FOREIGN

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JROPE

GROUNDFISH SHORTAGES CAUSING PROBLEMS FOR SOME PROCESSORS:

Excess processing capacity developed in ne Danish and Norwegian fishing industries ven though landings were maintained at a ood level in 1965. Processing facilities ave expanded with the growing demand for roundfish fillets and other fishery products. ow local fishermen, mainly dependent on oastal fishing grounds, are not always able o deliver enough supplies to fully utilize rocessing capacity. As a result, Danish and orwegian processors have pressed for lib-ralization of fresh fish imports and direct oreign landings for processing. This might e a short-term solution. But the Scandina-ans face competition from processors in her countries. For example, the United ngdom receives substantial foreign land-gs, and depends on them to supplement do-stic landings.

The downward trend in the catch-per-t-of-effort in the main Northeast Atlantic hing areas will add to the difficulties of untries dependent on coastal and medium-nge fisheries.

INTERNATIONAL CONVENTION FOR THE CONSERVATION OF ATLANTIC TUNAS

CONFERENCE OF PLENIPOTENTIARIES RAFTS CONVENTION:

An International Convention for the Con-rvation of Atlantic Tunas was agreed on by nations in Rio de Janeiro, Brazil, on May , 1966. The Convention was drafted at a o-week Conference of Plenipotentiaries onsored by the Food and Agriculture Or-nization of the United Nations (FAO). Del-ations attended from Argentina, Brazil, nada, Cuba, Democratic Republic of Congo, ance, Japan, Portugal, Republic of Korea, public of South Africa, Senegal, Spain, the Union of Soviet Socialist Republics, United Kingdom, Uruguay, Venezuela, and the United States. Observers were present from the Federal Republic of Germany, Italy, and Poland.

The Chairman's table during a session of the Main Committee of the Conference of Plenipotentiaries on the Conservation of Atlantic Tunas, Rio de Janeiro, Brazil, May 2-14, 1966. Left to right: J. E. Carroz and A. Roche, FAO Legal Advisers; J. Z. McHugh, Chairman; Horatio Rosa, Jr., Executive Secretary of the Conference; A Miyares del Valle, FAO Technical Assistant.

The United States Delegation was headed by Dr. J. L. McHugh, Assistant Director for Biological Research, Bureau of Commercial Fisheries, Department of the Interior. The other Department of Interior members were William M. Terry, Assistant Director for International Relations, Bureau of Commercial Fisheries; and Albert H. Swartz, Assistant Chief, Division of Fishery Biology, Bureau of Sport Fisheries and Wildlife. Department of State members were Burdick H. Brittin, Deputy Special Assistant for Fisheries and Wildlife to the Under Secretary for Economic Affairs; William L. Sullivan, Jr., Foreign Affairs Officer; Raymund T. Yingling, Assistant Legal Adviser; and Richard S. Croker, United States Fisheries Attache, Mexico City. Commercial and sport fishing interests were represented by Dr. W. M. Chapman, Van Camp Sea Food Company; Charles M. Carry, Tuna Research Foundation; John J. Supple, Bumble Bee Packing Company; and Richard H. Stroud, Executive Vice President, Sport Fishing Institute.

Development of a draft Convention began in Rome, Italy, in October 1963 when FAO convened a Working Party for Rational Utilization of Tunas in the Atlantic. The Working

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Party completed its assignment at a second meeting in Rome in July 1965. The Conference of Plenipotentiaries reviewed the draft prepared by the Working Party and altered the language where necessary to resolve differences of opinion.

The Convention was signed by Brazil, Spain, and the United States on May 15, 1966. The treaty will enter into force when it has been signed and ratified by seven nations. Its purpose is to plan and coordinate scientific research with the object of maintaining the maximum sustainable yield of tunas and tuna-like fishes in the entire Atlantic Ocean and adjacent seas. All species of fish caught by tuna fishing vessels, whether for food or for other purposes, are covered by the Convention.

When the Convention enters into force, a Commission will be established. Each Contracting Party will be represented by not more than three Delegates. The Commission will establish Panels on the basis of species, groups of species, or of geographic areas. The budget of the Commission will be contributed by member nations in the form of a levy of US$1,000 for Commission membership and US$1,000 for each Panel of which the nation is a member. If the budget exceeds this amount, the additional contributions will be calculated in proportion to the amount of contributions for Commission and Panel membership, the round weight of tuna caught in the Atlantic by the vessels of each nation, and the net weight of Atlantic tuna canned by each nation.

The Commission will employ an Executive Secretary and staff. Scientific studies and collection of the necessary statistics will be the responsibility of member nations, but the Commission will review and coordinate planning and may conduct studies of its own. Mechanisms were established for joint action in enforcing regulations designed to maintain the resources at levels consistent with maximum sustainable yields.

Meetings of the Commission will be held every 2 years. To guide its work in the interim a Council will be established, made up of the Chairman and 2 Vice-Chairmen of the Commission, plus not less than 4 nor more than 8 members. If Commission membership exceeds 40 nations, 2 more members may be added to the Council. (Bureau of Commercial Fisheries, June 1, 1966.)

Note: Copies of the Final Act of the Convention, as well as the Convention itself, are available from: Branch of Foreign Fisheries, Bureau of Commercial Fisheries, U.S. Department of the Interior, Washington, D. C. 20240.

INTERNATIONAL CONVENTION FOR THE NORTHWEST ATLANTIC FISHERIES

PROTOCOL CONCERNING HARP AND HOOD SEALS ENTERS INTO FORCE:

The Protocol (done at Washington, July 15, 1963) intended to bring harp and hood seals under the International Convention for the Northwest Atlantic Fisheries (ICNAF) entered into force April 29, 1966, with the official ratification of Italy. Other member countries of ICNAF had ratified previously.

Of the thirteen member countries of ICNAF, only four--Canada, Norway, Denmark, and the U.S.S.R.--have been active regularly or at intervals in the seal fishery of the northwest Atlantic in recent years. Canada's concern over the conservation of the resource was reflected in that country's proposal, informally accepted by the other countries some years ago, to observe opening and closing dates for the seal fishery.

Additional measures to conserve the seal populations were to be discussed at the annual meeting of the International Commission for the Northwest Atlantic Fisheries which opened in Madrid, June 6, 1966. Consideration was to be given to the needs for an internationally coordinated program of essential research and other matters designed to protect and develop the seal stocks. (Canadian Department of Fisheries, Ottawa, May 3, 1966.)

Note: See Commercial Fisheries Review, Sept. 1965 p. 52.

NORWEGIAN-U.S.S.R. SEALING COMMISSION

SEAL CONSERVATION IN WHITE SEA:

The Norwegian-U.S.S.R. Sealing Commission is taking steps to protect the seals in the White Sea in order to stop the serious decline in their number. Only vessels of under 100 tons are allowed to seal in the White Sea, and they are permitted only one trip a season. (U.S. Embassy, Stockholm, May 3, 1966.)

INTERNATIONAL WHALING COMMISSION

PROPOSED REGULATION OF LAND STATION WHALING IN SOUTHERN HEMISPHERE:

On May 16, 1966, the International Whaling Commission notified member countries of a

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eeting June 20, 1966, in London of a Special roup to consider the regulation of the catch whales from land stations situated south of 0° S. latitude and in other parts of the south- n hemisphere. Argentina, Australia, New aland, the South Africa Republic, and the ited Kindgom had indicated their wish to rticipate in the Special Group meeting. rway and Japan had asked to be represented observers.

The meeting of the Special Group on land ations arose out of a resolution adopted at e Seventeenth Meeting of the International haling Commission. In addition to con- dering the regulation of the catch of baleen ales by land stations, the Special Group s been called upon to study the question of scheme for international inspection at land ations comparable to the International Ob- rver Scheme on vessels.

The resolution proposed that the total tch limit of Antarctic pelagic whaling for the 6/67 season and after should take into con- eration the catch of Antarctic whales from d stations in the Southern Hemisphere.

For the 1965/66 season, voluntary catch strictions at land stations were proposed. ccordance with the Commission's request, United Kingdom stated that for the 1965/66 son, the catch of baleen whales at land ions in South Georgia would not exceed in the 1964/65 Antarctic season. In ad- on, the South Africa Republic notified the mission that the catch of baleen whales n their land stations in 1966 would be re- cted to the average of the catches for the e years 1963, 1964, and 1965.

* * * * *

ETING OF
RTH PACIFIC COMMISSIONERS:

On May 11, 1966, the International Whaling mission announced the draft agenda for meeting of the North Pacific Commis- ners in London, June 23-26, 1966. The t agenda included: report of scientists ondition of North Pacific baleen whale ks; consideration of whaling regulations (a) fin whales, (b) sei whales, and (c) r baleen whales; report of scientists on dition of sperm whale resources; con- ration of regulation for sperm whaling; recommendations to the Commission.

INTERNATIONAL NORTHWEST PACIFIC FISHERIES COMMISSION

VIEWS OF JAPANESE DELEGATES:

The 10th session of the International Northwest Pacific Fisheries Commission (Japan-U.S.S.R.) was completed in Moscow in mid-April 1966. On their return to Japan, chief delegates Fujita (Vice President of the Greater Japan Fisheries Association) and Kamenaga (Chief, Production Division of the Fisheries Agency) held a press conference and made the following points:

1. On the question of revising the Japan-Soviet fisheries treaty, the Soviets are dissatisfied with the fact that the salmon catch quotas, which were equal between Japan and the Soviet Union at the time the treaty was concluded, have become smaller for the Soviets. However, the present treaty does not decide on the distribution ratio of fish catch, and it was not clear if the Soviets desire to revise the treaty, or if the Soviets think that there is a problem in the management of the present treaty.

2. The Japanese proposed a "two-year arrangement" on fish catch quotas, but failed to obtain a definite promise. Soviet Chief Delegate Moiseyev stated the view that the general salmon catch quotas of Japan and the Soviet Union for next year (1967) will be the same as for last year (1965), but he was strongly opposed to decide on the distribution between Japan and the Soviet Union. The Soviets have not so far expressed their view on the catch quotas of the two countries. However, it is going too far to assume that the Japanese salmon catch quota has been secured at the same level as last year (115,000 metric tons).

3. There will be comparatively fewer questions about next year's negotiations on salmon as it will be an abundant year. However, the situation will be difficult on king crabs. (Asahi, April 21, 1966.)

Note: See Commercial Fisheries Review, June 1966 p. 48.

FOOD AND AGRICULTURE ORGANIZATION

EUROPEAN INLAND FISHERIES ADVISORY COMMISSION MEETING, MAY 9-14, 1966:

Talks on electrical fishing and trout and salmon culture highlighted a session of the European Inland Fisheries Advisory Commission of the Food and Agriculture Organization which met in Belgrade, May 9-14, 1966. Fisheries experts from 16 countries were invited to the meeting.

International (Contd.):

A major theme of the symposium on electrical fishing was the use of electricity in (1) studying the density of fish populations, and (2) for control and management of inland fish stocks. Eleven papers were presented.

Proper feeding methods was the principal theme of the symposium on inland trout and salmon culture with 13 papers presented, including contributions from Japanese, American, and European fish culturists.

During the session a working party met to study the effect of water temperature on aquatic life. (Food and Agriculture Organization, Rome.)

* * * * *

SOUTHWEST ATLANTIC REGIONAL FISHING CONFERENCE:

The third meeting of the Regional Advisory Commission on Fishing for the Southwest Atlantic (CARPAS) was held in Montevideo, Uruguay, April 25-29, 1966. The Member Countries of this FAO regional fisheries body are Argentina, Brazil, and Uruguay.

A principal accomplishment of the meeting was the approval of a system to create uniform statistical reporting. This system delineates the geographical and oceanographical area for the statistical purposes of CARPAS and establishes a uniform classification of fish species by common name.

The ocean area to be covered by CARPAS extends from the Straits of Magellan north to the Caribbean shores of Brazil and eastward to the mid-South Atlantic.

A recommendation was also made that Bolivia and Paraguay be invited to join the CARPAS organization.

An intangible result of the meeting was that the participating countries had an opportunity to exchange views and discuss common and particular problems. Members of the FAO delegation hope that the meeting will stimulate the members to work harder to develop their fishing industry and resources.

Dr. Victor H. Bertullo (Uruguay), the new President of CARPAS, will preside at the next meeting to be held in Rio de Janeiro. (U. S. Embassy, Montevideo, May 5, 1966.)

SALMON

UNITED STATES-CANADIAN PACIFIC SALMON PROBLEMS:

United States and Canadian fishery officials and industry representatives met in Seattle May 17-20, 1966, to give further consideration to salmon fishing problems of common concern in the Pacific Northwest, British Columbia, and Southeastern Alaska.

The discussions in Seattle followed two previous rounds of negotiations--one held in Ottawa in April 1966 and a prior one held in Washington, D. C., in October 1965. The earlier discussions also centered around Pacific Coast salmon problems of mutual concern.

The intermingling of salmon en route to their home streams through territorial waters of both countries has led to a disagreement. The Canadian position is that to the extent possible the net-fishing limits of each country should be used as a tool to minimize the harvest by one country of salmon bound for the rivers of the other country. The position of the United States is that the two countries must not only consider the origin of the salmon caught by fishermen of the respective countries but that they must respect the historic fisheries of the two countries in seeking an equitable solution to the problem.

The Canadians suggested that the solution to the problem lay in drawing inward the seaward limits of net fishing off the coast of Alaska and in waters of northern British Columbia. It was their view that this would minimize the capture by fishermen of either country of salmon bound for streams of the other country. The Canadians presented the United States with modified lines designed to accomplish this objective. The United States maintained that their important historic fishery off the west coast of Southeastern Alaska would be eliminated by the adjustment of net-fishing lines as suggested by Canada. The United States for its part presented net-fishing lines which would draw inward the seaward limits of fishing in Southeastern Alaska but would preserve historic fisheries found in that area. Canada was unable to accept these lines because they permitted continued interception of Canadian-bound salmon.

Because of these differences, the conference was unable to reach agreement on

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justment of the salmon net-fishing lines in e northern area. This led to an understand- g that the countries would no longer be bound the net-fishing line agreements reached in 7.

At the close of the conference the Canadian legation reserved the right for Canada to end its fisheries seaward where appropri- e in order to seek an equitable solution of e major problem of interception by fisher- n of one country of salmon bound for the er which could not be resolved by attempts reach agreement on the inward adjustment salmon net-fishing limits. Canada gave the surance that unrestricted high-seas fishing Canadian fishermen would not be permitted that due notice of changes in pertinent hery regulations would be given to the U- ed States.

The United States Delegation stated that in w of the Canadian reservation, the United tes reserved its right to redefine its sea- rd salmon net-fishing lines as considered propriate. It also indicated that due notice uld be given to the Canadian authorities of proposed changes.

The conference did agree that a research gram designed to provide more informa- on the movement and intermingling of the ks originating in southeastern Alaska and thern British Columbia should be initiated soon as possible. From such research it oped that solutions to the unresolved prob- s can be found which are equitable and ually advantageous to both countries. A rdinating committee (composed of 2 U. S. 2 Canadian fishery officials) was named itiate the necessary exchange of infor- on and prepare proposals for cooperative earch for the consideration of the two rnments before October 1, 1966.

The conference was discussed by the Ca- ian Fisheries Minister before a Canadian se of Commons Committee on May 26, 6. The Canadian Minister said: (1) while ada has reserved the right to extend sea- d the limits of net salmon fishing, no ac- would be taken before the 1966 season; Canada would study the effect of the 1956 itations imposed on Canadian fisheries; (3) Government and chartered vessels to esearch and tagging of salmon would be out immediately.

See Commercial Fisheries Review, June 1966 p. 50.

SCANDINAVIAN COUNTRIES

PROPOSED FISHING LIMITS AGREEMENT FOR THE SKAGERRAK AND KATTEGAT SEA:

Delegations from Denmark, Norway, and Sweden met in Copenhagen on February 15-16, 1966, to discuss a proposed Scandinavian agreement on mutual access to the fisheries in the Skagerrak and the Kattegat Sea after the eventual extension of the fishing limits of the three countries. This was a continuation of Scandinavian discussions on the subject in Stockholm in May 1965. Since then, fishing industry organizations of those countries have held meetings to discuss the problem.

The Government delegates at the February 15-16 meeting agreed to recommend to their governments that fishing vessels from the 3 countries should continue to be allowed to fish up to a distance of 4 nautical miles from the coasts of the other countries in an area bounded by a line between Hanstholm, Denmark, and Lindesnes, Norway, and between Skagen, Denmark, and Tistlarna reef, Sweden.

At the same time, it was agreed between Denmark and Norway that traditional Norwegian fishing rights south of the line between Skagen and Tistlarna should be continued. Between Denmark and Sweden, it was agreed that a Scandinavian agreement should not affect the Danish-Swedish Convention of 1932 on fisheries conditions in the Kattegat. (Regional Fisheries Attache for Europe, U. S. Embassy, Copenhagen, February 24, 1966.)

Note: See Commercial Fisheries Review, Jan. 1966 p. 65, Dec. 1965, p. 48.

SOUTH AMERICA

DISTRIBUTION OF BOTTOMFISH OFF CHILE, PERU, AND ECUADOR:

A fishery scientist of the Bureau of Commercial Fisheries returned from a trip in March 1966 to Chile, Peru, and Ecuador and reported the following on the behavior and distribution of bottom-dwelling species:

(1) From Coquimbo, Chile, north to southern or central Peru, bottom waters at depths between 50 (164 feet) and 300 or 400 meters (984-1,312 feet) reportedly are deficient in oxygen and, consequently, demersal species are scarce in that zone. A similar situation occurs off northern Peru at depths between 30 (98 feet) and 100 meters (328 feet). The

International (Contd.):

substrate within that zone consisted of mud which is high in H_2S, which tends to plug trawl nets.

(2) Large schools of hake occur off both Chile and Peru with apparently identical behavior patterns to those occurring off Washington and Oregon. The hake rise into the surface layers at night and reform into compact schools near the ocean floor in the morning.

Fishing for hake, crew of Chilean trawler lower a net off Valparaiso.

(3) Large bottom trawl catches of hake are taken off Chile and Peru. To date, midwater trawling for hake has not been attempted with efficient gear. If this were done, however, catches would be extremely large--probably much larger than are now being taken with bottom trawls.

Australia

WESTERN AUSTRALIA FISHERIES DEVELOPMENT PROJECT ANNOUNCED:

A major British company with international interests in fisheries, shipbuilding, and other industries announced (in March 1966) plans to conduct a $1 million fisheries research and development project in Western Australia. The company has purchased a factoryship as part of the plan.

The 272-ton ship was formerly used by the C.S.I.R.O. and the Queensland Government in testing the shrimp potential of fishing grounds in the Gulf of Carpentaria. The vessel is in Exmouth Gulf, Western Australia, where the first fishing experiments will begin.

She will be mothership to a fleet of shrimp trawlers until a shore station and processing plant is built. She will then move to other grounds farther north where the process will be repeated.

In addition to processing shrimp for export, the ship will be used as a service depot for the company's fleet. While the fishing operation is in progress, local fishermen will be trained in new techniques of fishing and the fleet will be used in research.

Establishment of a tuna fishery in Western Australia is also in the company's plans.

The British firm moved into Western Australia in 1960 when it purchased a firm in Fremantle. In Sydney last year a director confirmed reports that the parent company was planning to work with Japanese interests to develop a tuna fishery in the west. In March 1966, a company spokesman announced that the plans to work with the Japanese had been canceled and that the company would go into tuna fishing on its own.

Fishing was to take place in waters north of Carnarvon and processing carried out at a port on the northwest coast. The venture, he said, could compete successfully with Japanese tuna-fishing groups already operating off Western Australia. Those groups caught about 4,500 metric tons of Western Australian tuna in 1964. (Fish Trades Review, March 1966.)

Barbados

BARBADOS FISHING ACTIVITY, 1965:

An American-owned enterprise had a reasonably successful year in 1965 in Barbados. It exported over 2 million pounds of frozen shrimp to foreign markets (principally

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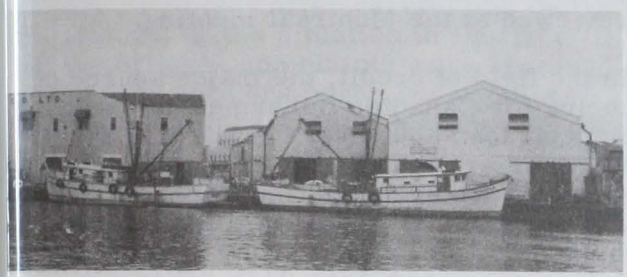
the United States). This firm can finally ook forward to expanding its operation.



g. 1 - Unloading dock, office, repair shop, and parts storeroom of U.S.-owned firm in Bridgetown, Barbados. Two shrimp trawlers at the dock.

Soon the Barbados Marketing Corporation BMC), a Government statutory board, is to large existing freezing and cold-storage cilities at a cost of EC130,000 (US$76,500). he Government's reluctance to expand these cilities, lest the American firm move on to more lucrative base of operation, appar- tly has been overcome by the willingness of e U. S. company to sign an agreement to ovide for processing a specific number of unds of shrimp a year for a specific num- r of years. The shrimp trawler fleet work- g out of Barbados now numbers 32 vessels d should increase.

g. 2 - Close-up view of shrimp trawlers at the dock in Bridge- own.

Although the catch of fish in 1965 exceeded at of 1964 and the number of operational shing vessels increased over the same per- d, the Island, to meet local demand, still d to import EC$1.2 million (US$706,000) rth of processed and salted fish. That nount was in excess of the value of the local tch. With the approval of Government, lo- l retail prices were allowed to rise to ex- ing black market levels. Since catches are generally confined to limited periods, the firm, with a shortage of storage facilities, was unable to absorb the glut and create a more even distribution pattern. Experiments are now being made in exporting flyingfish when the catch is heavy.

Fig. 3 - Flyingfish gill-netters in foreground docked at Bridge- town.

Relief may soon be in the offing since the EC$5.0 million (US$2.9 million) four-year U. N. Special Fund Fisheries Project for the Caribbean finally got off the ground. The gen- eral aims of the project are to promote fish- ing industries in the area by (a) demonstra- tional and exploratory activities, (b) training of fisheries officers, and (c) marketing dem- onstrations. However, in the final analysis, to expand this important economic activity considerable capital will have to be provided for modernization of equipment and methods. (U. S. Consulate General, Barbados, April 27, 1966.)

Bermuda

U.S.S.R. STUDIES POSSIBLE FISHING BASE ON BERMUDA ISLANDS:

The Crown Lands Corporation of Bermuda received an inquiry from a Canadian firm which was investigating the possibilities of Soviet trawlers using the free port area on Ireland Island, Bermuda, as a storage and transshipment base for fish. According to the chairman of the Corporation, information about the availability of land in the free port area had been passed on to the Canadian firm. (U. S. Consul, Hamilton, May 2, 1966.)

Canada

ATLANTIC HERRING FISHERY CONFERENCE HELD IN FREDERICTON, NEW BRUNSWICK:

The potential of the herring resource and its importance to the future of Canada's Atlantic fisheries was the theme of the Canadian Atlantic Herring Fishery Conference, held in Fredericton, N. B., May 5-7, 1966. The Conference was sponsored by the Canadian Federal-Provincial Atlantic Fisheries Committee. About 25 papers covering every phase of the herring fishery were submitted for discussion at the meeting. Representatives of the fishing industry, as well as technologists, biologists, and marketing specialists attended.

Led by the Federal Deputy Minister of Fisheries, Government officials emphasized that Canada was not exploiting its Atlantic herring fishery to full advantage. An expansion in the East Coast herring catch from 400 million pounds in 1965 to between 1 and 2 billion pounds by 1975 was projected by a Canadian economist. He forecast generally favorable demand for herring products for the next 5 years.

Various aspects of catching, processing, and marketing an expanded herring catch were discussed by other Government and industry representatives. Obviously much of the expanded catch would go for industrial uses. A note of caution was injected by several scientists as well as by canning interests. They agreed that the resource was underexploited, but said more research was needed in order to predict effects of expanded exploitation and to develop appropriate management practices. (Canadian Department of Fisheries, Ottawa.)

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PROPOSED INCREASE TO 50 PERCENT IN FEDERAL SUBSIDY FOR ATLANTIC INSHORE VESSELS:

An increase in the Canadian Federal subsidy for Atlantic inshore fishing vessels to 50 percent was to be considered at a meeting in Montreal, April 27, 1966, of Federal and Provincial fishery officials. The Federal Fisheries Minister said there is a need to accelerate the construction of larger inshore vessels (35- to 55-foot class) in order to modernize the fishery.

Only large steel trawlers 85 feet and over have been eligible for a 50-percent Canadian subsidy. The allowable subsidy for other Canadian fishing vessels ranges from 25 to 40 percent.

Loan facilities for fishermen were also to be reviewed at the Montreal meeting.

In the field of credit, the major source of financing for Canadian fishermen has been Provincial loan agencies, the Federal Fisheries Minister said. In order to facilitate lending by such agencies, the Canadian Federal government is prepared to recommend such agencies as lenders under the Fisheries Improvement Loans Act. This action would provide a guarantee to Provincial lending agencies similar to that now provided to banks and credit unions making loans to fishermen. (Canadian Department of Fisheries, Ottawa, April 19, 1966, and other sources.)

* * * * *

REGIONAL DIRECTOR OF FISHERIES IN THE MARITIMES AREA APPOINTED:

R. E. S. Homans of Halifax, N. S., has been appointed Regional Director of Fisheries in the Maritimes Area for the Department of Fisheries of Canada, it was announced April 18, 1966. He was the successful candidate in a Civil Service Commission promotional competition.

As Area Director of Fisheries, Homans (with headquarters in Halifax) is the senior officer of the Federal Department of Fisheries in the Provinces of Nova Scotia, New Brunswick, and Prince Edward Island. (Canadian Department of Fisheries, Ottawa, April 18, 1966.)

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SCALLOP FISHERY DOES NOT INTERFERE WITH LOBSTER SEASON IN NORTHUMBERLAND STRAIT:

No immediate change is planned in the regulations governing the scallop fishery in Northumberland Strait between Pictou County, Nova Scotia, and Kings County, Prince Edward Island, the Canadian Fisheries Minister announced April 21, 1966. The region referred to in the announcement is within Canadian Lobster Fishing District 7B.

Lobster fishermen in the district had voiced concern that scallop fishing would interfere with the lobster fishery in the May and June season. They also feared damage

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lobsters on the grounds through the use of werful draggers with heavy rakes or drags.

The Fisheries Minister said the decision continue under previous regulations in the ea was made only after careful and thorough vestigations of the situation in District 7B. hen the original complaints were received, partmental officers began observations hich included trips aboard scallop draggers see the effect of the operation upon lobsters. here was no evidence to indicate that lobrs were being taken in scallop drags. The sheries Minister also pointed out that no allop draggers have actually fished the area ring the lobster-fishing season.

The Canadian Department of Fisheries will ntinue to keep the scallop and lobster fishries of District 7B under close observation that any adverse changes in the established ttern may quickly be spotted. (Canadian Department of Fisheries, Ottawa, April 21, 1966.)

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ARINE OIL AND MEAL PRODUCTION, SE, AND FOREIGN TRADE, 1964-1965:

Marine Oil: Canada's marine oil production of 58.8 million pounds in 1965 was about e same as in the previous year. A drop in rring oil output on the West Coast was aut offset by higher production of herring oil the East Coast.

Table 1 - Canadian Production of Marine Oil and Meal, 1964-1965

	1965	1964
	. . (1,000 Pounds) . .	
RINE OIL:		
lantic Coast:		
Groundfish: body oil	1,977.6	1,437.8
liver oil	4,566.6	5,817.9
Herring	7,142.3	4,729.8
Seal	2,336.9	1,272.4
Other	1,015.7	605.5
Total Atlantic Coast oil	17,039.1	13,863.4
tish Columbia:		
Herring	41,774.3	44,544.5
Grand Total marine oil production	58,813.4	58,407.9
MEAL:		
lantic Coast:		
Groundfish	85,588.0	50,684.0
Herring	25,566.0	12,494.0
Other	1,860.0	1,872.0
Total Atlantic Coast meal	113,014.0	65,050.0
itish Columbia:		
Herring	80,258.0	88,080.0
Grand Total meal production	193,272.0	153,130.0

e: Marine-oil production data converted to pounds by use of ctor 9.25 pounds equal 1 imperial gallon.

Exports of marine oil in 1965 were down m the high levels of 1964 due to the loss herring oil markets in the United Kingdom. ipments to the United States were also down.

Table 2 - Canadian Foreign Trade in Marine Oil, 1964-1965

	1965	1964
	. . (1,000 Pounds) . .	
EXPORTS:		
Cod-liver oil (all countries)	5,112.0	6,965.0
Herring Oil:		
United Kingdom	6,767.2	19,459.0
Australia	-	24.6
United States	811.2	3,807.4
Total herring oil exports	7,578.4	23,291.0
Whale Oil:		
United Kingdom	-	1,344.0
Italy	2,083.1	739.0
Netherlands	2,151.5	-
Australia	-	672.6
United States	291.7	404.9
Total whale oil exports	4,526.3	3,160.5
Other Marine Oils:		
United Kingdom	256.9	21.4
West Germany	-	33.9
Netherlands	1,490.9	-
Norway	-	2.8
Switzerland	.1	-
United States	728.8	1,216.9
Total other marine oil exports	2,476.7	1,275.0
Grand total marine oil exports	19,693.4	34,691.5
IMPORTS:		
Fish-Liver Oil:		
United Kingdom	172.6	971.8
Japan	14.5	-
St. Pierre	-	78.2
United States	73.7	-
Total fish-liver oil imports	260.8	1,050.0
Other Fish and Marine-Animal Oil:		
United Kingdom	143.9	119.9
Iceland	5,512.5	-
Norway	235.8	242.1
Chile	603.5	-
United States	1,415.6	618.4
Total other fish & marine animal oil imports	7,911.3	980.4
Grand total marine oil imports	8,172.1	2,030.4

Canadian imports of marine oils increased in 1965 due to larger purchases from Iceland.

In 1965, Canadian use of marine oil in margarine and shortening production totaled 44.7 million pounds as compared with 43.2 million pounds in 1964.

Table 3 - Canadian Foreign Trade in Fish Meal, 1964-1965

Item	1965	1964
	. . (1,000 Pounds) . .	
EXPORTS:		
Herring Meal:		
United Kingdom	4,982	4,263
United States	95,242	96,732
Total herring meal exports	80,224	100,995
Other Fish Meal:		
United Kingdom	27,121	18,598
Ireland	233	500
Netherlands	50	-
Sweden	440	203
Leeward & Windward Islands	34	32
Cuba	-	487
United States	9,783	4,163
Total other fish meal exports	37,661	23,983
Grand Total fish meal exports	117,885	124,978
IMPORTS:		
Fish Meal:		
Republic of South Africa	-	9,599
United States	143	180
Total fish meal imports	143	9,779

Canada (Contd.):

The 1965 prices for herring oil ranged from 11.4 Canadian cents a pound f.o.b. Toronto to 12.9 cents a pound.

Table 4 - Canadian Prices1/ for Herring Oil and Certain Vegetable Oils and Lard, 1965

Month	Soybean Oil	Malayan Palm Oil	Ceylon Coconut Oil2/	British Columbia Herring Oil	Lard
	(Canadian Cents Per Pound)				
January	14.91	13.7	17.9	12.8	13.7
February	15.41	14.3	18.5	12.9	14.2
March	15.49	14.7	20.2	12.9	14.4
April	15.42	15.1	20.7	12.9	14.9
May	13.99	15.2	21.8	12.9	14.1
June	12.85	14.9	21.5	12.2	14.3
July	13.35	14.2	18.4	11.5	15.5
August	13.38	13.2	16.8	11.4	15.4
September	14.00	12.8	16.1	11.5	15.8
October	14.60	13.4	17.6	11.9	15.6
November	14.73	13.4	17.9	12.1	15.3
December	14.36	13.3	17.8	12.2	15.0

1/F.o.b. Toronto.
2/Ceylon coconut oil is no longer quoted regularly as it is both high-priced relative to Malayan coconut oil and not always available.

Fish Meal: Canadian production of fish meal was up substantially in 1965 due to increased output on the East Coast. In 1965, there was a decline in exports of herring meal to the United States which was partly offset by larger shipments of other fish meal to the United Kingdom. (Agricultural Attache, United States Embassy, Ottawa, April 21, 1966.)
Note: See Commercial Fisheries Review, July 1965 p. 62.

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ATLANTIC WHALING STUDIED WITH AID OF JAPANESE VESSEL:

The #17 Kyo Maru, a 187-foot steel whale catcher vessel from Japan, arrived in mid-May 1966 in St. John's, Newfoundland, to carry out exploratory work and demonstrate modern whale-catching techniques and methods to the Canadian fishing industry. Scientists from the Canadian Federal Fisheries Department are also spending time aboard the vessel to collect and assess biological and oceanographic data. The vessel is working for the Canadian Fisheries Department under a 6-month charter ending November 15, 1966. Any whales caught will be processed at a plant in Dildo, Newfoundland. (Canadian Department of Fisheries, Ottawa, May 16, 1966.)

North Atlantic and Arctic whaling has been conducted on a relatively small scale in recent years. Total catch by all countries in that area in 1963/64 was 1,443 whales, according to the Food and Drug Administration.

Chile

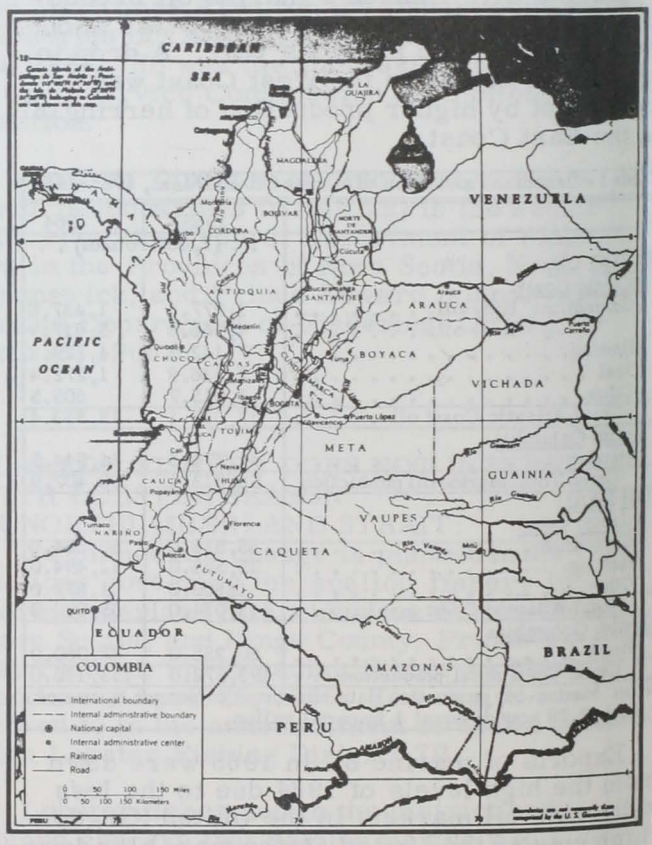
FISH MEAL PRODUCTION REACHES RECORD PROPORTIONS:

In the first quarter of 1966, fish meal production in Chile totaled 73,474 metric tons, which exceeded the production of 70,579 tons for the entire year in 1965. Anchovy catches in early March 1966 declined somewhat but the fish returned after mid-March and the April catch may equal that of March. Chilean anchovy catches by month in early 1966 were (in metric tons): January--194,199; February--153,422; March--75,390. (U.S. Embassy, Santiago, April 29, 1966.)

Colombia

SHRIMP FISHERY, BUENAVENTURA, 1965:

The nascent shrimp industry, centered at Buenaventura on the Pacific coast, continued its growth during 1965 and reports that about 800 metric tons of shrimp were exported during 1965 with a value of over US$1,400,000. All Colombian shrimp are exported to the United States market. Local operators are ham-



Colombia (Contd.):

ered by overage vessels and by difficult ransportation connections with the Colombian ternal market. However, shrimp operators lan to increase their fleet by nearly 40 per- ent during 1966 by purchasing 9 new United tates vessels and another 9 new vessels om Mexican builders. (U. S. Embassy, Bo- ta, May 6, 1966.)

enmark

ODIFIED METHOD OF RECOVERING IL AND SOLIDS FROM FILLETING LANT RINSE WATER:

Danish processors are showing a growing terest in the recovery of oil and protein olids from rinse water used in herring fil- ting. In 1964, a centrifuging recovery proc- ss was installed in Hirtshals, a large her- ng fishing and processing port in Jutland. milar machinery was ordered by other Dan- h firms.

In the spring of 1966, a modified recovery ocess was installed in a new filleting plant Skagen. This process involves recovering e oil and protein from the filleting machine sh water by screening off the larger par- les, adding chemicals to initiate precipi- ion, concentrating the precipitated solids ntaining oil and protein, recovering most he solids in a decanter type centrifuge, recovering the remaining solids and the in a disc centrifuge. Experimental oper- on has shown substantial profits with high es of recovery of oil and protein and, as a product, purified discharge water which s not pollute the harbor. A recovery plant his type capable of handling 20 filleting ma- es is estimated to cost under US$100,000 b. Denmark. Future experiments are nned with similar equipment for precipi- ng stickwater from ship-and-shore fish- duction plants. (Regional Fisheries Attache Europe, U. S. Embassy, Copenhagen, A- l 27, 1966.)

See Commercial Fisheries Review, February 1965 p. 58.

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HERY TRENDS, JANUARY-MARCH 1966:

Summary: Danish processors maintained d production of fresh and frozen fillets in first quarter of 1966 in spite of short sup- plies of some species. But there was a drop in output of most other fishery products (par- ticularly fish meal and canned and semipre- served herring) due to a general decline in landings. Average ex-vessel prices were at a high level in the first 3 months of 1966.

Catch: Landings of fish in local ports by Danish fishing craft during January-March 1966 were 15 percent less than during the same period of 1965 (table 1). Herring land- ings were down 44 percent. Flatfish landings decreased one-third, primarily the result of continued poor catches of plaice.

Table 1 - Danish Domestic and Foreign Landings, January-March 1966

Item	Jan.-Mar. 1966 Quantity	Change from Jan.-Mar. 1965
	Metric Tons	Percentage
Danish Ports:		
By Danish vessels:		
Flatfish 1/	6,974	- 33
Cod	28,813	+ 6
Cod-like 2/	56,495	+288
Herring	43,131	- 44
Brisling	524	- 34
Mackerel	288	+ 5
Eels	56	+ 4
Salmon	395	- 18
Pond trout	2,304	+ 15
Other fish 3/	6,763	- 81
Norway lobster	117	- 71
Shrimp, deep-water	751	- 7
Mussel	2,367	- 48
Starfish	89	- 90
Total	149,067	- 15
By foreign vessels	43,143	- 5
Grand Total	192,210	- 13
Foreign Ports:		
By Danish vessels	404	+ 39

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

Partly offsetting the decline were in- creased landings of cod-like fish (mostly small haddock and whiting) which were used mainly for industrial rather than food prod- ucts. Production of pond trout--which is calculated from export data--was 15 percent higher; this may cut into the supply of mar- ketable trout available for sale during the re- mainder of 1966.

The substantial landings of fish in Danish ports by foreign vessels declined 5 percent. The comparatively smaller landings in for- eign ports by Danish vessels rose 39 percent.

Prices: Average ex-vessel prices were generally higher during the first quarter of 1966 than in the same quarter of 1965 (table 2). Prices for plaice, one of the most im- portant export items, were even more than

Denmark (Contd.):

the high prices in the 1965 period. Salmon prices were very firm at about US$1.15 a pound. The supply of salmon decreased as a result of the decline in the Greenland salmon catch. Among other important species, prices were higher for herring for food, Norway lobster, and industrial fish. Turbot, common sole, and deep-water shrimp brought lower prices.

Table 2 - Danish Average Ex-Vessel Prices for Selected Species, January-March 1966 and 1965

Species	1966			1965		
	Jan.	Feb.	Mar.	Jan.	Feb.	Mar.
	(U.S. Cents/Pound)					
Cod, drawn	8.1	7.5	7.0	8.0	6.9	7.0
Plaice, drawn	19.9	23.4	19.1	14.7	18.3	16.6
Industrial fish	1.9	1.8	1.8	1.4	1.5	1.5
Herring for food	7.8	5.9	5.3	4.9	4.6	4.7
Turbot	48.3	44.7	49.5	40.1	47.3	54.2
Salmon	115.2	115.8	114.3	106.6	97.7	94.1
Haddock	10.9	10.1	9.1	9.5	8.3	7.8
Coalfish	11.6	7.5	8.9	13.7	7.2	8.0
Common sole	72.5	68.9	73.8	82.3	83.9	88.1
Eel, silver	74.2	-	-	86.8	-	-
Eel, yellow	47.5	-	-	47.2	-	-
Norway lobster	58.8	49.3	55.1	46.8	41.3	35.8
Lobster	98.8	116.9	123.1	68.3	90.0	84.6
Shrimp, deep-water	33.0	30.3	28.5	43.1	34.2	29.1
Dogfish	9.9	9.1	9.5	8.0	6.1	8.5

Source: Danish Ministry of Fisheries.

Processing: Production of all major categories of processed products in January-March 1966 lagged behind the first quarter of 1965. In general, declines in production of processed fish followed the pattern of lower catches. But production of fresh and frozen fish fillets, the most important category, decreased only 1 percent. Production of herring fillets rose 5 percent, thus indicating that a larger percentage of the herring catch went into food use since total domestic and foreign landings were down.

Production of processed fish products in January-March 1966 included: 28,412 tons of fresh and frozen fillets (consisting of 15,794 tons of herring fillets, 9,453 tons of cod fillets, 1,021 tons of cod-like fillets, 1,409 tons of plaice fillets, 724 tons of other flatfish fillets, and 11 tons of miscellaneous fillets); 2,998 tons of canned fish; 1,355 tons of semi-preserved fish; 789 tons of smoked fish; 19,565 tons of fish meal; 4,113 tons of fish oil; 1,185 tons of ensilage; 2,109 tons of fish solubles; and 887 tons of miscellaneous products.

The decline in raw fish supplies spurred discussions concerning the easing of bans on direct landings in Danish ports by foreign vessels as well as surface importation of fresh plaice and other species needed by the processing plants. The Fisheries Ministry and the processing segment favor relaxation of restrictions, but the fishing segment (including the two most important associations) is mostly opposed.

Supplies from Danish landings increased and auction prices dropped during the first week in May 1966. At that time, two meetings of industry representatives and the Fisheries Ministry resulted in a decision not to further liberalize imports. (Regional Fisheries Attache for Europe, U. S. Embassy, Copenhagen, May 11, 1966.)

Greece

PROPOSED FIVE-YEAR FISHERY DEVELOPMENT PLAN:

An increase in the annual Greek fisheries catch to 200,000 metric tons by 1970 is included in a proposed 5-year economic development plan submitted to the Greek Government by an economic study group. That would be almost double the 105,000 tons landed in 1964. Most of the increase would come from distant-water fisheries. Following is a breakdown of the projected 1970 landings by type of fishery (with comparable 1964 landings in parentheses): distant-water fisheries 86,000 tons (21,000); middle-water fisheries 70,000 (60,500); coastal fisheries 18,000 (14,000); inland fisheries 15,000 (9,500); fish farming and culture 11,000 (none in 1964). Most of the projected catch increase would be for domestic consumption which is expected to increase from 145,000 tons in 1965 to 220,000 tons in 1970.

Additional fisheries investment of 2,050 million drachma (US$68 million) is called for in the 5-year plan to achieve the projected catch increase. Eighty percent of the proposed increase is marked for distant-water fisheries to provide 57 new long-range vessels with a total annual potential production of 65,000 tons of frozen fish. The remainder of the proposed investment would be used to modernize other sectors of the Greek fishing industry. The plan proposes for the Greek Government to provide about 10 percent of the new investment. (Alieia, April 1966.)

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reece (Contd.):

ROCESSED FISHERY PRODUCTS RODUCTION AND FOREIGN TRADE, 1965:

Summary: Greece produces small quantities of canned fish, salted fish, sea sponges, d fish meal. Fish meal production started 1965 for the first time in Greece with the quisition of a factoryship from the Soviet nion. Production of processed fishery products is still limited, however, and Greek imports of fishery products greatly exceed her shery exports.

Processing: CANNING: The Greek fish-anning industry consists of two small factories (one in Thessaloniki and one at Myrina Lemnos Island), which can sardines, ackerel, and octopus. Both also can vegables. Two small factories (one at Chrysupolis in Macedonia and one at Orei on uboea Island) discontinued fish canning in 965. Greek canned fish production in 1964-965 is estimated as follows:

Item	1965	1964
	(Metric Tons)	
ackerel (in oil or tomato)	22	227
rdines (in sauce or oil	123	68
ctopus	20	46
Total	165	341

Greek production of canned fish has been ecreasing because of foreign competition. he plans of the Hellenic Industrial Develop-ent Bank (ETVA) to establish a pilot fish-rning factory at Cavala have not yet ma-rialized.

SALTING: This is done in many small, nechanized establishments in coastal lolities all over Greece, chiefly in Cavala, essaloniki, Volos, and on the islands of boea and Mitylene. The Greek Ministry of dustry, which has responsibility over fish-, has estimated salted fish production in 5 at 4,500-5,000 tons, the same as in 1964.

SPONGES: These are Greece's most imrtant processed fishery product, and the incipal processed fishery export. Accordg to the Ministry of Industry, Greek sponge oduction amounted to 69 tons in 1965, as mpared with 98 tons in 1964. Decreased oduction was chiefly due to the difficulty in rolling crews. Sponge fishing in 1965 was rried out in Greek, Libyan, Tunisian, and priot waters.

FISH MEAL: Production of fish meal in eece started for the first time in late 1965, when the 3,170-ton factory trawler Rea (formerly the Krylov) was purchased from the Soviets by Greek interests. About 100 tons of fish meal were produced in 1965. Another five large fishing vessels have been ordered from the U.S.S.R. by Greek interests. The first of these vessels, the 3,800-ton Thetis, was delivered in January 1966, and a second is expected to be delivered during 1966. Annual production capacity of these 3 vessels is placed at 1,000 tons of fish meal and some fish oil. (It is believed the vessels will also freeze fish.) There are no shore-based fish meal factories in Greece.

General Information: MARKETING AND RESEARCH: Work on the fish markets in Piraeus, Thessaloniki, Patras, Chalkis, and Cavala is nearing completion, and all five fish markets are expected to go into operation in 1966. Work on the fish market at Volos has been delayed, and is now expected to be completed in 1967.

Greek Law No. 4482, dated June 11, 1965, provides for the establishment by the Greek Government of an Institute for Oceanographic and Fishing Research.

Foreign Trade: EXPORTS: Greek exports of fishery products, except sponges, totaled 3,483 tons (US$1,602,400) in 1965, as compared with 3,185 tons ($1,279,800) in 1964. The difference was chiefly due to increased exports of fresh and frozen fish. Exports of canned and salted fish in 1965 were slightly higher than in 1964 (1,293 tons versus 996 tons). Sponge exports amounted to 106 tons ($2,496,900) in 1965 (of which 93 tons were bleached or otherwise processed) as compared with 114 tons ($2,529,200) in 1964.

IMPORTS: Greece imported a total of 55,084 tons of fishery products valued at $16.9 million in 1965 as compared with 44,216 tons valued at $13.2 million in 1964. Imports in 1965 included: fresh, frozen, or salted fish 24,150 tons ($8.6 million); canned fish 14,960 tons ($5.8 million); sea sponge 9 tons ($77,000); and fish and meat meals 15,965 tons ($2.5 million).

Greek fishery imports from the United States in 1965 included: canned fish 4,590 tons ($1,140,100) of which 4,382 ($1,068,300) were canned squid; and fish and meat meals 100 tons ($13,934). (U.S. Embassy, Athens, May 18, 1966.)

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Greece (Contd.):

FREEZER-TRAWLER LANDINGS, JANUARY-FEBRUARY 1966:

January-February 1966 landings of frozen fish from the Greek Atlantic trawler fleet totaled 5,085 metric tons as compared with 3,850 tons during the same period of 1965 and 3,242 tons during January-February 1964. The Greek freezer-trawler fleet was operating off Mauritania in early 1966. (Alieia, March 1966.)

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SPONGE IMPORTS RESTRICTED:

The Greek Ministry of Trade has forbidden sponge imports from August to December of each year in order to protect domestic sponge prices in Greece. Greek sponge imports during the remainder of the year will be regulated by the Ministry of Trade with the advice of the Greek fishing industry. (Alieia, April 1966.)

Iceland

EXPORTS OF FISHERY PRODUCTS, JANUARY-FEBRUARY 1966:

During January-February 1966, there was a sharp increase in exports of frozen herring, herring oil, and herring meal as compared with the same period in 1965, according to the Icelandic periodical Hagtidindi, March 1966. But exports of stockfish and salted fish showed a decrease in the first 2 months of 1966.

Icelandic Fishery Exports, January-February 1966 with Comparisons

Product	Jan.-Feb. 1966			Jan.-Feb. 1965		
	Qty.	Value f.o.b.		Qty.	Value f.o.b.	
	Metric Tons	1,000 Kr.	US$ 1,000	Metric Tons	1,000 Kr.	US$ 1,000
Salted fish, dried	734	16,963	394	1,066	21,913	508
Salted fish, uncured	407	7,817	181	867	14,462	336
Salted fish fillets	298	5,850	136	297	5,772	134
Wings, salted	-	-	-	44	600	14
Stockfish	1,511	48,331	1,121	2,089	60,811	1,411
Herring on ice	1,245	5,903	137	-	-	-
Other fish on ice	5,354	39,484	916	6,905	42,641	989
Herring, frozen	10,146	65,771	1,526	5,880	37,640	873
Other frozen fish, whole	1,108	17,090	396	1,259	14,522	337
Frozen fish fillets	2,634	78,119	1,812	2,166	48,774	1,132
Shrimp and lobster, frozen	82	8,361	194	73	6,523	151
Roes, frozen	520	5,685	132	183	2,825	66
Canned fish	186	6,551	152	76	3,964	92
Cod-liver oil	932	10,075	234	1,047	11,555	268
Lumpfish roes, salted	-	-	-	-	-	-
Other roes for food, salted	-	-	-	-	-	-
Roes for bait, salted	656	5,046	117	-	-	-
Herring, salted	5,793	73,399	1,703	5,006	53,765	1,247
Herring oil	13,638	106,057	2,461	3,931	31,902	740
Ocean perch oil	-	-	-	-	-	-
Whale oil	-	-	-	774	6,698	155
Fish meal	1,263	10,004	232	754	4,878	113
Herring meal	24,952	206,792	4,798	14,823	101,935	2,365
Ocean perch meal	36	275	6	-	-	-
Wastes of fish, frozen	452	1,893	44	597	1,881	44
Liver meal	18	131	3	94	666	15
Lobster and shrimp meal	-	-	-	25	124	3
Whale meal	-	-	-	311	1,889	44
Whale meat, frozen	-	-	-	10	80	2

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

As of March 31, 1966, Iceland's stocks of frozen groundfish (fillets) for export to the United States totaled 4,947 metric tons, about the same as the 5,156 tons on hand March 31, 1965. (United States Embassy, Reykjavik, May 2, 1966.)

Icelandic Export Stocks 1/ of Principal Fishery Products, March 31, 1966

Item	Qty.	Value	
	Metric Tons	Million Kr.	US$ 1,000
Groundfish, frozen:			
for export to:			
U. S.	4,947	328.6	2,986.5
other countries	3,980	73.9	1,716.2
Stockfish	1,250	41.3	959.1
Herring, frozen	822	5.2	120.8
Industrial products:			
fish meal:			
herring	10,119	85.0	1,974.0
other fish	17,431	125.7	2,919.2
herring oil	14,738	119.4	2,772.9

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

United States imports of frozen groundfish fillets from Iceland in the year 1965 totaled 21,384 metric tons of groundfish blocks and slabs, 3,850 metric tons of cod fillets, 2,660 metric tons of haddock fillets, and 478 metric tons of ocean perch fillets. Iceland is second only to Canada as the leading supplier of groundfish fillets and blocks to the United States.

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FISHERY LANDINGS BY PRINCIPAL SPECIES, JANUARY-DECEMBER 1964-1965:

Species	Jan.-Dec.	
	1965	1964
	(Metric Tons)	
Cod	243,702	280,703
Haddock	53,676	56,689
Saithe	24,730	21,793
Ling	5,157	4,990
Wolffish (catfish)	7,598	8,289
Cusk	2,260	3,542
Ocean perch	29,910	27,707
Halibut	989	1,205
Herring	762,867	544,396
Capelin	49,735	8,640
Shrimp	902	542
Other	16,778	13,775
Total	1,198,304	972,271

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

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eland (Contd.):

E OF FISHERY LANDINGS,
NUARY-DECEMBER 1964-1965:

How Used	Jan.-Dec.	
	1965	1964
	(Metric Tons)	
ring and Capelin[1]/ for:		
l and meal	714,689	468,916
ezing	32,961	26,553
lting	61,081	57,298
sh on ice	2,950	-
ndfish[2]/ for:		
sh on ice	37,357	39,892
ezing and filleting	183,336	183,849
lting	88,439	89,686
ckfish (dried unsalted)	54,226	84,118
nning	952	297
l and meal	3,155	3,686
staceans for:		
ezing	4,417	3,732
nning	190	198
me consumption	14,551	14,046
Total production	1,198,304	972,271

Whole fish.
Drawn fish.
rce: Hagtidindi, March 1966.

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INIMUM SIZE LIMIT FOR
ERRING ESTABLISHED:

Iceland is protecting herring stocks with new regulation banning catches of herring nder 23 cm. (9 inches). Object of this Min-istry of Fisheries regulation is to protect the uth coast herring stocks (caught mainly in nter) which appear to have diminished. (Fishing News International, April 1966.)

eland

ISHERY TRENDS:

Over 22,000 schoolgirls in Ireland com-ted in a recent national fish cookery com-tition. This is an example of the market omotion work that is increasing fish con-mption in Ireland.

U. S. interests intend to set up a shellfish ant on the west coast of Ireland. Initially e group will buy shellfish from Irish fish-men for processing, but later may operate s own fleet of vessels. (The Fishing News, ondon, May 6, 1966.)

Italy

IMPORT DUTY ON FROZEN TUNA:

According to information received by Japanese trading firms in the spring of 1966, the Government of Italy has decided to place the following import duties on frozen tuna:

1. Imports up to 14,000 metric tons a year will be admitted duty free.

2. Imports between 14,000-40,000 metric tons will be dutiable at 0.5 percent ad valorem.

3. Imports exceeding 40,000 metric tons a year will be dutiable at 15 percent ad valorem.

Previously, imports of frozen tuna up to 40,000 metric tons were admitted duty free. In recent years Japanese exports of frozen tuna to Italy have been averaging about 30,000 metric tons a year. (Note: April 1965-March 1966 exports totaled 35,323 metric tons, as compared to 28,866 tons for the previous comparable period.)

Reportedly, frozen yellowfin tuna (dressed without tails) transshipped to Italy early in April were bringing c.i.f. US$620 a metric ton and big-eyed tuna (d.w.t.) about $580 a ton. The prices were said to have declined $10-15 per ton in late April and early May reflecting the softening of market conditions in the United States. (Suisan Tsushin, May 4 & 9, 1966.)

Japan

CATCH OF SMALL ALBACORE
TUNA CAUSES PRICE DROP:

The Japanese summer albacore fishery was off to a slow start in 1966, with very light landings reported as of early April. No sizable run was expected to develop until late April. As a result, a number of skipjack vessels that had been re-outfitted for albacore fishing switched back to skipjack fishing and a few shifted to long-line fishing in the southwest Pacific in April.

Albacore began appearing in the fishery in late March and a delay in their appearance, with one or two exceptions, has indicated a poor run. This has led some observers to

Japan (Contd.):

predict an unfavorable season this year, with the season's landings possibly 30,000 metric tons or less, compared to about 45,000 tons landed last year.

In spite of this unfavorable supply outlook but because of the appearance of unusually small fish, Japanese albacore export prices fell rapidly in April with buy offers for ship-frozen (long-line-caught) round albacore coming in at around US$400-410 a short ton f.o.b. The somewhat unusual catches of small albacore (averaging about 15 pounds with a large number of 10-lb. fish) taken by pole-and-line gear off northeastern Japan were being exported at about $330 a short ton f.o.b., substantially below the ship-frozen catches due to their 20-25 percent lower recovery rate. Pole-caught albacore in early April were sold ex-vessel at 120-130 yen a kilogram (US$302-328 a short ton). It was anticipated that, if the downward price trend continues, the summer albacore price may range around $360-370 a short ton f.o.b. (about 10 percent below the price for long-line catches).

To cope with the declining albacore export price, the Japan Frozen Tuna Producers Association, at a meeting held April 15, discussed the need for industry to cooperate in holding at a high level the price for the pole-caught summer albacore and to possibly avoid exporting the early season pole-caught albacore, since its lower recovery and low ex-vessel price were believed to be contributing to the decline in albacore prices. (Suisan Tsushin, April 5, 13, 18, 1966.)

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SUMMER POLE-AND-LINE ALBACORE FISHERY REPORTED SLOW:

The Japanese summer pole-and-line tuna fishery as of May 7, 1966, was very slow. Fishing usually begins picking up in late April and early May and the slowness was attributed by many to the temperature of the surface water layer, which was too cold.

If the summer pole-and-line fishery does not pick up, this may tend to drive up the price of ship-frozen long-line-caught albacore. Further, in view of the decline in the number of Japanese tuna vessels in the Atlantic Ocean, some Japanese circles feel that the combination of these developments may serve to bring about a sharp upswing in the albacore price. (Earlier press reports indicated Atlantic fleet expected to decline to about 60 vessels during May-July 1966. In March the fleet totaled 74 as compared to 155 vessels in March 1965.) However, as of early May, United States packers were reported still showing little interest in buying Japanese tuna. (Suisan Tsushin, May 7, 1966.)

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FISH LANDINGS IN YAIZU:

March 1966: Fish landings at the Japanese fishing port of Yaizu (principal tuna port) totaled 17,818 metric tons valued at 2,442.2 million yen (US$6.8 million), according to data compiled by the Yaizu Fishery Cooperative Association. This was an increase of 4,398 tons and 1,019.9 million yen ($2.8 million) over the same period in 1964. (Kanzume Nippo, April 7, 1966.)

Yaizu Fish Landings, March 1966 with Comparisons

Species	March			
	1966	1965	1966	1965
	Quantity (Metric Ton)		Avg. Value ($/Short Ton)	
Tuna:				
Bluefin	6,949	5,691	486	393
Albacore	1,482	930	431	307
Skipjack	6,538	3,456	257	176
Mackerel	2,131	2,642	108	104
Other fish	718	701	-	-
Total	17,818	13,420	-	-

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April 1966: Landings of fish at the Japanese port of Yaizu totaled 20,197 metric tons valued at 2,288 million yen (US$6.4 million) as compared to March landings of 17,818 metric tons valued at 2,442 million yen ($6.8 million), according to data compiled by the Yaizu Fishermen's Cooperative Association. Albacore landings showed a sharp decline but landings of both skipjack and mackerel showed significant increases. Skipjack landings were double those of April 1965. A large portion

Table 1 - Yaizu Fish Landings and Average Values, April 1966 with Comparisons

Species	Quantity			Average Value		
	1966		1965	1966		1965
	April	March	April	April	March	April
	(Metric Tons)			(US$/Short Ton)		
Tuna:						
Bluefin 1/	6,373	6,949	7,011	521	486	390
Albacore	2,647	1,482	4,684	376	431	314
Skipjack	5,293	6,538	2,646	265	257	274
Mackerel	5,234	2,131	3,711	88	108	102
Other fish	650	718	665	-	-	-
Total	20,197	17,818	18,717	-	-	-

1/Includes yellowfin and big-eyed tuna.

apan (Contd.):

Table 2 - Yaizu Fish Landings and Values, January-April 1966 with Comparisons

Species	Quantity		Value	
	1966	1965	1966	1965
	. .(Metric Tons).		. . (US$1,000). .	
a:				
luefin 1/	24,977	23,809	13,192	9,855
bacore	5,788	7,082	2,472	2,290
ipjack	15,146	7,111	4,164	1,609
kerel	11,998	7,281	1,274	838
er fish	2,898	2,732	776	663
Total	60,807	48,015	21,878	15,255

1/ Includes yellowfin and big-eyed tuna.

the catch was being purchased by Katsuoushi (dried skipjack loin) processors. In arly May they were reported paying prices nging from 70 to 100 yen a kilogram ($176-52 a short ton). (Kansume Nippo, May 7; Suisan Keizai Shimbun, May 5, 1966; and other sources.)

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UNA FISHERMEN PLAN TO MEET ITH KOREANS AND CHINESE:

The Japan Federation of Tuna Fishermen's ssociations (NIKKATSUREN), as one of its ajor projects for the year, plans to meet th representatives of the tuna fishing indstries of the Republic of Korea (ROK) and iwan to discuss problems affecting the ree countries. NIKKATSUREN considers it cessary to maintain close communication th the industry members of those two countes in view of their rapidly developing tuna heries, and to resolve common problems reng to resources, stabilization of tuna prices, or, and wages. The organization's Vice esident reportedly has already sounded out e views of the ROK and Taiwan fishery repentatives during their earlier visits to Jaand has received their pledge of cooperaon. (Suisan Keizai Shimbun, April 12, 1966.)

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TLANTIC TUNA FISHING ND MARKETING TRENDS:

The number of Japanese tuna vessels opating in the Atlantic Ocean totaled 74 vesls, as of March 31, 1966, compared to 155 ssels in March 1965 and 159 vessels durg the peak of operations in 1964. Based on ril 1966 operating plans, the Japanese tuna eet was expected to further decline to about vessels in May-June and 59 in July. The thdrawal of Japanese vessels from the Atlantic Ocean was expected to greatly affect the supply of Atlantic tuna available for export to the United States. Landings at Atlantic bases were down to around 5,000 metric tons per month, with the number of vessels landing fish averaging about 20 a month. It was anticipated that at that rate, transshipments of Atlantic tuna in business year 1966 (ending March 31, 1967) may not exceed 60,000 metric tons, or 80 percent of the 1965 transshipments of 75,000 tons.

Composition of the Japanese Atlantic tuna fleet and export trends during the past three years were:

Year	No. Vessels Operated		Transhipments
	High	Low	Metric Tons
1965	152	74	75,027
1964	159	110	94,640
1963	105	86	86,868

In view of the reduction of the Atlantic tuna fleet and indications of further vessel withdrawals, observers in Japan foresee a supply shortage of Atlantic tuna more acute than that which occurred in late 1965. Thus, despite the tuna price decline, they anticipate a definite upswing in prices again in the near future. Cessation of United States buying of Japanese albacore for direct export from Japan since the beginning of April was viewed as only a passing phenomenon attributed to the temporary decline in canned tuna sales in the United States and to the withholding of buy offers by United States packers pending further development of the Japanese summer albacore fishery. (Suisan Tsushin, April 23 and 26, 1966.)

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MARKET VALUE OF TUNA FISHING LICENSES INCREASES:

Japanese tuna fishing licenses, which are freely sold at a premium on the open market in Japan, were reported selling for around 240,000 yen (US$667) a vessel ton, compared with a low of 120,000 yen ($333) in late 1965. The rise in premium, which began in early 1966 (average of $417 offered in January and $500 in February-March) was attributed to improved economic conditions in the fishery. The highest postwar premium paid for a tuna license was 420,000 yen ($1,167) a vessel ton in late 1962. (Suisan Keizai Shimbun, April 12, 1966.)

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Japan (Contd.):

EX-VESSEL PRICES FOR TUNA AT INDIAN OCEAN BASES:

The company which operates the cannery at Penang, Malaysia, and the Japanese association representing vessel owners operating tuna long-line vessels out of overseas bases reached a new price agreement on tuna delivered to Penang, Malaysia, and Port Louis, Mauritius Island. The agreement covered

Prices for Tuna Delivered to Penang, Malaysia, and Port Louis, Mauritius Island, April 1-May 31, 1966

Species	Penang		Port Louis	
	Yen/Kg.	US$ Short Ton	Yen/Kg.	US$ Short Ton
Albacore, round, over 25 lbs.	160	403	145	365
Yellowfin, G. & G., all sizes	150	378	135	340

the period April 1-May 31, 1966, and provided for an increase in price of 15-20 yen a kilogram (US$38-50 a short ton) for tuna landed at the two bases. (Suisancho Nippo, March 26, 1966, and other sources.)

* * * * *

TUNA FEDERATION PLAN TO STABILIZE EX-VESSEL ALBACORE PRICES:

At a meeting held March 15, 1966, the National Federation of Tuna Fishermen's Associations (NIKKATSUREN) adopted a plan aimed at preventing a collapse of ex-vessel albacore prices during the 1966 summer pole-and-line fishing season. Under the proposed plan, NIKKATSUREN would purchase albacore when there should be very heavy landings and if there is danger that prices might drop suddenly. The fish would be held in cold storage and released either for export or for domestic use at such time when their release will not disrupt market conditions. NIKKATSUREN planned to approach the Fisheries Agency and those engaged in the tuna business to seek support for its plan. (Katsuo-Maguro Tsushin, March 18, 1966.)

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TUNA FEDERATION RECOMMENDATIONS FOR GOVERNMENT ACTION:

The Japan Federation of Tuna Fishermen's Associations' (NIKKATSUREN) Vice President presented two recommendations to the Liberal Democratic Party's Distant-water Fisheries Promotion Subcommittee Chairman, urging enactment of favorable administrative measures for the tuna fishing industry. The gist of the recommendations was reported to be as follows:

I. Priority Measures to Promote Stable Growth of the Tuna Fishery

A. The Government should lower interest rates on existing fishery loans from the current 7.5 percent to 6.5 percent and should reduce interest rates on new loans from purchase, construction, or conversion of vessels from 7.5 percent to 5.5 percent. It should also raise the loan ceiling of 60 percent of the total cost of the vessel, or a maximum loan of 80 million yen (US$222,222) per vessel, to 70 percent of the cost or a maximum amount of 120 million yen ($333,333) per vessel. Loan interest charged by the Agriculture-Forestry Center Cooperative Bank (semi-government controlled) should be reduced from the current 8.7 percent on existing long-term loans (totaling about 270 billion yen or $75 million) to 7.5 percent and on new long-term loans to 6.5 percent.

B. To facilitate incorporation and business expansion of independent fishery enterprises, the Government should withhold assessment of incorporation tax, establish a separate category for government loans, and adopt other tax reducing methods.

C. The Government should provide NIKKATSUREN with funds needed to purchase vessels and equipment of enterprises faced with bankruptcy, thereby preventing the occurrence of successive bankruptcies among other financially-distressed enterprises.

II. Basic Plan (Preliminary) to Promote Development of the Tuna Fishery

In order to stabilize and strengthen the management of the tuna fishery, it is essential that the fishery resources be effectively utilized, operations be modernized and rationalized, and the structure of the industry be developed to a higher degree, thereby strengthening Japan's international competitive position. To attain these objectives, the following is recommended:

A. Tuna Production and Export Targets for 1971

1. Tuna production target:

Fishery	Quantity	Value	
	Metric Tons	Million Yen	US$1,000
Tuna, long-line . . .	360,000	74,160	206,000
Skipjack, pole & line	211,000	26,800	74,444
Total	571,000	100,960	280,444

2. Tuna export target:

Product	Quantity	Value	
	Metric Tons	Million Yen	US$1,000
Frozen	263,000	38,250	106,250
Canned	121,000	20,150	55,972
Total	384,000	58,400	162,222

3. Principal measures to be implemented:

a. A total of 155 tuna vessels to be transferred from the long-line fishery to the skipjack pole-and-line fishery.

b. The number of tuna motherships carrying 1-2 portable boats to be increased by 50.

pan (Contd.):

c. The overseas-based tuna fleet to be increased by a total of 112 vessels, and overseas-based vessels to be allowed to transship their catches on the high seas, thereby increasing efficiency.

d. To promote export trade, loans to trading firms to be administered on a sound basis, excessive inter-firm competition eliminated, and an export sales system firmly established.

B. Fleet Modernization (Organization) Target for 1971

1. Target (No. of Vessels):

una long-line vessels	581
kipjack pole-and-line vessels	374
ortable-boat carrying motherships . .	88 (76,000 gross tons)
easonal tuna vessels	90 (8,000 " ")
Total	1,133

2. Area of Operation:

cean	Types of Vessels	
	Long-line 1/	Pole-and-line
tlantic	130 (43)	30
ndian	160 (100)	10
acific	469 (180)	334
Total	759 (323)	374

1/ Figures in ( ) give number of vessels operating out of overseas bases.

uisancho Nippo, March 24, 1966.)

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E PORT ON GOVERNMENT-INDUSTRY JNA SYMPOSIUM:

The 1966 Japanese Government-industry nposium on the tuna fishery, sponsored by e Japan Scientific Fisheries Council and pported by the Japan Federation of Tuna shermen's Associations (NIKKATSUREN), s held in Tokyo, April 5-6, 1966. The symsium, chaired by the Director, Nankai Reonal Fisheries Research Laboratory, feared discussions on scientific papers on tuna sources, fishing grounds, and gear and shing methods, contributed by Government nd industry fishery researchers.

The initial discussion centered on the resource problem. Industry asked what type of ear--long-line, purse seine, or pole and ne--would be better from the standpoint of aintaining the resources. A researcher om the Nankai Laboratory replied that from e viewpoint of resources, a gear which capres young fish was not desirable.

NIKKATSUREN's managing director asked Japanese research and investigation have made any progress on the pending question of whether the eastern Pacific yellowfin belonged to an independent population separate from the yellowfin fished by the Japanese in the western Pacific. Noting the need for biological data at future international meetings, he also asked what kind of studies, including length frequency and serological studies, have been made on this species. Referring to reports on the declining hook rate in the Atlantic Ocean, he urged that Japanese scientists assemble detailed catch data since Japan will likely be placed under great pressure should the time come when the Atlantic tuna resources come under close scrutiny.

The discussion then turned to fishing grounds. Industry asked for detailed data on tuna resources in waters south of Australia and also inquired whether there was any possibility of developing new tuna-fishing grounds. Professor Uda introduced research data on tuna resources in southern Australian waters and Uemura (Nankai Laboratory) and Kawasaki (Tohoku Laboratory) explained that there were virtually no new fishing grounds that could support a tuna long-line fishery. It was pointed out that even if new grounds were developed, sustained working of those areas could conceivably affect availability in existing grounds. This discussion brought out the need to correlate the two factors.

In discussing the possibility of developing new skipjack fishing grounds, the scientists felt that, since most of the Japanese skipjack fishermen operate on a small scale, employing simple pole-and-line gear, there was still much room for exploiting the widely ranging skipjack, dense schools of which are found off Japan, Marianas, Ceylon, Madagascar, Hawaii, and in the eastern Pacific. It was pointed out that reliance on the primitive pole-and-line fishing gear, which catches mainly 2-year-old fish and some 3-year olds, should be restudied since 4- to 5-year old fish are believed to be available in fairly great quantity and gear improvement could substantially increase production. Professor Inouye of Tokai University explained that exploratory cruises to the central south Pacific indicated good possibilities of exploiting skipjack in waters off Truk, Mariana and Marshall Islands.

Concerning the tuna resources, Uemura explained the expansion of Japanese tuna long-line operations, in the past 10 years or

Japan (Contd.):

so, from the northwest Pacific to the Indian and Atlantic Oceans, and noted the steady rise in catch from 110,000 metric tons in 1952 to over 530,000 tons in 1962. He pointed out, however, that, despite the rapid expansion in fishing operations, resources in the fishing areas began to decline perceptibly, and production, after peaking in 1962, started to fall off. It was also stated that Japanese research and investigation lagged far behind the rapid changes occurring in the fishery and resources.

Yellowfin: Based on Nankai Laboratory's tuna data up to 1962, Uemura noted that fishing intensity continued at a very high level in 1962 and that even if efforts were increased beyond the 1962 level, an increase in overall catch could not be expected. Systematic research and investigation of the tuna resources in the eastern Pacific, conducted by the Inter-American Tropical Tuna Commission, indicate that maximum sustainable yield in the eastern Pacific is around 80,000 tons a year. This quantity was reported to be somewhat more than the total yearly Japanese long-line catch of yellowfin for the entire Pacific Ocean. Mimura noted a marked decline in hook rate in the Indian Ocean since the beginning of operations in that ocean. Nakagome reported that hook rate in the Atlantic Ocean showed a marked decline since the commencement of Japanese Atlantic operations. Reproduction, mortality, and hook rates estimated by Tetsu for the years 1957 to 1963 brought out that increased fishing effort beyond the 1963 level could not be expected to increase production. Catch statistics by fishing grounds, prepared by Shiozawa and his colleagues, show that since 1961 catch has declined considerably despite increased fishing effort.

Big-eyed: Research on this species so far has been confined to the Pacific Ocean. Data compiled by Suda, Nakagome, and Kume on the annual variation in hook rate for the eastern Pacific, where big-eyed distribution is heavy, show a marked decline since 1961. Suda's study clearly shows evidence of a declining trend from 1961 when Japanese fishing operations began to expand to the eastern Pacific off the American continent. Analysis of resource trends based on data up to 1962 indicate that the fishing effort in 1960-61 approached the level of maximum yield. Thus, caution was expressed with regard to increasing the fishing intensity beyond the 1961-62 level.

Albacore: Several papers on the mechanisms of yearly change in the Pacific albacore population in the Northern Hamisphere contributed by Suda, showed wide changes in fishing effort and population size. However, over the entire period of fishing operations, a stabilized situation was observed and the yearly change in population size was primarily attributed to changes in the occurrence of recruitment. The survival rate of albacore was estimated to be around 70 percent but fishing intensity was believed not to have reached a very high level. Otsu, in explaining the albacore population off the U. S. coast stated that it was difficult to believe that fishing has had any significant effect on the resource inasmuch as no declining trend has been observed.

Bluefin: Nakamura, Yamagami, and Ito, in their report on the state of the bluefin resource off Japan, noted a prolonged cyclical change in fishing conditions, which was believed to be due to environmental factors. Research by Nakamura and Yamanaka into the yearly changes in the length frequency of bluefin indicated a possible close correlation between change in fishing conditions and appearance of a dominant year-class group. (Katsuo Maguro Tsushin, April 8, 11, & 13, 1966.)

Note: See Commercial Fisheries Review, April 1966 p. 61.

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EXPORTS OF FROZEN TUNA TO U.S. AND CANADA, APRIL 1965-MARCH 1966:

Data released by the Japan Frozen Foods Exporters Association show that in business year 1965 (April 1965-March 1966) frozen tuna (round, gilled and gutted, dressed without tail, fillets and loins) approved for export to the United States and Canada from Japan proper totaled 66,223 short tons valued at US$25.7 million as compared to BY 1964 exports of 57,324 tons valued at $21 million. Transshipments from overseas bases to the United States and Canada totaled 50,180 short tons valued at $14.4 million as compared to BY 1964 exports of 36,334 tons valued at $10.5 million. The increase in transshipments of 13,846 tons was primarily accounted for by albacore, which showed an 11,148-ton gain.

Exports of frozen tuna to countries other than the United States and Canada totaled

Japan (Contd.):

49,293 metric tons valued at $19.1 million as compared to the previous year's exports which totaled 56,320 tons valued at $20.6 million. Italy was again the principal customer for Japanese tuna. Her purchases totaled 35,323 metric tons valued at $14.9 million, an increase of 6,457 tons over BY 1964 purchases, which totaled 28,866 tons valued at $10.8 million. (Suisan Tsushin, May 4, 1966.)

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EXPORTS OF FROZEN TUNA TO COUNTRIES OTHER THAN U. S., APRIL 1965-MARCH 1966:

Exports of Japanese frozen tuna to countries other than the United States in business year 1965 (April 1965-March 1966) exceeded 46,000 metric tons, valued at US$17.6 million, according to preliminary data from the Japan Frozen Foods Exporters Association. Exports to Italy (excluding February 1966) totaled 32,148 metric tons, exceeding the previous year by 4,000-6,000 tons. Exports to Yugoslavia declined drastically, to about one-third of the previous year, while exports to Spain increased 15-fold. Except for Italy and Trinidad, there were no shipments made in February and March 1966. (Suisancho Nippo, May 2, 1966 and other sources.)

Japanese Frozen Tuna Exports to European, Asian, and African Countries, April 1965-March 1966

Country	Total	Albacore 1/	Yellowfin 2/	Big-eyed 3/	Bluefin 4/	Skipjack 5/
	. . . . . Metric Tons (Value in US$1,000*).					
Italy 6/	32,148.4 (13,060.0)	1,798.8 (789.8)	21,217.8 (9,114.3)	5,612.2 (1,999.5)	3,139.6 (1,064.5)	380.0 (91.9)
Spain	6,373.1 (2,159.8)	4,474.9 (1,724.4)	132.5 (45.3)	498.7 (133.1)	54.8 (18.9)	1,212.2 (238.1)
Yugoslavia ...	2,998.2 (1,142.6)	1,462.0 (563.1)	779.2 (327.9)	295.0 (90.7)	462.0 (160.9)	-
Czechoslovakia	2,495.6 (682.4)	-	-	2,495.6 (682.4)	-	-
Ghana	520.2 (66.1)	-	162.7 (21.8)	145.0 (18.5)	-	212.5 (25.8)
Libya	426.1 (146.6)	93.0 (35.3)	30.0 (12.8)	303.1 (98.5)	-	-
Tunisia	318.8 (106.7)	147.6 (56.1)	10.3 (4.4)	155.8 (44.4)	5.1 (1.8)	-
Trinidad	308.1 (85.6)	-	-	295.9 (81.6)	12.2 (4.0)	-
France	237.0 (92.1)	237.0 (92.1)	-	-	-	-
Denmark	150.0 (35.3)	-	-	150.0 (35.3)	-	-
Sweden	35.0 (21.9)	-	-	-	35.0 (21.9)	-
Australia	7.2 (5.5)	-	7.2 (5.5)	-	-	-

1/ Mainly round fish, but includes very small quantity of loins.
2/ Includes round, gilled and gutted, dressed without tails (d.w.t.), fillets & loins.
3/ Includes gilled and gutted, d.w.t., and fillets.
4/ Includes d.w.t. and fillets.
5/ Round fish.
6/ Includes data for February 1966.
* Value figures in ().

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EXPORTS OF FROZEN TUNA TO U.S. AND PUERTO RICO, JANUARY-FEBRUARY 1966:

Japan's exports of frozen tuna to the United States and Puerto Rico increased in February 1966 as compared with the previous month. Exports to the United States dropped slightly in quantity but increased somewhat in value because of higher prices for frozen tuna. Exports to Puerto Rico increased considerably in both quantity and value. (Fisheries Attache, United States Embassy, Tokyo, April 19, 1966.)

Japan's Exports of Frozen Tuna by Species to the United States and Puerto Rico, February and January 1966

Species	February		January	
	Qty.	Value	Qty.	Value
	Short Tons	US$ 1,000	Short Tons	US$ 1,000
Albacore:				
United States ..	1,668	769	2,105	815
Puerto Rico ...	2,484	1,099	1,416	528
Total	4,152	1,868	3,521	1,343
Yellowfin:				
United States ..	2,179	990	2,535	993
Puerto Rico ...	1,295	498	308	93
Total	3,474	1,488	2,843	1,086
Big-eyed:				
United States ..	109	38	60	20
Puerto Rico ...	35	11	92	24
Total	144	49	152	44
Skipjack:				
United States ..	670	216	117	33
Puerto Rico ...	745	149	806	132
Total	1,415	365	923	165
Total United States	4,626	2,013	4,817	1,861
Total Puerto Rico	4,559	1,757	2,622	777
Grand Total ..	9,185	3,770	7,439	2,638

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EXPORT PRICES OF FROZEN TUNA, APRIL 1965-MARCH 1966:

The data in the following tables show monthly average frozen tuna export prices as compiled by the Japan Frozen Foods Exporters

Table 1 - Average Monthly Prices F.O.B. Japan, of Frozen Tuna Exported to the United States, April 1965-March 1966

	Albacore		Yellowfin		Skipjack	Big-eyed
	Round	Loin	G & G	Loin	Round	
	. . . . . (US$/Short Ton)					
1965:						
Apr.	318	690	311	684	-	1/420
May	313	688	312	684	227	1/580
June	290	687	312	-	227	-
July	292	670	314	675	-	2/252
Aug.	309	674	309	667	-	-
Sept.	322	693	320	710	242	1/420
Oct.	325	708	320	677	-	-
Nov.	325	733	312	711	-	1/500
Dec.	376	752	360	722	262	-
1966:						
Jan	388	812	390	809	291	2/339
Feb.	442	850	433	923	330	2/346
Mar.	472	931	486	977	344	2/364

1/ Fillets.
2/ Round.

Japan (Contd.):

Table 2 - Average Monthly Export Prices of Japanese-Caught Atlantic Tuna, April 1965-March 1966

	Exports to			
	United States 1/		Italy 2/	
	Albacore Round	Yellowfin G&G	Albacore Round	Yellowfin Dressed
	(US$/Short Ton)		(US$/Metric Ton)	
1965:				
Apr.	291	315	372	427
May	284	318	374	413
June	301	315	370	409
July	300	315	382	404
Aug.	300	317	374	415
Sept.	302	322	397	420
Oct.	303	321	380	424
Nov.	323	350	433	450
Dec.	363	320	438	474
1966:				
Jan.	379	372	471	493
Feb.	445	451	532	548
Mar.	494	476	591	589

1/F.o.b. or f.a.s. port of transshipment.
2/C.i.f. Italy.

Association and the Japan Export Frozen Tuna Producers Association. (Katsuo-Maguro Tsushin, April 25, 1966.)

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EXPORT TRENDS OF CANNED TUNA:

Japanese canned tuna in oil approved for export in business year 1965 (April 1965-March 1966) totaled 1,885,214 cases, according to data compiled by the Japan Tuna Packers Association. This was a decrease of about 100,000 cases from 1964 exports of 1,989,004 cases.

Japanese Canned Tuna in Oil Exports, BY 1965 and 1964

Principal Countries of Destination	BY 1965	BY 1964
	(No. of Actual Cases)	
West Germany	771,110	765,564
Canada	300,102	242,752
Switzerland	133,472	139,124
Aden	132,402	71,375
Netherlands	103,617	108,985
Great Britain	87,316	191,297
Belgium	78,918	92,461
Okinawa	66,232	75,267
Lebanon	63,299	43,198
Kuwait	36,319	25,248
Saudi Arabia	24,909	43,573
Other	87,518	190,160
Total	1,885,214	1,989,004

Japanese canned tuna other than in oil (specialty packs but not including in-brine pack) approved for export totaled 999,753 cases, 321,000 cases more than the 678,224 cases exported in 1964.

Principal countries of destination for the specialty packs of canned tuna were (1964 exports in parentheses): West Germany--801,569 (480,642); Netherlands--85,217 (79,781); Belgium--47,415 (45,257); Panama--10,985 (11,512); Great Britain--10,250 (5,175); Australia--6,750 (2,645); United States--3,606 actual cases (3,122). (Suisan Tsushin, April 19, 1966.)

Other Canned Tuna Exports	BY 1965	BY 1964
	(No. of Actual Cases)	
Vegetable tuna	858,838	575,583
Jelly tuna	74,147	72,064
Cream tuna	36,860	-
Tuna flake in soy sauce	8,520	20,080
Tuna spread	11,206	6,677
Chili sauce tuna	1,817	397
Tenderized tuna	700	2,700
Tomato tuna	45	193
Other	7,620	530
Total	999,753	678,224

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PACKERS ASSOCIATION SETS QUOTA ON CANNED TUNA CONSIGNMENTS TO SALES COMPANY:

The Japan Tuna Packers Association, at a meeting held on April 18, agreed on canned tuna consignments to the Sales Company in the ratio of 60-80 percent whitemeat tuna and 20-40 percent lightmeat tuna for the business year 1966 (April 1966-March 1967). (Suisan Tsushin, April 19, 1966.) Of those ratios, consignments by can size were set as follows:

Can and Case Size	Whitemeat	Lightmeat
	(Percent)	
7-oz. 48's	33	35
13-oz. 24's	22	20
4-lb. 6's	45	45

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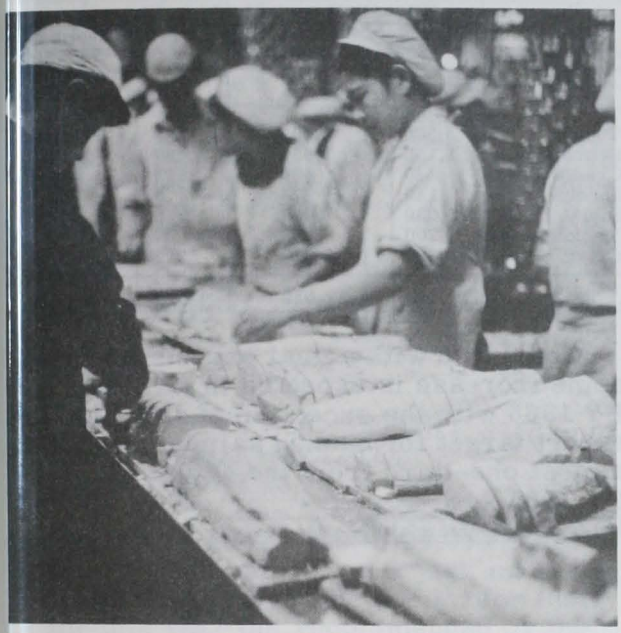
CANNED FISH PRODUCTION AND MARKETING TRENDS:

The Japan Canners Association compiled a report on canned food production and marketing trends in 1965 and early 1966. The section dealing with fishery products states:

Canned Tuna: Production totaled about 6 million cases, declining despite the fact that United States demand increased and prices continued to increase since the fall, with export prices also going up. The National Federation of Tuna Fishermen's Associations (NIKKATSUREN) had not yet undertaken the promotion of canned albacore in oil as a result of high fish prices. (Note: In September 1965 NIKKATSUREN decided to launch a sales campaign to promote domestic consumption of albacore in oil. The program was to continue for three years, beginning November 1965, and was to be financed by assessment on albacore landed in Japanese ports.) The major fishing companies were reported planning to launch a campaign after March to sell

pan (Contd.):



. 1 - Slicing cooked and cleaned tuna loins for canning in a panese cannery.

lid albacore tuna in oil for 120 yen (US$0.33) an at retail.

Canned Salmon: Production in 1965 in-eased greatly, totaling about 3.7 million es. Due to a world shortage of canned k salmon and a firm export market, sup-s available for release on the domestic ket are short. The major fishing com-ies completely sold their pack of factory-p-produced pink by February 1966. Even retail price of the flat No. 2 (7.8-oz.) k increased to 98 yen ($0.27) a can.

Canned Crab: Production in 1965 totaled about 850,000 cases and this has created an acute shortage on the domestic market. The demand is strong for fresh "zuwai" (tanner) crab from the Sanin District (prefectures on the southwestern part of the main Japanese island facing the Japan Sea), the fishery for which peaks in February-March, and the fresh product was selling at the high price of over 100 yen a kilogram ($0.13 a lb.). The No. 3 pack (drained weight 3.3 oz.) was wholesaling for 95-97 yen ($0.26-0.27) and retailing for 130-140 yen ($0.36-0.39) a can.

2 - Processing crab meat for canning aboard a Japanese toryship in the Bering Sea.

Canned Mackerel: Production increased greatly, totaling about 5.5 million cases. The winter mackerel fishery off Choshi, Chiba Prefecture, did not come up to expectations, but beginning around February 20, 1966, fishing began in the Yaizu, Shizuoka District. Natural flat No. 1 (15.5-oz.) wholesaled for 54-56 yen ($0.15-0.16) and natural flat No. 2 (7.25-oz.) wholesaled for 33 yen ($0.09) and retailed for 40 yen ($0.11) a can.

Fig. 3 - Washing and packing mackerel in baskets prior to putting the fish in the hold aboard a Japanese fishing vessel.

Canned Saury: Production in 1965 totaled about 2.35 million cases, of which 1.4-1.5 million cases of seasoned saury and 0.7 million cases of broiled saury were packed for the domestic market. The No. 6 (7.4-oz.) seasoned pack wholesaled for 38 yen ($0.11) a can and the oblong No. 5A (4.4-oz.) broiled pack wholesaled for 33-37 yen ($0.09-0.10) a can. (Suisan Tsushin, March 28, 1966.)

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EXPORTS OF MARINE PRODUCTS, DECEMBER 1965:

Japan's exports of marine products in December 1965 consisted principally of fresh and frozen fish valued at over US$5.5 million (over $4 million in November 1965) and canned products valued at over $19 million ($10.7

Japan (Contd.):

Japan's Exports of Marine Products, December 1965

Product	Quantity	Value
	Metric Tons	US$ 1,000
Fresh & Frozen Fish:		
Tuna, skipjack	1,372	222
Tuna, other	9,340	3,339
Marlin	821	711
Sea bream	1,191	208
Mackerel	164	30
Saury	272	67
Salmon	10	14
Other fish	1,954	914
Total fresh and frozen	15,124	5,505
Cured:		
Cod	7	5
Boiled and dried	71	25
Shark fins	122	192
Other	39	36
Total cured	239	258
Shellfish, etc., fresh, frozen, dried:		
Scallops	2	16
Oysters	15	17
Shrimp	202	453
Squid	1,620	508
Octopus (fresh)	236	114
Whale meat	14	6
Bull frog	49	94
Other	7	25
Total shellfish, etc.	2,145	1,233
Canned:		
Salmon	6,610	10,678
Tuna, skipjack	1,025	844
Tuna, other	2,658	2,517
Mackerel	3,506	1,200
Saury	657	292
Sardine	89	36
Horse mackerel	1,507	497
Other fish	1,628	1,311
Crab	284	1,042
Shrimp	63	122
Squid	355	136
Other shellfish	536	553
Total canned	18,918	19,228
Other Products:		
Seaweed, kombu	136	61
Seaweed, laver 1/	147	14
Agar agar	33	131

1/In 1,000 sheets.

million in November 1965.) (Fisheries Attache, United States Embassy, Tokyo, April 19, 1966.)

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EXPORT TARGETS FOR CANNED MARINE PRODUCTS, FISCAL YEAR 1966:

The Canned Goods Committee of the Japanese Ministry of International Trade and Industry's Agricultural and Marine Products Export Council held a meeting on April 7, 1966, and developed export targets for marine products for the fiscal year 1966 (April 1966-March 1967). (Fisheries Attache, United States Embassy, Tokyo, May 13, 1966.)

Japanese Canned Marine Products Export Targets for FY 1966 with Comparisons

Product	Quantity		Value	
	Target FY 1966	Actual Exports FY 1965	Target FY 1966	Actual Exports FY 1965
	. . (1,000 Cases). .		. . (US$100,000). .	
Tuna	5,300	4,909	460	408
Salmon	1,150	1,659	407	575
Crab meat	440	420	113	107
Sardine	110	73	8	6
Saury	1,030	462	66	29
Mackerel	700	698	44	46
Other	3,380	2,838	212	188
Total	12,110	11,059	1,310	1,359

Compared with actual exports for FY 1965, some increase is expected in all items for FY 1966 with the exception of salmon. The export target for canned salmon is down by almost one-third from the actual exports in FY 1965.

Note: See Commercial Fisheries Review, July 1965 p. 71.

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FROZEN SWORDFISH EXPORT VALIDATIONS TO U. S. AND CANADA, APRIL 1965-FEBRUARY 1966:

Japan's export validations of frozen broadbill swordfish (fillets, chunks, and "other" forms) to the United States and Canada in February 1966 totaled 691 short tons valued at US$534,513. This compared with 436 tons valued at $288,496 in February 1965 and 403 tons valued at $307,561 in January 1966.

For the 11 months, April 1965-February 1966, export validations of frozen swordfish to the U. S. and Canada totaled 4,630 tons valued at $3,487,411. Fillets accounted for 66 percent of the total. This compared with 64 percent of the total for the previous 10 months (through January 1966) and for the previous 9 months as well (through December 1965). For the 11 months, April 1964-Feb. 1965, frozen swordfish export validations totaled 3,832 tons valued at $2,485,134. (Fisheries Attache, United States Embassy, Tokyo, April 19, 1966.)

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EXPORTS OF FROZEN RAINBOW TROUT, FEBRUARY 1966:

Japan's exports of frozen rainbow trout in February 1966 doubled in quantity and value compared with the exports in January 1966. Exports in January amounted to 106 short tons valued at US$81,670. (Fisheries Attache, United States Embassy, Tokyo, April 19, 1966.)

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Japan's Exports of Frozen Rainbow Trout by Country of Destination, February 1966

Country of Destination	February 1966	
	Quantity	Value
	Short Tons	US$
ited States	146	113,414
ited Kingdom	30	20,144
lgium	5	3,794
nada	15	11,011
ustralia	4	3,292
st Germany	25	7,636
ther	5	3,549
Total	230	162,840

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RM CONTRACTS FOR EXPORT
F CANNED MACKEREL TO
HE UNITED STATES:

A Japanese trading firm has contracted for export to the United States of 25,000 cases (48 1-lb. cans) of natural pack jack mackerel. The suggested export price (f.o.b.) for that pack for this year (as recommended by the Canned Mackerel Sales Company at a meeting held March 10) is 1,850 yen (US$5.14) a case, minimum 1,750 yen ($4.86). (Nihon Suisan Shimbun, March 14, 1966.)

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INCREASES EXPORTS OF CANNED MACKEREL TO THE U. S.:

As of March 31, 1966, sales of canned jack mackerel for export to the United States totaled 86,150 cases (1-lb. talls), including 20,000 cases contracted for sale in February, according to data compiled by the Japan Canned Mackerel, Sardine and Saury Sales Company. The marked increase in Japanese canned mackerel exports to the United States was attributed to a decrease in mackerel production in that country and in South Africa (which normally exports large quantities of that product to the United States). South African mackerel production was reported down 50 percent. (Nihon Suisan Shimbun, April 4, 1966.)

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QUOTA SET FOR
NORTH PACIFIC SALMON FLEET:

Japan and the Soviet Union, after six weeks of negotiations in Moscow, agreed on April 14 on a North Pacific salmon catch quota of 96,000 metric tons in 1966 for Japan. (Suisan Tsushin, April 30, 1966.)

The Japanese Fisheries Agency, in turn, developed the following distribution formula for the 96,000-ton quota:

	Catch Quota	Percentage of Total
	. .(Metric Tons). .	
Area A (north of 45° N. latitude):		
Mothership-type fishery (11 motherships, 369 catcher vessels)	38,981	40.6
Land-based gill-net fishery (332 vessels)	9,019	9.4
Subtotal Area A	48,000	50
Area B (south of 45° N. latitude):		
Land-based gill-net fishery (332 vessels)	28,390	29.6
Land-based long-line fishery (369 vessels)	12,610	13.1
Small gill-net vessel (under 7 tons) fishery (1,378 vessels)	4,000	4.2
Japan Sea gill-net fishery (296 vessels)	3,000	3.1
Subtotal Area B	48,000	50
Grand total	96,000	100

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SALMON EX-VESSEL PRICES, 1966:

The Japan Federation of Salmon Fishermen's Associations (NIKKEIREN) and the Northern Waters Mothership Council (representing mothership operators) reached agreement May 7 on 1966 salmon ex-vessel prices.

Species	Ex-Vessel Prices			
	1966		1965	1964
	Yen/Kg.	Cents/Lb.	Cents/Lb.	Cents/Lb.
Red	248	31.3	30.7	27.4
Chum	142	17.9	16.6	14.9
Pink	114	14.4	13.4	11.9
King & silver	155	19.6	18.1	16.2

The agreement on prices to be paid fishermen calls for a 2-percent increase for red salmon and about a 7.5-percent increase for pink, chum, king, and silver salmon. (Suisancho Nippo, May 10, 1966.)

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KING CRAB FISHING TRENDS:

The two Japanese king crab fleets (Tainichi Maru and Keiko Maru) in Bristol Bay were reported as of April 30, 1966, to have caught 564,840 crabs and packed 24,339 cases (48-½ lb. cans) of crab meat. Their catch per unit of gear was 9.2-10.9 crabs and recovery rate 21.6-27.1 crabs a case. So far, fishing this season had been only fair. In part, according to the Director of fishing operations on the Tainichi Maru, this was attributed to the pres-

Japan (Contd.):

ence of pack-ice which carried away the nets, at times. Most of the nets were later recovered. (Suisan Tsushin, May 6, 1966 and other sources.)

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VIEWS ON NORTH PACIFIC FISHERIES PROBLEMS:

With the settlement of the tenth round of Japan-Soviet fisheries under unfavorable terms for the Japanese side, Japanese northern Pacific fisheries have entered a period in which the problem of organizational improvement must be taken up from a long-range point of view. The salmon catch quota has been curtailed to 96,000 metric tons as a result of the negotiations because the Japanese side, too, had to recognize the depletion of salmon and salmon-trout resources in the northern Pacific. Moreover, Japan is destined to encounter even greater difficulties in 1968, which is a lean year for both Japan-Soviet fisheries and American red salmon fisheries. Because of these circumstances, it has become necessary for the Government and fisheries circles to rebuild the present structure for fishing operations commensurate with the depletion of resources and, at the same time, ask for the release of the northeastern Pacific fishing grounds to the Japanese in the negotiations for revision of the Japan-U.S.-Canada Fisheries Treaty, to find an outlet from the aforementioned difficulties.

Salmon fisheries constitute the pillar of the Japanese northern Pacific fisheries based at Hokkaido and Tohoku. Their annual yield amounts to about 40 billion yen (US$110.5 million) in value, and one-half of that amount is exported. As has been revealed in the course of the recent Japan-Soviet fisheries negotiations, however, the salmon in the Northern Pacific are doubtlessly dwindling. It is necessary for Japan to continue resisting stubbornly the Soviet plan for the distribution of resources. It is also necessary, however, for Japan to establish, as early as possible, countermeasures to cope with the depletion of salmon in the northern Pacific.

The first problem, which must be taken up for the organizational improvement of northern Pacific fisheries, centered on salmon, is to curtail the scale of fishing operations commensurate with the depletion of resources. The reason is that in the negotiations with the Soviet Union, the Japanese side cannot avoid taking up the problem of curtailing the number of fishing vessels in the northern Pacific. It must be expected that the Soviet side will repeatedly ask Japan for such curtailment in future negotiations. As the Japanese delegation to the Japan-Soviet fisheries negotiations asserted, however, it is time for Japan to "make its own decision" on such curtailment.

The key problem is how to reduce the number of salmon fishing vessels on a rational basis. It is difficult for the Government to pay compensation out of the National Treasury to those who will suffer losses from such reduction. In the end it will become necessary to make use of the system of simultaneous renewal of the date and period of fishing licenses, which has first been adopted by the present Fisheries Law (to go into effect in August, 1967), as an important means of reorganizing northern Pacific fisheries.

The Fisheries Agency is studying measures for such renewal, with the view to expanding the scale and improving the organization of fisheries enterprises engaged in bonito, tuna, and mackerel fisheries and eastern drag-net fisheries (the scale of operations has already been fixed by the Japan-Soviet fisheries treaty for those engaged in salmon and crab fisheries). As for northern Pacific fisheries, there is the growing opinion that the Government should take drastic steps now for the amalgamation of small fisheries enterprises in order to lay the "foundations" for the curtailment of the number of salmon fishing vessels.

Another important problem which must be solved for the stabilization of northern Pacific fisheries centered on salmon is the revision of the Japan-U.S.-Canada Fisheries Treaty. It has been the cherished desire of the Japanese concerned with northern Pacific fisheries to revise this "unequal treaty" which bans Japanese fishing for American salmon across the "voluntary restraint line" (abstention line) established in the center of the Pacific (175° W. longitude).

While the Japan-Svoiet fisheries treaty permits offshore salmon fisheries, the Japan-U.S.-Canada Fisheries Treaty reflects the viewpoint that "the salmon which are bred in American or Canadian rivers, always belong to those two countries, regardless of wherever they move." Needless to say, such

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...ew contravenes freedom of the high seas. ...an holds that the Japan-U.S.-Canada fish-...s treaty, which is based on such exclu-...m, is a "bad law" rare throughout the ...ld. Also the officials of the Fisheries Re-...ch Institute of the Agriculture-Forestry ...istry emphasize that "the American salm-...esources still leave considerable room ...further exploitation, in view of the scale ...merican and Canadian coastal fisheries."

...ll Japanese circles concerned hold un-...ously that the only outlet from the pres-...eadlock of northern Pacific fisheries, ...ecially salmon, is the revision of the Ja-...U.S.-Canada fisheries treaty in favor of ...release of the northeastern Pacific fish-...grounds as a new "frontier" for salmon ...eries. It is not permissible, of course, ...Japan to catch at random the salmon from ...tol Bay where the United States and Can-...have been attempting conservation of re-...ces over a long period. If reasonable ...appropriate catches, however, are per-...ed to Japan, the blow to be dealt the Ja-...se by the decrease in Asian salmon catches ...o the Japan-Soviet fisheries treaty will ...minimized. (Nihon Keizai, April 15, 1966.)

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...MEAL PRODUCTION FROM ...ET-CAUGHT ALASKA POLLOCK:

...e 14,000-ton Japanese fish meal facto-...ip Hoyo Maru returned to Yokohama ...h 29, 1966. The factoryship operated in ...khotsk Sea, beginning in mid-January, ...g Alaska pollock from Soviet trawlers ...ocessing into fish meal and oil. She ...ased 47,500 metric tons of Alaska pol-...and produced 7,752 metric tons of meal, ...ons of oil, and 1,120 tons of fish solu-... (Suisancho Nippo, March 30, 1966.)

See Commercial Fisheries Review, March 1966 p. 58.

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...TH PACIFIC WHALING ...ULATIONS FOR 1966 ISSUED:

...e Japanese Fisheries Agency on April ...nounced these whaling regulations for ...ifteenth (1966) North Pacific Whaling ...dition:

... Number of whaling fleets to be author-... 3 (to be operated by the same firms ... participated in the 1965 operations).

2. Catch limit:

a. Whalebone whales--1,001 blue-whale units (same as actual production in 1965). For fin whales, the season's limit will be 1,265 whales. This represents a voluntary reduction of 10 percent from the 1965 production of 1,406 whales. Action taken in view of need to protect species. Ban on the harvesting of blue whales and humpback whales will continue as before. No catch restriction will be imposed on catch of sei whales since stock assessment indicates no need to regulate harvest of that species.

b. Sperm whales--3,000 whales. This represents an increase of 540 whales over the 1965 catch of 2,460 whales. The decision to increase the limit was based on the fact that the Soviets in 1965 harvested about 8,100 sperm whales, indicating that the stock is not in a poor condition.

3. Assignment of catcher vessels: In 1965 one fleet (which was granted an increase in catch quota of 200 blue-whale units) was licensed to operate with 11 catcher vessels, while the other two fleets were each restricted to 7 catcher vessels. There will be no restrictions placed on those two fleets this year.

4. Allocation of whale quota: The catch quota for whalebone whales will be allocated to the 3 whaling fleets:

Whaling Fleet	Catch Quota (Blue-Whale Units)
Kyokuyo Maru	467
Nisshin Maru No. 3	267
Nichiei Maru	267

The Kyokuyo Maru fleet receives the additional quota of 200 whales as in 1965.

The fin whale quota will be divided equally among the 3 firms operating the 3 fleets at the rate of 421 whales per fleet. The sperm whale quota will be allocated on the basis of 1,000 whales per fleet.

Fig. 1 - Japanese whale factoryship in Bering Sea. Note stern ramp for taking whale aboard.

Japan (Contd.):

Fig. 2 - Sperm whale meat ready for freezing aboard a Japanese factoryship in Bering Sea.

The Agency also announced its intention to progressively reduce the fin whale catch during the next three years. Two (Nichiei Maru and Kyokuyo Maru) of the Japanese whaling fleets were scheduled to depart Japan around May 15 and the third (Nisshin Maru No. 3) around May 20.

1966 Production Plan With Comparisons

Products	Nichiei Maru	Kyokuyo Maru	Nisshin Maru No. 3	Total	1965 Production
	(Metric Tons)				
Finback:					
Oil	3,658	11,010	-	14,668	14,545
Frozen meat	8,277	24,222	-	32,499	31,846
Sperm Whale:					
Oil	7,500	-	15,200	22,700	19,524
Frozen meat	2,000	-	3,950	5,950	-
Other	1,019	1,101	2,920	5,039	5,009
Total	22,454	36,333	22,070	80,856	70,924

This year finback meat, which was not fully used previously, is to be used completely. One company has concluded a contract with a U. S. pet food manufacturer for 3,000 metric tons of such food (the export price is about 80,000 yen a short ton (about US$221) c.i.f. (Suisan Tsushin, April 30, 1966, Nihon Keizai, May 15, 1966, and other sources.)

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FINBACK WHALE CATCH IN NORTH PACIFIC CUT BY TEN PERCENT:

Japan will "voluntarily" reduce her catch of finback whales in the Northern Pacific this year by 10 percent, the Fisheries Agency announced in late April 1966.

The decision was made in view of little hope existing for the four whaling countries (Japan, the Soviet Union, the United States, and Canada) to agree on how to conserve dwindling finback resources in the area. No agreement was in sight in time for the start of the whaling season in mid-May.

By this decision, Japan will reduce her catch for 1966 from the quota of 1,406 finbacks for last year to 1,266.

As diminishing whale resources in the Northern Pacific became apparent, the four countries concerned met in Honolulu in February. The international gathering failed to reach any agreement on restrictive measures to be taken. Japan also sounded out the Soviet Union in vain when the two countries met in Moscow on their salmon and crab quotas in Northwestern Pacific waters. Under the circumstances, Japan decided to self-impose the 10-percent restriction in conformity with a recommendation by a scientists' group at the Honolulu meeting, which proposed that Japan and the Soviet Union limit their total catch below 1,600 finbacks annually if whale resources are to be maintained at the present level.

By informing the other three parties of the new decision, the Fisheries Agency hopes that the Soviet Union also will voluntarily restrict its catch. The Agency thinks, however, that a final conclusion on this problem will be reached only after a series of whaling meetings this year, including a meeting of the International Whaling Commission in London in June (Mainichi, April 30, 1966).

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AGRICULTURE MINISTER URGES FISHING INDUSTRY TO PRACTICE RESOURCE CONSERVATION:

In an interview with the press, Japanese Minister of Agriculture Sakata was quoted as follows: " In the Japan-Soviet fishery talks this time, there were many difficult problems, but it was a matter for congratulations that the agreement came to a conclusion in a comparatively short period of time due to the spirit of friendship and mutual understanding between Japan and the Soviet Union which has been fostered for ten years after conclusion of the Treaty. I think highly of the efforts made by the members of the delegation, including Delegate Fujita, and at the same time, I wish to request again of our country's persons concerned with fisheries to realize conservation of resources under

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erly fishing operations so that this Treaty vi be enforced smoothly." (Sankaii, April 1 1966.)

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FHING VESSEL CONSTRUCTION TNDS, 1965/66:

Fishing vessel construction data compiled bhe Japanese Fisheries Agency show that inscal Year 1966 (April 1965-March 1966) atal of 807 steel vessels were approved by thAgency. This represents an increase in nber of 33 vessels over FY 1965 but a decase in total vessel tonnage of 2,592 gross tc. The FY 1966 construction trends were cracterized by a marked increase in vesbuilding activity in the distant-water trawl fiery and a decline in the tuna long-line fiery. Particularly noteworthy was the dstic decrease in the construction of tuna Lg-liners of over 200 gross tons in size (lecting the depressed condition of that fiery) and an increase in the construction okipjack pole-and-line vessels in the 100-t0 50-ton class. In the distant-water trawl fiery, a total of 38 vessels aggregating 327 gross tons was built, compared with 2essels totaling 16,659 gross tons in FY 16. In the tuna long-line and skipjack pole-a-line fisheries, a total of 60 vessels aggating 11,765 gross tons was approved for ocruction, compared with 129 vessels, totag 27,463 gross tons, for FY 1965. By s class of vessel, they were as follows (figures in parentheses): Under 100 t --6 vessels (21); 100-200 tons--41 vess (54); 200-300 tons--10 vessels (37); o 300 tons--3 vessels (17). (Shin Suisan Shbun Sokuho, April 19, 1966.)

Republic of Korea

PRCHASE OF TUNA VESSELS FDM WEST GERMANY:

South Korean interests have commissioned a est German shipyard in Leer to build five tru long-line vessels. The five vessels are ected to be delivered in 1966. (Allgemeine Fshwirtschafts-Zeitung.)

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FISHING FLEET EXPANSION PLANNED:

According to the Government of the Republic of Korea (ROK), the country's fishing fleet totals 48,716 vessels. These include 6,463 (13.2 percent) motorized and 42,253 (86.8 percent) non-motorized vessels, but about 17,000 are vessels over 10 years old. With assistance from Japan, the ROK plans to modernize her fishing fleet by motorizing the non-powered fleet and by replacing the older vessels with new and larger motorized vessels.

The ROK's distant-water tuna fleet totals 45 long-line vessels and, as of March 1966, 40 were reported fishing out of American Samoa. Under the proposed fishing vessel expansion plan, the distant-water tuna fleet is to be increased by over 200 vessels in the next 10 years. (Note: Other foreign vessels based at Samoa in March included 26 Japanese and 36 Formosan vessels.) (Suisancho Nippo, May 7 & 9, 1966.)

Malaysia

FISHERY TRENDS:

On July 1, 1965, the administration of fresh-water fisheries was reorganized. The federal fry production stations and training of farmers and would-be fish culturists in fish culture practices is now under the Fisheries Officer (Extension). During the third quarter of 1965, 232 new fish ponds covering some 40 hectares (excluding the unknown acreage of the 18 ponds opened up in Pahang) were put into operation. A total of 305,914 fish fry were distributed free to pond owners and a further 249,700 fish fry were released into various waters for public fishing.

Mechanization of fishing boats continued to progress with 388 inboard engines and 175 outboard engines installed during the third quarter of 1965. The marked preference for outboard engines over inboard engines in Johore Province continues.

The second 5-month marine fisheries training course for 1965 commenced in Penang on July 1, 1965. The enrollment at the end of September totaled 25, of which 7 were from the Borneo States.

In Kuala Trengganu, the third 3-month marine fisheries course for the year began

Malaysia (Contd.):

on September 4 with an enrollment of 25, including 7 trainees from Sarawak.

The Fisheries Division's 4-day training courses in fish culture practices attracted a total of 36 trainees.

Mexico

SHRIMP FISHERY, 1965 AND EARLY 1966:

The Mexican west coast shrimp fishery, while continuing to produce at a low level, finally exceeded last year's substandard output toward the end of the first quarter of 1966. Exports to the United States for the season from September 1, 1965, through March 18, 1966, were 30,883,000 pounds, up 189,000 pounds. Prices were up substantially to record levels.

Although no data were available, indications were that Gulf of Mexico production in the first quarter was running a little ahead of last year, which was a good season. At least 18 new shrimp vessels are under construction at Carmen and Campeche, reflecting a slight note of optimism.

Preliminary data on fishery production in the State of Baja California, the largest volume area in Mexico, indicate that 1965 catches were almost exactly the same as in 1964, about 58,500 metric tons. This is somewhat disappointing, as Baja California was expected to show a good increase and lead the Mexican fisheries out of the doldrums. (U. S. Embassy, Mexico, D. F., May 14, 1966.)

Morocco

STUDY TO REVIVE FISHING INDUSTRY IN AL HOCEIMA:

A delegation consisting of representatives from the ministries of Industry and Mines, the Interior, and the Merchant Marine arrived in Al Hoceima in mid-May 1966 to study the resources and the means available for developing the fishing industry in this area of the Mediterranean coast. The ministerial group will study several plans which have been drawn up by a group of businessmen in Al Hoceima. The study is being undertaken as part of a national effort aimed at bolstering the fishing industry in Morocco. (United States Consulate, Tangier, May 13, 1966.)

Note: See Commercial Fisheries Review, June 1966 p. 78.

Norway

HERRING AND COD FISHERY TRENDS, APRIL 23, 1966:

Herring: As of April 23, 1966, the 1966 Norwegian herring catch amounted to 5.1 million hectoliters (474,000 metric tons) and the capelin catch amounted to about 3.26 million hectoliters (303,000 tons). Fish meal and oil plants absorbed all of the 1966 capelin catch and 79 percent of the herring catch.

The bulk of the 1966 herring catch was taken in the winter herring fishery which ended in late March. The 1966 winter herring catch was double that in the previous year and the capelin catch was also up sharply.

Cod: The Norwegian catch of spawning and Finmark cod as of April 23, 1966, totaled 68,741 tons of which 20,056 tons went for filleting, 20,578 tons for drying, 21,680 tons for salting, and 6,427 tons for fresh consumption. The 1966 cod fishery off northern Norway has been somewhat more productive than in the past 2 years when catches were very light. As of April 24, 1965, the catch of 55,064 tons was used, 16,613 tons for filleting, 18,378 tons for drying, 11,970 tons for salting, and 8,103 tons for fresh consumption. (Fiskets Gang, April 28, 1966.)

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FISHERIES OCEANOGRAPHIC PROGRAM REVIEWED:

The Oceanographic Institute of the Norwegian Fisheries Directorate carries out research to assist Norwegian fisheries. The objective of the Institute is to study the basis of Norwegian fisheries, and to publish research results and distribute data that may aid the fisheries. On March 4, 1966, the Norwegian Government appointed a review committee for this oceanographic program to evaluate its effectiveness and whether or not changes are needed. (U. S. Embassy, Stockholm, May 3, 1966.)

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PORTS OF CANNED FISHERY ODUCTS, 1964-1965:

Norwegian total exports of canned fishery ducts in 1965 were down about 3 percent uantity and 2 percent in value from 1964.

Table 1 - Norwegian Exports of Canned Fishery Products by Type, 1964-1965

Product	January-December 1965			January-December 1964		
	Quantity	Value		Quantity	Value	
	Metric Tons	1,000 Kroner	US$1,000	Metric Tons	1,000 Kroner	US$1,000
ked brisling in oil	5,429	38,250	5,342	5,768	38,562	5,386
ked brisling in tomato	925	5,037	703	1,278	6,978	975
ked small sild in oil	11,244	48,832	6,820	11,077	48,743	6,528
ked small sild in tomato	1,809	6,528	912	2,154	7,644	1,068
noked small sild in oil	797	2,347	328	379	1,321	184
ll. sild packed otherwise	902	3,429	479	673	2,489	348
ered herring	3,329	15,033	2,100	3,264	14,370	2,007
kerel	782	3,726	520	745	3,606	504
unclassified	1,020	4,324	604	1,330	5,613	784
herring roe	817	5,339	746	1,141	5,593	781
balls	608	1,716	240	531	1,374	192
r canned fish	111	863	120	100	739	103
lfish	1,246	12,452	1,739	1,603	16,393	2,289
Total	29,019	147,876	20,653	30,043	151,425	21,149

Table 2 - Norwegian Exports of Canned Fishery Products1/ by Country of Destination, 1964-1965

Country of Destination	January-December 1965			January-December 1964		
	Quantity	Value		Quantity	Value	
	Metric Tons	1,000 Kroner	US$1,000	Metric Tons	1,000 Kroner	US$1,000
land	313	1,656	231	269	1,424	198
den	1,322	6,091	851	925	4,330	604
ium-Luxembourg	680	3,351	468	669	3,232	451
nd	215	815	114	298	1,209	168
ce	248	1,069	149	278	1,121	156
erlands	236	1,064	148	202	875	122
ed Kingdom	4,671	23,427	3,272	6,626	32,243	4,503
Germany	1,112	4,465	624	899	3,483	486
oslovakia	1,151	3,965	554	1,089	3,871	540
Germany	1,563	5,337	745	1,276	4,322	603
Africa Republic	1,436	5,747	803	1,740	6,950	970
	10	38	5	88	333	46
da	1,036	6,453	901	922	5,651	789
d States	11,247	62,957	8,793	10,479	56,021	7,824
alia	2,046	8,723	1,218	2,144	8,858	1,237
ealand	419	1,908	266	466	2,004	279
countries	1,114	4,583	640	1,049	4,327	604
Total2/	28,819	141,649	19,782	29,419	140,254	19,588

s not include exports of canned shellfish.
tals are slightly different than the combined exports of canned fish (excluding shellfish) shown in table 1.
Norwegian Kroner 7.16 equal US$1.00.

United States was Norway's most import- market for canned fishery products, ac- nting for 39 percent of total shipments in 5 and 36 percent in 1964. (Norwegian ners Export Journal, March 1966.)

See Commercial Fisheries Review, Aug. 1965 p. 90.

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ARCTIC WHALE OIL DUCTION DROPS IN 1965/66:

The two Norwegian whaling expeditions ticipating in the 1965/66 Antarctic season duced 126,030 barrels of whale and sperm or 54 percent of the 1964/65 production. Norwegian expeditions captured only 66 percent of the blue-whale units allocated to Norway within the international whaling quota for the 1965/66 Antarctic season. (U.S. Embassy, Oslo, April 22, 1966.)

Peru

FISH MEAL AND ANCHOVY RESOURCE SITUATION, EARLY MAY 1966:

The following is a comparison of fish meal production of Peru on a monthly basis:

Month	1965/66	1964/65	1963/64
	(Metric Tons)		
October	41,463	130,492	76,769
November	116,716	181,673	166,167
December	213,742	180,979	139,629
January	242,380	194,104	195,551
February	179,330	122,285	125,216
March	194,309	191,930	175,170
April 1-15	83,190	92,924	83,134
Total	1,071,130	1,094,387	961,636

Peru (Contd.):

Based on these production figures, it appears that after a very poor start in October and November 1965, the anchovy landings for this season improved greatly, permitting fish meal production levels to exceed those of the same months (except possibly for April) of the two preceding seasons.

Fish meal stocks, as of March 31, 1966, stood at 445,347 metric tons and were estimated at about 530,000 tons in early May, as the fishing in the latter half of April was reportedly very good.

During the first week of May 1966, the price of fish meal rose about $20 a ton (to about $148.00 f.o.b. Peru).

At the end of March 1966, 147 fish meal plants were reported in production, compared with 142 for that period of 1965.

The current fishing season for anchovy was scheduled to end on May 31, 1966, with a total catch of about 7.8 million metric tons. Under present Peruvian regulations, there was to be a closed season June-August, with a maximum anchovy catch to be set for the 1966/67 fishing season, probably to be between 7 and 8 million tons. This new regulatory approach grew out of concern that the anchovy resource may have been overfished, which was expected to have serious immediate implications for the local reduction industry which has an estimated processing capacity of 16 million tons. As the industry is one which operates on heavy credit margins, and many of the plant and fishing fleet owners are heavily in debt, the closed season would likely impose a serious strain on financial resources of many in the industry. One anticipated result would be a consolidation, leading to fewer but more efficient fishing vessels and meal plants.

During the first quarter of 1966 (the second three months of the current fishing season), Peru exported fish meal to the following countries:

	Metric Tons	Percentage
Europe:		
West Germany	64,528	16.1
East Germany	29,615	7.4
Belgium	8,150	2.0
Czechoslovakia	8,896	2.2
Cyprus	50	-
Spain	47,990	12.0
Finland	3,000	0.8
France	5,794	1.4
Greece	2,782	0.7
Netherlands	45,286	11.3
Hungary	5,000	1.2
Great Britain	500	0.1
Ireland	1,000	0.3
Italy	26,263	6.6
Poland	17,071	4.3
Rumania	4,000	1.0
Sweden	4,448	1.1
Yugoslavia	13,905	3.5
Total	288,278	72.0
Western Hemisphere:		
Argentina	1,700	0.4
Brazil	100	-
Bolivia	12	-
Colombia	780	0.2
United States	60,454	15.1
Mexico	14,781	3.7
Venezuela	4,500	1.1
Total	82,327	20.5
Asia - Near East:		
Israel	2,000	0.5
Japan	28,000	7.0
Total	30,000	7.5
Grand Total	400,605	100.0

During January-March 1966, 16,312 metric tons of semirefined fish oil and 5,934 tons of crude fish oil were exported, a total of 22,246 tons.

It is interesting to note that vast resources of hake exist off Peru and Chile which can be converted to fish meal. Chile is already producing over 10,000 metric tons of fish meal annually from hake. Up until now, the fish reduction industry in Peru has been largely dependent upon the anchovy resource for its raw material, but the advent of conservation regulations may accelerate development and utilization of the hake resource potential. (U.S. Embassy, Lima, May 10 and May 24, 1966.)

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USAID MISSION FAVORS SMITHSONIAN PROPOSAL TO STUDY RELATIONSHIP BETWEEN ANCHOVY AND GUANO BIRD POPULATION:

Members of Peru's guano fertilizer industry believe that the recent decline in the number of guano birds is related to the competition for the anchovy resource from the fish meal industry. The members of the fish meal industry, however, do not believe that a relationship necessarily exists; there is the possibility that when the Humboldt current changes and the fish go deep under water, the fish are inaccessible to the birds and they die of starvation from natural causes. Bird numbers declined drastically in 1911, 1917, 1925, 1932, 1950, and 1957, prior to extensive develop-

ru (Contd.):

nt of the fish meal industry in the 1960's. Se believe that about 9 million metric tons chovy could be harvested annually with- serious competition to the guano bird pop- on.

n 1965, the guano bird population declined t8 million birds from 18 million in 1964. T production of guano fertilizer was 168,700 ric tons in 1965, a drop of 36,391 tons fm 1964. Guano fertilizer is cheap because ci Government subsidy. In a reasonably fe market, guano could not compete with cmmercial fertilizers. It is interesting to nt also that during 1965 there was a steady ansion of the Peruvian production of chem- il fertilizers (97,444 metric tons produced i 965, compared to 81,086 tons in 1964) in l with the increasing demand of both do- stic food producers and export crop grow- e.

In the meantime, the Smithsonian Institu- th has proposed to conduct a research study o ll aspects of the problem and the USAID Ission in Peru has pledged full cooperation w Smithsonian scientists. (U. S. Embassy, Ima, May 6 and May 11, 1966.)

tugal

TA FISHERY MODERNIZATION PLANS:

he Portuguese tuna industry is dependent o e catch of fish traps and small wooden v els. But the Portuguese fisheries devel- o ent plan for 1965-1967 calls for construc- t of four ocean-going tuna vessels as well a ew cold-storage support bases.

t was reported in early May 1966 that rmany has agreed to (1) help Portugal trans- E a vessel into a modern live-bait tuna Eing vessel and (2) provide two technicians t ake a 6-months tuna survey off the Cape de Islands. If the survey is promising, Portugal may build a fishing base in the Cape de Islands. Germany is the leading buy- e Portuguese canned fish. (U.S. Embassy, Lbon, May 10, 1966, and other sources.)

South Africa

PLANS FACTORYSHIP FISHING OPERATION:

Following the failure in 1965 of offers for public subscriptions in the Willem Barendsz (a 26,000-ton former whaling factoryship), which is to be converted into a floating fish factory, the project has proceeded with private capitalization. Included is a 40-percent share held by an established inshore fishing group. The ship is undergoing conversion, a process which will require a total of several months for completion. In the meantime, negotiations are under way to bring Willem Barendsz Ltd. into the marketing orbit of South African Fish Meal Producers. Although various restrictions have been placed upon the operation of the factoryship (an embargo on the use of South-West African ports and operations within the 12-mile fishing limit), the ship will have access to Cape Town docks. (United States Embassy, Pretoria, April 29, 1966.)

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PELAGIC SHOAL FISH CATCH OFF TO SLOW START IN 1966:

The poor start for South Africa's 1966 shoal fishing season, with disappointing catches in January, was attributed to poor fishing south of Cape Town. The Cape west coast catch in January 1966 amounted to 21,287 metric tons as compared with 38,713 tons in 1965 and 68,041 tons in 1964. This was especially disappointing in view of the high and firm prices for fish meal quoted at US$182 a metric ton c.i.f. European ports.

South Africa's Pelagic Shoal Fish Catch, January 1966 with Comparisons for 1965 and 1964

Species	1966	1965	1964
	(Metric Tons)		
Pilchards	4,637	12,276	63,781
Maasbanker	6,359	6,746	3,666
Mackerel	3,338	4,362	594
Anchovy	6,953	15,329	-
Total	21,287	38,713	68,041

The January 1966 catch in South Africa yielded 4,832 short tons of fish meal, 169,583 imperial gallons of fish body oil; also 124,272 pounds of canned pilchards, 232,454 pounds of canned maasbanker, and 313,632 pounds canned mackerel, making a total of 670,368 pounds of canned fish.

While South African factories were unable to take full advantage of the firm price situation, fish meal production in Peru was reported good. The industry in South-West Africa was hoping for an increase in the pilchard

South Africa (Contd.):

catch quota for 1966. The 8 plants in South-West Africa were granted a quota of 90,000 tons each, or a total of 720,000 tons for 1966. The hoped-for increase was 10,000 tons for each plant which would bring the total to 900,000 tons. It was reported that the Peruvian fish meal industry would produce stickwater concentrate in 1966 to partially offset an expected drop in meal production because of a catch quota of 7,000,000 tons of anchoveta imposed by the Government of Peru.1/

Because of the poor catch for the first part of the season by the South African industry, the Walvis Bay pilchard industry of South-West Africa was concentrating on the manufacture of fish meal to meet the heavy commitments for this year. The entire fish oil production for the season has already been sold in advance at a good price to the United Kingdom.

The canning prospects in South-West Africa for this year also look bright. Traditional markets have placed firm orders while the local market in South and South-West Africa has shown a marked increase. It is estimated that the local market will take about 1,750,000 cases of canned fish this year as compared with barely 500,000 cases five years ago.

The average oil yield during the third week of February was about nine gallons per ton of fish at Walvis Bay. The fish were being caught fairly far out--from 9 to 10 hours steaming from the factories. (South African Shipping News and Fishing Industry Review, March 1966.)

1/See "Peru."

South Africa Republic

CONSERVATION MEASURES PROPOSED FOR TRAWLING OFF COAST:

Japanese fishing industry circles welcomed a recent proposal by a West German fishing company for holding an international conference to conclude an intergovernmental or private agreement to regulate trawling activities off South Africa. The proposal was made during a visit in Japan in May 1966, by the president of a large German fishing company who is also the president of the West German fishery association. It was reported that the proposal is unofficially supported by the Government of West Germany.

The conservation measure would apply to the taking of porgies or sea breams (Pterogymnus laniarus) and cape hake or stockfish (Merluccius sp.) and would provide for a cod-end mesh of 160 millimeters (about 6.3 inches) as compared with 90 millimeters (about 3.5 inches), the mesh size of trawls now used by Japanese vessels fishing in the area. It was said that at present the internationally accepted size of trawl cod ends is 110 millimeters (about 4.5 inches) as provided for in the regulations set up under the International Convention for the Northwest Atlantic Fisheries.

Japanese fishery circles believe the proposal is a timely one because it will forestall moves by African coastal nations to set up exclusive fishing zones beyond their coastal waters. Such a step was considered desirable also in view of increasing international competition for fish in the waters off the coast of South Africa. It was reported that trawlers from Great Britain, Japan, West Germany, South Africa, and the U.S.S.R. are already fishing in the area and that vessels from other nations now fishing farther north in the eastern Atlantic would eventually move to the area. (The Japan Economic Journal, May 24, 1966.)

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WHALING REGULATIONS FOR 1966 ISSUED:

On April 29, 1966, the Government of South Africa issued regulations setting the maximum number of whales which may be taken during the 1966 season by land stations located on the Indian Ocean and Atlantic Ocean coasts as follows:

Indian Ocean (Durban): baleen whales 236.8 blue-whale units; sperm whales 2,847 whales.

Atlantic Ocean (Saldanha Bay): baleen whales 162.7 blue-whale units; sperm whales 798 whales.

For the purposes of this regulation the blue-whale unit equivalents were set at: 1 blue whale unit is equal to 2 fin whales or 6 sei whales. On February 4, 1966, the Government issued a regulation setting the 1966 whaling season for land-based stations as follows:

Indian Ocean: baleen whales, April 1 through September 30; sperm whales, February 1 through September 30.

uth Africa Republic (Contd.):

Atlantic Ocean: baleen whales, May 1 rough October 31; sperm whales, March 1 rough October 31. (United States Consul, pe Town, May 20, 1966.)

uth-West Africa

Y RAISE PILCHARD CATCH QUOTAS:

Although the results of the work of the new uth-West African commission of enquiry to the fishing industry are not yet known, pansion plans among fishing companies ap- ear to indicate that the commission will ap- ove a rise in pilchard catch quotas from eir present level of 90,000 tons for each of e 8 factories. Suid Kuene Visserye's (Wal- s Bay) annual report showed that the com- ny ordered construction of 7 fiberglass and e wooden fishing vessel at a cost of US$1.2 illion. The vessels will be built in Cape wn, South Africa. A fishing industry spokes- an also indicated that a second Walvis Bay mpany is completing extensive modifica- ns of its processing plant, almost certainly th an expansion of capacity. The spokes- an noted that all South-West African plants eady possess excess capacity and could sily step-up production with little, if any, pansion of plants. Most technical experts South Africa seem to agree that South-West ican quotas could rise at least to a total of 00,000 tons (presently 720,000 tons) with harm to the supply of pilchards. Among questions undoubtedly facing the commis- n of enquiry, however, is whether to allo- e the increase to existing factories or to w companies.

In a speech before the South-West Africa gislative Assembly, Administrator W. plessis pointed out the profits of the fish- g industry in 1965. Increased world demand r fish meal and oil brought profits to a new ak. Fish meal production was valued at 7.7 million while the value of canned fish, incipally anchovies, was $19.1 million. The eady increase in demand for fish oil prompted nstruction of storage tanks to hold 23,000 llons at Walvis Bay. The market for spiny sters also increased, partly because of wer Australian production. The administra- r called for more attention by domestic fish- rmen to the white fish industry which, thus r, has been exploited by foreign fishing fleets off the coast of South-West Africa; neverthe- less, the white fish catch by fishermen was 1.6 million pounds in 1965, double that of the previous year.

Preliminary reports on the 1966 fishing season are even rosier. Fish meal prices are approximately 20 percent higher than in 1965 and the entire 1966 production of fish oil already has been sold at prices equal to those last year. A new development is the experimental canning of anchovies in soya sauce for the Japanese market. (United States Embassy, Pretoria, April 29, 1966.)

Turkey

SPONGE EXPORTS, 1965:

Turkish sponge exports in 1965 totaled 38 metric tons of which 34 tons went to Greece, with the remainder going to North America, Italy, Sweden, Japan, Canada, and Denmark. (Alieia, April 1966.)

U.S.S.R.

DISCOVERY OF NEW PACIFIC OCEAN PERCH STOCKS:

A Soviet exploratory vessel discovered large concentrations of Pacific Ocean perch in the central Bering Sea. A factory stern trawler was despatched to the new grounds to begin the perch fishery in mid-May 1966.

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INDIAN OCEAN TUNA FISHING:

The Soviet tuna factoryship Leninskii Luch returned to her home port of Vladivostok af-

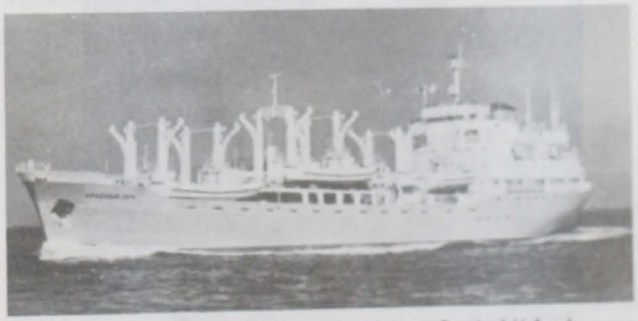

Fig. 1 - Soviet tuna factoryship, sistership to Leninskii Luch, built in Japan in 1965.

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

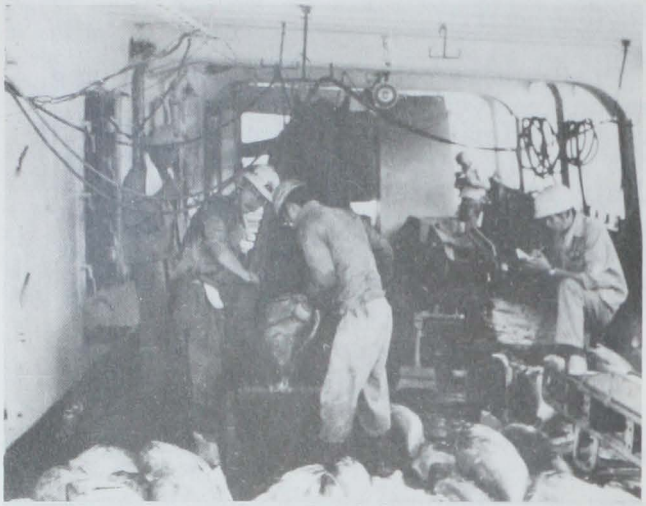

Fig. 2 - Conveyor used to carry tuna from deck to processing lines below deck aboard Soviet tuna factoryship. Fish are weighed; man measuring fish, and another recording data.. Conveyor rubber mat has lips to keep fish from sliding off belt.

Fig. 3 - Tuna processing line aboard Soviet factoryship.

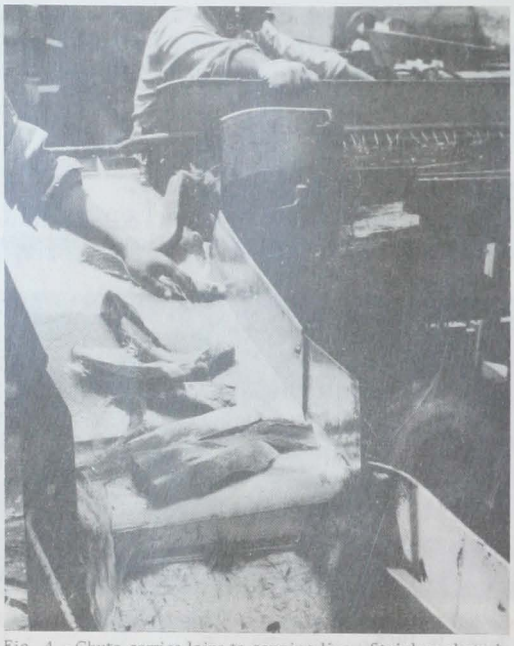

Fig. 4 - Chute carries loins to canning line. Stainless chute is used to wash tuna loins.

Fig. 5 - Weight checker--cans weighing short are picked out of line by means of a "phototube." Men are timing flow of cans.

ter 9 months in the Indian Ocean. A total of about 1,500 metric tons of fish were caught, or one-third more than the quota established for the trip. Over 2 million cans of fish were packed.

Editor's note: This was the vessel's second fishing trip. On its first trip (in 1965) the Leninskii Luch was fishing also for sharks to be exported as frozen meat and fins to Japan.

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INDIAN OCEAN FISHING EXPANDED:

At least 2 fishing trawlers (both from the Black Sea Fisheries Administration) began fishing in the Mozambique Channel (between Africa and the Island of Madagascar) in May 1966.

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EXPANSION OF FAR EASTERN FISHERIES:

Soviet fishery planners foresee the largest expansion of Soviet fishery operations during the 1966-1970 Five-Year Plan in the Far East where several large fishing ports are being built or are being planned. The Vladivostok fishing port will be the largest in the Soviet Union exceeding that of Murmansk where presently over 800,000 metric tons of fish a year are landed. At nearby Nakhodka several new fishing wharfs have been built, as well as two large refrigerated storage plants. One, capable of storing 11,000 metric tons of fishery products, is the largest refrigerated fish storage in the Soviet Union. The Far East

I.S.S.R. (Contd.):

rovides at present 33 percent of the total Soiet fishery catch. Ninety percent of that atch is harvested by processing vessels hich deliver to shore bases fishery products n finished or semifinished form.

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AMCHATKA FISHERMEN STRIVE O FULFILL CATCH QUOTAS:

The catch goals for Kamchatka fishing vesels provided that during May 1966 each large tern factory trawler belonging to the Kamhatka Fisheries Administration catch 1,400 netric tons of fish. Since most Kamchatka actory stern trawlers fish for ocean perch nd other rockfish, the monthly quota probbly refers to those species.

Each Kamchatka medium trawler was to atch 260 metric tons, but Gulf of Alaska nedium trawlers fishing for Pacific ocean erch and other rockfish were to catch 620 netric tons in May.

The vessels during January-April 1966 did ot fulfill the planned landings of edible fish. As a result, their planned catches for May 55,900 tons) were set about 16 percent high-r than originally scheduled (46,900 tons).

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ISHERY EXPORTS TO GREAT BRITAIN:

A British firm, which is the sole importr and distributor of Soviet fishery products or Great Britain, has concluded a US$3.5 illion contract for the importation of Soviet anned salmon and canned crab meat during he first half of 1966.

Editor's note: The firm, a subsidiary of a arger food company, is a traditional importer of Soviet fishery products. In 1964, Soviet rab meat and salmon exports to the United Kingdom amounted to about $3.7 million.

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FISHERY EXPORTS TO GREECE:

Two new delicatessen fishery products--squid and mussels canned in natural juice--are being mass-produced in the Soviet Far East for Greek markets. By March 1966, over 500,000 cans of squid and 30,000 cans of mussels were shipped.

Editor's note: The Greek firm is an importer of frozen and canned fishery products (mostly sardines from Portugal and anchovies from Spain).

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CANNING OF SHARK MEAT IN MURMANSK:

The Fisheries Administration at Murmansk has begun canning shark meat in four varieties: in natural juice, smoked, fried, and "steaks" or slices. (The Evening Star, Washington, D.C., January 28, 1966.)

Editor's note: Increasing Soviet operations off U.S. mid-Atlantic coast might have produced incidental catches of sharks. In 1964, the Soviets reported a catch of only about 100 metric tons of sharks. However, in early 1966 the Soviets reported the start of a shark fishery in the Sea of Japan. It is possible that full-scale shark fishing in the Atlantic is also being planned since it is hard to conceive that the Soviets would invest in a canning operation without making some provisions for the steady flow of raw material.

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DEEP-WATER RESEARCH DEVICE:

A deep-water research device designed by Soviet experts resembles a single-stage rocket. It can submerge to a depth of 12,000 meters (39,360 feet) and register information about the physical processes taking place in the water all the way to the ocean floor. The automatic device incorporates electronic measuring assemblies, with supply sources and a self-balancing system. It is 4 meters (13 feet) long and works according to a preset program, automatically conducting an entire series of measurements and obeying the signals of its electronic programming block. Upon completion of its task, the device responds to a recall signal and slowly ascends to the surface where an antenna buoy emits a signal.

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WHALING OPERATIONS:

The Slava, one of the three Soviet whale factoryships that operate in the Antarctic out of European Russia, was transferred from its home port of Odessa on the Black Sea to Vladivostok in the Far East. The transfer occurred at the end of May 1966 after the Slava concluded its 1965/66 Antarctic whale expe-

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

dition. It is not quite clear whether the Slava will operate in the Pacific as a whaler or as a fish-processing vessel. However, since she is scheduled to depart on her next Pacific expedition within a short time, it seems likely that she will be--at least this season--engaged in whaling. Conversion of the vessel for fish processing would probably take considerable time. The transfer of the Slava may also be one of the reasons why the Vladivostok and Dalnii Vostok are now being used as fish-processing vessels.

Soviet whale factoryship Vladivostok.

In 1965, the Soviet whale factoryships Dalnii Vostok and Vladivostok were used as fish-processing factoryships for the first time since their delivery in 1962 (from Kiel, West Germany, for a reported US$16 million for each vessel). Both vessels in 1965 processed 57,000 metric tons of Alaska pollock into 7,500 tons of fish meal and 5,000 tons of frozen pollock. In 1966, both will continue to process pollock. When the Soviets bought these two factoryships, they specified that they must be constructed in a manner permitting their use as both whaling and fish-processing floating factories. This may indicate that the U.S.S.R. was planning to diversify, if needed, its whaling operations as far back as 1962. It also means that the Soviets will probably de-emphasize Antarctic whaling for the 1966/67 season. The entire Soviet Far Eastern whaling industry presently employs about 4,300 persons.

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ANTARCTIC EXPERIMENTAL KRILL FISHERY:

The scientists of the Soviet Antarctic whaling flotilla Slava have studied the commercial use of large stocks of Southern Hemisphere krill (Euphausia superba) for several years. Prior to the 1958/59 whaling season, studies were made only on krill found in the stomachs of whiskered whales. The first experiments on commercial krill fishing with variable-depth trawls were conducted in 1959 by the scientific research ship Ivan Nosenko.

Kilometers-wide "fields" of krill, i.e., accumulations of large (up to 6 cm. long) Euphausiids (the source of food for various antarctic animals such as the whiskered whale, seals, fish, and birds) were found at the ocean surface during the Antarctic summer.

The Soviets believe that up to 5-10 metric tons of large krill, which can be used as feed for farm animals, may be caught in 30-60 minutes of sweeping in krill "spots" from diesel-electric whaling ships using industrial pelagic trawls. It is also possible that high-vitamin fat may be obtained from the krill. The equipment available on Soviet whaling ships can successfully be used to process the krill. (Soviet Antarctic Expedition Information Bulletin, Vol. II, pp. 124-125, issued by Elsevier Publ. Co., Amsterdam, N. Y., London, 1964.--Original paper published 1960, Inform. Byull. Sovetsk. Antarict. Eksped., 1955-1958, No. 14.)

United Kingdom

LANDING TRENDS, 1965:

Landings of fish (excluding shellfish) during 1965 in England, Wales, and Scotland totaled 1.96 billion pounds as compared with landings of about 1.8 billion pounds in 1964.

Table 1 - Landings of Principal Species in England and Wales, 1964-1965
(Does Not Include Scottish Landings)

Species	1965			1964		
	Quantity	Value		Quantity	Value	
	1,000 Pounds	£ 1,000	US$ 1,000	1,000 Pounds	£ 1,000	US$ 1,000
Cod	593,141	21,110	59,108	557,496	19,222	53,822
Haddock	136,675	5,397	15,112	135,882	5,385	15,078
Plaice	73,940	4,926	13,793	78,082	4,698	13,154
Saithe	81,898	1,364	3,819	72,235	1,183	3,312
Ocean perch	34,267	508	1,422	37,375	538	1,506
Herring	33,727	621	1,739	39,425	733	2,052
Sprat	21,764	120	336	31,948	139	389
Other fish	163,129	6,283	17,592	162,564	6,262	17,535
Total (excluding shellfish)	1,138,541	40,329	112,921	1,115,007	38,160	106,848

Source: British Ministry of Agriculture, Fisheries, and Food.

United Kingdom (Contd.):

In 1965, landings in England and Wales accounted for about 58 percent of the total, and Scotland accounted for the remainder. Cod dominated English landings while haddock was the leading item in Scottish landings. Increased deliveries of those species accounted for much of the gain in British landings during 1965. Scottish landings of sprat were also up sharply.

Station which supports gangplanks is taken off a British deep-trawler, Grimsby, England. Vessel has finished unloading a trip of fish.

Landings of Nine British Distant-Water Trawlers at Grimsby, England, During the Week Beginning March 28, 1966

Vessel	Quantity	Gross Value	
	Pounds	£ Sterling	US$
Vianova	341,460	12,082	33,830
Royal Lines	329,420	11,642	32,598
Northern Jewel	371,280	11,172	31,281
Lifeguard	314,580	11,046	30,929
Lord Willoughby	288,680	10,861	30,411
Northern Eagle	278,600	11,937	33,423
Northern Chief	308,000	12,844	35,963
Coldstreamer	392,000	14,718	41,210
Northern Gift	323,540	13,771	38,559

($28,000) and all but 2 of the vessels landed over 300,000 pounds.

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PURSE-SEINE EXPERIMENTS MAY INCREASE HERRING CATCH AND FISH MEAL PRODUCTION:

British plans to test herring purse-seine fishing were discussed in the Fishing News, April 15, 1966. Separate tests were to be carried out with the middle-water trawler Princess Anne based at Lowestoft and the herring vessel Glenugie III based at Peterhead. The Glenugie III was to be equipped with a nylon purse-seine net 1,440 feet long and 420 feet deep costing about £10,000 (US$28,000).

Table 2 - Landings of Principal Species in Scotland, 1964-1965

Species	1965			1964		
	Quantity	Value		Quantity	Value	
	1,000 Pounds	£ 1,000	US$ 1,000	1,000 Pounds	£ 1,000	US$ 1,000
Cod	104,012	3,913	10,956	102,046	3,841	10,755
Haddock	234,878	5,451	15,263	194,743	4,833	13,532
Whiting	88,902	1,469	4,113	69,759	1,407	3,940
Herring	182,287	2,279	6,381	176,809	1,958	5,482
Sprat	103,992	369	1,033	47,127	128	358
Other fish	109,054	4,027	11,276	108,003	3,795	10,627
Total (excluding shellfish)	823,125	17,508	49,022	698,487	15,962	44,694

Source: Department of Agriculture and Fisheries for Scotland.

The 1965 United Kingdom landings of fish and shellfish combined yielded a record ex-vessel value of £60.8 million (US$170 million) as compared with £56.9 million ($159 million) in 1964.

* * * * *

DISTANT-WATER TRAWLER LANDINGS AND EARNINGS DATA:

Nine distant-water trawlers of one British firm landed at Grimsby during the pre-Easter week of March 28, 1966, and delivered over 2½ million pounds of fish. Average landings and gross earnings for each of the vessels were 327,506 pounds and £12,230 (US$34,245). The best trip was 392,000 pounds with an ex-vessel value of £14,718 ($41,210). Each of the vessels had gross earnings of over £10,000

Success in these experiments and development of a modern purse-seine fishery could lead to a sharp increase in herring landings, which in turn could expand British production of industrial fishery products and thus reduce Britain's heavy dependence on imported fish meal and oil.

* * * * *

NEW METHOD OF TRANSFERRING FISH AT SEA TESTED:

In the spring of 1966, the British White Fish Authority's Industrial Development Unit carried out tests of a new method of transferring fish at sea from one vessel to another. Two 130-foot trawlers, the Ardenlea and the Summervale, took part in the tests which were held in the Pentland Firth with a wind of up to force

United Kingdom (Contd.):

5, but with slightly less severe sea state. The vessels were brought together with the help of a new fendering system. Then the fish were transferred in aluminum boxes by means of traditional union purchase rigs. Rate of transfer achieved was 10 metric tons an hour per hoist.

The advantage of this method of transfer is that the fish are not immersed in the sea. The White Fish Authority pointed out that larger vessels might be able to use this transfer system in even worse weather than that encountered during the test. (The Fishing News, London, May 6, 1966.)

* * * * *

FISHING EXHIBITION TO BE HELD IN LONDON IN 1967:

A British trade periodical plans to present a World Fishing Exhibition in London, June 1-7, 1967. The exhibition will be sponsored by a number of British Fishery Associations and will be open only to members of the fishing industry. Exhibitors from many countries will be invited to display fishing gear, vessel designs, marine engines, deck machinery, electronic navigating and fish-finding devices, and refrigerating and processing equipment.

A similar exhibition was held in London in 1965. For additional information about the 1967 exhibition write to Commercial Exhibitions Ltd., The Tower, 229-243 Shepherds Bush Road, Hammersmith, London, W. 6, England.

Note: See Commercial Fisheries Review, September 1965 p. 79.

Foreign Fishing Off United States Coasts, May 1966

Off Alaska: SOVIET: Trawling for Pacific ocean perch continued to be the largest Soviet fishery off Alaska. Throughout May a fleet of about 90 vessels fished for perch in the Central Gulf of Alaska from Yakutat to outer Portlock Bank east of Kodiak Island. A smaller number of trawlers fished off southeast Alaska (Cross Sound) in late May; by month's end about 35 vessels were fishi

At least two factory trawlers resumed t ocean perch fishery in the western Aleutian in late May. The Soviets abandoned this fis ery in early February of this year.

A new ocean perch fishing area was discovered in the central Bering Sea by Soviet exploratory vessels and at least 1 freezer trawler and 2 factory trawlers were dispatche to the area. Catches averaged about 80,000 to 100,000 pounds a day on the factory trawlers.

The Soviet shrimp fishing fleet, centered in the Shumagin Islands area, declined during May to about 5 medium freezer trawlers serviced intermittently by refrigerated fish transports. In April that fleet consisted of 12 medium freezer trawlers and 1 refrigerator vessel.

The flounder fleet in outer Bristol Bay, which was reported disbanding in late April, discontinued operations in mid-May. Partic ipating vessels were transferred to the Gulf of Alaska and off the Pacific Northwest coas to fish for other fisheries.

The 3 king crab factoryships, accompani by 12 tangle-net handling trawlers, operated throughout the month on the broad Continent Shelf north of the western Alaska Peninsula. These factoryships were first reported in April, although it became evident during boardings that they began operations in earl March 1966, one month earlier than usual.

Soviets report that three whaling fleets were active in the North Pacific in early May Each fleet consists of a factoryship and 9 ac companying whale killers.

JAPANESE: At the end of May about 111 Japanese fishing vessels were operating in waters off Alaska. In addition, 11 salmon motherships accompanied by 369 catcher ves sels (the same number as in 1964 and 1965) were fishing for salmon in the North Pacific between 175° W. longitude and the far western Pacific. Most of the salmon fishing vessels were operating well west of the 175° W. "abstention line."

By the end of May, 8 Japanese factory wlers had entered the Gulf of Alaska and re fishing from near Kodiak Island westrd to the Unimak Pass region. Catches sisted mainly of ocean perch with Alaska lock second in abundance. At least 4 adonal factory trawlers operated along the tern and central Aleutians during the month, ing mainly ocean perch and Alaska pollock.

A second fish-meal factoryship with 29 acmpanying trawlers joined her predecessor the outer Bristol Bay grounds in early y. The two fleets, with a total of 59 trawl-, fished primarily north of Unimak Island roughout the month.

The two shrimp factoryships, with 24 acmpanying trawlers, remained throughout month on the proven grounds north of the bilof Islands.

In late May one of the Japanese king crab toryships and her five tangle-net setting wlers shifted from north of Port Moller to t east of the Pribilof Islands. The Japane began commercially exploiting stocks of e king crab (Paralithodes platypus) near Pribilofs last year. The second Japanese g crab fleet (1 factoryship and 5 trawlers) ed primarily north and west of Port Mol- during May.

LATIONS OF U.S. TERRITORIAL SEA:

The incidence of violations of U. S. terrial waters in Alaska by foreign fishing sels increased sharply during the first months of 1966. The number of reported lations through early May had exceeded total of such violations reported in 1965. s year 17 incidents of unlawful entry by ign vessels have been reported as comed with 13 such violations in 1965, 17 in 4, and 18 in 1963.

In 1963 and 1964, the alleged offenders re about equally divided between the Japane and Soviets. Beginning in 1965 a greater portion of offenses were charged to Soviet ssels, and in 1966, of the 17 violations rted to date, 15 are attributed to Soviet ssels.

Actual fishing by foreign vessels within territorial sea has also become more valent this year. In 1964, the year Sena- Bartlett's bill prohibiting such fishing became Public Law 88-308, none of the Japanese or Soviet vessels detected in our waters was engaged in fishing. Last year in only 2 of the 13 incidents were the vessels fishing within the territorial sea. This year Soviet vessels have been fishing during 5 of 15 reported incursions into our waters.

BOARDING OF SOVIET KING CRAB FACTORYSHIPS:

In accordance with the provisions of the U.S.-U.S.S.R. agreement on king crab fishing, signed in early 1965, Management Agents of the U.S. Bureau of Commercial Fisheries and U.S. Coast Guard officers boarded three Soviet king crab factoryships operating in the eastern Bering Sea on various dates in April 1966. The boarding party in each case was well received and was given information on the Soviet Bristol Bay canned pack for this season. Each vessel has an automated three-line cannery; the canning is supervised by a trained fishery technologist. The factoryships are supplied by 12 picker boats (each manned by about 10 men) which set and pick the tangle nets. The crews of the factoryships and picker boats exceed 600, many of them women cannery workers.

LOSSES OF U.S. KING CRAB POTS:

Nearly $20,000 worth of U. S. king crab pots have reportedly been destroyed by Soviet trawlers in the Shumagin Islands area since mid-February of 1966. Shortly after a Soviet shrimp fishing fleet of 14 medium freezer trawlers moved into the Shumagin Islands, the U.S. fishermen in the Sand Point area began reporting losses of pots caused by the Soviet vessels. By April, losses in the Shumagins totaled 64 pots (each valued by our fishermen at $200 to $300). The losses occurred outside U. S. territorial waters.

OFF PACIFIC NORTHWEST (Washington and Oregon States):

Soviet: In the first week of May, an additional 8 large factory stern trawlers joined the Soviet fleet of 7 stern trawlers which were fishing off the southern Oregon coast at the end of April. (One of the new additions was a Tropik- or RTM-class factory stern trawler which is suited to tropical as well as northern waters, and is air-conditioned. The rest

of the large factory stern trawlers belong to the Maiakovskii- or BMRT-class.) The number of Soviet medium fishing trawlers was the same (22-23) as in April. But the number of refrigerated transports and base ships doubled in early May. With the increase in large factory stern trawlers (each has its own freezing capacity of about 30 tons a day) and support ships, the entire fleet's freezing capacity in early May was close to 1,000 metric tons a day. The fleet was fishing both Pacific ocean perch and some Pacific hake.

One base ship with 5 medium trawlers was catching hake 20-30 miles off Cape Meares (about 50 miles south of the mouth of the Columbia River). After a few days, the weather became bad and the hake fleet joined the vessels fishing off Newport, Oregon. The rest of the fleet, including all 15 large stern trawlers, fished for ocean perch 20-30 miles off the Oregon coast between Newport and Florence (or between 44°15' N. and 44°50' N.).

On May 20, a total of 45 Soviet fishing vessels was sighted. Half were fishing off Newport, Oregon (between Yaquina Head and Heceta Head), and the other half off Willapa Harbor, Washington (about 20-30 miles off the mouth of the Columbia River). Most of the large stern trawlers were concentrated in the Willapa Harbor area. Most of the catches observed were Pacific hake. It seems that by then the Soviet fleet found a large concentration of hake near the mouth of the Columbia River and was actively exploiting it. During the last days of May 1966, the Soviet fishing vessels off Pacific Northwest were taking an average of 800-1,000 metric tons of rockfish (mostly Pacific ocean perch) and Pacific hake each day. About 34 Soviet fishing vessels (10 large stern factory trawlers and 24 medium trawlers) were operating in the Pacific Northwest at the time. By the end of May all of the Soviet fishing vessels moved out of the Newport area and were fishing from 12 to 25 miles offshore in depths of from 40 to 50 fathoms at points between Grace Harbor and Willapa Bay, slightly north of the mouth of the Columbia. Hake catches by the end of May dropped off. The U. S. Bureau of Commercial Fisheries research vessel John N. Cobb, which operated among the Soviet vessels off Willapa Bay from May 27-29, noted that although catches of up to 30,000 pounds of hake per two hours of trawling were observed, average catches were much less. A number of tows with catches of less than 5,000 pounds were observed.

On June 1, a total of 43 vessels was sighted, including 4 stern trawlers, over 30 medium trawlers, and 8 refrigerator fish carriers. During the last week of May, 6 large stern trawlers left the area off Pacific Northwest and transferred their operations to Queen Charlotte Sound where about 15 Soviet vessels were sighted early in June.

Soviet research vessels have been active throughout the month both in conducting independent research as well as in supporting the exploratory activities of the Soviet fishing fleets.

The activity of the Soviet fishery research vessel Adler during April and May is symptomatic of the active support the Soviet fishing fleets operating in new fishing areas always can count on. On April 9 she was sighted off Cascade Head (Oregon) on her way to Vancouver, B.C., where she obtained supplies, fuel and water (April 11-15). By April 20, the Adler was again steaming south to join the Soviet fishing fleet off Coos Bay. During the last week of April and in the first week of May she was actively criss-crossing the offshore waters between 100 and 200 fathoms deep helping the commercial fleet to locate schools of fish. It was at this time that she discovered large concentrations of Pacific hake.

In the last days of May the Adler again came to Vancouver, to resupply. While at Vancouver, she was found to have fishing gear aboard--a fact that prompted Canadian fishery officials to resurrect a law which prohibits any foreign vessel from entering Canadian territorial waters if it has fishing gear aboard, even though it may not engage in actual fishing.

On June 1, the research vessel Adler was sighted conducting research south of Amphitrite Point (Vancouver Island) not far from the Strait of Juan de Fuca.

IN THE GULF OF MEXICO AND CARIBBEAN:

Norwegian: On May 23, 1 of the 4 Norwegian shark-catching vessels which had been fishing off eastern and southeastern U. S. Atlantic coasts since June 1965 entered Pensacola, Florida, for supplies. The captain indicated this was probably his last trip to the Gulf; his catch was about 200 metric tons of "brown sharks."

Soviet: No precise information on Soviet shing in this area is available.

In mid-May 1966, a group of 65 Soviet technical experts and instructors arrived at Havana, Cuba, to replace Soviet instructors who have been giving practical instruction for the last six months in fishing techniques to Cuban fishermen. The U.S.S.R. is maintaining a strong liaison group with the Cuban Institute of Fisheries, helping the Cubans in fishery research, fishing techniques, technology, the training of fishermen, construction of fishing vessels, and the general organization of the state-owned Cuban fishing industry. The Cubans--like the Soviet Union--are turning to fisheries as a major source of animal protein as well as a prime source for obtaining hard foreign currency.

NORTHWEST ATLANTIC:

Soviet: Soviet fishing activity increased slightly during the month. By mid-May, approximately 90 vessels were operating off southern New England. Several factory stern trawlers were deployed to the mid-Atlantic during the early part of the month, but some of them had returned by the month's end. In addition, the arrival of about 30 medium side trawlers increased Soviet fishing fleet to about 110 vessels by the end of May.

A total of 141 vessels (exclusive of duplication) was sighted during the month and identified as 34 factory stern trawlers, 10 large freezer factory trawlers, 17 large refrigerated side trawlers, 21 medium refrigerated side trawlers, 47 medium side trawlers, 5 refrigerated fish transports, 3 factory mother ships, 3 fuel and water carriers and 1 tanker. This compares to 128 vessels sighted during April 1966 and 125 reported in May 1965.

This fleet continued to operate in large groups dispersed along the 200 miles of the 100-fathom curve of the Continental Shelf from east of Atlantic City, New Jersey (Hudson Canyon), to south and southeast of the Nantucket lightship off Massachusetts coast. By the end of May, the fleet extended its operations eastward to the southwest and southeast Georges Bank.

The principal species of fish taken by the Soviets appeared to be whiting, red hake and large herring. Their catch compositions were inconsistent and varied from vessel to vessel. Although the majority of vessels was actively engaged in fishing operations the catches of fish were considered only moderate to poor.

Polish: One factory stern trawler was sighted fishing on Georges Bank on May 24. (5 Polish stern trawlers were fishing on Georges Bank in September 1965.)

OFF MID-ATLANTIC COASTS:

Soviet: Fishing effort off mid-Atlantic U. S. coast increased greatly during May. Exclusive of duplications, 74 vessels were sighted and identified as 53 factory stern trawlers, 6 large freezer factory trawlers, 9 large refrigerated side trawlers, 2 medium side trawlers and 4 refrigerated fish transports.

By mid-May between 60 and 70 Soviet vessels were dispersed along 200 miles of the 100-fathom curve from 45 miles northeast of Oregon Inlet (N.C.) to 90 miles east of Cape May, N. J. By the third week, these vessels returned to Georges Bank or to the fishing grounds off Nova Scotia and less than ten Soviet vessels remained in mid-Atlantic.

Heavy catches of fish appeared to be primarily scup (porgies) and whiting. Numerous trawls were observed bulging with fish--estimated catches of 30,000 to 40,000 pounds. There seemed to be little doubt that the Soviets were fishing in a productive scup area. This amazed Virginia fishermen who stated that they found little or no fish in these areas. (Normally, U. S. fishermen in these areas engage in other fisheries by the end of May when the scup season ends.)

U. S. fishermen were impressed and concerned about the size and catch capabilities of the Soviet stern trawlers. The fishermen link the Soviet success in catching fish when U. S. vessels are unable to do so to their ability to fish in greater depths and catch fish when they rise off the bottom. They also maintain that the Soviets have superior fish-finding devices.

This was the largest concentration of Soviet vessels to operate along the mid-Atlantic coast. Of particular interest was the Soviets' increased interest in scup. During March 1964 about 15 Soviet stern trawlers took substantial quantities of scup east of Virginia Capes.

Norwegian: Several longliners have moved south of Martha's Vineyard off Massachusetts coast to fish for sharks.

ALLEGED SOVIET FISHING FOR SALMON OFF PACIFIC NORTHWEST:

In mid-May several U. S. west coast fishermen reported to the Press that they had seen the Soviets fishing with gill nets for salmon in the dawn hours. On May 31, the director of the Washington Department of Fisheries stated that 16 out of 1,184 salmon caught by sport fishermen over Memorial Day weekend off Pacific Northwest were fish "recently marked by gill nets." The head (A. Chepur) of the Soviet fishing fleet operating off Pacific Northwest was asked by U. S. public relations men and newsmen whether his fleet was fishing for salmon. He denied that any of his vessels is either equipped for salmon fishing or is permitted to fish for that species. He did allow that individual salmon may be caught incidentally during trawling and is eaten by the crew.

Because it is known that the Soviet Ministry of Fisheries does not look with favor on high-seas fishing for salmon, there seems to be a reasonable doubt that the Soviets are fishing salmon commercially.

INTERVIEW WITH SOVIET FISHERMEN:

On May 28, a party of Washington's Legislature, representatives of the West Coast Trollers Association, and newsmen chartered a boat to pay a private visit to the Soviet fishing fleet. Aboard were three members of the Washington State Legislature's interim Fisheries Committee (Senator Ted Peterson and Representatives Dwight Hawley and Chet King), the public relations director of the Congress of American Fishermen (Dick O'Keef), a newspaper reporter (Stanton H. Patty of the Seattle Times), and a radioman (Bob Ginther) of the King Broadcasting Company.

Several weeks previous, O'Keef tried to get aboard the flagship (the Churkin) of the Soviet fleet operating off the Oregon coast, but was unable to do so even on written request. On May 28, however, the Soviet Commander of the fishing fleet, residing aboard the Churkin did allow O'Keef and 2 newsmen to come aboard for an interview. It was obvious that he had received permission from the Soviet authorities to do so. During the interview, the Soviet Commander Aleksander Chepur made several interesting statements: (1) The Soviet vessels fishing off the U. S. coasts may only approach within 15 miles of shore; if any vessels stray inside 15 miles, they are doing so in violation of this Soviet operational directive; (2) the Soviet Union will stay in the Northeastern Pacific fishing areas at least until mid-September 1966, unless instructed differently by the Soviet Ministry of Fisheries.

On the weekend of June 4-5, another group of newsmen was allowed aboard Soviet fishing vessels. This time, they took pictures for a Seattle television program.

LOBSTER SHEARS FOR THE HOME DINER

Lobster eating for the home diner is made much easier by using a new type of lobster shears recently devised. The shears readily cut through the toughest of lobster shells and eliminates trying to retrieve bits of meat from shelled-in places. The shears have fine pointed blades which cut the joints wide open allowing the diner to pick out the meat neat and clean in one piece. (Science News, April 16, 1966.)