



FOREIGN

International

EUROPEAN FREE TRADE ASSOCIATION

MINISTERIAL MEETING IN VIENNA REVIEWS POLICY:

The Council of the European Free Trade Association (EFTA) met at the Ministerial level in Vienna on May 24, 1965. The Ministers examined the situation as it exists today in Europe, after 5 years of successful development of EFTA. They discussed the likely consequences for Europe of the deepening division resulting from the continued separate evolution of EFTA and the European Common Market (EEC). The Ministers considered that a hardening of the division could only be arrested by new initiatives. They agreed that it would be desirable to seek to arrange meetings at the Ministerial level between the two groups at the earliest opportunity which offered prospects of a fruitful result.

The Ministers reaffirmed their determination to intensify cooperation within EFTA in order to ensure the prosperity of its own members and to offer the best prospect of achieving a satisfactory basis for closer collaboration between the Association and the European Common Market. They accordingly instructed the EFTA Council at the official level to examine the further progress to be made in EFTA with that in view and to report to the Ministers in time for their next meeting, which is scheduled to be held in Copenhagen in October 1965. The Council report is to deal in the first place with the internal arrangements of EFTA, including the Economic Development Committee, with due regard to the EFTA objectives of the Association concerning agriculture and fisheries as set out in Article 2 and Articles 22 and 27 (Article 27 specifically deals with the objec-



tives for trade in fish and other marine products). Second, the report is to cover the external aspect of EFTA activities, taking into account the arrangements proposed for joint discussions with the EEC. The Council was also instructed to review the institutional arrangements of EFTA. (European Free Trade Association, Information Office, Washington, D. C. May 24, 1965.)

FISH MEAL

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

Member countries of the Fish Meal Exporters' Organization (FEO) account for about 90 percent of world exports of fish meal. The FEO countries are Chile, Angola, Iceland,

Table 1 - Exports of Fish Meal by Member Countries of the FEO, Jan.-Mar. 1965

Country	March		Jan.-Mar.	
	1965	1964	1965	1964
. . . (1,000 Metric Tons). . . .				
Chile	15.9	17.2	31.1	42.8
Angola	4.2	6.6	16.3	13.4
Iceland	11.7	11.7	27.3	31.7
Norway	16.7	13.0	42.5	53.7
Peru	169.8	186.1	464.8	388.7
So. Africa (including S.-W. Africa). . . .	26.5	20.0	42.4	44.6
Total	244.8	254.6	624.4	575.0

Table 2 - Production of Fish Meal by Member Countries of the FEO, Jan.-Mar. 1965

Country	March		Jan.-Mar.	
	1965	1964	1965	1964
. . . (1,000 Metric Tons). . . .				
Chile	10.1	4.3	33.8	47.4
Angola	2.6	5.3	13.3	14.9
Iceland	13.7	8.8	22.8	21.0
Norway	31.4	28.2	56.0	43.2
Peru	191.9	175.2	508.3	495.9
So. Africa (including S.-W. Africa). . . .	43.0	33.4	74.3	63.8
Total	292.7	255.2	708.5	686.2

International (Contd.):

Norway, Peru, and South Africa/South-West Africa.

Peru accounted for about 74 percent of the 24,400 metric tons of fish meal exported by PEO countries in January-March 1965.

WORLD PRODUCTION, APRIL 1965 WITH COMPARISONS:

World fish meal production in April 1965 was down about 21 percent from the previous month due mainly to a decline in Peruvian output.

World fish meal production in January-April 1965 was about the same as that in the first 4 months of 1964. Peru accounted for about 61 percent of total output in January-April 1965.

Country	April		March		Jan.-Apr.	
	1965	1964	1965	1964	1965	1964
	(Metric Tons)					
Canada	2,065	1,460	7,154	4,227	23,893	12,460
Denmark	7,473	6,591	8,434	3,810	30,723	21,608
France	1,100	1,100	1,100	1,100	4,400	4,400
German Fed. Rep.	5,726	6,736	6,123	6,388	22,027	26,271
Netherlands	542	500	1/	600	1,704	2,500
Main	2,321	1/	1/	1/	10,038	1/
Sweden	782	885	1,001	527	3,440	2,897
United Kingdom	6,785	7,217	6,751	6,438	28,572	28,345
United States	9,876	6,438	2,501	2,027	16,776	11,847
Angola	2,314	2,753	2,654	5,296	15,571	17,633
Iceland	4,384	10,094	13,681	8,771	27,232	31,122
Norway	23,230	31,582	31,372	28,221	79,210	74,820
Peru	149,911	158,505	191,930	175,170	658,230	654,442
S. Afr. (including S.-W. Afr.)	37,635	31,543	43,091	34,188	112,182	96,980
Belgium	375	375	375	375	1,500	1,500
Italy	3,695	13,343	10,062	4,291	37,502	60,752
Morocco	300	350	1/	700	600	1,910
Total	258,514	279,472	326,229	282,129	1,073,600	1,049,487

1/ Data not available.
2/ Japan does not report fish meal production to the International Association of Fish Meal Manufacturers at present.

World fish meal production in March 1965 was up about 51 percent from the previous month due to a sharp increase in Peruvian output and rising production in South Africa, Norway, and Iceland.

World fish meal production in January-March 1965 was up slightly from that in the first 3 months of 1964. Peru accounted for about 63 percent of total output in the first quarter of 1965. Most of the principal countries producing fish meal submit data to the International Association of Fish Meal Manufacturers monthly (see table).

FISH OIL

WORLD EXPORTS, 1964:

World gross exports of fish oil (including fish-liver oil) continued at a record level in 1964.

Peru, the United States, Iceland, and the Republic of South Africa 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 1963-64. 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, West Germany, and Denmark. In addition, Norway, West Germany, and the Netherlands import large quantities of fish oil for further processing and export largely to other European countries.

Continent and Country	1964	1963	1962	1961	1960	1959	Average 1955-59
	(1,000 Short Tons)						
North America:							
Canada	15.8	6.4	3.2	4.4	15.2	14.8	8.3
Mexico	0.3	0.2	0.3	0.8	3/	0.7	0.7
United States	75.7	131.2	61.5	61.2	71.8	72.2	64.1
Total No. America	91.8	137.8	65.0	66.4	87.0	87.7	73.3
South America:							
Argentina	0.5	0.5	0.4	0.6	1.0	0.4	0.5
Chile	15.1	12.7	12.0	5.1	6.6	0.1	4/0.1
Peru	147.3	121.3	166.0	112.8	38.6	18.9	5.5
Total So. America	162.9	134.5	178.4	118.5	46.2	19.4	6.0
Europe:							
Denmark	33.5	22.9	16.8	10.5	7.4	16.1	12.5
France	3.2	4.0	2.8	2.7	2.4	1.6	1.1
West Germany	16.2	19.7	22.9	25.3	26.2	31.6	17.9
Iceland	68.6	71.2	72.5	35.2	54.5	18.9	31.1
Netherlands ^{2/ & 6/}	2.7	2.8	2.6	5.2	7.8	16.0	10.4
Norway ^{6/}	22.3	21.2	18.6	24.0	18.4	21.8	21.3
Portugal	7.5	10.5	6.7	7.4	4.9	5.7	5.1
Sweden	3.0	3.4	2.0	3.4	2.5	3.0	2.5
United Kingdom	2.2	2.7	2.6	3.2	3.7	3.7	3.8
Other Countries (incl. U.S.S.R.) ^{1/}	2.8	2.6	2.9	2.8	2.0	2.3	1.7
Total Europe	162.0	161.0	150.4	119.7	129.8	120.7	97.4
Africa:							
Angola	8.1	3.4	2.9	3.3	7.3	5.6	8.1
Morocco	5.8	5.7	4.9	4.5	5.7	4.3	2.7
South Africa Republic ^{3/}	49.2	35.3	50.4	50.3	37.4	26.6	15.2
Total Africa	63.1	44.4	58.2	58.1	50.4	36.5	26.0
Asia and Oceania:							
Japan	2.3	2.0	3.2	2.7	3.8	3.6	5.8
Other Countries ^{2/}	0.8	0.8	0.7	0.8	1.0	1.7	1.2
Total Asia and Oceania	3.1	2.8	3.9	3.5	4.8	5.3	7.0
World total	482.9	480.5	455.9	366.2	318.2	269.6	209.7

1/Hardened fish oils have been included whenever 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.

Exports from Peru reached a record 147,300 short tons in 1964, an increase of 21 percent from 1963. The increase enabled Peru to surpass the United States and become the leading world supplier. Exports from the Republic of South Africa, Chile, Denmark, and Canada rose, while exports from the other major suppliers, the United States and Ice-

International (Contd.):

land, declined. (World Agricultural Production and Trade, U. S. Department of Agriculture, June 1965.)

Note: See Commercial Fisheries Review, Feb. 1965 p. 48, and Sept. 1964 p. 51.

FOOD AND AGRICULTURE ORGANIZATION

WORLD SYMPOSIUM ON WARM-WATER
POND FISH CULTURE
TO BE HELD IN MAY 1966:

A World Symposium on Warm-Water Pond Fish Culture will be held in Rome, May 18-25, 1966, by the Food and Agriculture Organization (FAO) of the United Nations. The Symposium is intended to bring together fishery scientists and technicians actively concerned with some aspect of pond-fish culture.

The important contribution that fish culture can make to the improvement of human diets and general development of rural areas is being increasingly recognized all over the world. There is a need, however, to stimulate further research in fish culture and to modernize techniques.

Since the entire field of fish culture is too wide to be covered in one meeting, the Symposium at Rome will only consider selected aspects of pond culture of warm-water species (such as carp and tilapia). Cold-water species such as salmon and trout will not be considered.

The objectives of the Symposium will be to:

- (a) Evaluate warm-water pond-fish culture development in different regions of the world.
- (b) Review the present status of knowledge on: (1) the role of soil in productivity; (2) fertilization of ponds; (3) feeds and feeding; (4) control of pond weeds; (5) stock manipulation and other biological methods of increasing production; (6) breeding and selection (including induced breeding and induced sterility); (7) new systems and new fish for culture; and (8) diseases and parasites of pond fish.

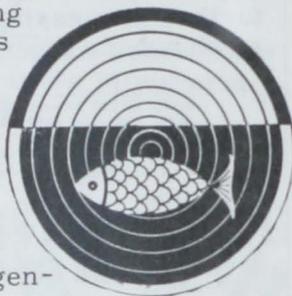
- (c) Delineate major problems requiring solution.
- (d) Consider means of stimulating critical scientific studies on pond-fish culture and coordinating research programs.
- (e) Discuss and recommend future lines of endeavour, national and international, in the study and promotion of fish culture for food.

The Symposium will be held in ten consecutive meetings. Each meeting will have discussion leader and a rapporteur. Leading workers and specialists will be invited to contribute reviews and experience papers on the selected topics, which will be duplicated and distributed in advance of each meeting. The discussion leader of each meeting will summarize the relevant papers; the subject will then be open for discussion, and the authors of papers will have the opportunity to highlight, if required, any aspect of their contribution. If the discussion on any topic indicates the need for a closer study of any particular problem, the discussion leader will appoint an informal working group and, with the rapporteur, coordinate their work. Each rapporteur will prepare a report summarizing the discussions in his meeting, including the working group reports. Their reports will be incorporated in the Report of the Symposium after general approval by the participants.

Member Governments of FAO are being invited to nominate Symposium participants with expert knowledge in the field. Several international organizations are also being invited to send participants and observers. It is understood that participants presenting papers or contributing to discussions will do so in their individual capacity; they will not be expected to commit their governments to resolutions or recommendations, nor in other ways formally to represent their governments or the organizations which may nominate them.

The Symposium will be conducted in English, French, and Spanish; simultaneous interpretation in those languages will be provided.

Additional information about the Symposium as well as instructions for preparing manuscripts for the meeting may be obtained from Dr. T.V.R. Pillay, Secretary, FAO World Symposium on Warm-Water Pond Fish Culture



International (Contd.):

Fisheries Division, FAO, Via delle Terme di Caracalla, Rome, Italy.

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GENERAL FISHERIES COUNCIL
FOR THE MEDITERRANEAN

ANNUAL SESSION HELD IN ROME:

Tuna Working Party Set: A working party to study the tuna and tuna-like fish of the Mediterranean was set up by the General Fisheries Council for the Mediterranean (GFCM) at its 8th Annual Session in Rome, May 10-15, 1965.



... fishing off the coast of Libya. Fish are trapped in set nets.

The purpose of the GFCM working party is to determine the size, migratory habits, distribution, growth and mortality rates, spawning grounds, and sustainable annual yield of the Mediterranean's stocks of tuna and tuna-like fish. The working party also intends to organize Mediterranean-wide tuna-tagging experiments, a basic tool for studying the population dynamics of any given species of fish. Eight nations have already agreed to provide a new working party with tuna experts. They are France, Italy, Israel, Libya, Monaco, Spain, Tunisia, and Yugoslavia.

Tuna is one of the most important commercial fish species caught in the Mediterranean. Mediterranean fishing nations catch at least some tuna. Turkey caught 19,200 metric

tons of tuna in the Mediterranean in 1963, a larger tuna catch than any of the other Mediterranean fishing nations. Italy, followed with 3,300 tons, Israel 900 tons, and Yugoslavia 300 tons. France, Morocco, and Spain have large tuna fisheries, but the bulk of their tuna catch is from the Atlantic.

Sardine-Tagging Program in Mediterranean: The first sardine-tagging program for the entire Mediterranean Sea will be initiated in 1966. The proposed program had the unanimous agreement of the 15 member nations attending the annual meeting at Rome of the General Fisheries Council for the Mediterranean. The program calls for each Mediterranean country presently fishing sardine to devote about one month to tagging some 5,000 fish each.

The sardine is of major commercial importance to the fishing nations of the Mediterranean. Tagging fish is a means for determining the growth and mortality rates, migratory routes, distribution, population dynamics, and stock sizes. The program's major aim is to revitalize the Mediterranean sardine fishing industry and to determine, through recovery of the tagged fish, how much can be caught without harming the stocks.

Other Actions: The Council also called on the Food and Agriculture Organization (FAO) for aid in drawing up a general plan for the future development of the Mediterranean's marine resources. It asked FAO to seek aid in financing such a general program through the United Nations Special Fund, the United Nations Expanded Program of Technical Assistance, and other international bodies such as the World Bank. The Council also asked FAO's help in collecting economical and statistical data on Mediterranean fisheries, and in improving Mediterranean fisheries statistical systems.

Dr. Raffaele Cusmai, Italy's Director-General of Fisheries, was elected chairman for the next GFCM biennial session, to be held in Split, Yugoslavia, in May 1967.

Member nations of the GFCM are France, Greece, Italy, Israel, Libya, Malta, Monaco, Morocco, Spain, Syria, Tunisia, Turkey, the United Kingdom, the United Arab Republic, and Yugoslavia. (Food and Agriculture Organization, Rome, May 12 and 17, 1965.)

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

International (Contd.):

INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA

CONVENTION ENTERS INTO FORCE:

The International Convention for the Safety of Life at Sea, 1960, done at London, June 17, 1960, entered into force May 26, 1965. The new Convention (commonly called the 1960 International Rules of the Road) was formulated by the maritime nations making up the Inter-Governmental Maritime Consultative Organization. (Department of State Bulletin, April 12, 1965.)

Note: See Commercial Fisheries Review, Feb. 1965 p. 95, and Jan. 1965 p. 103.

NORTHEAST ATLANTIC FISHERIES COMMISSION

THIRD MEETING HELD IN MOSCOW:

The Northeast Atlantic Fisheries Commission (NEAFC) held its third meeting in Moscow, May 11-14, 1965. Delegations were present from 13 of the 14 member countries--Belgium, Denmark, Federal Republic of Germany, France, Iceland, Ireland, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Soviet Union, United Kingdom. Observers were present from the United States, International Council for the Exploration of the Sea (ICES), the International Commission for the Northwest Atlantic Fisheries (ICNAF), and from the Fisheries Division of the Food and Agriculture Organization (FAO).

At the meeting in Moscow, the Northeast Atlantic Fisheries Commission agreed on the following:

1. In the part of the Convention Area south of 48° North, from January 1, 1966, for a trial period of three years: (a) the minimum size of mesh of nets applicable should be 60 millimeters (2.35 inches); (b) minimum lengths of 24 and 21 centimeters (9.44 and 8.26 inches) should be prescribed for hake and sole, respectively; and (c) the species Discoglossa (or Dicologlossa) cuneata should be added to the list of species which may be fished for with nets containing meshes of less than the prescribed minimum size.

2. After the Special Committee on International Control, established at the Second Meeting at the Hague in 1964, reported on the results of its deliberations, the Commission resolved that Contracting States should, within the limits of their respective jurisdictions, inspect foreign vessels to ascertain whether

they were complying with the Commission's recommendations and report the result of the inspection to the Flag State and the Commission. The Commission also agreed that the Committee should continue its work during the ensuing year with a view to studying the possibility of introducing a system of international inspection on the High Seas from January 1, 1967.

3. Until December 31, 1968, Contracting States could authorize use of top-side chafers which did not obstruct or otherwise affect the selectivity of the mesh in the cod end. The scientific evidence on which the authorization was based would be furnished to the Commission which could circulate the evidence to Contracting States.

4. (a) The minimum mesh size in the northern part of the Convention Area east of the Greenwich meridian, should be increased by 10 millimeters (0.3937 inches) from January 1, 1967; (b) from January 1, 1967, the minimum mesh size around the Faroe Islands, should be increased by 20 millimeters to 95 millimeters and 100 millimeters (0.787, 3.74, and 3.93 inches) and that a further increase of 10 millimeters should come into operation on January 1, 1970. The area in which those provisions would apply was defined as being that contained by a line drawn east from 10° west longitude along the parallel of 63° north latitude, to 4° W. longitude, then south to 60°30' north latitude, west to 5° west longitude, south to 60° north latitude, west to 15° west longitude, north to 62° north latitude, east to 10° west longitude and then north to 63° north latitude; (c) from January 1, 1969, the minimum sizes of fish prescribed for the northern part of the Convention Area should apply to the area around the Faroe Islands.

5. The present provisions on industrial landings should be extended until January 1, 1970.

6. The minimum size for dab (Limanda limanda) should be reduced from 20 centimeters to 15 centimeters but that annual reports showing the composition of "by-catches" of the dab fishery should be submitted.

7. Until December 31, 1968, vessels based on and landing their catches in ports in the area in the Irish Sea between the parallels of 54°30' and 53° north latitude and west of 5°15' west longitude could, for the purpose of catching whiting, carry and use nets of a minimum mesh size of 60 millimeters (2.36 inches).

International (Contd.):

8. ICES should be requested to reconvene the North Western Working Group to review the state of the fish stocks in the North West area and in the Faroes, and to provide up-to-date assessments through the Liaison Committee and to continue the activity of the North Eastern Working Group.

9. Countries fishing for cod and other species in the Arctic should provide for the Liaison Committee more data on: (a) rate of discards made by the trawlers, together with fish used for meal; (b) length measurements of landings of commercial trawlers; (c) effective selectivity of gear in use.

10. All countries should be urged to provide to the Liaison Committee regular information on the actual cod end mesh sizes in use, as measured with the standard ICES gauge, with as much information as possible to be provided by September 1, 1965.

11. The Contracting States should be requested to continue investigations designed to obtain more precise information on the selectivity of nets of different materials with regard to appropriate differentials in the prescribed minimum meshes and to submit any fresh evidence to the Liaison Committee as soon as possible.

12. The Liaison Committee should be requested to review the mixed fisheries only at intervals of three years but the Contracting States should be requested to continue to submit annual reports on the state of their mixed fisheries.

13. The Infractions Committee should be requested to consider how the intensity of infraction can best be reflected in the statistics to report to the Commission at its next meeting.

14. The budget for the year ending June 30, 1966, should be £4.1 million pounds sterling (US\$11.5 million).

15. J.S.W. Henshaw (UK) should be appointed Secretary in place of A.K.H. Atkinson (UK), resigned.

16. The next (fourth) NEAFC meeting should be held in Edinburgh, Scotland, May 11-13, 1966. (Regional Fisheries Attache for

Europe, United States Embassy, Copenhagen, June 2, 1965.)

Note: See Commercial Fisheries Review, April 1965 p. 43; and August 1964 p. 52.

TRADE PROTOCOL

SOVIET-NORWEGIAN PACT PROVIDES FOR EXCHANGE OF FISHERY PRODUCTS:

The Soviet Union and Norway signed a 3-year Trade Protocol in Oslo on January 29, 1965. The Protocol provides for an annual export to the Soviet Union of 5,000 metric tons of frozen herring and herring fillets, 10,000 tons of frozen fish and fish fillets, and 5,000 tons of salted herring in 1965, 1966, and 1967. In addition, the Soviets will import unspecified amounts of Norwegian canned fishery products and fishing equipment.

Soviet fishery exports to Norway will consist entirely of canned king crab in the amount of 3,400 cases for each of those three years.

The Soviets agreed to accept the delivery of 5,000 tons of salted winter herring only after prolonged negotiations. The 1964 Norwegian-Soviet trade agreement provided for the delivery of 15,000 tons of salted herring to the U.S.S.R. but, because of the poor quality of 1964 Norwegian herring catches, only about 5,000 tons were actually sold. The Soviets cited the Norwegian failure to fulfill the 1964 delivery as the reason for reducing the 1965 quota.



Australia

TUNA CATCH DOWN IN 1965:

The total Australian tuna catch for 1965 was 7,525 tons, compared with the 1964 record of 8,978 tons.

Two vessels, the Ekalta and the Caroline Star, surveyed new fishing areas to the south-east of Port Lincoln as far as Portland. Their survey was made after spiny lobster fishing vessels reported tuna in the area.

In the coming 1966 season, the largest wooden fishing vessel to be built in Australia is expected to enter the tuna fishery. Under construction at a Birkenhead shipyard, the 87-foot tuna vessel is expected to cost A£85,000 (US\$190,400).

Australia (Contd.):

The 1965 South Australian tunafishing season ended in May with a total catch of 5,215 short tons, 848 tons less than in the 1964 season. The catch for April was 1,413 tons, but tapered off in the first two weeks in May when only 50 tons were landed.

As of April 15, the total tuna catch off South Australia during the 1965 season amounted to 4,706 short tons, an increase of 333 tons over the catch during the same period of the 1964 season.

In the last 2 weeks in March 1965, the South Australian tuna fleet of 22 vessels caught 1,226 tons of bluefin tuna--a record for any 2-week period since the fishery began in 1952. In February-March 1965, one of the top vessels caught 350 tons of tuna.

Operations this year have been concentrated on areas off Neptune and Rocky Islands, Coffin Bay, and Pearson Island. The Tacoma in March explored grounds farther to the west and returned after 7 days with 44 tons of tuna aboard. The Degei worked south off the Continental Shelf and caught 53 tons.

Rough weather in March and early April restricted operations by the three vessels engaged in the search for tuna on the eastern and southern coasts of Tasmania.

While searching for tuna off Tasmania, the Australian research vessel Marelda tagged 80 bluefin in a 2-week period. (Australian Fisheries Newsletter, June 1965; May 1965.)

Note: See Commercial Fisheries Review, June 1965 p. 36, and April 1965 p. 60.

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RESULTS OF TASMANIAN TUNA SURVEY NOT UP TO EXPECTATIONS:

A progress report on operations during the first 3 months of the Tasmanian tuna survey, issued after a meeting in Hobart of the joint committee organizing the survey, said that results so far had not been particularly encouraging.

The survey in eastern Tasmanian waters, financed jointly by the Commonwealth Government from the Fisheries Development Trust Fund and the Tasmanian State Government, began on February 1, 1965. Two chartered tuna vessels and an airplane were used in an

attempt to assess the prospects of developing a commercial tuna fishery in Tasmanian waters by the pole-and-live-bait method of fishing.

The weather was not particularly favorable for most of the period and the hours steamed by the vessels was slightly below expectation. Aerial spotting was conducted as planned and the research vessel Marelda of the Commonwealth Scientific and Industrial Research Organization (CSIRO) also operated as planned, collecting hydrographic information.

Sightings of bluefin tuna in the first 3 months were not extensive enough to justify commercial operations. But quantities of striped tuna, sufficiently large to encourage gill-net fishing were sighted.

Officers of the Division of Fisheries and Oceanography of CSIRO, who are responsible for the technical direction of the survey, advised that the results of the survey must be examined in conjunction with environmental conditions found.

The 65° F. isotherm did not advance further south than Cape Barron and it was only in that region that bluefin tuna were poled. All bluefin tuna taken further south were caught on trolling lines. This pattern of behavior is consistent with bluefin behavior in other areas and indicates that a bluefin tuna fishery in eastern Tasmanian waters would be regulated by the annual intrusion of warmer water from the north in summer. The depth of this intrusion varies from year to year.

Since the report was issued, a Victorian shark fisherman reported passing through shoals of tuna off Sandy Cape, on the West Coast of Tasmania. An aerial search under good conditions found only a dozen bluefin tuna in the area. Acres of striped tuna were seen in Bass Strait, off Flinders Island.

A spotting airplane in mid-May spotted a number of schools of bluefin and striped tuna off the southern coast of the island, and some were estimated to contain 5 tons of fish. However, the tuna were feeding, and appeared only briefly on the surface and could not be poled. (Australian Fisheries Newsletter, June 1965.)

Note: See Commercial Fisheries Review, April 1965 p. 51.

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Australia (Contd.):

NEW SMOKED TUNA
PRODUCT INTRODUCED:

A new fishery product--smoked pressed tuna--is being marketed in Australia by the South Australian Fishermen's Cooperative.

The cooked smoked tuna will be available as a 5-pound loaf, or in slices, and is expected to sell at retail for about 8½ Australian shillings (about 95 U. S. cents) a pound. Fresh and chilled it can be used for sandwiches, with salads, and with smorgasbords. (Australian Fisheries Newsletter, June 1965.)

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SCALLOP AND SHRIMP
FISHERY TRENDS, EARLY 1965:

Scallops: During the 9-months period ending March 31, 1965, scallop landings in the State of Victoria amounted to 149,000 bags with a total ex-vessel value of A£245,699 (US\$546,680). In March 1965, there were 51 vessels fishing for scallops off Victoria. In April 1965, prices for scallop meats reached 6s. 6d. (27.5 U. S. cents a pound), the highest level of the 1964/65 season which began July, 1964.

In mid-May 1965 in the State of Tasmania, 10 vessels were fishing on the east coast, and catches of up to 60 bags of scallops a day were reported from the Bicheno area.

Shrimp: In Western Australia, it has been reported that the number of vessels to be licensed to fish for shrimp in Exmouth Gulf will be limited to 15 during 1965 and 1966. (Australian Fisheries Newsletter, June 1965.)

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FISHERY PRODUCTS EXPORTS
IN FISCAL YEAR 1964/65:

If trends for the first 9 months of fiscal year 1964/65 (July 1964 to June 1965) were to continue, Australian marine exports for that year could total A£10 million (US\$22.4 million) for the first time.

Trends in Australian Marine Export Markets published by the Fisheries Branch of the Australian Department of Primary Industry showed that for the 9 months ended March 31, 1965, exports were valued at \$15.2 million, an increase of 23.1 percent as compared with the same period in 1963/64.

Frozen spiny lobster tails remain the most valuable item; exports for the 9 months being valued at \$9.3 million compared with \$8.4 million in the corresponding period in 1963/64. The March 1965 exports valued at \$1.9 million were nearly double those for March 1964.

The total quantity of spiny lobster tails exported for the 9 months ended March 31, 1965, were 4.8 million pounds as compared with 6.4 million pounds in the same period in 1963/64, but the drop in quantity was more than compensated for by record prices prevailing in the United States market. Prices paid in New York City in March 1965 for 10-12 oz. Australian spiny lobster tails ranged from \$2.40 to \$2.42 a pound, compared with \$1.70 to \$1.75 in the same month of 1964.

Australia's shrimp exports for March 1965 were at their highest level since September 1964. Most of the shrimp exports during the month went to South Africa and Japan. A total of 1.8 million pounds valued at \$1.6 million was exported in the 9 months ended March 31, 1965, compared with 771,000 pounds valued at \$759,000 for the same period in 1963/64.

About 39,000 pounds of tuna valued at \$4,500 was exported to Japan and Italy during March 1965, bringing the total tuna exports for the 9 months ended March 31, 1965, to 776,000 pounds valued at \$105,000.

Australia's exports of scallops in the first 9 months of fiscal year 1964/65 totaled 1.4 million pounds valued at about \$800,000. Of that total, about 1 million pounds valued at close to \$600,000 went to France, with shipments also to the United States market. (Australian Fisheries Newsletter, June 1965.)

Notes: (1) Values converted at rate of A£1 equals US\$2.24.

(2) See Commercial Fisheries Review, March 1965 p. 67, and January 1965 p. 63.



Bulgaria

ATLANTIC FISHERIES
EXPANSION PLANNED:

The Bulgarian Government has authorized the construction of a new fishing port and fish-processing plant at Burgas, on the Black Sea. The port will be the first to service the Bulgarian high-seas fishing fleet which is be-

Bulgaria (Contd.):

ing organized through domestic construction and purchases in the U.S.S.R. The construction of a 310-meter (1,017-foot) wharf was begun in January 1965 after East German naval specialists dredged the adjacent Bay of Burgas to accommodate vessels having a draft of up to 9 meters (29.5 feet).

Adjoining the new fishing port will be a fish-processing plant capable of producing 13,000 metric tons of fishery products annually (10,000 tons of canned, 1,000 tons of smoked, 1,000 tons of salted, and 1,000 tons of semi-finished fishery products). The new processing plant will be the only one of its kind in Bulgaria; its output will be marketed domestically.

A cold-storage warehouse with a capacity of 4,000 tons of fish will also be located near the Burgas fishing port, which is scheduled to become fully operational at the end of 1966.

Most of the machinery and equipment for both the fishing port and the fish-processing plant will be supplied by the Soviet Union under the U.S.S.R.-Bulgarian aid agreement of January 24, 1964. The agreement also provides for the delivery to Bulgaria of 20 large stern factory trawlers and 4 refrigerated fish transport vessels by 1970. The Soviet Union has already delivered to Bulgaria the Tropik-class trawlers Feniks and Albatross under long-term credits provided by the aid agreement. In return for Soviet aid, the Bulgarians will begin constructing 300-gross-ton fishing trawlers for the U.S.S.R. (120 such vessels are to be delivered by 1970).

Plans call for the proposed Bulgarian fishing fleet of 20 factory stern trawlers to remain on the fishing grounds for 3 to 6 months, catching and processing 25 to 30 tons of fish daily. They will be serviced about every 2 weeks by a refrigerated carrier which will transport the finished and semifinished fishery products to Burgas. This is essentially the system of operations employed by the U.S.S.R. in her distant fisheries. The Bulgarians will first try to develop West African operations, but as more vessels are obtained, trips to Icelandic and Northwest Atlantic grounds are planned. Later, fishing may be expanded into the Indian Ocean, but this will depend to a great extent on the success the

Soviet fishermen have there. By 1980, about 1,600 Bulgarians may be employed in high-seas fisheries.

In the past, Bulgaria has limited its fisheries mostly to fresh waters (the Danube River, lakes and ponds) and to the Black Sea where her fisheries are regulated by the Joint Black Sea Fisheries Commission composed of the U.S.S.R., Rumania, and Bulgaria. Less favorably situated for Black Sea fishing than the Soviet Union or Turkey, Bulgaria began planning in 1962 for a high-seas fishery with Soviet assistance. The plans were spelled out at the Eighth Congress of the Bulgarian Communist Party in 1962 and approved by the Second Session of the Fourth National Assembly. The Bulgarian goal for the fishery catch of 1980 was set at 100,000 tons, or 9 times the 1962 fishery catch of 10,000 tons.

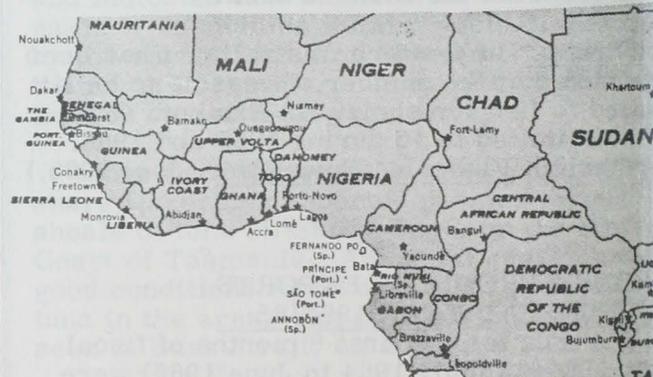
Note: See Commercial Fisheries Review, April 1964 p. 51.



Republic of Cameroon

FISHERY TRENDS, 1964:

Fishery landings in Cameroon (West Africa) in 1964 by her fleet of 14 trawlers amounted to 8,000 metric tons. About 1,700 persons were engaged in that country's fishing industry, with wages paid for the year totaling some 170 million CFA francs (US\$700,000).



The Cameroon fishing industry was estimated to have spent \$1 million in 1964 for ice, boxes, fuel, and other provisions in connection with its fisheries. A small modern new fishing port was scheduled to be ready at Douala by early summer 1965.



Chile

FISH MEAL INDUSTRY CONTINUES
TO SUFFER FROM ANCHOVETA
SHORTAGE IN APRIL 1965:

Poor fishing in April 1965 added yet another month to the prolonged anchoveta shortage which has left the \$75 million Chilean fish meal industry in a serious financial crisis. Six plants are reported closed and others are closing (some continue to fish, but pool the catch for processing in one plant to reduce unit costs). The Chilean Fisheries Development Institute reports that fish meal production has dropped to about 10 percent of installed capacity. The number of fish meal industry workers thrown out of work in Tarapacá Province is estimated at 3,000.

On May 11, 1965, the Production Development Corporation of Chile (CORFO) granted its Executive Vice President broad authority to take a variety of measures to: (1) alleviate the current financial burdens on the fish meal companies; (2) promote a more efficient industry; and (3) foster other development projects which would offset growing unemployment in fisheries. Details concerning the program are expected to be announced soon.

Unfortunately relief measures can't supply the missing anchoveta. (United States Embassy, Santiago, May 15, 1965.)

* * * * *

SHELLFISH INDUSTRY SHOWS PROMISE:

With an anchoveta shortage plaguing the fish reduction industry in northern Chile, interest is beginning to turn to the less developed fisheries off the central and southern coasts of the country. The shellfish industry, in particular, is attracting attention.

A rise in exports is expected because of expanded output of frozen shrimp (a deep-water species) and langostino (a salt-water crayfish classified in some foreign markets as "baby rock lobster-type meat"). Annual export earnings from that trade might reach \$5 million within 3 years. In addition, the domestic market for fresh and frozen shrimp and langostino is largely untapped. Another possibility for the Chilean shellfish industry is the development of an export market for tiny lobsters.

Shrimp and Langostino: Official Chilean data show a 1963 catch of 3,634 metric tons

of shrimp and 9,248 tons of langostino, as compared with 4,346 tons of shrimp and 7,986 tons of langostino in 1962. Preliminary data show some increase in 1964 landings.

Ex-vessel prices of shrimp with heads on were up sharply in 1964, ranging from escudo 3.0 to 3.6 for a box of 16 kilos (about 2.5 to 3.0 U. S. cents a pound). That was an increase of about 60 percent over the 1963 prices. In 1964, langostino (with heads on) ex-vessel prices were escudo 2.0 to 2.2 for a box of 14 kilos (1.9 to 2.1 U. S. cents a pound), as compared with 1963 prices ranging from escudo 1.2 to 1.5 (1.1 to 1.4 U. S. cents a pound).

The recovery rate of shrimp meat is about 16 percent of landings, while langostino yields 8 to 10 percent.

Chile produced 925 tons of frozen shrimp and 776 tons of frozen langostino in 1964, as compared with 553 tons and 674 tons, respectively, in 1963. Canned output of shrimp and langostino combined totaled 88 tons in 1964 and 83 tons in 1963.

About 85 percent of Chile's frozen shrimp and langostino output is exported. Frozen shrimp exports in 1964 totaled 774 tons with a value of US\$1.1 million. The United Kingdom was the leading buyer, followed by the United States and Germany. Shipments to the European market where higher prices prevail have been encouraged by the Chilean Government through its export licensing system.

Although exact data on frozen langostino exports are not available, it is known that about 85 percent of all shipments go to the United States.

Sales of canned shrimp and langostino depend mainly on the domestic market in Chile.

Shrimp and langostino are fished commercially off Chile from Coquimbo to Talcahuano by trawlers at depths up to 500 fathoms. Shrimp are captured the year round; langostino from March until mid-December. A larger shrimp is being captured off Constitucion than that taken to the north of San Antonio. Experimental fishing indicates that shrimp can be fished along the coast to the Straits of Magellan, but further study is necessary to determine the feasibility of commercial exploitation in the southern waters.

Chile (Contd.):

At the close of 1964 there were at least 6 plants freezing shrimp and langostino in Chile, and 2 other freezing plants were under construction. Other fishing companies were thinking of entering the field.

Chilean shrimp are not generally sorted by size. All shrimp and langostino are cooked and peeled before freezing, but only the langostino are deveined. The pack consists of individually frozen tails as well as the block-frozen product. Processing of individually frozen tails will increase with the completion of several blast-freezing tunnels now under construction. Most firms now use plate freezers.

Spiny Lobster: One of the new shrimp-freezing plants being built in San Antonio, Chile, is also interested in the potential of Chile's spiny lobster resources--now exploited only on a limited scale and almost entirely for the domestic market. If exploratory fishing justifies an investment, the company (which is predominately foreign owned) could place a well-equipped fleet in spiny lobster fishing. Its catch would most likely be processed for the export market. (United States Embassy, Santiago, May 25, 1965.)



Denmark

EXPORTS OF FISHERY PRODUCTS AND BYPRODUCTS, JANUARY-MARCH 1965:

Exports to All Countries: Denmark's total exports of fishery products and byproducts in January-March 1965 were up 7 percent in quantity and 19 percent in value as compared with the same period in 1964. Exports were up for all major items in quantity and value except frozen fishery products. Despite the lower exports of frozen fishery products in the first quarter of 1965, the value rose 14 percent from the same quarter in 1964 due to increased exports of cod as against a drop in herring exports. With higher world prices for fish meal, exports of that product were up 41 percent in quantity and 64 percent in value.

Exports to United States: The value of Danish fishery products exports to the United States in the first quarter of 1965 was higher than

in the same period of 1964. After a sharp drop from 1963 to 1964, Danish shipments of frozen cod blocks to the United States market made a comeback. Exports of canned herring and sprat also were higher probably because of the smaller pack of canned Maine sardines.

Danish Exports of Fishery Products, January-March 1964 and 1965

Products	January-March			
	1/1965		1964	
	Qty.	Value	Qty.	Value
	Metric Tons	US\$ 1,000	Metric Tons	US\$ 1,000
To all countries:				
Fresh products	55,127	13,823	53,829	12,323
Frozen products	11,422	6,722	12,435	5,864
Processed fishery products	1,998	1,499	3,998	2,713
Fish meal & solubles, etc. 2/	18,032	2,753	12,762	1,673
Canned products:				
Fish	1,711	959	3/	3/
Shellfish	410	488	-	-
Semipreserved products . .	733	716	3/	3/
Total	89,433	26,960	83,024	22,573
Fish oil	12,405	2,405	3/	3/
To United States:				
Fresh & frozen products:				
Fillets:				
Cod	1,508	873	1,016	458
Other fillets	4	4	36	23
Pond trout	84	86	104	117
Norway lobster	27	85	65	177
Other	15	16	29	23
Cured products (smkd. & sltd)	6	5	9	6
Canned products:				
Herring & sprat	242	150	161	106
Shrimp	19	27	41	57
Other	34	20	19	15
Semipreserved products . . .	9	13	4	7
Fish solubles	150	22	-	-
Total	2,098	1,301	1,484	989

1/Preliminary.

2/Includes ensilage and trout food.

3/Not shown.

Notes: (1) Values reported in Danish kroner and converted to U. S. dollars; 1 kroner equals \$0.145.

(2) Fish oil data not shown because they are collected by another Ministry.

Source: Danish Ministry of Fisheries.

Exports to Other Markets: In January-March 1965, exports to European Common Market countries were valued at US\$11.5 million, an 11-percent increase from the same period in 1964. Shipments to European Free Trade Association (EFTA) countries in the first quarter of 1965 were also valued at \$11.5 million, having increased 31 percent from 1964. West Germany was the leading buyer of Danish fishery products in the first quarter of 1965 with receipts valued at \$7.8 million, followed by the United Kingdom with a value of \$4.6 million. Shipments to Sweden during the period were valued at \$4.1 million. Those countries ranked in the same order as in the previous year as buyers of Danish fishery products and byproducts. (Regional Fish-

Denmark (Contd.):

Consular Attaché for Europe, United States Embassy, Copenhagen, May 26, 1965.)



Ecuador

TUNA LANDINGS AND EXPORTS, 1964:

Ecuadorian landings of tuna and bonito dropped from a total of 13,100 metric tons in 1963 to 9,800 tons in 1964, according to preliminary data from the Ecuadoran National Fisheries Institute. Bad weather was said to be one of the causes of the decline.

In spite of the drop in landings, Ecuadoran exports of canned tuna increased. A total of 1,877 tons of canned tuna valued at US\$1.19 million was shipped in 1964, compared with 1,586 tons valued at \$976,000 in 1963. All but about 6 percent of the canned tuna exports were for the United States market. Local consumption of canned tuna in Ecuador in 1964 reached 212,000 cases (24 pounds each), only slightly less than the amount exported. Local consumption in 1965 is forecast at about the same level.

In 1964, exports of whole frozen tuna totaled 3,103 tons valued at about \$494,000 as compared with 2,046 tons worth \$320,000 in 1963. The 1963 exports also included 1,325 tons of headed and gutted frozen tuna valued at \$220,000. Comparable data on 1964 exports of headed and gutted tuna were not available. As in the case of canned tuna, the United States is the leading market for Ecuadoran exports of frozen tuna.

The Ecuadoran tuna fleet increased by 7 vessels in 1964 to a total of 51 vessels. Most of these have a limited range and concentrate their activity around the port of Manta and the Santa Elena peninsula when the tuna are running. As of summer 1965, 4 purse-seine vessels were operating, of which 3 (with capacities of 50 to 80 tons each) belonged to a large cannery (operated by U. S. interests) at Manta. (United States Consul, Guayaquil, June 18, 1965.)

SHRIMP LANDINGS AND EXPORTS, 1964:

Ecuador's annual shrimp landings have leveled off at about 5,000 metric tons (live-

weight basis) in recent years. Most of those landings are frozen for export, mainly to the United States.

Ecuador's exports of frozen shrimp tails in 1964 amounted to 2,441 tons valued at US\$1.7 million, compared with 2,453 tons valued at \$1.6 million in 1963. Domestic annual consumption is estimated at about 350 tons (live-weight basis).

There were no large investments in Ecuador's shrimp industry in 1964. The shrimp fleet currently comprises 160 vessels, 24 of which were built in 1963, the most active construction year since 1958 when 31 vessels were launched. Improved refrigeration and net handling equipment are being installed on some of the vessels, but a large part of the shrimp fleet still lacks the gear and refrigeration equipment which would permit fishing off the coast in waters of 30 fathoms or more. (United States Consul, Guayaquil, June 18, 1965.)

SPINY LOBSTER LANDINGS AND EXPORTS, 1964:

Ecuador's exports of frozen lobster tails have risen consistently in recent years, but declined somewhat in 1964 to 80 metric tons valued at US\$130,000, compared to 92 tons worth \$152,000 in 1963. The catch (live-weight basis) fell off from 400 tons in 1963 to 300 tons in 1964, due in part to the lack of organization in the industry. Although one firm has been experimenting with traps, which have the disadvantage of being easily stolen, lobsters are mostly caught by net and hand. Preliminary statistics show that live lobster exports climbed to 15 tons in 1964 valued at \$7,500, compared to only 4 tons in 1963 worth \$1,900. Almost all lobster exports go to the United States. (United States Consul, Guayaquil, June 18, 1965.)



El Salvador

EXPORT TAX ON SHRIMP BEING STUDIED:

Possible modifications to the export tax levied on shrimp by El Salvador are being studied by a committee made up of officials of the Salvadoran Ministries of Economy and Finance. The shrimp export tax is now 6 U.S.

El Salvador (Contd.):

cents a pound regardless of the value of the shrimp. Such a tax tends to limit shrimp exports to the United States to the larger sizes. Salvadoran exporters find it unprofitable to ship smaller and less costly shrimp because of the high proportion of the sales price absorbed by the export tax. (United States Embassy, San Salvador, May 21, 1965.)



Guatemala

FROZEN SHRIMP EXPORTS, 1964:

Guatemala's exports of frozen shrimp in 1964 amounted to 2.9 million pounds valued at slightly more than US\$1 million. The greater part went to the United States which received 2.2 million pounds.

In January-March 1965, United States imports of frozen shrimp from that country totaled 498,000 pounds as against 631,000 pounds in the same period a year earlier. (United States Embassy, Guatemala, May 20, 1965.)



Iceland

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

Iceland's stocks of frozen groundfish (fillets) for export to the United States totaled 7,100 metric tons as of April 30, 1965.

United States imports of frozen groundfish fillets from Iceland in the year 1964 totaled

Icelandic Export Stocks ^{1/} of Principal Fishery Products, April 30, 1965			
Item	Quantity	Value	
		Metric Tons	US\$ 1,000
Groundfish, frozen:			
For export to:			
U. S.	7,100	156.2	3,627.5
Other countries	4,552	78.7	1,827.7
Stockfish	4,500	126.0	2,926.1
Herring:			
Salted	2/	2.1	48.8
Frozen	1,174	6.7	155.6
Industrial products:			
Fish meal:			
Herring	1,147	8.3	192.7
Other fish	9,519	48.4	1,124.0
Herring oil	14,783	122.7	2,849.5

1/Includes only stocks intended for export.
2/Not available.
Note: Icelandic kronur 43.06 equal US\$1.00.

17,812 metric tons of groundfish blocks and slabs, 4,669 tons of cod fillets, 2,791 tons of haddock fillets, and 548 tons of ocean perch fillets. (United States Embassy, Reykjavik, June 2, 1965.)

FISHERY LANDINGS BY PRINCIPAL SPECIES, 1963-64:

Species	Jan.-Nov.		Year Totals	
	1964	1963	1964	1/1963
. (Metric Tons)				
Cod	275,189	226,508	280,703	240,068
Haddock	53,134	46,850	56,689	51,606
Saithe	21,223	13,722	21,793	14,712
Ling	4,699	5,318	4,990	5,601
Wolfish (catfish)	8,218	17,077	8,289	17,463
Cusk	3,225	5,473	3,542	5,849
Ocean perch	26,757	31,718	27,707	35,373
Halibut	1,151	1,112	1,205	1,232
Herring	516,733	383,801	544,396	395,166
Shrimp	497	603	542	649
Capelin	8,640	1,077	8,640	1,077
Lobster	2,628	5,177	2,631	5,179
Other	10,097	7,375	10,387	7,994
Total	932,191	745,811	971,514	781,969

1/Revised.
Note: Except for herring which are landed round, all fish are drawn weight.

UTILIZATION OF FISHERY LANDINGS, 1963-64:

How Utilized	Jan.-Nov.		Year Totals	
	1964	1963	1964	1/1963
. (Metric Tons)				
Herring^{2/}:				
Canning	218	296	270	296
Oil and meal	436,057	271,489	460,409	274,704
Freezing	24,703	32,260	26,420	37,721
Salting	55,755	73,955	57,298	76,641
Fresh on ice	-	5,802	-	5,802
Groundfish^{3/} for:				
Fresh on ice	35,945	34,375	39,892	40,171
Freezing and filleting	178,659	162,496	183,849	174,481
Salting	88,907	70,527	89,685	72,451
Stockfish (dried unsalted)	83,346	70,983	84,119	74,251
Canning	27	47	27	47
Oil and meal	3,548	3,321	3,687	3,571
Capelin for:				
Freezing	133	188	133	188
Oil and meal	8,507	889	8,507	889
Shrimp for:				
Freezing	299	475	344	507
Canning	198	128	198	141
Lobster for:				
Fresh on ice	-	2	-	2
Freezing	2,628	5,175	2,630	5,177
Home consumption	13,261	13,403	14,046	14,907
Total production	932,191	745,811	971,514	781,969

1/Revised.
2/Whole fish.
3/Drawn fish.
Source: Aegir, March 1 and 15, 1965.



India

JAPANESE FISHING FIRM PLANS JOINT SHRIMP COMPANY IN INDIA:

A Japanese fishing company, after surveying shrimp fishing prospects in India, is reported to have started negotiations to establish a joint shrimp fishing and processing enterprise in that country. At present, one Japanese company is engaged in shrimp fishing in India (at Cochin) and is said to be doing well. (Suisancho Nippo, June 24, 1965.)



Japan

FROZEN TUNA EXPORTS TO U. S. AND PUERTO RICO, JANUARY-MARCH 1965 AND YEAR 1964:

Japan's exports of frozen tuna to the United States and Puerto Rico in March 1965 were

down 46.1 percent in quantity and 45.1 percent in value from the previous month when they totaled 10,050 short tons. As compared with January 1965, the March exports were lower by 24.5 percent and 30.0 percent, respectively.

The March exports were about equally divided in quantity between the United States and Puerto Rico, with albacore tuna accounting for 67 percent and yellowfin 32 percent. The remainder was mostly big-eyed tuna.

Albacore tuna accounted for 59.7 percent of Japan's total frozen tuna exports to the United States and Puerto Rico in 1964, and yellowfin 39.6 percent. The remainder was mostly big-eyed tuna. Of the total exports to the United States, albacore accounted for 57.3 percent and yellowfin 41.8 percent. Exports to Puerto Rico were made up of 63.0 percent albacore, with the remainder mostly yellowfin and some big-eyed tuna. (Fisheries At-

Table 1 - Japan's Exports of Frozen Tuna by Species to United States and Puerto Rico, January-March 1965

Species	1965						Total	
	March		February		January		Jan.-March 1965	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Short Tons	US\$1,000	Short Tons	US\$1,000	Short Tons	US\$1,000	Short Tons	US\$1,000
Spjack:								
United States	2	1	3	4	3	4	8	10
Puerto Rico	-	-	-	-	-	-	-	-
Total	2	1	3	4	3	4	8	10
Albacore:								
United States	1,270	383	4,170	1,183	3,454	1,173	8,894	2,739
Puerto Rico	2,335	634	4,069	1,113	2,395	659	8,799	2,406
Total	3,605	1,017	8,239	2,296	5,849	1,832	17,693	5,145
Yellowfin:								
United States	1,303	406	1,267	388	544	165	3,114	959
Puerto Rico	405	97	455	114	782	207	1,642	418
Total	1,708	503	1,722	502	1,326	372	4,756	1,377
Big-eyed:								
United States	98	24	30	4	-	-	128	28
Puerto Rico	5	1	56	11	-	-	61	12
Total	103	25	86	15	-	-	189	40
Total United States	2,673	814	5,470	1,579	4,001	1,342	12,144	3,736
Total Puerto Rico	2,745	732	4,580	1,238	3,177	866	10,502	2,836
Total	5,418	1,546	10,050	2,817	7,178	2,208	22,646	6,572

Source: Japan's Bureau of Customs.

Table 2 - Japan's Exports of Frozen Tuna by Species to United States and Puerto Rico, 1964

Species	United States		Puerto Rico		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
	Short Tons	US\$1,000	Short Tons	US\$1,000	Short Tons	US\$1,000
Albacore	35,987	11,413	29,138	9,261	65,125	20,674
Yellowfin	26,286	8,755	16,926	4,406	43,212	13,161
Big-eyed	539	115	199	42	738	157
Spjack	3	2	-	-	3	2
Yellowfin	3	1	-	-	3	1
Total	62,818	20,286	46,263	13,709	109,081	33,995

Source: Japan's Bureau of Customs.

Japan (Contd.):

tache, United States Embassy, Tokyo, April 16 and May 28, 1965.)

* * * * *

FOURTH CANNED TUNA IN
BRINE SALE TO UNITED STATES:

The Japan Tuna Packers Association announced June 15, 1965, that it planned to offer for the fourth sale (June-July) 250,000 cases (performance quota 175,000 cases and adjustment quota 75,000 cases) of canned tuna in brine for export to the United States. The sale was to consist of 220,000 cases of white meat tuna (20 percent of which must be chunk style) and 30,000 cases of the light meat 4-lb. pack, including a small quantity of the 7-oz. and 3 $\frac{1}{4}$ -oz. pack. The Association set the shipping period deadline as July 15 and revealed that it was providing US\$110,000 for the summer promotion of the 220,000 cases of white meat tuna.

Subsequent buy tenders submitted by trading firms amounted to only 44,163 cases of the available adjustment quota. (Note: Firms which use their performance quota and wish to export additional quantities can dip into the adjustment quota.) The lack of buying interest shown by trading firms was said to reflect poor market conditions in the United States for Japanese tuna. (Suisancho Nippo, June 17, 1965; Kanzume Nippo, June 22, 1965.)

* * * * *

CANNED TUNA MARKET TRENDS:

A recent Japanese survey of U. S. canned tuna market conditions revealed that prices of U. S.-advertised brands advanced, while prices of Japanese name brands held firm. Despite this trend most of the 18 designated Japanese firms exporting canned tuna in brine to the United States were asking the Japan Canned Tuna Sales Company to reduce prices. The survey also revealed that on the third sale (offering of 350,000 cases) conducted by the Sales Company, the trading firms failed to completely use the full quantity of 105,000 cases offered under the 30-percent adjustment quota; whereas at the second sale (120,000 cases represented the adjustment quota) conducted in early May, the exporting firms submitted offers greatly exceeding (by nearly 90,000 cases) the quantity put up for sale by the Sales Company.

Observers in Japan viewed these developments as follows:

1. The price decline in the frozen albacore market since early this year has enabled U. S. packers in Puerto Rico to pack tuna at substantially lower costs, and they are using gains derived from this to promote sales of their advertised brands and reduce prices of private labels.

2. A great majority of the 18 Japanese exporting firms which do not handle name brands are being driven into a difficult situation by price cuts on private labels carried out by their U. S. competitors.

3. Under the new sales structure established by the Japan Canned Tuna Sales Company, whereby a large portion of the adjustment quota is allotted to trading firms submitting large buy orders, some firms handling small volume of exports have begun to force themselves to sell larger quantities so as to acquire a greater share of the adjustment quota. This practice has tended to further disrupt the market for Japanese "off" labels.

4. These developments are progressively ruining the position of Japanese name brand packs in the U. S. market. To maintain price it has become necessary to temporarily suspend efforts to expand the market for name brands.

5. In view of the situation wherein the majority of the 18 trading firms is seeking a price reduction at a time when the Sales Company is struggling with an excessive supply of canned tuna, many exporting firms have begun to withhold purchases on the assumption that the Sales Company may likely lower its price in the future. (Suisan Tsushin, May 24, 1965.)

Editor's Note: The situation with regard to the excessive supply of canned tuna mentioned in (5) above is not expected to improve due to the excellent catches of albacore made off Japan in the pole-and-line summer fishery. Japanese packers were actively buying fish available to them at very low prices, as low as US\$227 a short ton (as of May 27), ranging upwards to \$315 a ton. The fishery usually begins tapering off after early June and ends in July.

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apan (Contd.):

**CANNED TUNA PACK,
MARCH-APRIL 1965:**

Data compiled by the Shizuoka Packers Association reveal that in March and April 1965 49 member firms packed a total of 197,292 cases of tuna in oil and 285,351 cases of tuna in brine. Not included was canned skipjack, which totaled about 100,000 cases. Of the above, 109,012 cases of tuna in oil (55 percent) and 284,292 cases of tuna in brine (99 percent) were marked for export. (Kanzume Nippo, June 17, 1965.)

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**U.S. CONSUMER RESPONSE TO
JAPANESE SPECIALTY-PACK TUNA:**

A study in the New York area to determine consumer response to Japanese canned tuna packed in vegetable (health food) was recently made by the Japan External Trade Promotion Organization (JETRO). Results obtained from that study follow:

Component	Response	Percentage of Response
Appearance	Excellent	13
	Good	37
	Poor	1/50
Taste-flavor	Excellent	29
	Good	42
	Poor	2/29
Smell ^{3/}	Excellent	49
	Good	39
	Poor	12
Texture	Excellent	4/33
	Good	20
	Poor	5/36
Proportion vegetable to tuna	Just right	64
	Too much vegetable	35
	Too little "	1
Importance as health food	Very important	6/29
	Somewhat important	36
	Not important	35
Desire to buy	Yes	7/39
	No	61

Contents appeared spoiled; color too dark and lacked coloring; too oily; does not look like tuna pack.
Tasteless; too strongly flavored.
Half of samplers impressed by tuna flavor, other half by absence of tuna smell.
Soft and tender.
Too soft.
Low cholesterol content.
Of "yes" respondents, 48 percent were under 35 years of age. Most were impressed by unique flavor and said they expect to use the product for salad or casserole, and majority felt 35-40 cents a can was fair price.

Marketing people all showed negative response, saying that the product would not sell in the United States for reasons of taste, flavor, and quality. Further, almost all of them

thought the description of contents on the label unlawful. (Suisan Tsushin, May 31, 1965.)

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**SUMMER ALBACORE POLE-
AND-LINE FISHERY TRENDS:**

The Japanese summer albacore pole-and-line fishery continued excellent into June 1965, with landings of over 1,000 metric tons almost daily. On June 8, a total of 1,604 metric tons was landed at the three Japanese ports of Yaizu, Shimizu, and Misaki. As of June 10, a total of 33,000 tons were landed at those ports. Ex-vessel prices at Yaizu on June 8 ranged from 93-100 yen a kilogram (US\$234-252 a short ton) for medium (18-24 lbs.) and 77-96 yen a kilogram (\$194-242 a short ton) for under 18-pound fish.

On June 14, a total of 660 metric tons of pole-and-line caught albacore tuna was landed at the Japanese tuna ports of Yaizu and Shimizu. As of that date the total summer fishery catch exceeded 40,000 tons. However, it was reported that about mid-June the catch had fallen off rapidly and unless fishing improved the catch of 50,000 tons forecast earlier might not be reached. Ex-vessel prices at Yaizu on June 14 were 94-100 yen a kilogram (US\$237-252 a short ton) for medium and large fish (over 18 pounds) and 85-95 yen a kilogram (\$214-239 a short ton) for under 18-pound fish. On June 17, ex-vessel prices at Yaizu were up and ranged from 104-117 yen a kilogram (US\$262-295 a short ton) for albacore over 18 pounds and 99-102 yen a kilogram (\$250-257 a short ton) for under 18-pound fish. Compared to early June, ex-vessel prices were up.

The price of frozen round albacore tuna for export to the United States also increased in mid-June from \$270 to \$275 a short ton f.o.b. Japan. The export price was expected to go up to \$280 a ton.

Fishing was excellent in May also, with 23,803 tons landed at the port of Yaizu May 1-15. Including April landings of 4,684 tons, landings at that port April 1-May 15, 1965, totaled 28,487 metric tons. Albacore were landed also at such ports as Shimizu, Misaki, and Nakaminato.

The heavy landings caused a drop in ex-vessel prices to as low as 85 yen a kilogram (US\$214 a short ton) on May 12. High for that day was 120 yen a kilogram (\$302 a short ton).

Japan (Contd.):

Data published by the Fisheries Agency show April-May 1965 Yaizu landings as the highest ever recorded for that port since 1957 (data prior to 1957 unavailable). A total catch of 50,000 metric tons or more had been forecast for the summer albacore fishery.

Export prices declined, from US\$365 a short ton c. & f. in April to \$345 a ton near mid-May. (Suisan Keizai Shimbun, May 21, June 9, 15, and 18, 1965; Suisan Tushin, June 19, 1965; Fisheries Agency 1965 Fishing Condition Report Nos. 8-10, and 13.)

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ATLANTIC ALBACORE TUNA FISHING AND MARKET TRENDS, MID-MAY 1965:

The Japanese Atlantic albacore tuna fishery commenced in mid-May 1965, somewhat earlier than usual. Fishing was reported good and daily more vessels were switching to that fishery.

The export price of frozen round Atlantic albacore tuna transhipped to Puerto Rico dropped from the late May price of US\$305 a short ton f.o.b. port of shipment to \$295 a ton in mid-June. (Suisan Tsushin, June 19, 1965.)

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TUNA INDUSTRY MEMBERS DISCUSS ALBACORE MARKET STABILIZATION:

Members of the Japanese tuna industry representing producers, freezers, packers, and exporters held a meeting at Tokyo on June 16, 1965, to discuss measures to stabilize the albacore tuna export market. It was acknowledged at the meeting that the stabilization of albacore prices was of common benefit to all, but the discussions did not proceed to a point where a study of concrete plans to stabilize prices could be undertaken. Further, no new acceptable plan that could be implemented to cope with the immediate problem resulting from the excellent catches made by the pole-and-line albacore fishery was presented. The consensus of the meeting was that the albacore problem should be examined in its entirety.

In an exchange of views among members of the Atlantic Committee, the majority agreed that Atlantic albacore transshipments

should be held to the 36,000 ton-per-year level. However, due to conflict of interests and to technical difficulties involved in implementing such a quota, the submission of a definite allocation plan was deferred to the next meeting. (Suisan Keizai Shimbun, June 18, 1965.)

* * * * *

TUNA MOTHERSHIP FLEET CATCH IN SOUTH PACIFIC:

The catcher vessels of Taiyo Fishing Company's tuna mothership Yuyo Maru (5,043 gross tons), which commenced fishing in the South Pacific near the Fiji Islands in late May 1965, were reported to be averaging two tons per day. As of May 28, the tuna mothership fleet had landed a total of 426 metric tons of fish, consisting of 46 percent yellowfin, 19 percent albacore, 10 percent other tuna species, 17 percent spearfish, and 8 percent miscellaneous fish. (Minato Shimbun, June 3, 1965.)

* * * * *

TUNA PURSE-SEINER OPERATION OFF GUAM CANCELLED:

A large Japanese fishing company, which was earlier reported to be planning to dispatch the tuna purse seiner Kenyo Maru (240 gross tons) to survey the waters off Guam in October 1965, was reported to have cancelled its plans. The Kenyo Maru, a converted purse seiner, is the first Japanese fishing vessel to be equipped with a power block (in 1962). (Shin Suisan Shimbun Sokuho, June 22, 1965.)

* * * * *

FRESH BLUEFIN TUNA COMMANDS HIGH PRICE:

On June 7, 1965, two metric tons of fresh trap-caught bluefin tuna were landed at Kesenuma, Japan. They brought prices ranging from 13,000-15,000 yen per 10 kilograms (US\$3,280-3,780 a short ton). The tuna, which averaged about 220 pounds in size, were sold to the fresh fish trade. (Nihon Suisan Shimbun, June 14, 1965.)

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SOVIETS OFFER EXCHANGE OF TUNA FISHING DATA:

The Soviet Union has offered to exchange during 1965 tuna data with Japan. The Soviet offer was made in response to the proposal

Japan (Contd.):

initiated in 1963 by the Misaki Fisheries Experimental Station in Kanagawa Prefecture at the two countries exchange tuna fishing information. Following receipt of the Soviet offer, the Misaki Station forwarded to the Soviet Government tuna data for 1964. Exchange data from the Soviet Union had not yet been received as of early summer but they were expected to reveal the extent of Soviet interest in, and the type of gear and methods used in tuna fishing. (Suisan Keizai Shimbun, July 29, 1965.)

* * * * *

SALMON FISHING SEASON IN NORTH PACIFIC AREA B SHORTENED DUE TO GOOD FISHING:

Data compiled by the Japanese Fisheries Agency revealed that the salmon catch in North Pacific Area B (south of 45° N. latitude), including the Japan Sea, was better than anticipated, totaling about 44,000 metric tons as of June 18, 1965. Production quota for Area B was 59,000 tons. As a result, the Agency announced that it would close the long-line fishery one week earlier than planned, on June 23 instead of June 30. The Agency also revealed that it would shorten by one week the period in which permits would be issued to gill-net fishing vessels licensed to operate in Area A (between 45° N.-48° N. latitudes). This measure, in effect, would compel gill-netters to terminate their operations in Area B earlier so as to be able to return to port in sufficient time to pick up their permits to fish in Area A. The permit issuing period was changed from June 21-July 10 to June 21-July 11. (Suisan Keizai Shimbun, June 20, 1965.)

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PINK SALMON CATCH IN JAPAN SEA:

The Japanese pink salmon catch in the Japan Sea was estimated to total 3,000 metric tons as of May 31, 1965. The fishery closed on June 15. Catch quota for that fishery was 4,000 tons. (Minato Shimbun, June 12, 1965.)

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SALMON PRICE AND PACK TRENDS, MARCH-JUNE 1965:

The ex-vessel price of pink salmon landed by the Japan-based vessels operating in the North Pacific was holding at the high level of about 260 yen a kilogram (30.5 U.S. cents a

lb.) in mid-June 1965. The pack to that date of canned pink salmon for the export market was estimated at 100,000 cases, consisting of 85,000 cases of the ½-lb. pack and 15,000 cases of the ¼-lb. pack.

At the beginning of the packing season, the land-based packers agreed to provide special incentives for the pack of the ½-lb. can and to penalize for the packing of the ¼-lb. can so as to avoid the situation in 1964 when packers concentrated on putting up the smaller pack. This measure has resulted in making it more profitable to put up the ½-lb. size despite high ex-vessel prices. (Suisan Tsushin, June 21, 1965.)

* * * * *

CANNED SALMON EXPORT PRICES FOR 1965 SET:

The Japan Canned Salmon Sales Company, following a meeting on June 21, 1965, announced that it was setting the c.i.f. export price of canned red salmon for cases of 48 ½-lb. cans for shipment to Great Britain as follows: July shipment--155 shillings (US\$21.70); August-October shipment--156 shillings (\$21.84); November-December shipment--158 shillings (\$22.12). In 1964 the first shipment was sold for 153 shillings and 6 pence (\$21.49). Prices in 1964 averaged 155 shillings (\$21.70). (Suisan Tsushin, June 22, 1965.)

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FIRMS CONTRACT FOR EARLY DELIVERY OF CANNED SALMON TO GREAT BRITAIN:

Two Japanese fishing firms (which operate salmon factoryships) formally contracted to ship in late June 1965 a total of 200,000 cases of canned salmon to Great Britain. The firms plan to transship their products from the fishing grounds directly to Great Britain, thereby cutting down shipping time by 30 days. Under the old system whereby the factoryship-packed salmon were unloaded in Japan, inspected, reloaded, and then shipped, the trip took over 65 days. (Suisancho Nippo, June 5, 1965.)

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CANNED SALMON TO BE SHIPPED DIRECT TO GREAT BRITAIN FROM FISHING GROUNDS:

A large Japanese fishing company has chartered the cargo vessel Yumishima Maru (1,941 gross tons) for hauling direct from the fishing

Japan (Contd.):

grounds to Great Britain, 100,000 cases of canned salmon packed by its salmon mothership fleet operating in the North Pacific. The Yumishima Maru left Yokohama on June 10, 1965, to rendezvous with the salmon fleet.

Another fishing company also chartered a vessel to pick up 100,000 cases of salmon on the high seas for delivery to Great Britain. That cargo vessel was scheduled to leave Yokohama for the North Pacific around June 20. (Suisan Keizai Shimbun, June 17, 1965.)

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SALMON FISHERMEN NEGOTIATE NEW WAGE CONTRACT:

The Shioyama (Miyagi Prefecture) Chapter of the Japan Seamen's Union has concluded a new wage agreement with the Miyagi association representing owners of salmon catcher vessels engaged in the mothership-type salmon fishery. On the basis of this agreement, all of the chapters of the Seamen's Union in the northeastern prefectures, except Yamagata, have negotiated new wage contracts, as of May 17, 1965. The agreement sets the following pay scale:

Base Pay and Guaranteed Bonus:

Position	Base Pay		Minimum Guaranteed Bonus		Bonus Shares
	Yen	US\$	Yen	US\$	
Skipper-fishing captain	39,000	108.33	9,750	27.08	2.0
Fishing captain	36,000	100.00	9,000	25.00	2.0
Skipper, chief engineer, chief radio operator	30,000	83.33	7,500	20.83	1.5
Deck chief, first mate	24,000	66.67	6,000	16.67	1.2
Deck crew	18,000	50.00	4,500	12.50	1.0

Bonus for Crew:

Value of Catch 1/		Bonus Allocation
Yen	US\$	Percent
Under 15 million	Under 41,667	7.1
15-20 million	41,667-55,556	17.0
Over 20 million	Over 55,556	24.0

1/Represents value of catch delivered by catcher vessel to mothership after deducting certain expenses shared with mothership operator, such as costs of operating scout vessels and salmon hatcheries.

Daily Sea Duty Allowance:

The amount of payment of daily sea duty allowance varies according to level of base

pay and area of operation. A total of five operational areas have been established, with payments ranging as follows for each level of base pay:

Base Pay		Range of Daily Allowance	
Yen	US\$	Yen	US\$
15,000-18,000	41.67-50.00	120-400	0.34-1.11
18,000-25,000	50.00-69.44	150-510	0.42-1.42
25,000-35,000	69.44-97.21	180-620	0.50-1.73
Over 35,000	Over 97.21	220-730	0.62-2.02

The agreement also stipulates payment of disaster compensation to crew members under the Seamen's Law or under insurance coverage to be provided by the vessel owner; compensation for personal property losses up to an amount equaling over one but less than two months' wages; and payment of up to three months' wages to the surviving family of a crew member found missing in line of duty, payment to stop upon confirmation of safety or death of the missing person. (Suisan Keizai Shimbun, May 23, 1965.)

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PACK AS OF JUNE 24 OF TWO KING CRAB FACTORYSHIPS IN BRISTOL BAY:

The two Japanese king crab factoryships (Tokei Maru, 5,385 gross tons, and Tainichi Maru, 5,859 gross tons) operating in Bristol Bay had packed a total of 88,766 cases of crab meat as of June 5, 1965. Catch per unit of effort was reported to be 9.9 crabs per shackle and yield 22.4 crabs a case.

By June 24 the two vessels had packed 112,584 cases of king crab, equal to 61 percent of their combined production quota of 185,000 cases. They were averaging 11.5 crabs per shackle and 22.5 crabs per case. (Nihon Suisan Shimbun, June 11; Suisan Tsushin, June 28, 1965.)

* * * * *

ELEVEN TRAWL FLEETS LICENSED TO FISH IN GULF OF ALASKA:

The Japanese Fisheries Agency formally announced on June 1, 1965, the names of the 11 trawl fleets that will be licensed to conduct operations in the Gulf of Alaska on a commercial basis. Previously the operation of vessels in the Gulf was licensed only on an experimental basis.

Japan (Contd.):

Following is the composition of the licensed Japanese Gulf of Alaska trawl fleet as reported by Suisan Keizai Shimbun, June 2, 1965:

Mothership (Gross Tons)	Catcher Vessel (Gross Tons)
<u>Akebono Maru No. 53</u> (1,450)	<u>Nisshin Maru No. 50</u> (263)
<u>Maishin Maru No. 12</u> (2,967)	<u>Fukushin Maru No. 1</u> (299)
<u>Sumiyoshi Maru No. 12</u> (578)	<u>Kintoku Maru No. 7</u> (298)
	<u>Dairin Maru No. 8</u> (204)
<u>Taiyo Maru No. 61</u> (1,496)	<u>Taiyo Maru No. 36</u> (372)
<u>Taiyo Maru No. 82</u> (2,886)	<u>Taiyo Maru No. 37</u> (372)
<u>Yakachiho Maru</u> (3,470)	<u>Fukuho Maru No. 2</u> (299)
<u>Yatsuta Maru</u> (560)	<u>Fukuho Maru</u> (276)
<u>Yokachi Maru</u> (2,530)	<u>Omi Maru</u> (291)
Undesignated (2,000)	<u>Kyowa Maru</u> (246)
" (1,500)	Undesignated (300)
" (1,499)	<u>Kohoku Maru No. 2</u> (295)

Editor's Note: The Japanese Central Fisheries Coordination Council (supreme government-industry fisheries advisory group) had previously approved the licensing of the trawl fleets in the Gulf of Alaska subject to the following limitations:

Halibut, salmon, and king crab will not be taken. Those taken incidentally will be returned to the sea immediately. Catch of herring under 20 centimeters (7.9 inches) must not exceed in numbers 10 percent of the total catch of herring. Should it exceed 10 percent, vessels must immediately move away from the area. Marine plants and animals must not be taken in waters within three miles off foreign territory. The possession on board vessels of long lines and gill nets is illegal. The responsible person on board the vessel must report to the government inspector the vessel's daily catch in accordance with provisions to be stipulated separately.

THREE BOTTOMFISH FLEETS SAILED IN MAY FOR EASTERN BERING SEA:

Japanese licensed bottomfish fleets which sailed in May 1965 to begin operations in the eastern Bering Sea included:

(1) The factoryship Itsukushima Maru (5,871 gross tons) accompanied by 18 catcher vessels ranging from 61 to 113 gross tons--departed Japan, May 17, 1965. Of the 18, 14 are combination trawl-gill net-long line vessels and 4 are combination gill net-long line vessels.

(2) The factoryship Seifu-Maru (8,331 gross tons) accompanied by 23 catcher vessels ranging from 48 to 167 gross tons--departed May 12, 1965. The fleet was to fish mainly for herring.

(3) The factoryship Soyo Maru (11,193 gross tons) accompanied by 21 catcher vessels ranging from 62 to 139 gross tons--departed May 15, 1965.

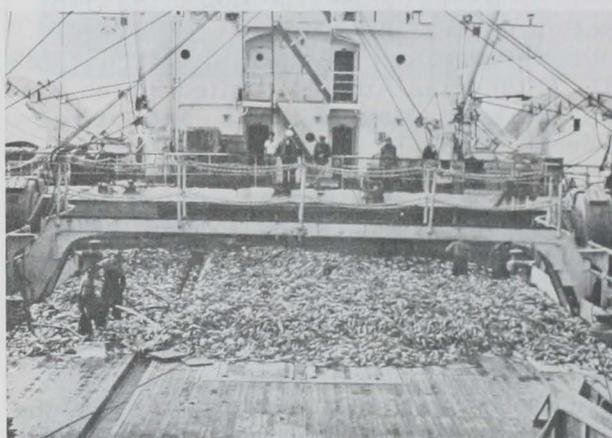


Fig. 1 - Looking forward on deck of Japanese factoryship Soyo Maru. Note conveyor in left foreground and sorters at right.



Fig. 2 - Japanese factoryship Tenyo Maru in Bering Sea.



Fig. 3 - Hoyo Maru, Japanese fish meal factoryship, in Bering Sea.

Japan (Contd.):

All the licenses for the listed factoryships expire January 31, 1966.

Japanese factoryship sailings in April 1965 for the Bering Sea included the Tenyo Maru (11,581 gross tons) with 10 catcher vessels to fish mainly for Alaska pollock for conversion into minced fish; the fish meal factoryship Gyokuei Maru (10,357 tons); the factoryship Kotoshiro Maru No. 15 (700 tons); the fish meal factoryship Hoyo Maru (14,111 tons); and the shrimp factoryship Einin Maru (7,482 tons). (Fisheries Attache, United States Embassy, Tokyo, May 25, 1965, and other sources.)

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ATLANTIC OCEAN TRAWL FISHERY PRODUCTION TRENDS:

The Japanese Government has scheduled a meeting for June 18, 1965, of the Central Fisheries Coordination Council (highest government-industry advisory board) to discuss the licensing of additional trawlers for the Atlantic Ocean. In preparation for that meeting, the Japan Overseas Trawlers Association has prepared data showing production trends

Year	No. Vessels	Total Catch	No. Tows	Catch/Tow
		Metric Tons		Metric Tons
1965 ^{1/}	45	34,599	23,226	1.55
1964	45	122,406	68,667	1.78
1963	34	92,084	48,938	1.88
1962	27	49,133	28,479	1.73
1961	15	27,952	16,370	1.71
1960	8	6,380	4,533	1.41
1959	2	802	831	.98

^{1/}January-March 1965.

for 1959-65. They show that the Atlantic trawl fleet has expanded rapidly from 2 to 45 vessels in 7 years, and production reached a peak in 1964, but catch per tow has steadily declined since 1963. (Suisan Tsushin, June 14, 1965.)

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LICENSING DEFERRED OF ADDITIONAL TRAWLERS FOR ATLANTIC OCEAN:

The Japanese Central Fisheries Coordination Council (highest government-industry advisory board), at a meeting on June 18, 1965, deferred the matter of licensing additional trawlers for operation in the Atlantic Ocean until its next meeting. The Fisheries Agency,

which reportedly hopes to newly license 22 vessels of 500 tons each, has been instructed to carry on discussions with other concerned ministries and industry organizations and to seek an adjustment of views. (Suisan Tsushin, June 21, 1965.)

* * * * *

NEW STERN TRAWLER TO FISH OFF WEST AFRICA:

A Japanese firm's newly constructed 1,500-ton stern trawler, Daishin Maru No. 16, was scheduled to depart on her maiden voyage for the trawling grounds off West Africa on June 26, 1965. The trawler, which has a complement of 54 men, is the fourth vessel of that size to be constructed by the firm since January 1962. In addition, the firm operates the 2,967-ton trawler Daishin Maru No. 12, constructed in September 1963. (Minato Shimbun, June 16, 1965.)

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CANNED SHRIMP EXPORTS, APRIL 1965:

Japan's exports of canned shrimp in April 1965 of only 621 cases (24 $\frac{1}{2}$ -lb. cans) were down sharply from the 11,032 cases the previous month. In April 1964, exports were 42,684 cases. Only 180 cases were shipped to the United States in April 1965, with the remainder shipped to unspecified countries rather than to Great Britain and Canada which had been among the bigger buyers.

According to Japan's Canned Crab Sales Company (sales agent for canned shrimp), the sharp decline was caused by Japan's poor shrimp production in the North Pacific and low inventories of the 1964 pack. (Fisheries Attache, United States Embassy, Tokyo, June 3, 1965.)

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PLANS TO IMPORT SOUTH AFRICAN CANNED SARDINES:

Three Japanese firms are proceeding with plans to import from South Africa about 20,000 cases of seasoned canned sardines. South Africa is said to have agreed to put up the special pack. Japan is faced with a critical shortage of that pack due to several years of poor sardine fishing. (Suisan Tsushin, June 21, 1965.)

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Japan (Contd.):

MARINE FISHERY PRODUCTION, 1964:

The 1964 Japanese marine fishery production totaled 5.87 million metric tons, declining below the 6.0-million-ton level for the first time since 1960, according to data released by the Ministry of Agriculture and Forestry. Compared to 6.2 million tons produced in 1963, the 1964 production represents a 5-percent decrease.

Japanese Marine Fishery Production by Leading Fisheries, 1964 with Comparisons		
Fishery	1964	1963
	. . . (Metric Tons) . . .	
Surrounding net	1,020,000	910,000
Medium-type trawl	740,000	600,000
Tuna pole-and-line and long line	680,000	690,000
Distant-water trawl	590,000	450,000
Isei ¹ trawl	300,000	350,000
Gill-net (excludes salmon) . . .	250,000	180,000
Squid	240,000	580,000
Small-type trawl	230,000	210,000
Saury	² /200,000	² /370,000
Mackerel pole-and-line	140,000	150,000

¹/Waters west of 130° E. longitude, primarily East China Sea.
²/Estimated catch.



Fig. 2 - Small fishing village near Ito, Japan.



Fig. 3 - Yellowtail bunched in the net are hauled into the fishing boat on Kumanonada fishing grounds, noted as one of Japan's three largest fishing areas.

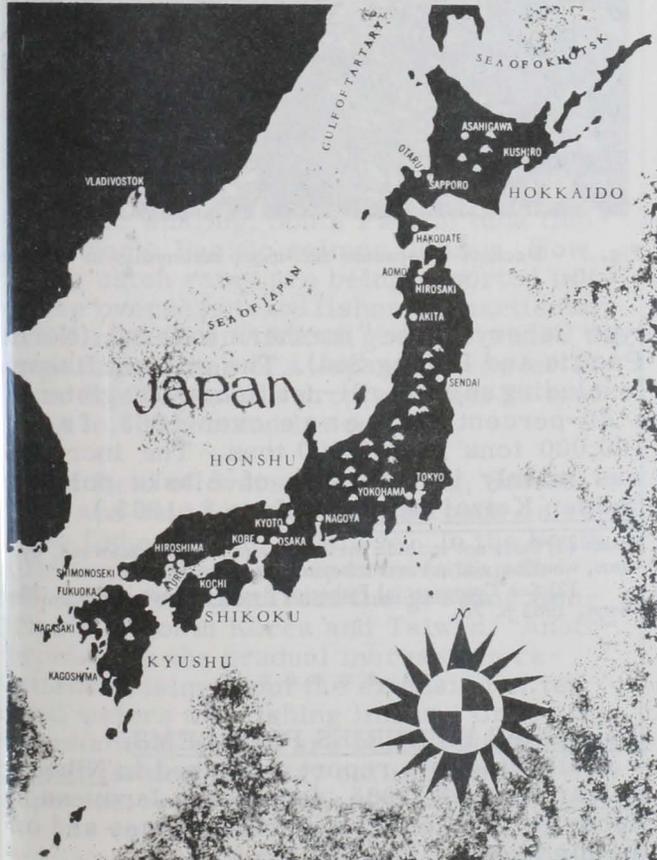


Fig. 1 - Japanese fishing vessels fish in all the world's oceans.

The decline in 1964 was primarily due to the low catches made in the saury and squid fisheries. Their combined total production fell by about 500,000 metric tons, from 950,000

Japan (Contd.):



Fig. 4 - A swordfish being hauled aboard a Japanese catcher boat.



Fig. 5 - Processing fish aboard a factoryship operating in gill-net fishery for bottomfish in Gulf of Alaska.

tons in 1963 to 440,000 tons in 1964. The tuna long-line and pole-and-line fisheries catch decreased slightly, from 690,000 tons in 1963 to 680,000 tons in 1964. This marks the second successive decrease in tuna catch since 1962, when a record 720,000 tons was landed. A 30-percent production increase was achieved in the distant-water trawl fishery, from 450,000 to 590,000 tons. The increase includes 430,000 tons (1963 production was 340,000 tons) produced by the mothership-

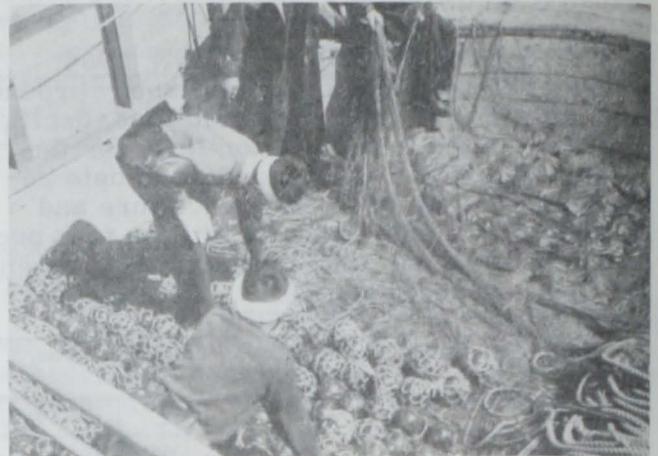


Fig. 6 - Setting sunken gill nets from stern of a catch boat in fishery for bottomfish in Gulf of Alaska.



Fig. 7 - Deck of a Japanese fish-meal factoryship in the North Pacific.

type fishery in the "northern waters" (North Pacific and Bering Sea). The gill-net fishery (excluding salmon gill-net fishery) registered a 40-percent increase over 1963, from 180,000 tons to 250,000 tons. The increase was mainly in the catch of Alaska pollock. (Suisan Keizai Shimbun, June 2, 1965.)

Notes: (1) Does not include shellfish, aquaculture, seaweed, oysters, whaling, and several other minor fisheries.

(2) See Commercial Fisheries Review, Sept, 1964 p. 78; Sept, 1963 p. 78.

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OVERSEAS FISHERIES PROBLEMS:

Following is a report published in Nihon Keizai, May 18, 1965, describing Japanese fisheries problems at overseas bases and on the high seas:

Stagnation threatens Japanese overseas fisheries because of (1) disappointing results

pan (Contd.):

from joint foreign ventures; (2) declining yields from high seas fisheries; and (3) foreign competition and restrictions which limit Japanese operations.

Joint Foreign Ventures: Japanese joint ventures with foreign interests have included: fishing bases in the Netherlands Antilles, Malaysia, New Hebrides, and New Caledonia; cold-storage plants in Brazil and Nigeria; whaling operations with Brazil and Canada; tuna fisheries with the Ivory Coast, Argentina, and Italy; and (5) trawl fisheries with Argentina, India, and the Bahamas.

Problems encountered in joint ventures have included: (1) foreign partners with insufficient capital and fisheries experience; (2) limitations on Japanese participation; (3) political instability; and (4) inflation. Those problems have made the outlook for such ventures less bright, although both Japanese and foreign groups continue to show interest in joint enterprises.

Distant-Water Fisheries: In addition to carrying out joint ventures with foreign interests, Japan sends self-supporting fishing fleets to many parts of the world. A declining catch rate has been a disturbing factor in a number of distant-water operations. Such declines have been experienced for some time in Antarctic whaling, South Pacific tuna fishing, and North Pacific salmon fishing. Now, declining catch rates are being reported in Japanese overseas trawl fisheries, particularly on the rich West African grounds where the average daily catch of a Japanese trawler of 1,000 to 2,500 tons has dropped from 20 metric tons to 10 tons and lower.

In the field of overseas trawling, Soviet vessels are said to be making inroads on resources fished by the Japanese. In the South Pacific tuna fisheries, Japan is facing increasing competition from the growing fleets of South Korea and Taiwan. Another problem is the gradual increase in restrictions arising from the extension of territorial waters and fishing limits. Under these circumstances, voices are being raised in the Japanese fishing industry calling for a review of Japanese overseas fisheries policies.

TEMPERATURES OF WATERS SURROUNDING JAPAN

CONTINUE BELOW NORMAL:

Ocean conditions off Japan were again reported below normal in 1965 and like those of the previous two years. Surveys conducted in April show that water temperatures in the Pacific Ocean, Japan Sea, East China Sea, and Yellow Sea are 1° to 3° C. (1.8° to 5.4° F.) colder than normal. Japanese fishery research laboratories have been monitoring the effect that the low water temperatures may have on fishing. The greatest concern expressed is that mackerel fishing off northeastern Japan and in the Japan Sea, as in the past two years, may be adversely affected. (Nihon Suisan Shimbum, May 10, 1965.)

RADIATION PRESERVATION OF FISH UNDER STUDY:

The Japanese Tokai Regional Fisheries Research Laboratory is studying ways to extend the storage life of fish by combining radiation sterilization with refrigerated storage. The Laboratory is trying to establish conditions for sterilization of clams for export that can be used by exporters to overcome the problem of claims made by overseas buyers.

For the domestic market, it is thought that pasteurization of fishery products with low-dose radiation would have the best chance of consumer acceptance. The Japanese people are accustomed to eating raw fish and would be very sensitive to even the slightest change in flavor resulting from irradiation.

In February 1965 a council for irradiated food studies was set up, bringing together the research organizations in the Kanto Area to analyze Japanese technical problems. The council meets once a month and is open to all researchers. At the meetings, research results and information are exchanged. It is reported that a similar council will be set up in the Kansai District of Japan. (Food Irradiation, Vol. 5, No. 3, January-March 1965.)

FISHING VESSEL EXPORTS:

Data compiled by the Japanese Fisheries Agency reveal that in fiscal year 1964 (April 1964-March 1965) a total of 57 used fishing vessels was exported. Countries to which the

Japan (Contd.):

used vessels were exported were: Philippine Islands 25; South Korea 15; Ryukyu Islands 10; Formosa 4; Nigeria 2; and Greece 1. They included 5 vessels exported to the Philippines as payment for reparation, but not the newly constructed 144-ton class tuna vessels exported to the Republic of Korea (ROK) as refrigerated carrier vessels. A total of 11 of those tuna vessels (completed in 1964) was specially approved in February 1965 for export to South Korea to help expedite the ROK-Japan negotiations to normalize relations. The treaty was signed June 23, 1965.

In FY 1963 Japan exported 49 used and 7 new vessels; FY 1962, 69 used and 4 new vessels; and in FY 1961, 45 used and 10 new vessels. (Suisan Keizai Shimbun, June 16, 1965, and other sources.)

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FISHING VESSEL CONSTRUCTION TRENDS AS OF MAY 1965:

A Japanese fishery guidance vessel constructed with aluminum alloy parts was recently completed. The 495-ton vessel, named Chiba Maru, built for the Chiba Prefectural Government, employs aluminum alloy in its fishhold, portholes, doors, radar mast, compass support, and railings. She is the first Japanese fishing vessel to make extensive use of this light, durable metal (Minato Shimbun, May 30, 1965.)

A 19-gross-ton plastic fishing vessel, the first of its kind in Japan, was recently completed by a Japanese firm. The vessel, named Fujiura Maru No. 3, was designed as a portable boat to be deck-carried on a large fishing vessel. The greatest advantage of this plastic vessel is that it weighs 5-6 tons less than a comparable steel vessel and has much less rolling motion than a wooden vessel. Delivery price is reported to be 17,260,000 yen (US\$47,944). (Hokkai Shimbun, June 7, 1965.)

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FISHING VESSEL CONSTRUCTION TRENDS, FISCAL YEAR 1964:

According to data compiled by the Japanese Fisheries Agency, 931 fishing vessels (including research and carrier vessels) totaling 128,488 gross tons were built in fiscal year 1964 (April 1964-March 1965). Compared to fiscal year 1963, it is a decline in

vessel construction of 141 vessels and an increase in tonnage of some 4,563 tons. Steel vessels built in 1964 numbered 502 (639 vessels in 1963) totaling 110,680 gross tons, and wooden vessels 429 totaling 17,808 gross tons.

Fishery	No. of Vessels		Tonnage	
	FY 1964	FY 1963	FY 1963	FY 1963
Distant-water trawl . .	36	14	41,699	17,576
East China Sea trawl .	61	101	6,441	10,361
Offshore trawl	56	33	4,800	3,064
Tuna	136	297	29,595	58,657
Purse seine	45	39	4,132	3,313
Salmon gill-net . . .	71	57	6,457	5,257

Tuna vessel construction showed the greatest decline: In fiscal year 1963--297 vessels and in fiscal year 1964--136 vessels. The decline was due primarily to inactivity of the tuna long-line fishery and the drop in construction of new larger vessels as replacements for existing vessels. There was a noticeable drop in the construction of 100- to 300-ton vessels, which normally make up the bulk of Japanese tuna vessel construction. The construction of wooden tuna vessels under 50 tons increased. This was attributed to the Government's action in establishing the coastal tuna fishery off Japan as a licensed fishery for vessels in the 20- to 50-ton category. Previously, vessels under 39 tons did not require licenses. (Suisan Keizai Shimbun, May 9, 1965.)

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REFUELING VESSELS AT SEA PLANNED FOR ATLANTIC OCEAN:

A Japanese firm is planning on conducting high-seas refueling operations starting July 1965 to supply fuel to Japanese tuna vessels operating in the Atlantic Ocean. The firm planned to use the 900-ton tanker Shotoku Maru for that purpose, which was scheduled to depart Japan in mid-June.

In addition, the Shotoku Maru will supply drinking water, provisions, and other supplies to the fishing vessels, as well as provide medical service if plans to station a medical doctor aboard the tanker materialized. Similar high-seas refueling and supplying operations were successfully conducted in the Pacific Ocean in 1963 and 1964 by the Japan National Federation of Tuna Fishermen's Cooperative Associations. (Suisan Keizai Shimbun, May 27, 1965, and other sources.)

Note: See Commercial Fisheries Review, January 1964 p. 56.

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Japan (Contd.):

ANTARCTIC WHALING FLEET FOR 1965/66 SEASON REDUCED:

At the special whaling conference held in London in early May 1965, the International Whaling Commission agreed to reduce the Antarctic whale catch quota to 4,500 blue-whale units for the 20th Whaling Expedition (1965/66 season). Following that conference, the Japanese whaling firms participating in the expeditions conferred on ways of satisfactorily reducing their whale fleets and consolidating their operations. On May 21 they reached an agreement and announced that for the 20th Expedition 2 of the firms will each operate 2 fleets and the third firm will operate 1 fleet. In the 19th Expedition one of the firms operated 3 fleets and another firm operated 2 fleets.

On May 26 the Japanese Fisheries Agency announced that one of the whaling companies had been instructed to consolidate its whaling operation by eliminating its unprofitable coastal whaling operation and beginning this year its South Georgia Island base operation. At the same time, the Agency increased that firm's northern water whale catch quota by 100 blue-whale units. (Suisan Keizai Shimbun & Suisan Tsushin, May 27, 1965.)

Note: See Commercial Fisheries Review, July 1965 p. 78.

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WHALE OIL PRODUCTION BY ANTARCTIC LAND STATIONS AS OF JANUARY 1965:

Four Japanese whaling companies operating land stations (Leith Harbor and Grytviken in South Georgia) in Antarctica landed 280.3 blue-whale units, 84 sperm whales, and 5,147 seals during September 18, 1964-January 26, 1965. Production of oil from the catch totaled 1,300 metric tons of baleen oil, 680 tons of sperm oil, and 1,650 tons of seal oil.

The entire Japanese output was sold under contract to European buyers, principally in the United Kingdom. The sales price for baleen oil was US\$232.40 to \$236.60 a metric ton c.i.f., and seal oil at \$224.

Three of the four Japanese companies terminated operations on December 3, 1964; the fourth continued whaling operations through March 1965.

The land stations in South Georgia were also leased by Japanese companies in the 1963/64 season. During that period, the catch totaled 341.2 blue-whale units and 60 sperm whales. Production of baleen oil amounted to 6,501 tons and production of sperm oil 517 tons. (Foreign Agriculture, U. S. Department of Agriculture, March 22, 1965.)

Note: See Commercial Fisheries Review, June 1965 p. 45.

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ANTARCTIC WHALE OIL AND SPERM OIL PRODUCTION, 1964/65 SEASON:

Total marine oil production from Japanese whaling in the Antarctic during the 1964/65 season was down about 11 percent from the previous season.

Japanese whale oil output from the 1964/65 Antarctic catch totaled 534,370 barrels (about

Japanese Antarctic Production of Whale Oil and Sperm Oil by Whaling Fleets and Shore Stations During the 1964/65 Season ^{1/}			
Producing Unit	Whale Oil	Sperm Oil	Total Whale and Sperm Oil
 (Barrels ^{2/})		
Whaling Fleets:			
<u>Kyokuyo 2</u>	81,077	9,547	90,624
<u>Kyokuyo 3</u>	76,547	7,959	84,506
<u>Nisshin</u>	73,676	6,835	80,511
<u>Nisshin 2</u>	74,324	-	74,324
<u>Nisshin 3</u>	41,382	29,435	70,817
<u>Tonan</u>	76,335	6,129	82,464
<u>Tonan 2</u>	72,000	6,247	78,247
Total whaling fleets ..	495,341	66,152	561,493
Shore Stations:			
Leith Harbour	24,235	5,071	29,306
Grytviken	14,794	1,706	16,500
Total shore stations ...	39,029	6,777	45,806
Total whaling fleets and shore stations	534,370	72,929	607,299

^{1/}Preliminary.
^{2/}Six barrels equal approximately one long ton.
 Source: The Norwegian Whaling Gazette, No. 4, 1965.



Fig. 1 - Japanese catcher boat towing a whale.

Japan (Contd.)



Fig. 2 - Japanese whale catcher in Bay at Leith Harbour, Japanese land station at South Georgia Island in the Antarctic.



Fig. 3 - Whale being hauled on shore at Leith Harbour.



Fig. 4 - Stripping blubber from whale, Leith Harbour.

89,000 long tons) as compared with production in 1963/64 of 561,035 barrels (93,500 tons).

Sperm oil output in 1964/65 was 72,929 barrels (12,150 tons) as compared with production in 1963/64 of 120,093 barrels (20,000 tons).

The Japanese 1964/65 Antarctic whale catch totaled 4,125 blue-whale units. That was only 35 units short of the Japanese quota for 1964/65, but a decline of about 10 percent from the previous season's catch of 4,600 blue-whale units. (United States Embassy, Copenhagen, May 18, 1965.)

Note: See Commercial Fisheries Review, June 1965 p. 44, March 1965 p. 83, Oct. 1964 p. 49.

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THREE WHALING FLEETS SAILED FOR NORTH PACIFIC IN MAY:

The three Japanese whaling fleets licensed to take whales in the North Pacific and Bering Sea sailed from Japan, May 20, 1965.

One fleet consists of the mothership Nishin Maru No. 3 (23,405 gross tons) accompanied by 7 catcher and scout vessels (1 of which is listed as a "research-whale towing vessel") ranging from 622 to 758 tons. The fleet has a catch target of 1,640 sperm whales according to previous reports.



Flensing a sperm whale aboard a Japanese whaling factoryship in the North Pacific.

Another fleet consists of the mothership Nichiei Maru (12,918) accompanied by the carrier vessel Nojima Maru (8,815 tons) and 7 catcher and scout vessels (1 listed as a "research-whale towing vessel") ranging from 470 to 753 tons.

The third fleet consists of the mothership Kyokuyo Maru (11,449 tons) accompanied by the tanker Kyokuyo Maru No. 2 (16,443 tons), the carrier vessels Kyokurei Maru (9,943 tons) and Koyo Maru (7,658 tons), and 7 catcher vessels ranging from 618 to 738 tons. According

Japan (Contd.):

From earlier reports, the catch target of the Hyokuyo Maru fleet is 534 blue-whale units (30 blue whales, 680 fin whales, and 1,200 sei whales).

The licenses of all three fleets expire December 31, 1965. (Fisheries Attache, United States Embassy, Tokyo, May 25, 1965, and other sources).

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FISH OIL PRODUCTION, 1956-1964:

Japanese estimated production of fish-body oil totaled 10,900 metric tons in 1964, a decline of 27 percent from 1963 due mainly to lower production of saury oil. Japanese production of saury oil has declined sharply from the high levels of the late 1950's.

178-foot mothership, and a smaller special vessel was handed over to the Kuwait National Fishing Company by a Norwegian shipyard at Bergen in May 1965. On its trip to the Persian Gulf the fleet was manned by Norwegians.

The cost of the complete fleet was US\$2.8 million, fully equipped with both navigational and fish-finding equipment and fishing gear. The Norwegian shipyard worked out the fisheries program for the Kuwait firm, planned the most suitable types of vessels for the Kuwait fisheries, designed them specially for that purpose, and handled the recruitment of Norwegian crews for them. Vessel captains are Norwegian and key crew positions are manned also by Norwegians.

The trawlers are 88 feet long and equipped with modern freezing equipment. The

Japanese Production of Fish-Body Oil, Liver Oil, and Squid Oil, 1956-1964

Type of Oil	1964	1963	1962	1961	1960	1959	1958	1957	1956
(Metric Tons)									
Fish-Body Oil:									
Cardine	300	578	838	928	631	832	2,610	2,164	926
Herring	-	1	8	31	12	133	10	44	618
Atka mackerel	1,800	864	681	2,372	556	869	115	406	761
Saury	2,800	7,685	18,877	11,032	7,045	24,482	20,044	10,998	6,972
Flounder	-	73	100	171	280	413	476	510	685
Other fish-body oils	6,000	5,789	7,958	5,701	5,194	4,681	3,178	2,171	1,684
Total fish-body oil	10,900	14,990	28,462	20,235	13,718	31,410	26,433	16,293	11,646
Squid oil	1,000	2,663	3,181	2,967	2,720	4,871	4,056	4,170	3,470
Fish-Liver Oil:									
Cod & Alaska pollock	7,500	6,026	7,771	6,743	6,198	6,618	3,686	4,728	4,035
Shark	1,000	1,266	2,201	2,247	3,831	3,222	2,514	3,743	3,212
Other fish-liver oils	200	269	717	1,657	1,081	1,600	409	325	432
Total fish-liver oils	8,700	7,561	10,689	10,647	11,110	11,440	6,609	8,796	7,679
Grand total	20,600	25,214	42,332	33,849	27,548	47,721	37,098	29,259	22,795

Estimated.
Source: Japanese Ministry of Agriculture & Forestry.

Japanese estimated production of fish-liver oil in 1964 totaled 8,700 tons. That was a gain of 15 percent over the previous year due to greater production from cod and Alaska pollock. Japanese output of other fish-liver oils continued to decline in 1964. Squid oil production was also down. (Fisheries Attache, United States Embassy, Tokyo, May 25, 1965.)



Kuwait

SHRIMP VESSELS DELIVERED BY NORWEGIAN SHIPYARD:

A complete fishing fleet consisting of 8 specially built 90-foot shrimp trawlers, a

800-ton mothership, which has a large freezing plant and ample cold-storage facilities, will receive the catch from the trawlers and pack it into larger units, with most of the production going to the United States market. (Press release of the Export Council of Norway and News of Norway, June 10, 1965.)

Note: See Commercial Fisheries Review, July 1964 p. 72.



Malaysia

FISHERY TRENDS, 1964:

Speaking at the launching of Malaysia's eighth combination fisheries research and patrol vessel on May 8, 1965, the Malaysian

Malaysia (Contd.):

Minister of Agriculture and Cooperatives announced that the total marine fisheries catch for the States of Malaya in 1964 was up 4.5 percent from 1963. He stated that 192,000 long tons of marine fish valued at M\$162 million (US\$53.1 million) were landed in Malaya in 1964, as compared with 183,630 tons worth M\$157 million (US\$51.5 million) in 1963. He also noted that in 1964 a total of 10,000 tons of fish were landed in Singapore and 20,000 tons in Sabah. There was no fisheries department in the State of Sarawak in 1964, but the Minister said that the Malaysian Government intended to establish an office there in 1965.



Discussing the recent decision to legalize trawling on a restricted basis, the Minister stated that his trip to Thailand in April 1965 had convinced him that it would be a "retrograde step" to continue the trawling ban. He cited the increased Thailand marine landings which have resulted from the use of trawlers (146,500 long tons in 1960 to 332,000 tons in 1963, or an increase of over 125 percent in 3 years).

The Minister said that he realized that the introduction of trawling would meet resistance from many fishermen. He compared trawling, however, to the introduction of "pukat jeroot" (purse-seine nets) on the east coast of Malaya. He said purse seining had been strongly resisted at first, but by 1964 a total of 34 vessels were using the nets in the

State of Kelantan. Those vessels landed 35,000 piculs (4.6 million pounds) of fish or 30 percent of the total catch in Kelantan.

The Minister observed that expansion of fisheries was important to supply protein for the expanding population. He emphasized the need to meet Singapore's demand for fresh fish. He said that Singapore annually imported 31,000 long tons of fresh fish worth M\$1 million (US\$6.2 million), mainly from the States of Malaya, Thailand, and Vietnam. (United States Embassy, Kuala Lumpur, M 21, 1965.)

Notes: (1) Malaysian \$3.05 equal US\$1.00.
(2) See *Commercial Fisheries Review*, April 1965 p. 77 Aug. 1964 p. 67; Feb. 1964 p. 76.

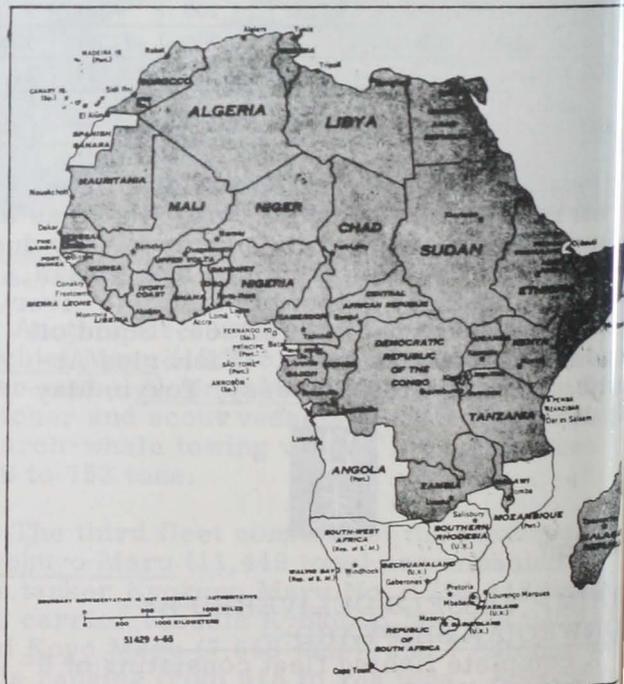


Morocco

LONG-RANGE TUNA FISHING VENTURE CONTINUED:

A fleet of 7 small Moroccan vessels in early 1965 sailed over 2,000 miles from the home port of Agadir to fish for tuna as far south as the Ivory Coast. The venture may be a breakthrough in extending the limited range of Morocco's fishing fleet.

The vessels taking part in the expedition were 50 to 60 feet in length with a hold capacity for 30 to 50 metric tons of fish. The



Morocco (Contd.):

is a type of vessel normally used in the Moroccan sardine fishery.

For the tuna expedition, the vessels carried purse-seine gear, radiotelephones, electronic fish-finding equipment, and crews of 10 to 25 men.

The Moroccan expedition fished in coastal waters 20 to 36 miles offshore from Dakar (Senegal) and Conakry (Guinea); they also fished off Abidjan in the Ivory Coast. The fleet was said to have been unable to secure permission from Mauritania to fish off Port Etienne.

The total catch of the 7 Moroccan vessels in January-March 1965 was reported by La Vie Economique on April 9, 1965, as 360 metric tons (mostly tuna, mackerel, and anchovy).

By early June 1965, several vessels in the expedition had returned to Morocco, but two of the vessels were reported to be still fishing off Dakar, and others planned to return to Dakar to fish for tuna. (United States Embassy, Rabat, June 3, 1965.)

Note: See Commercial Fisheries Review, July 1965 p. 86.



New Zealand

GRANT AWARDED UNIVERSITY FOR PILCHARD RESEARCH:

A grant of £8,000 (US\$22,300) from New Zealand lottery funds has been made to enable scientists from Victoria University to make a survey in Cook Strait to determine the feasibility of establishing a pilchard canning industry in Nelson. The survey is to be conducted by two faculty members of the University, one a biologist in applied fisheries and the other in zoology. It will be the first industrial research in the fisheries field carried out by any of the New Zealand universities.

The survey will be an extension of a study carried out by the New Zealand Marine Department in September 1964, after overseas firms had agreed to establish a canning industry in Nelson if competent biologists reported favorably on the availability of pilchards. The University biologist said the study had revealed considerable quantities of pilchards

in the Cook Strait, Marlborough Sound, and Tasman Bay areas, but precise information was not obtained. He added that the study, however, was sufficiently promising to lead representatives of a British firm to have detailed talks with Nelson industrialists with a view to early establishment of a cannery.

Most of the grant would be taken up by the purchase of a specially designed research steel vessel, but about £1,700 (\$4,700) would be used for gear, especially new types of nets, and about £1,000 (\$2,800) would be used for aerial surveys. The research vessel was expected to be ready by early August 1965. (New Zealand Commercial Fishing, April 1965.)



Norway

COD FISHERY AS OF MAY 1965:

As of May 8, Norwegian cod landings in 1965 totaled 65,507 metric tons, of which 20,997 tons were sold for filleting, 23,280 tons for drying, 12,560 tons for salting, and 8,670 tons for marketing as iced fish. The catch also yielded 23,707 hectoliters of cod-liver oil. The Norwegian cod catch in the same period of 1964 totaled about 57,700 tons, of which 11,000 tons were sold for filleting, 23,100 tons for drying, 17,400 tons for salting, and 6,200 tons for marketing as iced fish; the catch yielded 23,214 hectoliters of cod-liver oil.



Norwegian vessel operating in the Lofoten cod fishery--sorting the catch.

As of May 29, Norwegian cod landings totaled 75,166 metric tons, of which 26,216 tons were sold for filleting, 26,817 tons for drying,

Norway (Contd.):

12,943 tons for salting, and 9,190 tons for marketing as iced fish. The Norwegian cod catch in the same period of 1964 totaled about 62,074 tons--13,143 tons were sold for filleting,

CANNED FISH EXPORTS, 1963-1964:

Norway's total exports of canned fishery products in 1964 were up about 10 percent in both quantity and value from 1963. The United States was Norway's most important market for canned fishery products, accounting

Table 1 - Norwegian Exports of Canned Fishery Products by Type, 1963-1964

Product	January-December 1964			January-December 1963		
	Quantity	Value		Quantity	Value	
	Metric Tons	1,000 Kroner	US\$1,000	Metric Tons	1,000 Kroner	US\$1,000
Smoked brisling in oil . . .	5,768	38,562	5,386	4,793	32,785	4,579
Smoked brisling in tomato .	1,278	6,978	975	575	3,175	443
Smoked small sild in oil . .	11,077	46,743	6,528	11,478	48,482	6,771
Smoked small sild in tomato	2,154	7,644	1,068	1,447	5,234	731
Unsmoked small sild in oil .	379	1,321	184	869	2,812	393
Small sild packed otherwise	673	2,489	348	61	225	31
Kippered herring	3,264	14,370	2,007	3,149	13,442	1,877
Mackerel	745	3,606	504	666	3,117	435
Roe, unclassified	1,330	5,613	784	1,412	5,132	717
Soft herring roe	1,141	5,593	781	719	3,545	495
Fish balls	531	1,374	192	581	1,517	212
Other canned fish	100	739	103	162	1,212	169
Shellfish	1,603	16,393	2,289	1,545	16,486	2,303
Total	30,043	151,425	21,149	27,457	137,164	19,156

Table 2 - Norwegian Exports of Canned Fishery Products^{1/} by Country of Destination, 1963-1964

Country of Destination	January-December 1964			January-December 1963		
	Quantity	Value		Quantity	Value	
	Metric Tons	1,000 Kroner	US\$1,000	Metric Tons	1,000 Kroner	US\$1,000
Finland	269	1,424	198	185	1,187	166
Sweden	925	4,330	604	396	2,036	284
Belgium-Luxembourg	669	3,232	451	649	3,124	436
Ireland	298	1,209	168	295	1,087	152
France	278	1,121	156	278	1,151	161
Netherlands	202	875	122	219	893	125
United Kingdom	6,626	32,243	4,503	4,859	21,608	3,018
West Germany	899	3,483	486	782	3,012	421
Czechoslovakia	1,089	3,871	540	2/	2/	2/
East Germany	1,276	4,322	603	1,479	5,295	739
South Africa Republic	1,740	6,950	970	212	981	137
Iraq	88	333	46	1,233	5,126	716
Canada	922	5,651	789	922	5,527	772
United States	10,479	56,021	7,824	11,900	61,597	8,603
Australia	2,144	8,858	1,237	1,947	7,150	999
New Zealand	466	2,004	279	503	2,144	299
Other countries	1,049	4,327	604	2,186	7,797	1,089
Total ^{3/}	29,419	140,254	19,588	28,045	129,715	18,117

^{1/}Does not include exports of canned shellfish.

^{2/}Data not available.

^{3/}Totals are slightly different than the combined exports of canned fish (excluding shellfish) shown in table 1.

Note: Norwegian Kroner 7.16 equal US\$1.00.

24,832 tons for drying, 17,705 tons for salting, and 6,394 tons for marketing as iced fish.

In late May 1965, the Finmark fishery for young cod off northern Norway was still yielding good results. Norway's Lofoten fishery for spawning cod ended earlier with a disappointing catch of only about 19,500 tons, or a decline of 4,100 tons from the 23,600 tons taken off Lofoten during the 1964 season. (Fiskets Gang, Nos. 16, 17, 18, and 19, and 22, 1965.)

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for 36 percent of total shipments in 1964 and 42 percent in 1963. (Norwegian Cannery Export Journal, April 1965.)

Note: See Commercial Fisheries Review, June 1964 p. 53.

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CANNED FISH EXPORTS,
JANUARY-FEBRUARY 1964-1965:

Preliminary data show that Norway's total exports of canned fishery products in January-February 1965 were up about 10 percent from the same period of the previous year due mainly to larger shipments of smoked small sild.

Norway (Contd.):

As of March 20, the 1965 Norwegian canned pack of kippered herring totaled 185,254 standard cases, compared with 203,827 standard cases in the same period of 1964.

Norwegian Exports of Principal Canned Fishery Products, January-February 1964-1965		
	Jan. 1-Feb. 27 1965	Jan. 1-Feb. 29 1964
 (Metric Tons)	
Fishing	1,251	1,109
Smoked small sild ..	2,670	2,197
Kippered herring ...	486	508
Soft herring roe ...	16	40
Mild delicatessen ...	95	75
Shellfish	186	303
Other fishery products .	332	332
Total	5,036	4,564

The 1965 pack of soft herring roe as of March 20 was 10,225 cases of $\frac{1}{2}$ -ovals and 10,751 cases of $\frac{1}{4}$ -oblongs, as compared with 16,561 $\frac{1}{2}$ -ovals and 29,136 $\frac{1}{4}$ -oblongs in the same period of 1964. (Norwegian Cannery Export Journal, April 1965.)

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OPERATIONS OF LARGE FROZEN FISH PACKING FIRM:

In the 1950's an international firm set up a plant to pack frozen fishery products in the Norwegian port of Hammerfest, the northernmost city in the world. Annual production at that plant is now estimated at 8,000 metric tons of frozen fish fillets and 4,000 tons of other processed products such as fish balls, fish sticks, and fish cakes. Cod, haddock, and lean perch are the main species handled. That pack is marketed all over Europe and even in the United States. The plant also processes about 6,000 tons of animal feed a year, most of which goes to Sweden and Finland.

The company owns 7 modern trawlers and has under annual charter another 15 trawlers of 300 to 500 gross tons. About 600 fishermen work on those 22 trawlers and supply over half the company's requirements for raw fish. The remainder is supplied by coastal fishermen using smaller vessels.

Quality control is emphasized in all phases of the Hammerfest operation--from fishing to marketing. As soon as fish are caught they are gutted, rinsed, and stowed in ice. Upon landing at Hammerfest, the catch is immediately started on its way through production lines after grading (by an examination of 10 percent of each trawler load) and hand-

sorting. Processing is speeded by filleting and skinning machines. Daily production of frozen fillets amounts to about 140 tons or 140,000 consumer packages.

A total of 800 workers are employed in the plant. That includes 500 women production workers who work on a piece-rate basis. Their average hourly earnings are 7 to 9 kroner (US\$0.98 to 1.26).

The Hammerfest operation is considered to be a success and plans for similar operations in other fisheries centers of northern Norway have been reported. (United States Embassy, Oslo, June 10, 1965.)

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EXPORT OF FISHING VESSELS EXPANDED:

Norway has been rapidly expanding its export business in fishing vessels and equipment, as well as fishery training, and has for some years been building fishing vessels for countries in Asia, Africa, Latin America, and Europe.

Norway's role as an exporter of fishing vessels and fishery training to other countries started with a development aid project in Kerala State in India where she has been active for more than 10 years in teaching modern fishing methods and supplying equipment. Later, Norwegians helped in building a modern fishing industry in Pacific Coast nations of Latin America and were also active in the modernization of the Philippine fisheries. So far, Norway has built two fishing vessels for the Philippines.

Norwegians also have a part in developing the fishing port of Shama in Ghana, with one shipyard now building 7 stern trawlers (231-foot long) for that country. Fishing vessels are also being built for Israel and Scotland (Fair Isles).

Iceland is Norway's biggest foreign customer for fishing vessels. Two Norwegian shipbuilding sales organizations delivered 17 vessels to that country. A third shipbuilding group had not yet released its 1964 export data on fishing vessels for Iceland, but in 1963 sold that country \$4.5 million worth of fishing vessels.

Norwegian shipyards are working actively on the international market and look for more orders for completely equipped fishing fleets for other countries in the Middle East, in Lat-

Norway (Contd.):

in America, and other parts of the world.
(Press release of the Export Council of Norway)

Note: See Commercial Fisheries Review, May 1965 p. 67; January 1965 p. 72; August 1964 p. 65.



Pacific Islands

FISHERIES TRENDS, EARLY 1965:

Cultured Pearls: The first cultured pearls to be produced in French Polynesia have raised hopes of a new and profitable industry for the islands. The pearls were produced at Bora Bora in the Society Islands and are 10 to 14 millimeters (half an inch or thereabouts) in diameter.

Le Journal de Tahiti describes them as "perhaps the most beautiful in the world." It says their tones, varying from black to green to rose, are "excessively rare in cultured pearls."

Attempts to cultivate pearls in French Polynesia at Bora Bora and Hikueru Atoll in the Tuamotus--have been under way since July 1962 with Japanese know-how and money from FIDES, a French aid scheme.

Meanwhile, in New Guinea, a small raft anchored in a quiet backwater of Port Moresby's Fairfax Harbor is the key to another experiment in pearl production. The raft was anchored there by an Australian company which has successfully been producing cultured pearls by Japanese methods in the Torres Strait off Queensland and in Western Australia at Kure Bay.

Local oysters are suspended from the Port Moresby raft in baskets. Every 6 months their growth will be checked. After 12 months it may be possible to see whether the industry will be a paying proposition for the Territory. Production would take 2 or 3 years.

Australian-Japanese Fishing Venture Proposed for Papua-New Guinea: An Australian businessman from Brisbane hopes to set up a £250,000 (US\$556,000) fishing enterprise in Papua-New Guinea with the aid of Japanese labor and capital, according to a news service report.

If he gets approval from the Australian Government, the Brisbane businessman plans

to bring three 60-foot Japanese fishing trawlers to work in Papua's Gulf District. The vessels would be manned entirely by Japanese crews.

About 45 percent of the capital invested in the venture would be Japanese. The project includes plans to build wharves in Port Moresby and freezing and processing facilities for the catch, and later a cannery. (Pacific Islands Monthly, March and April 1965.)



Poland

TUNA CANNING EXPERIMENTS:

In connection with plans to begin fishing for tuna, a Polish plant at Gdynia has carried out tuna-canning experiments with imported fish. Good results were reported. (Polish Maritime News, April 1965.)

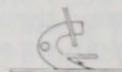
FISHERIES EXPANSION PLANNED IN 1966-1970:

Poland's largest fishing cooperative, "Dalmor" of Gdynia, is scheduled to catch an overall total of 714,000 metric tons of fish over the period from 1966 to 1970. In 1970 Dalmor's annual catch is to total 174,000 tons, as against 117,000 tons to be landed in 1966. By the end of 1970 Dalmor is to own a fleet comprising 26 factory trawlers, 4 freezer trawlers, 4 tuna vessels, and about 30 steam trawlers.

The "Gryf" Deep-Sea Fishing Cooperative of Szczecin is scheduled to have 68 vessels and catch about 67,000 tons of fish in 1970. (Polish Maritime News, April 1965.)

NEW FISHING VESSEL DESIGNS:

The Polish Ships Design Office ("Bekatermor") has worked out new designs for a 17-meter (56-foot) cutter to use ring nets, a 25-meter (82-foot) cutter to employ trawl and ring nets, and a 30-meter (98-foot) cutter to fish with trawls in African and South American waters. The office has also adapted the 27-meter (86-foot) stern cutter to use trawl. (Polish Maritime News, April 1965.)



Portugal

CANNED FISH INDUSTRY OUTLOOK FOR 1965:

Portuguese carryover stocks of canned sardines in oil at the beginning of 1965 were estimated at about 2 million cases of "1/4 club" cans. (The 1964 Portuguese canned fish pack total included a record sardine pack of 70,209 metric tons and 15,423 tons of other species, as compared with the 1963 pack of 49,644 tons and 20,776 tons, respectively.) Export shipments of canned sardines were moving well in early 1965 in spite of the rather large carryover.

Only moderate carryovers were reported for other Portuguese canned fish items in oil (pilchards, mackerel, tuna, and anchovy), so 1965 exports of those items will depend on the size of the pack this year.

In 1964 Portuguese canners raised prices for their pack of skinless and boneless sardines. This year the Portuguese Canned Fish Producers Association is reported to be considering plans to set up a minimum price system in order to eliminate the wide price fluctuations which have occurred in the past.

Portuguese exports of canned fish in oil in 1964 totaled 69,935 tons valued at conto 14,195 (US\$40.9 million) as compared with 776 tons in 1963 valued at conto 1,105,149 (US\$5 million). The increase in value in the face of a small decline in shipments reflects price increases of 1964. (Conservas de Peixe, April 1965.)



South Africa Republic

MAGIC SHOAL FISH CATCH, FIRST QUARTER 1965:

South Africa's Cape west coast shoal fish catch for the first 3 months of 1965 was 207,324 short tons pilchards, 19,874 tons maasbanker, 24,287 tons mackerel, and 15,517 tons anchovy. The total catch was 207,324 short tons. In the same period of 1964 the total catch was 205,247 tons, made up of 168,060 tons pilchards, 9,443 tons maasbanker, and 27,744 tons mackerel.

The January-March 1965 catch yielded 42 short tons of fish meal, 2,211,523 gallons of fish body oil, 2,098,824 pounds of can-

ned pilchards, 2,960,592 pounds of canned maasbanker, and 4,840,296 pounds of canned mackerel.

In the Territory of South-West Africa, all 7 of the pilchard-processing factories at Walvis Bay had started operations by the end of February 1965. The shoal catch landed at Walvis Bay in January-March 1965 totaled 130,666 tons and consisted of 130,422 tons pilchards and 244 tons anchovy.

South Africa's Cape west coast shoal fish catch for the first two months of 1965 was 51,602 short tons pilchards, 18,065 tons maasbanker, 12,275 tons mackerel, and 15,503 tons anchovy. The total catch was 97,445 tons. In the same period of 1964 the total catch was 130,640 tons, made up of 111,210 tons pilchards, 9,437 tons maasbanker, and 9,993 tons mackerel.

The January-February 1965 catch yielded 22,844 short tons of fish meal, 863,242 gallons of fish body oil, 1,643,976 pounds of canned pilchards, 2,635,392 pounds of canned maasbanker, and 1,971,384 pounds of canned mackerel.

In the Territory of South-West Africa, all seven of the pilchard processing factories at Walvis Bay had started operations by the end of February 1965. Their early catches were taken close inshore and yielded about 8 to 12 gallons of oil per ton of fish. (The South African Shipping News and Fishing Industry Review, March, April, May 1965.)

* * * * *

WORLD FISH MEAL MARKET TRENDS CAUSE CONCERN:

The uncertainties surrounding the world market for fish meal are causing some concern among producers in the South Africa Republic. The main concern is that world supplies will not satisfy world demand in 1965. Such a shortage would raise prices, but it could also lead to some disturbing long-term developments. The South African Shipping News and Fishing Industry Review, May 1965, published the following report on the situation:

For some years there have been attempts to find substitutes for the protein in fish meal, or to synthesize some of the more important amino acids. One of the projects has aimed to produce a protein as a byproduct of the

South Africa Republic (Contd.):

petroleum industry. The project has produced preliminary samples which are neutral in taste and have a biological value equal to that of yeast. Fish meal is of course superior as a protein source. The petroleum project is still being developed and difficulties in the fish meal market would stimulate the experiments.

Another result of a shortage of fish meal might be in the use of smaller proportions in animal feeds. Already some feed manufacturers have cut the proportion to $2\frac{1}{2}$ to 3 per cent. Such a development could of course be seen as healthy progress towards the more efficient use of meal. But some producers may also see it--with the experiments in substitutes--as a warning that fish meal may be more difficult to sell in the future.

The growth of world trade in fish meal is one of the more remarkable events of recent years. In 1948 statistics compiled by the Food and Agriculture Organization showed total world fish meal exports of only 110,000 metric tons; 10 years later exports had risen to 657,000 tons. Then came the explosive growth of anchoveta fishing off Peru. By 1961 world exports had soared to 1,351,000 tons; in 1963 they totaled 1,769,000 tons; and in 1964 they were more than 2 million tons.

The sharp rise in available meal sent prices tumbling in the early 1960's. But the lower prices helped spread fish meal to more users and more importing countries. It proved a boon to the animal feed industry, took some of the pressure out of efforts to synthesize the protein (or some of the constituent amino acids) provided by fish meal, and eventually helped to place the market for fish meal on more solid foundations.

Now, stability in the fish meal market is again threatened--this time by a possible shortage rather than a surplus.

Under the circumstances, it would be timely to consider increasing production in South Africa to offset possible declines in output in South America.

A total catch of 1.2 million short tons of shoal fish in the South Africa Republic in 1964 yielded 284,000 short tons of meal. A decline in Cape production was more than balanced by an increase in the catch permitted in South-West Africa.

Under current fishing regulations, South African fish meal output in 1965 should be about the same or less than last year. However, if quotas were raised, more fish could be caught quite easily in South-West Africa, and perhaps also in South Africa if it was decided to extend the Cape season for anchovy.

What should also be considered is whether another 200,000 tons of pilchards added to the 1965 South-West Africa quota would endanger the resource, and whether this danger is sufficient to offset the benefit of the extra meal to the economy, to the industry, and to the future of the fish meal trade.

After calling for more fisheries research to clarify the South African fisheries potential, the South African Shipping News and Fishing Industry Review concluded with the statement: "Fisheries research is still so neglected that those who impose controls over the shoal catch continue to grope blindly never knowing the effect of fishing on the resource. In fact conservation control is no more than the steady go apprehensive stumble of a blind man leading to walk with a stick--a careful prod forward, a pause, and then another prod. It seems unfortunate that the pause period should fall in a critical year for the fish meal industry. We can only hope that it will be decided before the end of 1965 to try another prod forward."

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RECORD FISHERIES CATCH IN 1964:

Record fisheries catch in the South Africa Republic (includes the Territory of South-West Africa) continued in 1964 when the total exceeded the 1,265,000 short tons of 1963 by more than 100,000 tons to reach a figure of 1,379,309 tons. That was the 7th year in succession that the catch has set a new record and the 1964 total was nearly double the 724,000 tons of 1958 when the record-breaking run started.

In South-West Africa, the 1964 catch totaled a record 735,775 tons and included an estimated 2,000 tons of white fish, 2,000 tons of snoek, 8,000 tons of spiny lobster, 718 tons of anchovy, and 723,057 tons of pilchards.

In the rest of the South Africa Republic the catch was 643,534 tons of pilchards, masbanker, mackerel, anchovy, hake and other trawled fish, spiny lobster, snoek, line fish and tuna. That total was just below the 651,000

South Africa Republic (Contd.):

tons of 1963 and was well below the 725,000 tons of 1961.

In the Cape west coast shoal fishery, anchovy (at 104,630 tons) partly made up for the drop in the pilchard catch to 282,301 tons and brought the shoal fish catch to 471,578 tons. The trawl fish catch improved slightly over that of 1963 and reached 117,756 tons. The spongy lobster catch was estimated at 12,200 tons, line fish at 30,000 tons, snoek at 8,000 tons, and tuna at 4,000 tons. (The South African Shipping News and Fishing Industry Review, April 1965.)

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ANCHOVY FISHING REGULATIONS ISSUED:

Following the successful anchovy fishery of the Cape west coast in 1964, that species is covered in new fisheries regulations published by the South Africa Republic in Government Gazette, February 26, 1965.

Regulations governing the pilchard fishery have been extended to anchovy so that both species are now subject to a closed season on the Cape west coast from August 1 to December 31. (The closed season for maasbanker and mackerel is from August 1 to October 31.)

Anchovy was also included with pilchards, maasbanker, and mackerel in regulations covering the licensing of canneries and fish meal plants to process those species. (The South African Shipping News and Fishing Industry Review, March 1965.)

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NEW LICENSES EXPAND FISH-MEAL CAPACITY ON THE CAPE:

Press reports have indicated that the South African Government planned to grant 3 new fish meal licenses in 1965 thereby increasing the number of Cape fish meal factories from 17 to 20 and their total raw fish capacity from 200 to 320 short tons an hour.

In early March 1965, although official confirmation was lacking, South African newspapers announced that two companies, previously unknown in the fishing industry, had been allowed a concession to catch pelagic fish off the Namaqualand coast and to process

fish meal in a factory at Port Nolloth. Their license was said to be for 15 tons of raw fish an hour.

According to a report in the South African Financial Mail, a 10-ton license was to be granted to a company formed by a group of Cape fishermen and professional men, and a 25-ton license was to be divided equally between existing fish meal producers and a number of fisheries men operating along the west coast and around to Hermanus.

An increase in fish meal plant capacity on the Cape may be of little value unless it is matched by an increase in fishing capacity. The fleet of about 130 licensed shoal vessels was hard put to provide for 14 fish meal factories in 1964 during the 7 months pilchard season from January until the end of July. In the first 2 months of 1965 the Cape pilchard catch was less than 60,000 tons as compared with 111,210 tons in the same period of 1964. These trends indicate that 20 or 30 shoal vessels might be needed to support any expansion in productive capacity. (The South African Shipping News and Fishing Industry Review, April 1965.)



U. S. S. R.

ANTARCTIC WHALE OIL AND SPERM OIL PRODUCTION, 1964/65 SEASON:

Total marine oil production from Soviet whaling in the Antarctic during the 1964/65 season was down about 13 percent from the previous season.

Soviet Antarctic Production of Whale Oil and Sperm Oil by Whaling Fleets During the 1964/65 Season ^{1/}			
Whaling Fleets	Whale Oil	Sperm Oil	Total Whale and Sperm Oil
 (Barrels ^{2/})		
Juri Dolgor . . .	39,371	29,588	68,959
Slava	21,765	50,651	72,416
Sov. Ukraina . .	64,958	57,929	122,887
Sov. Rossia . . .	47,376	22,029	69,405
Total all fleets	173,470	160,197	333,667

^{1/}Preliminary.
^{2/}Six barrels equal one long ton.
 Source: The Norwegian Whaling Gazette, No. 4, 1965.

Soviet whale oil output from the 1964/65 Antarctic catch totaled 173,470 barrels (about 28,900 long tons) as compared with production in 1963/64 of 214,438 barrels (35,700 tons).

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

Sperm oil output in 1964/65 was 160,197 barrels (26,700 tons), as compared with 167,715 barrels (27,950 tons) in the previous season. (United States Embassy, Copenhagen, May 18, 1965.)

Note: See Commercial Fisheries Review, Oct. 1964 p. 49.

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**SOVIETS DEVELOP SMALL
"SUBMARINE HYDROPLANE" TO
OBSERVE FISHING GEAR:**

To make underwater observations of trawls and the reaction of fish to gear, the Soviet Institute of Fishery and Oceanological Research has built a "submarine hydroplane." The 1-man underwater craft is designed to be towed by a surface vessel. It has been tested successfully in the Mediterranean and the Atlantic off Africa where a Soviet engineer has made dives to a depth of 75 meters (246 feet). He reported that trawls showed up quite clearly at those depths and that no difficulty was experienced in obtaining film records at depths of 50 to 75 meters (164 to 246 feet), even without the use of light projectors installed on the craft.

The Soviet engineer who made the test dives says his colleagues have nicknamed him "Hydronaut No. 1." (World Fishing, April 1965.)



United Kingdom

**UNITED STATES DEMAND FOR EUROPEAN
FISH VERY BIG SAYS BRITISH EXECUTIVE:**

Shortly after his return in May 1965 from America, where he had been buying and selling fish, the British managing director of a large fisheries firm in Hull discussed the United States market.

"There is a very big demand for European fish in America," he said. "The problem is more one of quality and suitability rather than of price. . . They are looking more and more to the world picture for their supplies, rather than simply to their own domestic fishing which is not developed on the scale of various European countries."

He pointed to a large and expanding population as the big factor behind the U. S. demand.

Commenting on arrangements he had been making for contracts in North America, the British executive said that his exports would be frozen groundfish. So far as the imports were concerned, he said substantial contract arrangements would be entered into for frozen fish supplies from North America. These would include halibut, salmon, fillets, and shellfish from the East and West Coasts.

The British executive attended the North American Fisheries Conference while he was in the United States. (Fishing News, London, May 14, 1965.)

* * * * *

BOXING FISH AT SEA IMPROVES QUALITY

Keeping time is increased by 1 to 3 days when fish are boxed at sea rather than stowed in bulk or shelved. That was the conclusion of the British White Fish Authority after small-scale tests in 1964 by the Torry Research Station. Results equally as good were achieved during commercial tests with boxed fish aboard the trawler Summervale in the spring of 1965. After one trip during the test the vessel returned with a catch of 44,800 pounds packed in specially designed boxes. (Fish Trade Gazette, April 24, 1965.)

Note: See Commercial Fisheries Review, November 1964 p. 11 and March 1964 p. 73.

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**NEW SEMIAUTOMATED STERN TRAWLER
"ROSS FORTUNE" LAUNCHED:**

The Ross Fortune was launched June 15, 1965, at a shipyard in Selby, England, for the British firm which pioneered semiautomated trawling in the North Sea with the Ross Darling. The Ross Fortune and her sistership Ross Fame will extend automation to middle distance fishing. British middle-water vessels usually carry about 15 men, but Ross Fortune will start operations with a crew of only 10 men.

Ross Fortune is a shelter-deck stern trawler with an overall length of 139½ feet, a breadth moulded of 30 feet, and a depth moulded to upper deck of 19½ feet. Fish hold capacity is 8,500 cubic feet representing space for about 100 long tons of fish on shelves. Power is provided by an engine developing 950 b. hp. at 1,500 r.p.m.

When completed in the fall of 1965, Ross Fortune will operate out of Grimsby, England.

Note: See Commercial Fisheries Review, March 1965 p. 94.

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United Kingdom (Contd.):

NEW SEMIAUTOMATED STERN TRAWLER "ROSS DAINTY" ENTERS SERVICE:

A major feature of the Ross Dainty, which entered service in late May 1965, is push-button control from the bridge of every fishing operation. It also provides automatic bridge control of the main engine, propeller pitch, pumps, and gearbox clutch. The vessel is the first of two additional "Daring" class semi-automated stern trawlers ordered by a large British trawling firm.



Fig. 1 - Ross Dainty, the most recent British semiautomated stern trawler.

Ross Daring and her sistership Ross Daint (both launched in 1963) pioneered semi-automated stern trawling in the North Sea. Each of those vessels has a length between perpendiculars of 85 feet, a range of about 30 days, and a fishhold capacity for about 140,000 pounds of iced fish. Each is crewed by a crew of five men.



Fig. 2 - Ross Daring pioneered semiautomated stern trawling.

The Ross Dainty incorporates the basic design of the Ross Daring with improvements

developed through extensive trials of the earlier vessels. Changes in the Ross Dainty include an all-welded construction and fabricated stern frame; a length between perpendiculars of 86 feet 3 inches; and a slightly larger fishroom (5,000 cubic feet) covered with galvanized steel instead of aluminum.



Fig. 3 - The gutting and washing room on the Ross Daring. After fish are sorted on deck, they are passed through a hatch for gutting in the stainless steel trough in the foreground. Fish are then washed and transferred by chute to the fishroom below.

The Ross Dainty is powered by a 4-stroke diesel engine developing 407 s. hp. at 1,200 r.p.m.

Note: See Commercial Fisheries Review, March 1965 p. 94, and Sept. 1963 p. 93.



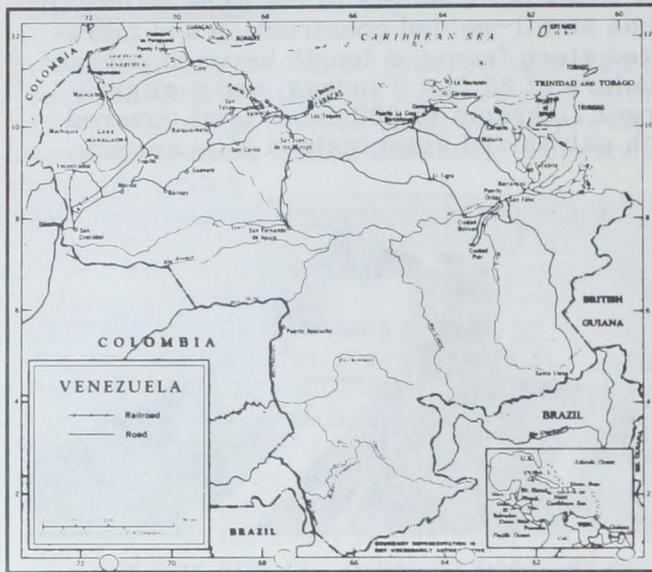
Venezuela

FISHERIES INVESTMENT OPPORTUNITY:

A Venezuelan firm is seeking a joint venture to establish a smoked fish operation using Venezuelan species of tropical fish to produce a smoked herring-type product. According to the firm, laboratory tests combined with the experience of three small plants have shown that two species of fish termed "Cabana" and "Cataco," when smoked with local wood, have the taste and appearance of smoked herring. Those fish are captured in the nets of Venezuelan sardine purse seiners within 2 miles of shore. Fishermen are currently discarding the "Cabana" and "Cataco."

The project calls for a smoking plant with an initial capacity of 2 metric tons of raw fish a day. Calculating a 50 percent loss in weight, the weekly output would be about 5 to 7 tons. About 50 percent of the initial production would have to be sold in foreign markets. The smoking plant could probably be financed locally, and it would be located near the source

Venezuela (Contd.):



of supply at one of three fishing centers in Venezuela.

A U. S. collaborator would be asked to supply fishing know-how and to bring into the company, for operation under the Venezuelan flag, an appropriate fully equipped fishing vessel. While the fish presently can be bought for a penny each from local fishermen, the company believes that when it begins production it should have its own boat in operation to insure an adequate supply of the required fish at competitive prices.

Note: Interested U. S. investors should write: Christian Pfeiffer, Americana Valor S.A., Edificio Galipan, A-2-F, Avenida Francisco de Miranda, Caracas (Apartado 11491 Chacao), Venezuela. A World Trade Directory report on the firm, dated March 31, 1965, may be obtained by qualified United States firms from U. S. Department of Commerce field offices for \$1.00 a copy.



Republic of Viet-Nam

FROZEN SHRIMP EXPORTS, 1964:

South Viet-Nam's exports of frozen shrimp during January-March 1965 were up from the same period a year earlier. In 1964 South Viet-Nam exported less frozen shrimp than in the previous year--732,000 pounds as compared with more than 1 million pounds in 1963.

In 1964 the United States received 77,000 pounds of that country's frozen shrimp exports. In the first quarter of 1965 the United States imported 26,000 pounds of frozen shrimp from South Viet-Nam, the same quantity as in the first quarter of 1964.

With the completion of additional fish landing facilities in that country, fishery products exports (including shrimp) are expected to increase. Trial shipments of frozen shrimp for market testing were made in 1964 to the United States, Europe, and Asiatic countries. (United States Embassy, Saigon, May 20, 1965.)

Note: See Commercial Fisheries Review, January 1965 p. 96.



Yugoslavia

NEW LAW PROCLAIMS EXTENDED TERRITORIAL WATERS AND CONTROL OVER ADJACENT CONTINENTAL SHELF RESOURCES:

A decree proclaiming a "Law on the Coastal Sea, The Outer Sea Belt, and the Epicontinental Belt of Yugoslavia" was published in the Yugoslav Official Gazette of SFRY, May 12, 1965, and became effective on May 20, 1965. The new law proclaims Yugoslav sovereignty over the "coastal sea of Yugoslavia" which includes "inner sea waters" and "the territorial sea." Base lines are set forth to be used in measuring those areas. The "inner sea" is within the base lines and the "territorial sea" is a belt of 10 nautical miles measured from the base lines toward the open sea.

The base lines specified are: (1) the low-tide lines along the coastline of the mainland and coastal islands; (2) straight lines closing the entrances to bays; and (3) straight lines connecting certain points on the mainland and coastal islands.

The law provides that a foreign fishing vessel while passing through the Yugoslav "territorial sea" must "keep her fishing equipment in the holds or sealed. Such a vessel must pass through the territorial sea by the shortest route, sailing at a speed not lower than the economic speed, without stopping or anchoring, unless this is necessary due to an act of God. During her passage through the territorial sea a foreign fishing vessel must bear clearly visible markings indicating a fishing vessel." The penalty provided for violation of those provisions is a fine of 20,000 to 200,000 dinars (US\$27 to \$267). Those provisions do not apply to a fishing vessel which has been granted permission, issued on the basis of an international agreement, for fishing in the "territorial sea," when such vessels are in the zone where they are allowed to fish.

Yugoslavia (Contd.):

Foreign fishing vessels are generally forbidden to enter Yugoslavia's "inner sea waters" unless forced there by an act of God. The penalty for such a violation is a fine of 50,000 to 500,000 dinars (\$67 to \$667) and is applicable to the captain of the vessel or any other responsible person aboard.

The new law prescribes an "outer sea belt" of 2 nautical miles measured from the outer boundary of the "territorial sea." In the "outer sea belt" competent Yugoslav authority is to "exercise control to prevent violation of customs, fiscal, and sanitary regulations. . . and to punish breaches of these regulations."

The "epicontinental belt" is described as "the sea bottom and the underground of the submarine space outside the outer boundary of the territorial sea to a depth of 200 meters (656 feet), and also beyond that boundary to the line where the depth of the water over the sea bottom permits exploitation of the natural wealth of the sea bottom and its underground."

Yugoslavia claims sovereign rights over the "epicontinental belt" concerning the exploration and exploitation of its natural wealth--including its underground and living organisms which, in the stage in which they are caught, are immovable on the sea bottom or underneath the sea bottom, or can move only when in continual, physical contact with the sea bottom or its underground.



AUSTRALIAN SHRIMP TRAWLER NETS RARE "BARKING" SPINY LOBSTER

A total of 22 unusual spiny lobster caught by the shrimp trawler Century Star, the latter part of 1964 in 65 fathoms of water 25 miles off Mooloolaba, Queensland, have been identified as "barking crayfish" (Linuparus trigonus). Previously they were recorded only twice in Australia.

The first example of the species (which belongs to the Japanese seas) recognized in Australia was taken in the net of a steam trawler in 65 fathoms off Botany Bay, New South Wales in 1949. Another specimen was netted in 50 fathoms of water, 16 to 18 miles off Newcastle, in 1956. Up until 1949 the only other record of the species being found outside Japanese waters was when a single specimen was trawled off Portuguese East Africa, in 180 fathoms of water.

The common name of "barking crayfish" was given to Linuparus trigonus by F. A. O'Neill in the June 1956 issue of the Australian Museum Magazine when he examined a live specimen caught off Newcastle.

When the spiny lobster flexed its tail and threw its pair of heavy antennae backwards over its head, the movement was accompanied by a loud harsh grating sound or "bark."

The source of the noise was later found to be the inner angles of the heavy basal joints of the stubby antennae, just in front of the eyes. Here there were two smooth-lined cavities which enclosed and bore upon a pair of highly-polished bosses when the antennae assembly was thrown backwards over the head. Even after death a semblance of this friction-produced sound could readily be produced by hand manipulation. (Australian Fisheries Newsletter, November 1964.)