl.20 million ($5.5 million).

2. A Government premium of Fl.500 ($139) per gross registered ton for the construction of 100 shrimp vessels, also replacing obsolete units, at a total cost of Fl.12 million ($3.3 million).

3. A Government subsidy of 10 percent of the auction price of certain types of fish so as to give the Dutch fishing industry a competitive chance in the European Economic Community.

4. Credit facilities of Fl.12 million ($3.3 million) for the Dutch fishing industry.

5. (a) Credit facilities of Fl. 7 million ($1.9 million) annually for replacement of obsolete fishing vessels.

(b) A thorough investigation into the prospects of fishing in other than the traditional Dutch fishing waters and protection of fish stocks in the traditional Dutch fishing waters.

(c) A thorough investigation into Dutch fishermen's working conditions.

The Dutch Government has already decided to carry out the last point of the recommendations. (United States Embassy, The Hague, March 7, 1964.)

New Zealand

LOCAL SPERM WHALING PROMISING IN EARLY 1964:

Sperm whaling in New Zealand appeared promising, announced New Zealand's Marine Minister early this year. Since an experimental season under special license began in mid-January, a firm of the Whekenur whaling station in Queen Charlotte Sound, had taken 45 sperm whales in the first few months of 1964. The whale catch had totaled 168 since the taking of sperm whales started in May 1963.

New Zealand (Contd.):

"The development of this industry and the investigations to determine the most appropriate time for an open season, are cooperative ventures by the Marine Department and the private fishing firm. The Navy and Air departments and the Royal New Zealand Air Force have helped by providing sperm whale spotting services," the Minister said.

The development of the sperm whaling industry had been forced on New Zealand because of the collapse of the humpback whale population as a result of excessive whaling in the Antarctic regions.

In 1963, the International Whaling Commission to which New Zealand belonged, prohibited the taking of humpback in the Southern Hemisphere. The New Zealand Government proposed to amend current legislation to provide for this prohibition. The only other known whaling stock around the New Zealand coast was a relatively small population of bryde or sei whales off the Hauraki Gulf. The prospects of further expansion beyond the area of exploitation could be based only on sperm whales of a different population to that being caught--from another land station. (The Fishing News, March 26, 1964.)

Nigeria

SHRIMP RESOURCES PROMISING:

Shrimp landings from Nigerian waters during June 1964 have indicated that the coastal waters of Nigeria may contain substantial shrimp resources which could be profitably exploited by experienced shrimp fishermen using efficient gear and vessels. The presence of commercial quantities of shrimp in those waters had not previously been demonstrated.

A fishing cooperative in Lagos, assisted by a fisheries adviser of the U. S. Agency for International Development (USAID), tried an American-built shrimp net for the first time in waters 12 to 20 miles south to southeast of Lagos harbor. The vessel used was an 80-foot trawler (180 hp.) towing a 60-foot Biloxi semi-balloon shrimp net. A Food and Agriculture Organization (FAO) gear specialist was aboard the vessel. The first trip in 3 days of fishing netted about 1,000 pounds of shrimp (probably white Penaeus setiferus) averaging 21-25 count (heads-off). A "tickler chain" was added and production increased to 2,000 pounds in 3 days, representing about 1 two-hour tows. It is probable that a more experienced crew, and a vessel using two nets, could increase this catch substantially. The depth of water in the area covered was 14 to 16 fathoms. Fishing was conducted both day and night, with catches by day somewhat better than those at night. Substantial quantities of mixed fish (including sole, croaker, and sardinella) were caught along with the shrimp. More than 75 percent of the shrimp caught have been 21-25 count (heads-off), with smaller quantities of 16-20 and 26-30 count.

The cooperative is marketing the shrimp in the Lagos and the western Nigeria area through Nigerian market traders, major food distributing companies, and its own refrigerated trucks. Small quantities are deheaded, deveined, and packaged in one-pound packages for the department store trade. Samples have been flown to Barcelona, Spain, and successfully marketed there. In the Lagos market, the cooperative's current selling price is about 7 shillings (98 U.S. cents) a pound for the peeled and deveined product.

Plans are under way for further work with two shrimp nets of larger size, also ordered from the United States. Although the Continental Shelf is narrow along the Nigerian coast the coast line is some 500 miles long. (U. S. Embassy, Lagos, July 11, 1964.)

Norway

EXPORTS OF CANNED FISH, JANUARY 1-APRIL 13, 1964:

Norway's total exports of canned fish during January 1-April 11, 1964, were down 5.8 percent from those in the same period of 19 Shipments of canned small sild dropped 17.7 percent and those of kippered herring were down 16.6 percent. But shipments of canned brisling increased 10.7 percent from the same period a year earlier, and there were some increases in the exports of several other canned fish products.

The packing of sild started in early May. Small sild ran to relatively large fish this year and were suitable for packing only as sild-sardine. Packing of brisling started on

rway (Contd.):

Norwegian Exports of Canned Fish		
duct	1/1/1-4/11 1964	1/1-4/13 1963
	(Metric Tons)	
ing	1,757	1,587
sild, smoked	3,530	4,287
red herring	822	986
erring roe	332	104
elicatessen	131	121
nner foods	180	210
sh	503	408
otal	7,255	7,703

liminary.

1. Norwegian canners and brisling fishmen had reached an agreement on the brisg price for the 1964 season. (Norwegian ners Export Journal, May 1964.)

* * * * *

SHERIES TRENDS, MAY 1964:

Fisheries Price Supports: Negotiators for Norwegian Government and representaes of the Norwegian Fishermen's Associain have agreed on increased Government supts for the fishing industry during the next two rs. The agreement, if approved by the Norgian Parliament, will raise direct fishery e support funds from Kr.85 million (US$11.9 lion) to Kr.90 million ($12.6 million) per r; grant a lump sum of Kr.10 million ($1.4 lion) to a new social fund that will partly covne costs of social insurance plans for fishmen; and provide Kr.5 million ($0.7 million) year to assist in modernization of fishing ts. In addition, the new agreement would ease the annual costs of the fisheries subprogram (excluding some small boat and pment subsidies) by Kr.20 million ($2.8 lion), or about 23.5 percent a year. The fishes support increases, if approved by Parliant, will result in about the same income gain fishermen as was granted wage earners in 1964 by the Norwegian State Arbitration rd.

Norway to Participate in Indian Fisheries itute: On the request of the United Nass Food and Agriculture Organization O), Norway will participate in establishand operating a fisheries training instie in Bombay, India. The Institute is deed to train university graduates in fishes administration. It will take qualified didates from various countries in South Asia as well as from India. The Norgian Agency for International Development concluded a contract to take over FAO's responsibilities in the project. Norway will provide an advisor to the Indian-appointed director of the Institute, a professor in fishery technology, and a professor in fishery economy. Norway will also supply a 40-foot fishing vessel, fully equipped, as well as scientific and other equipment for laboratories, workshops, and a library. Norway's contribution will be supplemented by financing from the Indian Government and the United Nations Special Fund. (United States Embassy, Oslo, June 9, 1964.)

* * * * *

STERN TRAWLER DESIGN PRODUCED BY COMPUTER:

By feeding a computer with relevant facts about fishing vessel operation, a stern trawler design was produced. According to the facts revealed by the computer, 14 vessels built according to the design would be able to outfish 18 trawlers and 10 or 12 long-liners.

This was the conclusion reached by a Norwegian firm which was asked in August 1964 by a Hammerfest, Norway, fish-freezing firm to design a trawler to suit the freezing company's requirements.

The design consultants fed an electronic data handling machine with a series of facts, including catch results, weather conditions, the occurrences of fish on the grounds and during which seasons, and comparative figures on processing on shore and at sea. With this, and other information, it was able to deduce from the machine the average value per pound of catch landed over a year of 330 working days. Three designs (for a 300-, 400-, and 500-gross-ton vessel) were produced, and the machine calculated that the 400-ton vessel would produce fish slightly cheaper than the 500-ton one. However, it was decided that the 500-ton vessel would prove most suitable as it would produce more fish in the slack season and would land the greatest total during the year.

A director of the firm of consultants said that 14 of the 500-ton stern trawlers would supply the fish-freezing firm's present demands. At present that firm uses 18 trawlers and 10 or 12 long-liners to achieve the results forecast for the 14 stern trawlers.

Other facts produced by the computer included the speed of the vessel--12 knots; a 24-hour tie-up between trips; and a cargo capacity of 116 tons of boxed fish.

Norway (Contd.):

The computer also produced statistics which indicated the best grounds on which the vessels should work at given times of the year. They will operate most profitably if they work off Western Finnmark in January and February, off Eastern Finnmark in March, at Bear Island during the following 4 or 5 months, and in Spitzbergen waters during the remaining part of the year. The daily income of each vessel was electronically calculated at 1,814.11 kroner (about US$254) for fish and 500 kroner ($70) for meal and oil.

The machine's findings were checked with available statistics which had been obtained in practice and were found to be accurate. (World Fishing, April 1964.)

* * * * *

FISHING FOR DOGFISH AND BASKING SHARK OFF GREAT BRITAIN TO BE CONTINUED:

Norwegian fishermen will be permitted to continue fishing for traditional dogfish (Acantis vulgaris) and basking shark (Cethorinus maximus) in certain defined area between 6 and 12 miles off the coast of Scotland until January 1, 1965. This will be in accordance with a proposal signed by the Norwegian and British delegations in the recent negotiations in London concerning the Norwegian fishery within the new 12-mile fishery boundary of Great Britain. The proposal will have to be approved by the two governments before coming into effect.

Until January 1, 1985, the Norwegian dogfish fishery may take place in the areas between 6 and 12 miles off the coasts of the Flannan Islands, the Shetland Islands, the Fair Isle, the St. Kilda Group, North Rona, Sulisker, Sule Skerry, and Stack Skerry. The basking shark fishery may be carried on in the same areas and, in addition, in the area between Runair in the Hebrides and Mull of Oa on the Islay Island.

Norwegian fishermen will further be permitted to carry on their dogfish and basking shark fisheries between 3 and 6 miles off the coasts of the defined islands until January 1, 1966.

At the London negotiations the delegations further agreed to include a most-favored-nation clause in the treaty securing Norway the same rights to fish for dogfish and basking shark in the defined areas as might be extended to third countries.

Jurisdiction over the fisheries in the period of transition will be based on the North Sea Convention of 1882 or on possible other international agreements signed by Norway and Great Britain during the period. As far as fish conservation measures are concerned, Great Britain cannot impose any regulations limiting the Norwegian rights in the period covered by the agreement without the consent of the Norwegian Government.

Judged by the reaction voiced through the press, it was considered that the Norwegian delegation obtained satisfactory results for the fishing interests of its country. Norwegian fishing off the coast of Great Britain has traditionally largely been limited to dogfish and basking shark in the areas covered by the agreement. To compensate for the rights granted to Great Britain for fishing in the areas between 6 and 12 miles off the entire coast of Norway for 10 years, the corresponding Norwegian rights in the waters of Great Britain have been extended to 20 years. (United States Embassy, Oslo, July 19, 1964.)

* * * * *

SEALING EXPEDITION TO THE ANTARCTIC:

A sealing expedition to the Antarctic left Bergen, Norway, July 18, 1964. The main purpose of the expedition, the first Norway has sent to the Antarctic in this century, is to survey the possibility of large-scale sealing in those waters. The expedition which is sponsored by a Bergen manufacturing and trading firm, consists of the sealing vessel Polarhav and one helicopter. Studies of the Antarctic seal herds will be conducted by a scientist from the Norwegian Ocean Research Institute in Bergen.

The search for new hunting grounds for Norwegian sealing is a reflection of the diminishing stocks of seals in traditional hunting areas in the Northern Hemisphere, according to the Norwegian firm sponsoring the expedition. (United States Embassy, Oslo, July 21, 1964.)

Panama

SHRIMP FISHERY TRENDS, 1963:

Panama's shrimp production in 1963 fell almost one million pounds short of the record 1962 mark, despite the fact that there was a greater number of vessels operating. The Fisheries Office reports a total catch of 12,309,714 pounds, compared with 13,284,031 pounds in 1962. The 1963 production compares more favorably with production prior to 1962, and actually exceeding the previous peak year of 1961 by almost 200,000 pounds.

Table 1 - Panama's Shrimp Production (Heads-off with shell), 1961-1963

Species	1963	1962	1961
	. . .	(1,000 Lbs.)	. . .
White	3,463	4,558	4,625
Pink	2,901	3,402	2,586
Titi	5,287	4,814	4,444
Tiger	659	510	461
Total	12,310	13,284	12,116

Production of the small titi and tiger shrimp rose during 1963 by 473,209 pounds and 148,737 pounds, respectively. Those gains were more than offset by a drop of 500,966 pounds in the pink shrimp catch and a more serious decrease of 1,095,297 pounds in the catch of the premium-priced white shrimp. Industry sources believe that the normal rise and ebb of the shrimp supply can account for some of the decline in production, but also contend that there have been too many vessels operating in recent years, which has resulted in overfishing.

Panama (Contd.)

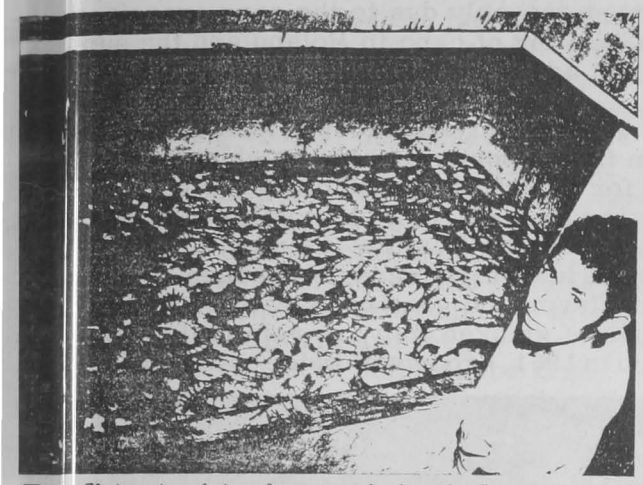


Fig. 1 - Shrimp in a brine-freezer tank aboard a Panamanian shrimp trawler.

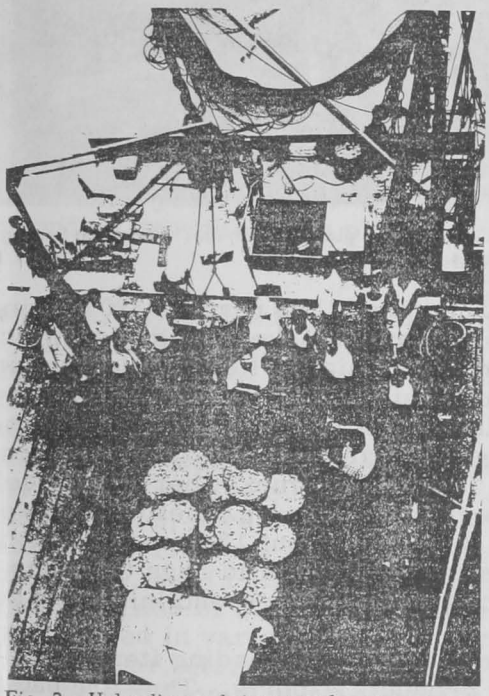


Fig. 2 - Unloading a shrimp trawler at a pier in Panama City.

ite the existence of legislation restricting the number np vessels to 160, there were as many as 210 vessels g in 1963. The source of illegal licensing has appar- en uncovered, however, and the Fisheries Office has nat the practice has stopped.

shrimp industry, although set back by a combination r production and falling prices in 1963, remains fi- ly strong, and the outlook for 1964 is optimistic. Mod- ion of vessels and equipment is continuing. Produc- the early months of 1964 was reported ahead of 1963.

n the past, the entire shrimp catch, with the exception r local sales, was exported to the United States. A ation of lower prices and the considerable decline in mium-priced white shrimp catch resulted in the f.o.b. f Panama's 1963 shrimp exports tumbling more than 23 percent from the record mark of 1962. Total f.o.b. value for 1963 exports was US$6.08 million as compared to $7.94 million for 1962 exports.

Table 2 - Value (f.o.b.) of Panama's Shrimp Exports, 1958-1963	
	Million US$
1963	6.08
1962	7.94
1961	5.85
1960	4.99
1959	5.10
1958	5.61

The bulk of Panama's shrimp catch is transported by sea. Processing is limited to peeling, removing the sand vein, and then packing for shipment. The more than adequate sea transportation facilities are a positive factor for Panama's shrimp industry. One firm, located in Chiriqui Province near the Costa Rican border, does fly its production to Miami. (United States Embassy, Panama, June 2, 1964.)

* * * * *

SPINY LOBSTER AND SCALLOP FISHERIES:

A small number of spiny lobsters are taken in Panama each year in the Bocas del Toro area on the Atlantic Coast, but no expansion of that operation is contemplated. Optimism for a much larger spiny lobster industry and for the development of a scallop industry, that blossomed for a time in 1963, seems to have disappeared completely.

The Bocas del Toro spiny lobster production in 1963 amounted to about 75,000 pounds, according to an unofficial estimate from the Fisheries Office. Some of that production was flown in small shipments to the United States, with the balance marketed in Panama.

Beginning in June of 1962, an exploratory program was undertaken, with USAID financing, to determine the potential for commercial exploitation of spiny lobsters in Panama's coastal waters. The program was extended in June 1963, but finally cancelled in December 1963. In the opinion of USAID, there was not sufficient interest shown by the Panamanian fish industry to justify further research.

The survey did produce a few promising signs. A few individuals have since made some limited, but as yet unsuccessful, attempts to further explore the commercial possibilities of spiny lobster fishing in the Gulf of Panama. It is the contention of at least one authoritative source in the industry, however, that, while there might be some possibilities for successful exploitation on a very small scale, there was nothing in the survey's findings to justify any hopes for a large-scale operation.

One unexpected development of the spiny lobster survey was the discovery, in September 1963, of large beds of scallops in the Gulf of Panama. One of Panama's largest shrimp firms attempted to capitalize on that finding and met with some initial success, harvesting 50,000 pounds in the period of a few months. Sharply dropping prices rendered further efforts unprofitable, however, and no further attempts have been made to exploit that fishery. The scallops taken were small by comparison with United States scallops. From an original price of 65 cents a pound, f.o.b. Panama, the price dropped in a few months to a point where the wholesale price in New York was 52 cents a pound. Attempts to open European markets were unsuccessful. In the opinion of the firm's manager, there is no doubt that the beds discovered are extremely extensive; but, based on the firm's experience, he does not believe that commercial exploitation is feasible, at least not if shrimp vessels with their expensive overhead are used to harvest the scallops. (United States Embassy, Panama, June 2, 1964.)

Poland

FISHERY TRENDS IN 1964:

"Gryf" Deep-Sea Fishery of Szczecin started operating its first "B-23"-type freezer stern-trawler, the Barwena, at the beginning of April.

By the end of April 1964, the sprat fishing season in the Baltic had commenced. This year's season (different from former seasons) saw dense sprat shoals in the open waters of the South Baltic, and none in the Bay of Gdansk.

In the years 1966-1970, fisheries will receive from Gdansk Shipyard more vessels than it was assumed. One enterprise will receive 19 factory-trawlers of the "B-15"-type as against the planned 15 units.

In the years 1966-1970, the funds to be spent for the extension of cold-storage plants, ports, fish meal factories, ice factories, etc. will total 1,148 million zloty, whereas only about 600 million zloty were allotted for this purpose in the years 1961-1965. (Polish Maritime News, June 1964.)

* * * * *

FISHERIES TRENDS AND EXPORTS IN 1963:

Poland's fishing industry and processing of fishery products were expanded in 1963 as a result of new investments which boosted that country's fishery economy. Poland, formerly an importer of fishery products, has become an exporting country. One large Polish import-export firm traded with a growing number of foreign countries in 1963, and has been increasing both its foreign trade and variety of fishery products for export.

In 1963, Poland exported 1,700 metric tons of fresh, frozen, or live fish, 390 tons of smoked fish, 3,500 tons of canned fish, and a smaller quantity of salted fish.

Exports of fresh-water fish, most of which are live, wet, or frozen, consisted mainly of eels, carp, perch, and pike. Eels from Poland have become especially popular in foreign markets. Poland's eel production has increased considerably because of its stocking program in reservoirs. In 1963, a total of more than 600 tons was exported.

Despite the abundance of carp found in most European markets, the foreign demand for Polish carp is very good because of its high qua ty and the fine texture of the meat. This is ported probably due to the care exercised in the rearing of carp in Poland and the supplements added to their natural food.

The leading and most valuable item in fr zen fish exports is salmon, which is sold ei er for direct consumption or for further pr essing (smoking). Polish salmon, in partic the so-called "Vistula" salmon, are highly garded in foreign markets because of its exc lent flavor and good preparation. Poland's ports of smoked fish are relatively new. In ated in 1961, exports of twice cold-smoked he

A Polish fish-canning plant in Gdynia. Preparing herring for hot smoking.

ring and herring fillets reached 390 tons in 19 The production of smoked fish by fish-proces ing plants in Gdynia and Koszalin is done with modern techniques consisting of a tunnel syst for drying soaked salted herring and for their smoking afterwards in large chambers or to ovens. Twice cold-smoked herring are deliv ed to receivers in wooden cases (contents of e being 6.8 kilos or about 15 pounds). Herring lets are packed in plastic bags (contents 14 grams or about 5 ounces) containing 30 bags e

Canned fish is the leading item in Pola fishery products exports. They are packe special state-owned and cooperative factor located at the sea fisheries ports of Gdynia Gdansk Leba, Ustka, Szczecin, Swinoujscie and other ports, as well as in the lakes re gions or in pond fish-breeding centers such Gizycko, Chojnice and Krakow. In 1963, te nical-organizational improvements were m in several canning factories with a view to creasing the quantity and enlarging the var of species packed, as well as to attaining u form standards of high quality.

Special stress has been laid on the prob of mechanizing production, modernizing the

nd (Contd.):

hines, and introducing the latest methods roduction technology. As a result of pro- ng the factories with such up-to-date ar- gements as tunnels for continuous mechan- evaporating of fish, heaters, sauce ho- enizers, colloidal sauce and pie mills, hanical sprat sorters and automatic sprat threading machines (for smoking), it was ble to arrange special production lines ose canning factories. This resulted in er production capacities and the attain- of a more uniform and larger variety of ed fishery products suitable for trans- ing and storing even under tropical con- ns.

oland's most outstanding modernizing was completed in 1963 at a fish process- plant in Gdansk. As a result, the produc- of canned fish there rose by nearly 100 ent, up to 3,000 tons a year. Moderniza- was also initiated in Poland's largest -processing factory at Gdynia. After its pletion, that factory's output is expected crease by nearly 70 percent to 5,000 tons anned fish a year. There will also be a esponding growth in that plant's produc- for export.

wide variety of fishery products offered supplied by Polish fish canneries to nearly ountries throughout the world include products as sprats in oil, brisling in oil, sardines, fish-liver paste, herring in oil, liver (in own sauce), mackerel in toma- , herring in tomatoes, flounder in toma- , stuffed carp, sprats in spicy oil, bream matoes, herring and mackerel fillets in ous sauces, eel in oil, and various other ry specialties of the hors d'oeuvre type. are packed in various size cans (round, , rectangular, etc.) with net weight of the nts ranging from about 3 ounces to near- pound.

olish fish-processing plants adjust their uction to the actual requirements of their omers and try to fill their export orders act specifications.

n 1963, Poland started selling and deliv- g fish to West African ports by vessels rating in central Atlantic fishing grounds. ish fishing units operating in that region d a good market potential in Nigeria and na. In 1963, the Polish Board of Fishing stry delivered several thousand tons of fish, both frozen and wet, to markets in West Africa. Species included red snapper, horse mackerel, and mackerel. The demand for fish in West African countries is considered very good and the Polish fishing industry believes it is possible to increase such exports considerably.

The Polish fishing economy in 1963, with respect to production and exports was considered, on the whole, as prosperous and profitable. The Polish fishing industry was believed to have made good progress during 1963 in meeting its long-range goal of placing Poland among the leading European producers of fishery products. In addition to increased fishery landings and greater output of processed fishery products in 1963, progress was seen in the improved quality of products offered for export. (Polish Maritime News, June 7-12, 1964.)

Note: See Commercial Fisheries Review, June 1964 p. 55, March 1964 p. 66, February 1963 p. 86.

* * * * *

FISH MEAL PRODUCTION, 1963:

Polish factory-trawlers in 1963 produced 2,257 tons of fish meal, while factories ashore manufactured 4,720 tons of fish meal and 2,851 tons of fish "pulp."

According to this year's target, factory-trawlers are to produce 3,930 tons of fish meal, factories ashore to manufacture 3,770 tons of fish meal and 3,020 tons of fish "pulp." (Polish Maritime News, June 1964.)

Portugal

CANNED FISH EXPORTS, JANUARY-MARCH 1964:

Portugal's total exports of canned fish in oil or sauce during the first quarter of 1964 were at the same quantity level as in the same period of 1963. Sardines accounted for 81 percent of the total canned fish exports in the first quarter of 1964, followed by anchovy fillets with 7 percent, mackerel 5 percent, and chinchards 4 percent.

The canned sardine exports in January-March 1964 were up 3 percent from the same quarter in 1963 and exports of chinchards were double those of a year earlier. Exports of canned mackerel for the period were 36 percent

Portugal (Contd.):

lower than in 1963 and those for anchovy fillets dropped 24 percent from the same period a year earlier.

Portuguese Canned Fish Exports, January-March 1963-64

Product	January-March			
	1964		1963	
	Metric Tons	1,000 Cases	Metric Tons	1,000 Cases
In Oil or Sauce:				
Sardines	14,055	739	13,607	716
Chinchards	674	35	331	17
Mackerel	878	34	1,361	54
Tuna and tuna-like	360	11	457	15
Anchovy fillets	1,138	114	1,506	151
Others	245	12	70	4
Total	17,350	945	17,332	957

Portugal's principal canned fish buyers during the first quarter of 1964 were Germany with 3,238 metric tons, followed by the United Kingdom with 2,333 tons, France 2,316 tons, the United States 1,788 tons, Italy 1,497 tons, and Belgium-Luxembourg 1,280 tons. Germany's 1964 purchases of canned fish from Portugal increased 25 percent from those in the same period of 1963, the United Kingdom up 21 percent, and France up 40 percent. Purchases by the United States and Italy were down 19 and 42 percent, respectively, from the same period in 1963. (Conservas de Peixe, May 1964.)

* * * * *

CANNED FISH PACK, JANUARY-MARCH 1964:

Portugal's total pack of canned fish in oil or sauce for the first quarter of 1964 was up 123 percent as compared with the same period in 1963. The substantially increased pack over the same quarter in 1963 was mostly due to the large pack of sardines which accounted for 56 percent of the total January-March 1964 canned fish pack. The canned tuna pack was nearly five times greater than in the same period a year earlier, and the chinchar pack was up sharply from the same period in 1963. (Conservas de Peixe, May 1964.)

Portuguese Canned Fish Pack, January-March 1963-64

Product	January-March			
	1964		1963	
	Metric Tons	1,000 Cases	Metric Tons	1,000 Cases
In Oil or Sauce:				
Sardines	3,358	177	1,177	62
Chinchards	225	11	9	-
Mackerel	198	8	32	1
Tuna and tuna-like	998	33	178	6
Anchovy fillets	1,008	101	1,289	128
Others	218	11	13	-
Total	6,005	341	2,698	197

South Africa Republic

EXPLORATORY FISHING FOR SHRIMP OFF WEST COAST:

Since December 1963, the Fisheries Development Corporation of South Africa, in co operation with the trawling industry, has ca ried out experimental fishing for shrimp off the Cape west coast and on the Agulhas Ban The vessel used is the 67-foot stern trawler Keurbooms, owned by a South African fisher firm.

A 75-foot shrimp trawl was imported specially for this operation; a 100-foot trawl wa ordered; and a 15-foot reversible beam traw has also been tested.

Early results indicate that night fishing h produced the best catches of shrimp. Three species have been taken in the nets, and whi initial catches have been small, the results are reported to be encouraging. (The South African Shipping News and Fishing Industry Review, May 1964.)

* * * * *

ANCHOVY RESOURCES OFF COAST EXPLORED:

Because of the need to vary the South African fishing ef fort and thus reduce the dangerous dependence on a few species, a carefully planned experiment in anchovy fishing was initiated late last year by the Fisheries Development Corporation in association with the Division of Sea Fisher and the fish meal industry. Six special purse-seine nets were imported and were supplied to six vessels provided by the industry.

Fishing started in October and early November 1963 an the work was coordinated by a Corporation technologist.

Until the end of December the following vessels fished the shoals of anchovy (Engraulis japonicus):

Between Lambert's Bay and Dassen Island-Groenveld and Leerdam; between Dassen Island and Cape Hangklip--Kruger and Brand; from Cape Hangklip east--Vleigans and Seegans. All of them are large modern pilchard vessels in the charge of experienced skippers. They used (in conjunction with power blocks) knotless nets of synthetic fiber eac about 200 fathoms long and 25 fathoms deep with a half-inc mesh (stretched).

Numerous technical problems were encountered, and it was only in December that fish were taken in any quantity. The total catch in that test period was 1,050 short tons, made up of 410 tons of anchovy, 465 tons of pilchards, 132 tons of round herring, and 45 tons of maasbanker. Four-fifths of the anchovy were caught in December and nine-

South Africa Republic (Contd.):

...s of the 410-ton catch were obtained off the coast of the ...Peninsula between about Llandudno and Cape Point. ...maining one-tenth was obtained mainly in the area ...en Saldanha Bay and Lambert's Bay. The length of the ...y was between 3 and 5-1/2 inches with an average of ...es.

...the start of the seven-months' Cape pilchard season in ...y the six vessels resumed normal fishing for their ...es. Five of the nets were distributed to factories ...the coast to be used whenever possible. The sixth net ...ken by the 61-foot vessel Karin, which was made ...le to the Corporation. The vessel was prepared for ...y fishing. Again, technical problems disrupted fish- ...by the end of March the tests, while they revealed ...sence of anchovy, had yet to show whether the fish ...e caught in quantities sufficient to support an industry.

...n one of the fishing firms which had one of the anchovy ...ade some modifications to it. Reports from other ...es had mentioned the difficulty of retrieving the deep ...e it had been cast. The company had also heard from ...men that anchovy could be seen near the surface. This ...em the idea that the special net might be too deep and ..., therefore, adjusted to about 20 fathoms.

...rying this net with an unbraided nylon rope as a purse ...ne of the firm's skippers sailed at about 11 a.m. on ...9 in the 67-foot pilchard vessel Silver Bonita. After ...utes' sailing north of the factory, anchovy shoals were ...n the echo-recorder. The first cast was successfully ...t in with 60 tons of anchovy of a very small size.

...April 10 the Silver Bonita set out at 10 a.m. and ...ded north for two hours before the echo-recorder ...ed fish. The first cast yielded 60 tons of anchovy at ...2 noon. A second cast at about 5 p.m. gave 100 tons. ...sh were slightly larger than those caught the previous ...

...April 12 the boat left the factory in the evening and ...ish in about the same position as before. This was ...st attempt at night fishing and, although the vessel re- ...early next morning with 120 tons of anchovy, five ...had to be made.

...April 13 the vessel set out at 11 a.m. and returned at ..., because of bad weather, with 70 tons of anchovy ...in one cast.

...he third week of April the Silver Bonita had taken ...r 800 tons. All her catches were satisfactorily proc- ...in the firm's fish meal plant. Oil yield was high and ..., slightly darker than that obtained from pilchards, ...good quality.

...le the Silver Bonita was taking her catches, other ...ad joined in the search. This was necessarily lim- ...scope because of the small number of anchovy nets ...e. One of those was used by the 70-foot vessel ...eld II, fishing for a canning company. In three ...s large vessel caught 300 tons of anchovy. By the ...eek in April she had brought in 540 tons.

...rating for still another firm, the Renosterkop ...t in 390 tons. The Kruger and the Brand, oper- ...or a Hout Bay firm, caught about 350 tons.

...ess than three weeks in April, therefore, more than ...tons of anchovy were caught.

...couraged by this success and its implications, the Cor- ...on and the industry have decided to move into the sec- ...age of the experiment. It was agreed last year that, if ...gns were favorable, fishing would be extended by the ...se of more nets. These are now being ordered and ...st was to arrive in June 1964.

Twenty-three more nets are to be bought at a cost of about R8,000 (US$11,100) each, and, with the Karin, 29 vessels were expected to be engaged in anchovy fishing within the next 3 or 4 months.

According to the general manager of the Corporation, the vessels will be allowed by the Director of Sea Fisheries to continue fishing after the close of the pilchard season at the end of July. This will be an industry venture controlled and coordinated by the Corporation. (The South African Shipping News and Fishing Industry, May 1964.)

* * * * *

FISH MEAL PRODUCTION FOR 1964 SOLD OR COMMITTED:

Prospects for South African fish meal appear very good, according to the Chairman of the South African Fish Meal Producers' Association. He made this statement when he visited Walvis Bay the last week of March 1964 with a 13-man Japanese delegation on a world tour.

About 75 percent of the total South African fish meal production (which includes South-West Africa) had been sold. The balance, for which the industry was already committed, would be sold later in the year.

The estimated South and South-West African production this year is about 300,000 short tons. The main markets for South African fish meal continue to be the United Kingdom, the Continent, the United States, and Japan.

Japan, he said, had signed a contract for 30,000 tons this season, the first shipment of which was scheduled in April 1964.

Speaking about the Japanese delegation, he said that its members represented the main feed buyers in their country.

"As a result of the talks we have had with the delegation," he said, "it is quite possible that Japan will purchase substantially more fish meal in 1965. . . ." (The South African Shipping News and Fishing Industry Review, May 1, 1964.)

* * * * *

SPINY LOBSTER FISHING REGULATIONS AMENDED:

The regulations for fishing spiny lobster in South African waters were amended on March 13, 1964, under Section 11 of the Sea Fisheries Act of 1940, as follows:

"No person shall land or bring ashore any Cape rock lobster or any part of any Cape

South Africa Republic (Contd.):

rock lobster at any point along the coast of the Cape Peninsula in the area between, as northern limit, a white concrete beacon marked TBN1 situated near the mouth of the Second Salt River (also known as Diep River) and, as southern limit, a similar beacon marked H1 situated near 'Die Josie' at the southern extremity of Hout Bay:

"Provided that this regulation shall not apply to the landing or bringing ashore of Cape rock lobster at the fishing harbour, Table Bay Docks, as defined in Government Notice No. R290 of March 2, 1962 (regulations for the Harbours of the Republic of South Africa and South West Africa), or at the main landing quay at Hout Bay fishing harbour."

Police stations along the coast were notified of the new regulation and fishermen operating from Three Anchor Bay, a favorite landing place for spiny lobsters, were warned that they will be prosecuted if they continue to do so.

The new regulation was described as the latest blow to rock lobster poachers. Apart from that measure, no lobsters may be caught in the permanent sanctuary between Hout Bay and Salt River, which extends 12 miles seaward--the recently defined limit of South Africa's sea-fishing zone.

During the closed season (September 1 to October 31) there is a total ban on lobster fishing along the coast and at all times there is a limit to the size and condition of lobsters that may be caught.

According to the Director of Sea Fisheries, the sanctuary is most important from the point of view of conservation, situated as it is at the southernmost region of the total distribution of the species along the West Coast. He said: "It plays an extremely important role in restocking other areas along the West Coast. . . ."

The new regulation seemed to stop the fishermen for a few days, but they were quick to see a loophole in the law. It was reported that men, manning boats equipped with outboard motors, which are not allowed in Table Bay Harbour and for which the distance to Hout Bay is too great, were transferring their lobsters to "mother" craft while still at sea and receiving cash on the spot. This, however, may be a technical infringement of the new rule.

The following are some of the main regulations governing the catching of spiny lobste in Cape waters:

1. The body must be at least $3\frac{1}{2}$ inches measured down the upper side of the shell from between the eyes to the rear end of th shell.

2. No one shall sell, expose for sale, pu chase, possess, or be in possession of any spiny lobster tail which has been severed fr the body, if the second segment of the tail fr where it joined the body is less than 15/16t of an inch long when measured from edge t edge down the middle line of the upper side the tail.

3. It is illegal to catch, sell, expose for sale, purchase, or be in possession of fema spiny lobster in berry (carrying eggs) or which show signs of having been stripped of the berry; or any spiny lobster which is abo to or which has recently cast its shell or is "soft."

4. Spiny lobster must be landed whole a if inadvertently caught undersized, "soft," o in berry, shall be returned immediately to sea.

5. The return of spiny lobster offal, or any part of a spiny lobster to the sea, is pr hibited except in a part of Table Bay to the northwest of a line drawn from the end of t breakwater to the beacon opposite Rietvlei and the part of the territorial waters boun by the coastline from York Point (or the P jie) to the mouth of Hourt Bay River, and b a straight line drawn from the Hout Bay R mouth to York Point.

6. No one may, for commercial purpos catch spiny lobster by diving or swimming underwater and no skipper or boat owner en gaged in catching spiny lobster may carry allow to be carried diving equipment of an description.

7. Any spiny lobster found on a boat car ing such equipment shall be deemed to hav been caught by divers--until the contrary i proved.

Diving for spiny lobster not for comme cial purposes is permissible subject to the following conditions:

South Africa Republic (Contd.):

) For his own use, a diver may not take more than five spiny lobster a day--a permit not being necessary.

) A diver who wishes to collect spiny lobster on behalf of others for their own use must apply to the Director of Sea Fisheries for a permit, which will be for a quantity not exceeding 15 a day.

) No spiny lobster undersized, in berry, or "soft" may be taken and no diving may be done in any sanctuary or during the closed season.

) The spiny lobster caught may not be sold or offered for sale.

) A diver without a permit found with more than five spiny lobster, or one with a permit found with more than the authorized quantity shown on the permit, will be deemed to have contravened the law.

There are 5 spiny lobster sanctuaries off the Cape coast--Hout Bay, Table Bay, Robben Island, Saldanha, and St. Helena. The regulations listed apply only in the Cape and not in Natal, where diving for fish is controlled by the Natal Provincial Administration.

The penalty for a conviction under the Sea Fisheries Act is a fine not exceeding 200 Rand (about US$279) or jail for a period not exceeding a year, or both. A further fine equivalent to the assessed monetary gain in consequence of the offense may be imposed. Fishing gear may be confiscated and in the case of a second or further conviction the boat used in committing the offense may be confiscated and the license cancelled. (The South African Shipping News and Fishing Industry Review, April 1964.)

* * * * *

QUALITY SPECIFICATIONS FOR FISHERY PRODUCTS:

The South African Bureau of Standards has been requested to prepare a specification for the oyster industry in South Africa. Although cultivation of oysters is one of the lesser known activities of the South African fishing industry, that industry envisions some measure of growth and development and is preparing to produce a quality product under the requirements of the Bureau of Standards.

The scope of the specification for oysters is expected to deal with good "farming" of the product, hygienic handling, treatment, size and weight grading, packaging, storage, and transportation. An important public safeguard will be the requirements dealing with pollution and contamination of the oyster beds as well as the oysters themselves. This will include the treatment necessary, and the exercise of control to protect the consumer by inspection and microbiological examination.

Quick frozen fishery products sold in South Africa are produced to the requirements of a standard specification of the South African Bureau of Standards. The emphasis is on hygiene--in the plant, the production line, employee working conditions, and for the employees themselves. Quality requirements for the raw product are strict and the characteristics that indicate absolute freshness are clearly defined in the specifications. (The South African Shipping News and Fishing Industry Review, March 1964.)

* * * * *

NEW VESSEL EQUIPPED FOR DRUM-TRAWL FISHING:

In May 1964, the new stern-trawler Scotia joined the Port Nolloth fleet of a South African fishing company. The 75-foot vessel does not have a stern ramp. It was designed, instead, to use the drum-trawl method of fishing which is widely practiced in the Pacific Northwest area of the United States. On the Scotia, a large drum has been fitted just over the stern between the legs of the gantry on the upper deck. The drum acts as a reel for the trawl net which is simply wound on to the drum or wound off for shooting. The cod end is lifted to the head of the gantry and then carried across by a derrick until it is over the fish storage hold. The trawl drum on the Scotia is cable-driven from the main trawl winch. The drum will be modified for hydraulic operation if it proves successful off South Africa. Drum trawling leaves a clear working deck at all times and the wheelhouse of the new vessel has been placed forward so there is ample working deck space.

Built in Durban, South Africa, the Scotia is equipped with a 3-cylinder, 2-stroke Diesel engine driving a single controllable-pitch propeller. During trials, top speed was 9½ knots. The vessel has a fuel capacity of 12 tons of Diesel oil and an operating range of 2,340 miles when traveling at a cruising speed of 6½

South Africa Republic (Contd.):

knots. It has a hold capacity of 30 tons of fish and an equal quantity of ice. The hold is completely insulated with polyurethane foam.

Although intended primarily for bottom trawling, the Scotia was designed as a multi-purpose vessel and will also be used for spiny lobster fishing and for tuna long-lining. The vessel carries radar, radiotelephone, and echo-sounding equipment.

As the Scotia prepared to enter service in the spring of 1964, a sistership, the Dunscore, was nearing completion in a Durban shipyard. The design of both trawlers was planned with the aid of technicians who had observed European and United States fishing methods. (The South African Shipping News and Fishing Industry Review, May 1964.)

South and South-West Africa

FISHERY LANDINGS SET ANOTHER RECORD IN 1963:

The fishing industry of South and South-West Africa had its third million ton year in 1963, and for the sixth year in succession total landings set a new record. The fishing fleet of 1,000 powered boats and some 3,000 dinghies, operating from Durban to north of Walvis Bay, caught 1,248,230 short tons of pilchards, massabanker, mackerel, hake and other trawl fish, snoek and other line fish, and spiny lobster. It was the third year in a row that landings were over one million tons, nearly 100,000 tons above the record landings in 1962.

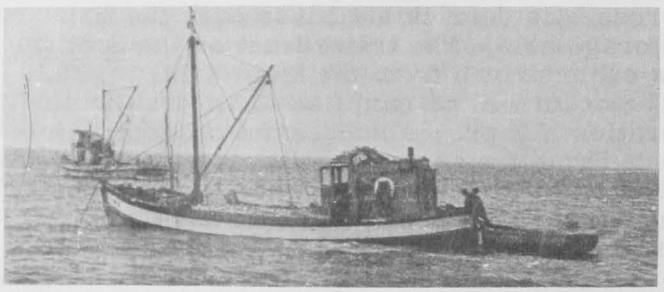


Fig. 1 - A 51-foot Walvis Bay, South-West Africa, vessel with a full catch of pilchards.

Since 1958, the South and South-West African fishing industry has enjoyed an unbroken succession of record landings. In 1958, total landings were 724,000 tons; in 1959--824,000; 1960--956,000; 1961--1,113,000; and in 1962 1,154,226 tons.

The new record in landings was achieved despite a drop in the Cape landings of pelagic shoal fish and a further slight decline in landings of trawl fish. But the difference was more than made up by a very large increase in the pilchard quota allowed the 6 factories Walvis Bay.

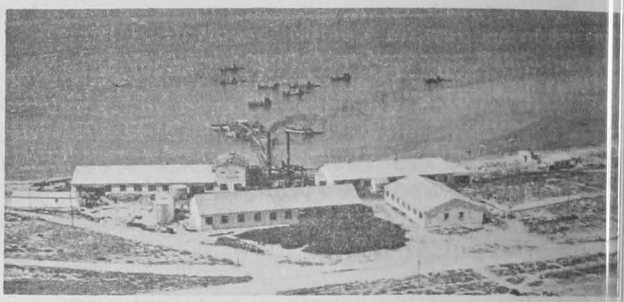


Fig. 2 - A pilchard-maasbanker cannery and reduction plant on the St. Helena Bay coast.

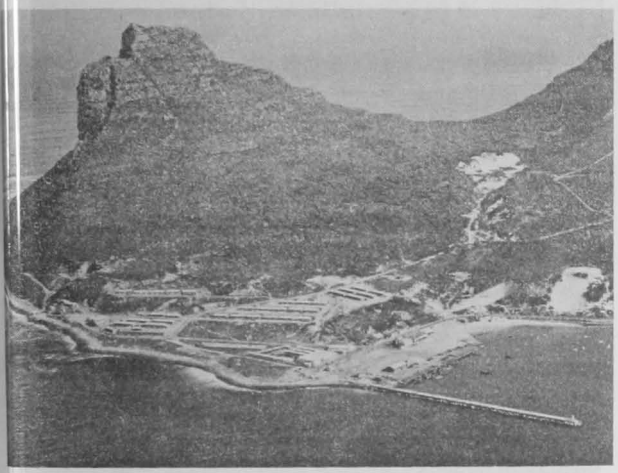
In the seven-months pilchard fishing season from January to the end of July, Cape fishing boats caught 441,943 short tons. In the same period in 1962, pilchard landings total 452,735 tons.

During the seven months, Cape boats also fished for maasbanker and mackerel. They were permitted another short season for the fish in November and December which brou the totals to 26,400 tons of maasbanker and 14,824 tons of mackerel, both well below th 1962 landings. The total pelagic shoal fish landings for the Cape in 1963 eventually re ed 483,167 tons as compared with 550,233 t in 1962 and 545,081 tons in 1961.

Fig. 3 - Part of the Cape Town fleet engaged in the South A spiny lobster fishery.

ith and South-West Africa (Contd.):

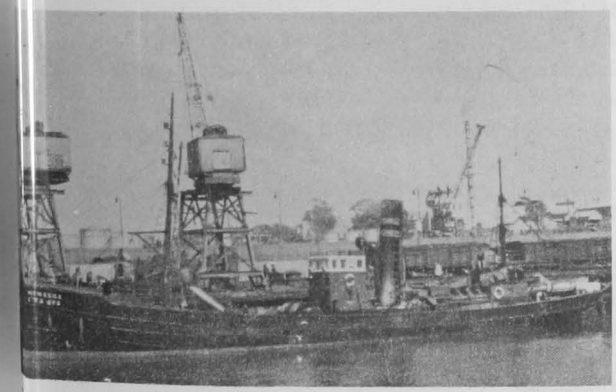
In Walvis Bay the pilchard quota was raised ain, this time from 435,000 tons in 1962 to 0,000 tons and later to 600,000 tons. The al landings of 602,639 tons compared with 5,068 tons in 1962 and with 377,281 tons in 1. Added to the figure for Cape shoal fish, increased catch at Walvis Bay raised the l for shoal fish in South and South-West ica from 986,301 tons in 1962 to 1,085,806 s in 1963.



4 - A spiny lobster plant at Hout Bay, near Cape Town, ch processes and exports frozen spiny lobster tails to United States.

With a seventh factory scheduled to go in- peration at Walvis Bay in mid-1964 and a fish meal factory going up at Luderitz, permitted limit for South-West African hards has been raised to 720,000 tons in . If the Cape catch fulfills its early ise, the increase in South-West Africa combine with it to set a further new rec- for shoal fish in 1964.

or the South African trawling industry, was an average year with the total land-



- A large otter trawler at Cape Town, typical of the fleet fishes for stockfish.

ings slightly below those of 1962. According to the Division of Sea Fisheries, those landings totaled 224.9 million pounds valued at US$7.2 million. In 1962, landings by the South African trawling industry were 117,925 tons.

No statistics are kept by the South African Government of spiny lobsters caught for local sale or of line fish landed at the numerous harbors, large and small, along the South African coast. The Division of Sea Fisheries estimates, however, that the Cape spiny lobster catch was about 9,000 tons and the Cape and Natal line fish catch was about 30,000 tons.

In South-West Africa a catch of 6,500 tons of spiny lobster was estimated, together with 3,000 tons of white fish and 1,500 tons of snoek. (The South African Shipping News and Fishing Industry Review, March 1964.)

Republic of Togo

EXTENDS TERRITORIAL WATERS TO 12 MILES:

A law regulating commercial fishing in the Republic of Togo, also extends Togolese territorial waters to a limit of 12 nautical miles (measured from extreme low tide). The law was passed on July 2, 1964, by the Togolese National Assembly. The law regulates commercial fishing in Togo's inland waters as well as ocean waters, and reserves fishing in territorial waters to Togolese citizens with no provision made for exceptions or licenses.

Fishing within the 12-mile limit is prohibited to foreign vessels, and the law provides severe penalties for violations, including confinement for up to 5 years and possible seizure of vessels and catch. The conditions of the law do not affect the free circulation of foreign fishing vessels navigating or anchoring in Togolese territorial waters. (United States Embassy, Lome, July 14, 1964.)

U.S.S.R.

NEW VARIETY OF STURGEON DEVELOPED:

A new variety of sturgeon which does not leave for the sea after spawning has been developed by Soviet scientists. One of the

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

U.S.S.R. scientists believes that in 10 to 15 years time it will be possible to keep large sturgeon shoals in any reservoir. This is considered an important development in view of the construction of powerful hydroelectric stations on the Soviet Union's biggest rivers.

At a conference held in Moscow to discuss theoretical problems of fisheries, in addition to the problems connected with the acclimatization of sturgeon varieties, emphasis was laid on problems of artificial reproduction of fish. (The Fishing News, March 26, 1964.)

United Arab Republic

FISHERY PRODUCTS IMPORTS AND EXPORTS, JANUARY-JUNE 1963:

Fishery products imports by the United Arab Republic (UAR) in the first half of 1963 (January-June) were 2,858 metric tons valued at ŁE382,858 (US$880,600). Canned and preserved fishery products (including anchovies and herring) accounted for about 85 percent of the total imports and about 90 percent of the value.

UAR fishery products exports in the same period of 1963 totaled 1,229 tons valued at ŁE535,010 ($1,231,000). Fresh and frozen shrimp was the principal export item for a total of 898 tons valued at ŁE479,873 ($1,104,000). Of that total, 684,000 pounds (310 metric tons) was exported to the United States market at a time when shrimp prices had risen substantially from those of a year earlier. On a per-pound basis, the average export price of shrimp in the UAR during that period was 56 U. S. cents a pound as compared with an average of 41 cents in 1962.

In 1962 (January-December) the UAR exported 1,545 tons of shrimp valued at ŁE607,598 ($1,397,475). United States shrimp imports from that country during 1962 amounted to 1,783,000 pounds, or 809 metric tons. (United States Embassy, Cairo, April 1, 1964.)

Note: See Commercial Fisheries Review, December 1963 p. 80.

United Kingdom

NEWEST ADDITION TO FREEZER-TRAWLER FLEET LAUNCHED:

A new British freezer stern trawler, the Cape Kennedy, was launched at a Selby shipyard in England on June 12, 1964. It is the second trawler of that type to join the trawling fleet of a large British fishing company.

Fig. 1 - Launching of British freezer stern trawler Cape Kenne at Selby, England, June 12, 1964.

The Cape Kennedy is driven by a Diesel electric power system, has an identical hull formation, and is of the same size (226 fee 6 inches long overall) as the stern trawler Ross Valiant built by the same shipyard an launched in January 1964.

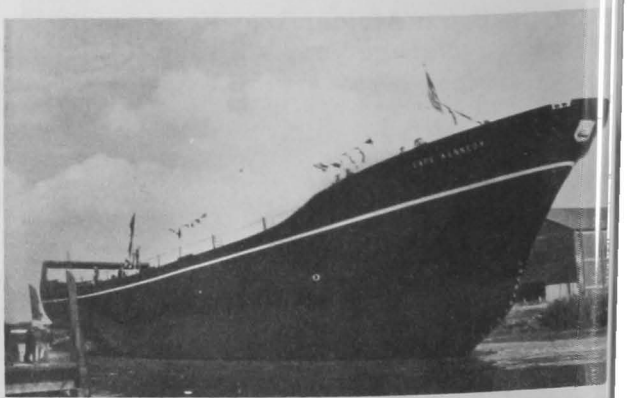


Fig. 2 - Freezer stern trawler Cape Kennedy, sistership to Ro Valiant, after launching.

United Kingdom (Contd.)

The vessel is to be built to Lloyds standards (*100 A.1.) for a single screw stern trawler. She has a bar keel and a well raked raus stem above the load waterline with cutaway forefoot for working in ice. There are two continuous decks--the upper one being the weatherdeck, and the lower the freeboard deck. Space between the decks provides accommodation for a crew of 28 and space for factory work. Space beneath the lower deck is for ballast, Diesel oil, fish livers, freshwater tanks, and chain lockers.

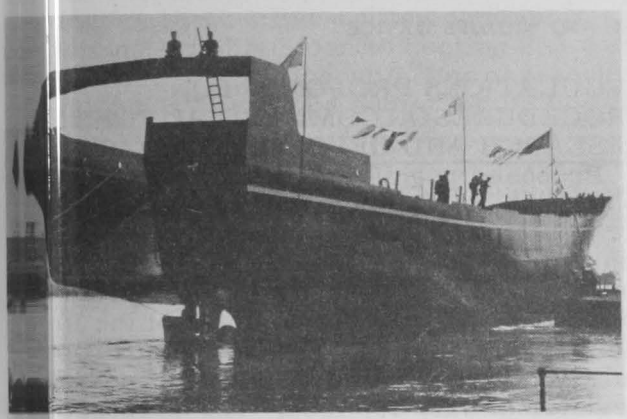


Fig. 3 - Stern view of Cape Kennedy showing stern ramp.

A prominent feature of the vessel is the wheelhouse topped by the navigating bridge. On the port side is the chartroom and the completely equipped wireless room is on the starboard side. Two tall gallows span the vessel to carry and work the fishing gear; one some 20 feet behind the wheelhouse boatdeck carries the trawl warps from the winch; the other is positioned across the end of the stern ramp to lift the cod end on to the fishdeck.

A cold-storage room of 22,000 cubic feet is insulated and can be refrigerated to a temperature of -20° F., and accommodate up to 400 tons of 100-pound fish blocks. The fish blocks are produced by a battery of 10 vertical plate freezers which have a maximum potential daily (24 hours) output of nearly 35 tons.

The new vessel is expected to enter service early in 1965. The machinery specification is similar to that of Ross Valiant except for the Diesel-electric propulsion machinery which consists of three 8-cylinder 925 b.hp. 700 r.p.m. turbo-charged marine propulsion engines each coupled to generators in tandem--and the trawl winch, which is of a different type.

The owners say that fish from the Cape Kennedy will help to meet the increasing demand for fish sold under their same unchanged price contract as fish produced by the Ross Valiant, which has helped to keep fish prices steady the year-round.

Note: See Commercial Fisheries Review, April 1964 p. 76.

PORTION OF UNITED STATES SHRIMP FLEET MIGRATES TO CENTRAL AND SOUTH AMERICA

During 1963, a portion of the United States Gulf and South Atlantic shrimp fleet migrated to Central and South American countries. Several of the larger shrimp firms set up companies in Latin American countries and moved a part or all of their fleets to those countries. The development pointed to the increasing trend for fishing fleets to become international in operation.

The possibilities of shrimp fishing off Central and South America were first made known by the U. S. Fish and Wildlife Service exploratory work in 1941-43. Subsequent work in recent years by vessels of the U. S. Bureau of Commercial Fisheries Exploratory and Gear Research Station at Pascagoula, Miss., corroborated the earlier findings. Fishing by vessels engaged in the fishery is now centered between Trinidad and the mouth of the Amazon River.

"Fisheries of the United States 1963"
C. F. S. No. 3500
U. S. Bureau of Commercial Fisheries
Washington, D. C.