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UROPEAN FISHERIES CONFERENCE

EETING OPENS IN LONDON:

The European Fisheries Conference met n London December 3-6, 1963, and then adurned until January 8, 1964. The British overnment had invited 16 nations to the conrence, including the ember countries of e European Free rade Association FTA) and the Euroean Economic Comunity (EEC) as well s Iceland, the Irish epublic, and Spain. he following statement was issued after adjournment of the Deember talks:

"At the invitation of Her Majesty's Govrnment, a conference met in London from e third to the sixth of December to discuss e solution on a European basis of certain sheries problems.

"The conference discussed the following genda: (1) freedom of fishing and access to shing grounds, (2) access to markets, (3) sheries policing, and (4) miscellaneous.

"Particular attention was given to the posibility of reaching agreed arrangements n access to fishing grounds. The desirabiliy of establishing the conditions for liberal rade policies for fish was emphasized. The onference recognized the importance of efective conservation measures in the comon interest. There was general agreement n the need for devising a modern code govrning the conduct of fishing operations to ring up to date on a wider basis the provions of the North Sea Fisheries Convention f 1882.

"On access to fishing grounds, proposals for defining the regime that might govern extensions of fishery jurisdiction were put forward by certain delegations. In order to give time for further study of these proposals and of other proposals made under other items of the agenda, the conference adjourned on Friday, December 6, until the 8th of January, 1964, when it will continue its discussions with the same agenda."

(Editor's Note: The British Government issued the invitation for the European Fisheries Conference in the spring of 1963 at the same time that it announced its intention to withdraw from certain international fishery agreements which limited its freedom of action regarding the extension of fishing limits.)

Note: See Commercial Fisheries Review, July 1963 p. 95.

FISH MEAL

PRODUCTION, AUGUST-OCTOBER 1963:

World fish meal production in August-October 1963 totaled 470,192 metric tons (163,310 tons in August, 152,775

World Fish Meal Production by Countries, August-October 1963

Country	Aug.-Oct.		Jan.-Oct.	
	1963	1962	1963	1962
	(Metric Tons)			
Canada	21,338	15,639	64,583	64,832
Denmark	28,229	34,218	87,170	84,788
France	3,300	3,300	11,000	11,000
German Federal Rep.	19,211	18,681	63,792	61,998
Netherlands	1/	1,400	2/ 1,900	4,300
Spain	6,153	5,896	17,022	21,725
Sweden	1,843	1,252	5,174	3,758
United Kingdom	17,617	17,261	63,716	62,196
United States	75,822	94,097	192,020	255,044
Angola	6,854	9,108	21,394	24,666
Iceland	32,383	41,338	78,267	92,762
Norway	40,164	40,061	109,907	107,239
Peru	162,690	209,480	903,437	819,638
So. Afr. (incl. S.W. Afr.)	54,588	20,437	233,072	200,753
Total	470,192	512,168	1,852,454	1,814,699

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

International (Contd.):

tons in September, and 154,107 tons in October), according to preliminary data from the International Association of Fish Meal Manufacturers. Production in August-October 1963 was down 8.2 percent from that in the same period of 1962. The decline was due mainly to small output in Peru, the United States, Iceland, and Denmark, which was only partly offset by greater production in South Africa and Canada.

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

World fish meal production during the first 10 months of 1963 was only about 2.1 percent greater than in the same period of the previous year. Production in 1963 was boosted by heavier landings of anchoveta in Peru and industrial fish in South Africa, but there was a sharp decline in production in the United States.

Peru accounted for 48.8 percent of total fish meal production during January-October 1963, followed by South Africa with 12.6 percent and the United States with 10.3 percent.

FOOD AND AGRICULTURE ORGANIZATION:

FISHERY PRODUCTS IN THE WORLD FOOD PROGRAM:

The United Nations (UN) and its specialized agency, the Food and Agriculture Organization (FAO), have a joint World Food Program for the multilateral use and distribution of surplus foods. The initial experimental three-year program approved by the FAO Conference in November 1961, and shortly thereafter by the United Nations, has aimed at creating a fund of $100 million in commodities, services, and cash contributed by member governments of the UN and FAO. An Intergovernmental Committee of 20 nations has been established to provide guidance on policy, administration, and operations. The Fourth Session of the Intergovernmental Committee was held in Rome, November 4-9, 1963.

As of October 31, 1963, donor countries had pledged about $90 million in commodities, services, and cash to the World Food Program. Commodities committed or earmarked for delivery to recipient countries totaled $27,330,000.

Fishery products have become an important part of the World Food Program. Of the commodities committed or earmarked for delivery so far, fishery products are the third most important category exceeded only by cereal and cereal products and dairy products. As of October 31, 1963, about 4,185 metric tons of canned and dried fish had been either earmarked or delivered (see table); those products were valued at $1,935,000. The donor countries for dried fish have been Canada, Norway, the Federal Republic of Germany, India, and Belgium. The principal donor countries for canned fish have been the Netherlands, Sweden, Canada, and Norway. The fishery products donated have gone to a large number of countries in Africa, Asia, and Latin America.

Of the $90 million so far pledged, the United States has agreed to donate $40 million in commodities, $4 million in shipping and services, and $6 million in cash. Presently, the only United States agricultural products that are being earmarked for delivery are those held by the Commodity Credit Corporation. Authority for disposal of such products comes under Title II of Public Law 480. By an amendment to PL 480, fishery products will be eligible after January 1, 1965, under the provisions of Title I, and they were eligible as of December 16, 1963, under Title IV.

World Food Program Fishery Products Pledged and Earmarked as of October 31, 1963

Type of Fish and Donor Country	Earmarkings and Deliveries: Quantity	Country of Destination
	Metric Tons	
Dried fish:		
Belgium	38.0	Togo
	300.0	Indonesia
Total	338.0	
Canada	188.0	Br. Guiana
	465.0	Pakistan
	63.0	Bolivia
	310.0	Colombia
	150.0	Indonesia
Total	1,176.0	
German Federal Republic	146.0	Tanganyika
	64.0	Ruanda
	10.0	Zanzibar
	5.7	Chile
	65.0	Korea
	92.0	Senegal
Total	382.7	
India	38.0	Korea
	200.0	Indonesia
	35.0	Pakistan
	33.0	Ceylon
Total	306.0	
Norway	400.0	Indonesia
	50.0	Tanganyika
	28.0	Bolivia
	65.0	Korea
	70.0	Tobago
	175.0	Jamaica
Total	788.0	
Total dried fish	2,990.7	
Canned fish:		
Canada	110.0	Br. Guiana
Tunisia	30.0	Ghana
Sweden	280.0	Ghana
	169.0	Iraq
Total	449.0	
Norway	48.0	Bolivia
	60.0	Ghana
Total	108.0	
Netherlands	55.0	Thailand
	60.0	Tobago
	29.0	Mauritania
	175.0	Jamaica
	100.0	Indonesia
	88.0	Sarawak
Total	507.0	
Total canned fish	1,204.0	
Grand total, dried and canned fish	4,194.7	

Note: Total value of dried and canned fish, as of October 31, 1963, was $1,935,000.

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WELFTH SESSION OF THE AO CONFERENCE:

The Food and Agriculture Organization of the United Nas holds a biennial conference to enable its member counies to review past programs, consider and approve the proam of work and budget for the coming two years, and to aluate long-term trends and programs. There are now 106 l member countries of FAO and 6 associate members. e 12th Session of the FAO Conference, held in Rome, Italy, tober 31 to December 5, 1963, began with meetings of six hnical committees--one each for fisheries, forestry, agulture, nutrition, economics, and information.

Government fisheries advisers on the United States Delaion to the 12th Session were H. E. Crowther, Deputy Director, Bureau of Commercial Fisheries, and Sidney Shapiro, Chief, Branch of Foreign Fisheries, Bureau of Commercial Fisheries. Charles R. Carry, Executive Director, California Fish Canners Association, served as industry adviser on the delegation. W. M. Chapman, Director of the Van Camp Foundation, attended the sessions of the Technical Committee on Fisheries as an observer.

Delegates from about 45 countries participated in the meetings of the Technical Committee on Fisheries. In past FAO Conferences representation at the technical meetings had been good, but many of the delegates had been either local embassy officers of their respective governments or agricultural representatives. The Technical Committee on Fisheries of the 12th Session was composed mainly of experienced fisheries men, and the meetings of the committee were the most productive of any held since the establishment of FAO.

Early in the discussions of the Technical Committee it became evident that a majority of the delegates were deeply concerned with the status of fisheries work in FAO. During the last decade, FAO has undergone reorganizations which have created a large number of divisions from the original five (Economics, Fisheries, Forestry, Nutrition, and Agriculture) that had been established in 1945 and 1946. The Fisheries Division has now become one of six divisions in the Technical Department. Also a Department of Economic and Social Services has been created with four divisions heavily engaged in agricultural work. With such a proliferation of divisions and departments, the Fisheries Division has become far removed from the Director-General's Office and has not received attention commensurate with the growing importance of fisheries in supplying high-quality protein to peoples in many parts of the world. Also, FAO's Fisheries Division has been taking a secondary role in international governmental and nongovernmental programs concerned with fishery research and development.

hery advisers on the U. S. Delegation to the 12th Session of the FAO Conference. From left, Charles R. Carry, Executive Director, California Fish Canners Association; H. E. Crowther, Deputy Director, Bureau of Commercial Fisheries; and Sidney Shapiro, Chief, Branch of Foreign Fisheries, Bureau of Commercial Fisheries.

The United States representatives to the Technical Committee on Fisheries presented a statement which highlighted the Fisheries Division's difficulties and expressed the feeling among United States fisheries people that international activities related to the oceans and inland waters were not properly organized in the United Nations family in a manner that would insure maximum effectiveness. Representatives from many other countries strongly supported this statement, and expressed unanimous concern at what they considered was the inadequacy both of staff and funds available

International (Contd.):

to the Fisheries Division for dealing with problems within its constitutional rights. The representatives were also concerned with the inadequacy of the Division to assume its responsibility as coordinator of the fishery activities of the many international governmental and nongovernmental bodies that deal with problems related to fisheries, the solution of which is so essential for supplying the world with high-quality protein foods.

The Technical Committee on Fisheries drafted a resolution which was later approved by the full FAO Conference. This resolution has considerable importance for the long-term position of FAO's Fisheries Division, not only with regard to raising its status in FAO but to making it the leading intergovernmental body in encouraging rational harvesting of food from the oceans and inland waters. It is expected that proposals for reorganizing the Fisheries Division will be presented by the Director-General of FAO to the next meeting of the FAO Council, which is scheduled for September 1964 in Rome.

The Technical Committee on Fisheries, and later the FAO Conference, approved the 1964-65 program of work and budget proposed for the Fisheries Division by the Director-General. Included in that budget were four new professional positions (with supporting staff), as follows: (1) A marine fisheries biologist to handle the work of the Advisory Committee on Marine Resources Research and to work on specific matters such as tuna research and methods of determining fish abundance; (2) a fish processing technologist to work on the development of new fishery products; (3) a fish processing technologist to work on UNICEF-related projects; and (4) a fisheries economist to work on an expanded project for the development of protein production.

In addition to the approved budgeted posts, the Technical Committee on Fisheries and the FAO Conference approved strengthening of four additional areas of work: (1) Stock assessment studies and the analysis of catch, fishing effort, and biological statistics on whales, tunas, and other species; (2) development of management practices in the inland fisheries of developing countries; (3) fishing boat design; and (4) regional fisheries work in East Africa. The cost of the additional posts needed to conduct these four areas of work was estimated to be $143,600 for the coming biennium.

The Conference approved a total FAO budget of $38,838,300 for 1964-65, and requested that the Director-General make appropriate adjustments within FAO in order to take into account the requests for new posts that were submitted by all the Technical Committees, and approved by the full Conference. The total budget voted by the FAO Conference was an increase of about 25 percent over that approved for 1962-63. The budget allocation for the Fisheries Division (not taking into account the $143,600 in new positions requested by the Technical Committee) is $2,224,600 for the biennium 1964-65, or an increase of about 16.5 percent over that approved for the Division during 1962-63.

The FAO Conference also approved the holding during 1964-65 of a number of international meetings, many of interest and importance to the United States fisheries. In the field of fishery biology, the FAO Advisory Committee on Marine Resources Research will hold two meetings during the coming two years, and the Expert Panel for the Facilitation of Tuna Research will hold one meeting. A World Symposium on Fish Culture will also be held during this coming biennium. In the field of fishery technology, the following meetings were approved: A Technical Meeting on Boats Concerning Small Units for Developing Fisheries; a Symposium on the Significance of Fundamental Research in the Successful Utilization of Fish; a Symposium on Improved Fish Handling and Distribution, to be held in conjunction with the forthcoming 11th Session of the Indo-Pacific Fisheries Council; and participation in a joint FAO/CCTA Symposium on the Preservation and Distribution of Freshwater Fish in Africa. In the field of fishery economics and statistics, approval was given to convening in 1965 a World Meeting on Fishery Administration; holding early in 1964 in Australia a Seminar on Fishery Development Planning and Administration for the Indo-Pacific Region; and holding in 1964 a Meeting on Business Decisions in Fishery Industries.

RESOLUTION ON FISHERIES DEVELOPMENT: THE FAO CONFERENCE:

Realizing that the most pressing need in human nutrition is to make available to people in all parts of the world an adequate supply of high-quality protein such as that derived directly from animals;

Noting that whereas there are great difficulties in rapidly increasing supplies of animal protein in many parts of the world, the oceans and inland waters offer exceptional possibilities for meeting this urgent need;

Observing that world fisheries production has doubled within the past decade and that opportunities exist for comparable increases in the next several decades;

Noting the increased attention which, in recent years, has been given to the rational exploitation of the living resources of the oceans and inland waters by national and international governmental and nongovernmental bodies concerned with research, management, and development;

Emphasizing that wasteful duplication in international fishery work can be avoided only if all efforts are properly coordinated;

Recognizing the constitutional responsibility of FAO in this field, and the increasingly important role that the Fisheries Division should play in the rational use of aquatic resources in order to supply food needed for the world;

Realizing the limited attention which the Fisheries Division has been able to give to this responsibility;

Requests that the Director-General prepare, for consideration by the Council and the 13th Session of the Conference, proposals outlining measures which can be taken to assure that FAO, through its Fisheries Division, has in future years the status of being the leading intergovernmental body in encouraging rational harvesting of food from the oceans and inland waters, bearing in mind the dynamic relationship between the living aquatic resources and the environment and also bearing in mind the importance of fisheries in providing needed animal protein;

Also requests that means for carrying out the proposals which are to be outlined by the Director-General take into account resources not only under the Regular Program budget but also from all other possible sources;

Further requests the Council to consider the status of the Fisheries Division in order to determine how the fisheries activities could be given full recognition in the Organization and among other international bodies that concern themselves with matters related to fisheries.

GREAT LAKES FISHERY COMMISSION

INTERIM MEETING HELD IN OTTAWA:

Continued progress in the joint Canadian-United States attack on the predatory sea lamprey in the Great Lakes was reported at an interim meeting of the Great Lakes Fishery Commission held in Ottawa, Canada, on December 6, 1963. The Commission is an international body formed eight years ago to find means of protecting and, in the case of some species, rehabilitating the commercial fish stocks of the Great Lakes.

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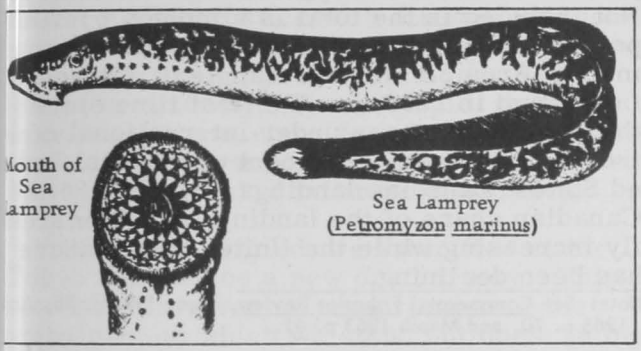
The sea lamprey, which has played havoc ith the once valuable stocks of lake trout d whitefish in many fishing areas of the kes, is the biggest problem facing the Commission. First priority in the fight against e lamprey was given to Lake Superior, last the Great Lakes to be invaded by the predtor. The lamprey population there was reced by 80 percent in 1962 through the use a chemical lampricide, and was kept at out the same level in 1963.



The Commission and its advisers were elcomed by Canada's Deputy Minister of isheries of Canada, who said it was gratifyng to note that new means of bringing the amprey under control are being developed. e stated that the research sponsored by the ommission showed promise and had broad alue but pointed out that questions regarding ng-term economic control of lampreys still emained unanswered.

The meeting, under the chairmanship of r. A. L. Pritchard, Director of the Conseration and Development Service of the Dertment of Fisheries of Canada, heard progess reports from its agents, the U. S. Buau of Commercial Fisheries and the Fishries Research Board of Canada, as well as ertain state agencies. Other members of he Commission are D. L. McKernan, vicehairman, who is Director of the U. S. Buau of Commercial Fisheries; Claude Ver Duin, of Grand Haven, Mich.; Lester Voight, Director of the Wisconsin Conservation Dertment; Dr. A. O. Blackhurst, Manager of he Ontario Council of Commercial Fisheries, Port Dover, Ont.; and Dr. J. R. Dymond, Consultant to the Ontario Department of Lands and Forests. Representatives of feeral, provincial, and state agencies concerned with fisheries management in the Great Lakes and their advisers took part in the discussions.

There are 110 lamprey-producing streams tributary to Lake Superior, 98 of which have been treated with chemicals to kill the young lamprey. The chemical treatments have now been extended to Lake Michigan, and surveys recently completed on Lake Huron have located 90 lamprey-producing streams there. In Lake Michigan, 66 of the 99 lamprey-producing streams have received initial treatment. An interesting development noted at the meeting was the discovery that a molluscacide used to destroy snails in tropical countries could be used to improve the action of the lampricide. Small amounts of that chemical, added to the lampricide now being used, can almost double its effectiveness, and will reduce considerably the cost of treating the remaining Lake Michigan streams, particularly those with high flows.

In addition to reports given on the lamprey control program, the Commission heard reports on the lake trout rehabilitation program from the states of Wisconsin and Minnesota, as well as from the Bureau of Commercial Fisheries and Canada's Fisheries Research Board. In Lake Superior, the improvement in the lake trout population is most pronounced in Wisconsin, where there was a marked increase in the numbers of large fish (over 25 inches) and in the numbers of spawning trout. Hatchery fish planted in Wisconsin waters of that lake were found to have survived well. It was reported that hatchery plantings are expected to be the mainstay of the inshore fishery until natural reproduction reaches its former levels. The survival of large mature fish indicates that this will occur and that the natural population will be rehabilitated. There has also been evidence of improved survival of larger and older trout in Canadian waters in Lake Superior, and the over-all improvement appears to be continuing

The Commission and its advisers also discussed the yellow pike (walleye) situation in Lake Erie. After several years of high production in the mid-1950's, the yellow pike population in that lake has declined drastically, although some recent recovery is in evidence for certain year classes. A program is under way to find the causes of the changes in abundance of that species and the means of improving the fishery.

At the December 6 meeting, the Commission received for study, proposed programs of investigations of the Great Lakes fisheries prepared by both Canadian and United States

International (Contd.):

fishery scientists concerned with fishing in the Great Lakes.

Note: See Commercial Fisheries Review, January 1963 p. 71.

INTERNATIONAL PACIFIC HALIBUT COMMISSION

NORTH PACIFIC HALIBUT FISHING ENDED NOVEMBER 30, 1963:

The 1963 North Pacific halibut fishing season was marked by the failure of fishermen to fullfill catch quotas in both Area 2 and in the newly created Area 3B North Triangle.

Areas 1 and 2 in the North Pacific were closed to halibut fishing at 6 p.m. (P.S.T.), November 30, 1963, in accordance with regulations of the International Pacific Halibut Commission. At that time, the catch limit of 28 million pounds in Area 2 had not been attained; no catch limit was provided for Area 1. On October 17, 1963, the Commission announced that a total of 2.4 million pounds of halibut was still needed for attainment of the quota in Area 2. After that announcement, the halibut fleet discarded the 8-day layover period.

Areas 3B North and 3B South (without catch limits) were closed on October 15, 1963. Area 3B North Triangle with a catch limit of 11 million pounds was also closed on October 15, 1963. Although landings from that new area were still slightly below the quota, the total catch was 10,944,000 pounds, of which Canadian fishermen took 4,058,000 pounds, Japanese fishermen took 3,670,000 pounds, and United States fishermen took 3,216,000 pounds. Area 3A was closed on August 9, 1963, with attainment of the catch limit of 34 million pounds.

In 1963, Areas 3B North and 3B North Triangle were opened to halibut fishing on March 25, Area 3B South was opened on April 19, and Areas 1, 2, and 3A were opened on May 9.

The failure of fishermen to attain the catch limit in Area 2 resulted in an extremely long fishing season. In 1963, Area 2 was open to halibut fishing for 205 days, as compared to 122 days in 1962, 120 days in 1961, 91 days in 1960, 68 days in 1959, 59 days in 1958, 47 days in 1957, and 38 days in 1956. Halibut seasons in Area 2 were even shorter before the adoption in 1956 of the "lay-over" provision requiring fishing vessels to remain in port for a specified rest period after each trip. The fishing season in Area 2 was only 24 days in 1955, 21 days in 1954, and 24 days in 1953.

Preliminary data indicate that the United States and Canadian catch of halibut in the North Pacific in 1963 totaled 70.6 million pounds--33.8 million pounds or 48 percent of that total caught by United States fishermen and the balance of 36.8 million pounds or 52 percent of that total by Canadian fishermen. Not included in the total is almost 3.7 million pounds of halibut caught by Japanese fishermen in Area 3B North Triangle. Canadian fishermen in 1963, for the first time since the fishery has been under international control, caught over 50 percent of the total United States-Canadian landings. Since 1936 the Canadian share of the landings has been steadily increasing while the United States share has been declining.

Note: See Commercial Fisheries Review, Sept. 1963 p. 56, Aug. 1963 p. 70, and March 1963 p. 41.

NORTH PACIFIC FISHERIES COMMISSION

STATEMENT BY U. S. DELEGATION CHAIRMAN AT SEPTEMBER CONFERENCE IN TOKYO:

The second Meeting of the Parties (Canada, Japan, United States) to the International Convention for the High Seas Fisheries of the North Pacific Ocean to consider a revision of the Convention began on September 16, 1963, and came to a close on October 7, 1963. At the closing session, Benjamin A. Smith II, Chairman of the United States Delegation, made this statement:

"We have just concluded 3 weeks of intensive discussions with delegations of Canada and Japan on the future of fisheries treaty arrangements in the North Pacific. The three nations did not reach complete agreement in these talks. In view of the wide differences which remained at the end of the first round of discussions at Washington in June 1963, it would perhaps have been unrealistic to have expected complete agreement at this time.

"Nevertheless, considerable progress has been made in narrowing the differences of view. The delegations are recommending to their respective Governments that a further conference be held next spring, probably at Ottawa. I personally look forward with considerable hope to a resumption of these talks

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and to the prospect of an eventual reconciliation of views among the three nations.

"As President Kennedy stated on September 10, 1963, shortly before my departure for Japan, the United States believes that the abstention principle is sound and reasonable and that without restraints of this nature the nations of the world would run serious risks of depleting fisheries. This was our position at the meeting in Tokyo. At the same time we recognized that certain difficulties had arisen with respect to the present formulation of the principle and to the language of the present treaty. For example, the Japanese people have come to interpret the treaty as an unfair arrangement imposed upon them during the period of military occupation.

"With this in mind, we submitted at the Tokyo conference a new draft treaty. This new draft involves no compromise of the principles on which we stand but does, in my view, constitute a major effort toward enabling the Japanese to accept our position.

"The United States proposal was not completely acceptable to Japan. However, Japan was willing to recognize the special interest of the United States in the salmon and halibut stocks of the eastern North Pacific and on the basis of this recognition was prepared to continue to accept substantial restrictions on its fishing in this area. This constituted a major departure from the rigid position which Japan took at the Washington talks.

"I believe that the discussions have lessened the prospects of a break in the existing relationships in the field of fisheries and that, with further patient consideration of the requirements of each country, the three nations will ultimately reach agreement." (The Department of State Bulletin, November 4, 1963.)

NORWEGIAN-SOVIET SEAL COMMISSION

SIXTH SESSION HELD IN OSLO:

The sixth session of the Norwegian-Soviet Seal Commission met in Oslo November 28-30, 1963, to consider the conservation of seal stocks in the northeastern Atlantic. The Commission, which was presided over by the leader of the Norwegian delegation, was presented with reports on the 1963 seal catch by both Norway and the Soviet Union. The Commission agreed to extend scientific investigations aimed at protecting seal stocks in the northeastern Atlantic and providing for a rational exploitation of seal herds in the area. The seventh session of the Commission will be held in Moscow, either at the end of 1964 or in early 1965. (United States Embassy, Oslo, December 7, 1963.)

OCEANOGRAPHY

INTERNATIONAL INVESTIGATION OF JAPANESE "BLACK CURRENT" PLANNED:

An international working conference of oceanographers and biologists (Kuroshio Investigation Planning Meeting) met in Tokyo October 29-31, 1963. The Hawaii Area Director of the U. S. Bureau of Commercial Fisheries served as a Member of the United States Delegation, Representative of the Indo-Pacific Fisheries Council, and Rapporteur of the sessions. According to the Area Director, the meetings convened at the Japanese Ministry of Foreign Affairs, for presenting plans and background information for a long-term, multination program of research on the Kuroshio, Japan's famed "Black Current."

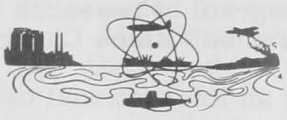
The idea of an international cooperative survey of the major "ocean river" of the western Pacific was put forward in a resolution of the International Oceanographic Committee in late 1962, and the Tokyo meeting, held under the auspices of United Nations Educational, Scientific, and Cultural Organization (UNESCO), the Government of Japan and several Japanese scientific organizations, was the first step in implementation of that resolution. The recommendations of the planning meeting will be reported back to the International Oceanographic Committee for its guidance in setting up detailed plans for the oceanographic investigations.

The Kuroshio is one of the main arteries in the circulation of the Pacific Ocean. It moves warm water from the Equator northward past Formosa and Japan and thence eastward across to the American coast, performing functions similar to those of the Gulf Stream in the Atlantic. It deeply affects the climates of northeastern Asia and northwestern America and helps to create, where it mingles with cold Arctic waters, some of the richest fishing grounds in the world. For these reasons its cycles of flow are of concern to many countries, a fact that was evidenced in the attendance of representatives of China, Hong Kong, Japan, Korea, the Philip-

International (Contd.):

pines, the United States, the Soviet Union, and Viet Nam at the Tokyo conference. The meeting was presided over by Japanese meteorologist Kiyoo Wadati, assisted by Claro Martin of the Philippines as vice-chairman.

The consensus of the meeting was that the Kuroshio investigations should cover an area from the Equator to 43 degrees north (roughly the latitude of Hokkaido) and from 160 degrees east longitude to the shores of Asia. Multiship research cruises would be carried out in summer and winter of 1965 and 1966. The results would then be reviewed and plans made for continuing studies of the oceanography and fisheries of the area. It is expected that Japan and the Soviet Union will assign a number of large ocean research ships to the survey. The United States is not yet committed to active participation in the study, although United States marine scientists are interested in the area and the scientific problems which it presents.



Aden

NEW FISHERIES RESEARCH VESSEL:

A new 67-foot fisheries research vessel for the Department of Fisheries, Federation of South Arabia, is under construction in Scotland and scheduled for delivery in mid-1964. The new all-steel vessel, planned for extended operations in the Indian Ocean and the Red Sea, will have a purse-seine design with accommodation and navigating space forward, leaving a large, and open deck aft. Other specifications are beam 19 feet and draft $10\frac{1}{2}$ feet. A 320 horsepower Diesel engine will drive the vessel at 10 knots. It will have a refrigerated hold with a capacity of 35 metric tons.

The new vessel will have navigational and fish-finding equipment such as radar, echo-sounder, and radiotelephone. The electronic equipment should open up waters previously inaccessible to the Federation's two smaller vessels, the Gulf Explorer and the Federal Star. It will be possible to track and plot the movements of fish both near the surface and at depths up to 500 fathoms.

Fishing gear on the vessel will include a large purse-seine net and a special line hauler constructed to handle Japanese-type long-lines. The vessel will also be fitted for pole-and-line fishing for tuna with live bait.

The cost of the new vessel is being shared by Aden State and the Federation of South Arabia because it is expected to benefit both.

This is the third vessel commissioned by the Federation of South Arabia Fisheries Department in the last 16 years. The other two, both of which will remain in service, have served as both survey and training vessels. Their activities in the Indian Ocean and the Red Sea have added to knowledge of the fisheries potential in those areas, which are now attracting considerable fishing interest. (United States Consulate, Aden, December 14, 1963.)

Note: See Commercial Fisheries Review, May 1963 p. 56.

Argentina

FISH MEAL PRODUCTION ESTIMATES REVISED:

Predictions made in October 1963 as to Argentina's fish-meal production were considerably overoptimistic. Total production for 1963 is expected to be about 6,800 metric tons, rather than the 20,000 tons previously forecast. This revised estimate is based upon data from the Argentine Bureau of Fisheries for the first nine months of 1963. Production in that period amounted to 4,838 tons--3,947 tons from the ocean catch and 891 tons from the fresh-water catch.

The largest of Argentina's 5 major fish-meal plants began production in March 1963. The new plant is located in Mar del Plata and was originally intended for installation in Deseado in the Patagonian province of Comodora Rivadavia. Its daily capacity is about 20 tons of fish meal, surpassing the 13-ton capacity of another plant in Mar del Plata, which began operations early in 1961. There are 3 other modern fish-meal plants processing ocean fish at Mar del Plata.

As of late 1963, the annual capacity of the industry producing fish meal from the ocean catch was about 9,600 metric tons. The capacity of the industry that processes fresh-water fish is about 2,400 tons to make an annual capacity of 12,000 metric tons. Two or three firms are seriously considering new

Argentina (Contd.):

plants for processing ocean fish, but whether these projects will be sufficiently advanced to come into production during 1964 is uncertain.

The growth of the Argentine fish-meal industry, however, is expected to continue, financed primarily by the earnings of the local fishing industry. While the uncertainty of business conditions in Argentina may have an immediate inhibiting effect on expansion, trade sources believe that the pace of development will depend primarily on the world market for fish meal, and the complementary growth of markets for Argentine fish. The 1963 landings are running 20 percent above the level of the previous year, and 1963 is certain to be a record year (estimated at 120,000-130,000 tons) for the Argentine fishing industry. (United States Embassy, Buenos Aires, November 30, 1963.)

Brazil

SPINY LOBSTER LANDINGS AND EXPORT TRENDS:

In 1962, exports by the steadily growing Brazilian spiny lobster industry were up 18.8 percent from 1961 and 73.1 percent from 1960, according to data supplied by the Brazilian Government. (Most of those exports are shipped to the United States in the form of frozen products.)

Brazilian spiny lobster production amounted to 3,048 metric tons in 1961, compared to 2,944 tons in 1960; 1,015 tons in 1959; and 1,100 tons in 1958.

The Superintendencia do Desenvolvimento da Pesca (SUDEPE) was recently established as a governmental coordinating agency for national fisheries development in the form of vessels, equipment, techniques, and possibly the services of United States fishermen, although not limited to such categories. (United States Embassy, Rio de Janeiro, November 22, 1963.)

Brazilian Exports of Spiny Lobsters, by Ports, 1958-1962

Ports	1962		1961		1960		1959		1958	
	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000
Fortaleza	1,382	2,708	1,266	2,070	711	1,041	390	430	239	264
Recife	688	1,331	475	793	485	775	226	252	191	209
Santos	-	-	-	-	-	-	-	-	3	3
Total	2,070	4,039	1,741	2,863	1,196	1,816	616	682	433	476

Brazil. The Chief of the Technical Staff of SUDEPE has stated that there are good opportunities for United States investment in the Brazilian spiny lobster industry; however, he stressed that such investment would have to collaborate with Brazilian capital. United States investment, he suggested, might be particularly attractive in

Canada

SALMON TAGGING PROGRAM IN THE STRAIT OF GEORGIA:

In early December 1963, biologists of the Canadian Department of Fisheries began a 6-week coho and chinook salmon tagging program in the Strait of Georgia area using the commercial purse-seine vessel Naughty Lady. This program represents the second phase of a field study initiated in May 1963, aimed at providing information on the factors governing the coho and chinook salmon production of the area. The tagging study is being conducted to measure, specifically, the movement and exploitation of resident coho and chinook salmon grilse within and away from the Strait of Georgia area.

Tag returns from the first phase of this project were very satisfactory largely because of the excellent cooperation of both sport and commercial fishermen. The success of the current tagging program will also be dependent on the degree of tag recovery obtained, and cooperation is again requested in returning tags to the Canadian Department of Fisheries, 1155 Robson Street West, Vancouver 5, B.C., together with the date, method, and location of recovery.

A nominal reward of 50 cents for each tag is offered. Special postage prepaid tag return envelopes are available at most boat rental and boat moorage facilities and fish camps in the area. Tags may also be returned to any Fishery Officer. (Canadian Department of Fisheries, Vancouver, November 29, 1963.)

Congo Republic

FRESHWATER FISHERIES PRODUCTION DROPS SHARPLY:

In 1959, the Kivu area of the Congo Republic produced about 37,000 tons of fish from Lakes Tanganyika, Kivu, and Edward, including fish caught by traditional as well as by modern methods. Since that time, the catch has been reduced to a small fraction of the 1959 total, and retail prices have risen to a point where only the most well-to-do citizens can afford to eat fish. Causes of this drop in production are the lack of nets, vessels, and organization. For the modern section of the industry, technicians and nets are needed, as well as some way of getting the vessels and the refrigeration plant back into operation. Solution of those problems could result in a catch of 40,000 tons a year, which would be of considerable value to the Kivu area economy. In addition, the area could not only supply a part of the fish needs of the rest of the Congo, but could also export fish. (United States Consulate, Bukavu, November 6, 1963.)

German Federal Republic

NEW RESEARCH VESSEL "METEOR II":

The new research vessel Meteor II was launched in Germany during August 1963 under the joint ownership of the German Hydrographic Institute of Hamburg and the German Research Association of Bad Godesbert.

The Meteor II is a 265-foot, Diesel-electric vessel displacing 2,200 tons. Its main engine gives a speed of 14 knots on a single screw, but it also has both an active rudder and a bow propulsion unit, giving extreme maneuverability. Active antirolling tanks were also fitted. The vessel will carry a total complement of 57, including 24 persons in the scientific party. (National Oceanographic Data Center, Newsletter, October 31, 1963.)

Ghana

FISHERIES TRENDS, THIRD QUARTER 1963:

Programs by Ghana to expand the production of fish, principally by the purchase of large modern fishing craft, received particular attention during the third quarter of 1963. The Government signed an agreement on July 9 with a Norwegian shipbuilding group for the delivery of six fishing trawlers. A ŁG5.7 million (US$15,960,000) contract was also signed with a large Japanese shipbuilding company for the construction of 10 stern trawlers and 2 carriers. All of the vessels are to be used by the Government-owned fishing corporation and deliveries are scheduled to start in mid-1964.

The Government fishing corporation took delivery in early August 1963 of two British-built stern trawler fishing vessels. Those vessels were the first to be delivered to the corporation, which left a total of 36 fishing vessels still on order--18 stern trawlers (6 from Norway, 10 from Japan plus 2 carriers), 8 side trawlers (Soviet Union), and 10 purse seiners (Soviet Union).

A private Ghanaian fishing company has on order 4 fishing trawlers from Japan and Yugoslavia. The 2 Japanese trawlers were to cost ŁG180,000 ($504,000) each; the 2 smaller Yugoslavian vessels ŁG42,000 ($117,600).

The Ministry of Agriculture has announced plans to increase the production of fish through the development of fisheries in the Volta River and its tributaries. Particular emphasis was to be placed on the development opportunities which would be provided by the creation of the 3,200-square mile Volta Lake after completion of the Akosombo Dam. (United States Embassy, Accra, December 1, 1963.)

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FISHERY IMPORTS PLACED UNDER THE CONTROL OF STATE CORPORATIONS:

The Ghanaian Minister of Trade announced on November 28, 1963, that, effective immediately, all imports of fresh and frozen fish would be handled by the Government-owned Ghana Fishing Corporation. All licenses issued to private firms for the importation of fish and for the charter of foreign fishing vessels were withdrawn. Affected firms, however, were permitted to continue to operate their own vessels. The Minister indicated

Ghana (Contd.):

that the new regulations were designed to permit the Ghana Fishing Corporation to exercise complete control over the supply and price of fresh and frozen fish.

The announcement followed a similar declaration on November 13, 1963, that, effective January 1, 1964, the Government-owned Ghana National Trading Corporation would be the sole importer of a number of essential commodities including canned fish. (United States Embassy, Accra, December 1, 1963.)

Greece

FISHERIES TRENDS, JANUARY-SEPTEMBER 1963:

Greek freezer and refrigerated trawlers operating in the Atlantic delivered 14,352 metric tons of frozen fish during January-September 1963, compared with landings of 11,888 tons during the same period of 1962 and 10,131 tons in the first 9 months of 1961. Contributing to the increased production in January-September 1963 was the expansion of the fleet of large freezer trawlers to 19 vessels; 2 more freezer trawlers were to be added in late 1963 and 6 were scheduled for delivery in 1964. The new vessels could raise the annual productive capacity of the Greek Atlantic fleet to 30,000 tons of frozen fish in 1964. Because of the increased catch, Greek operators are seeking a curtailment of fishery imports.

Greece sponge fishing in Greek, Egyptian, and Libyan waters through 1963 was expected to yield about 20 percent more than the 1962 production of 71 tons. Some Greek divers switched to aqualung devices in 1963 following the Greek Government's approval of SCUBA diving equipment.

Favorable conditions exist for the development of a Greek pearl culture industry, according to a Japanese report issued in October 1963. (Alieia, October 1963, and United States Embassy, Athens, November 22, 1963.)

Note: See Commercial Fisheries Review, December 1963 p. 63.

Iceland

ICELANDIC FISHERY LANDINGS BY PRINCIPAL SPECIES, JANUARY-JULY 1963:

Species	January-July	
	1963	1962
	(Metric Tons)	
Cod	203,157	196,595
Haddock	30,007	23,762
Saithe	8,270	8,305
Ling	4,149	5,491
Wolffish (catfish)	11,921	12,035
Cusk	4,826	4,052
Ocean perch	19,648	3,636
Halibut	695	892
Herring	196,026	244,231
Shrimp	349	349
Capelin	1,077	-
Other	7,537	6,865
Total	487,662	506,213

Note: Converted to whole ungutted fish regardless of how landed.

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ICELAND'S UTILIZATION OF FISHERY LANDINGS, JANUARY-JULY 1963:

How Utilized	January-July	
	1963	1962
	(Metric Tons)	
Herring[1] for:		
Oil and meal	126,696	183,516
Freezing	20,605	16,104
Salting	43,982	36,603
Fresh on ice	5,617	7,718
Groundfish[2] for:		
Fresh on ice	19,139	16,331
Freezing and filleting	125,304	113,844
Salting	65,793	81,492
Stockfish (dried unsalted)	65,971	38,830
Canning	237	289
Home consumption	8,610	7,726
Oil and meal	2,290	1,722
Shellfish for:		
Fresh on ice	2	-
Freezing	3,334	1,952
Canning	82	86
Total production	487,662	506,213

1/Whole fish.
2/Drawn fish.
Source: Statistical Bulletin, vol. 32, no. 4, November 1963, The Statistical Bureau of Iceland, Reykjavik, Iceland.

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EXPORTS OF FISHERY PRODUCTS, JANUARY-SEPTEMBER 1963:

During January-September 1963, there was a considerable increase in exports of frozen herring, herring meal, and cod-liver oil as compared with the same period in 1962, according to the Statistical Bureau of Iceland's Statistical Bulletin, November 1963. Exports of fish meal and uncured salted fish showed a considerable decrease in the first 9 months of 1963 (see table).

Iceland (Contd.):

Icelandic Fishery Exports, January-September 1963 with Comparisons

Product	Jan.-Sept. 1963			Jan.-Sept. 1962		
	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	1,579	32,065	744	1,938	38,111	884
Salted fish, uncured	17,569	221,266	5,133	23,892	287,720	6,675
Salted fish fillets	969	12,291	285	1,090	14,878	345
Wings, salted	1,504	18,484	429	983	11,271	261
Stockfish	5,202	146,323	3,395	6,550	167,751	3,892
Herring on ice	7,224	23,417	543	4,899	17,144	398
Other fish on ice	22,960	121,199	2,812	17,045	84,915	1,970
Herring, frozen	26,159	144,498	3,352	17,076	93,552	2,170
Other frozen fish, whole	2,265	24,133	560	1,134	15,344	356
Frozen fish fillets	41,535	767,720	17,811	40,322	703,639	16,324
Shrimp and lobster, frozen	438	44,495	1,032	328	32,591	756
Roes, frozen	788	13,227	307	648	12,401	288
Canned fish	174	9,036	210	222	11,235	261
Cod-liver oil	7,175	52,337	1,212	3,751	30,459	707
Lumpfish roes, salted	324	5,322	123	401	6,156	143
Other roes for food, salted	3,176	44,919	1,042	2,745	37,922	880
Roes for bait, salted	1,745	12,571	292	1,387	8,678	201
Herring, salted	29,098	295,780	6,862	26,685	256,601	5,953
Herring oil	29,981	139,055	3,226	33,294	141,245	3,277
Ocean perch oil	754	5,130	119	15	59	1
Whale oil	3,298	23,093	536	1,152	9,104	211
Fish meal	11,535	64,317	1,492	19,334	121,130	2,810
Herring meal	44,608	266,186	6,176	37,230	243,555	5,650
Ocean perch meal	2,953	13,754	319	34	204	5
Wastes of fish, frozen	4,452	12,426	288	4,544	11,457	266
Liver meal	371	2,563	59	305	2,029	47
Lobster and shrimp meal	72	193	4	13	42	1
Whale meal	100	558	13	402	2,151	50
Whale meat, frozen	1,967	13,564	315	1,621	12,284	285

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

Ireland

NEW FISHING COMPANY AIDED BY JAPANESE AND FRENCH INTERESTS:

Irish, Japanese, and French interests have combined to form a new offshore fishing company. The company will be based in Ireland, but fish will be landed for export only. The major shareholder in the new company, which was registered in Dublin early in December 1963, is a large Japanese fishing company. The French interest comes from the important fishing center of Lorient in Brittany.

It is expected that the new company will operate 6 deep-sea vessels, built to the most modern design, and each costing about £750,000 (US$2.1 million).

It is possible that three of the vessels may be built at a shipyard in Cork. Each vessel would employ about 100 men.

The vessels will fish in the North Atlantic and none of the catch will be marketed in Ireland. The bulk of the catch is expected to be packaged on board and delivered directly to British and other European markets. The balance will be landed at an Irish port and processed for export. The new company expects a gross return of about £3 million ($8.4 million) a year from its operations.

eland (Contd.):

No definite decision has yet been made on e choice of a base port but Galway, where arbor facilities are good and a fish-processg factory is close at hand, might be a like- choice. (Irish Press, December 12, 1963.)

aly

963 QUOTA FOR FRESH AND FROZEN UNA IMPORTS INCREASED:

The Italian Government on October 31, 963 (Gazzetta Ufficiale No. 316, December , 1963), increased the import quota for resh and frozen tuna by 8,000 metric tons or the last two months of 1963. The quota, which is duty-free, was opened to all countries. (United States Embassy, Rome, December 14, 1963.)

Japan

ALUE OF FROZEN AND CANNED TUNA EXPORTS, JANUARY-SEPTEMBER 1963:

Japan's exports of frozen tuna to the United States in the irst 9 months of 1963 were down 45.7 percent in value as ompared with the same period in 1962. For the same peiod the export value of canned tuna increased 1.0 percent.

Value of Japan's Exports of Selected Fishery Products, January-September 1962-63

Product	Jan.-Sept. 1963			Jan.-Sept. 1962		
	U.S.	Total	U.S. Ratio	U.S.	Total	U.S. Ratio
	(In US$1,000)		%	(In US$1,000)		%
una, frozen . .	13,900	33,384	41.6	25,603	40,500	63.2
una, canned . .	10,763	16,702	64.4	10,652	15,341	69.4

ote: Exports are valued f.o.b. Japan.
ource: Customs Bureau, Japanese Ministry of Finance.

The United States took 41.6 percent of Japan's total frozen tuna exports during the first nine months of 1963 as compared with 63.2 percent in the same period of 1962. The United States ratio of Japan's total canned tuna exports was 64.4 percent as against the same period in 1962 when it was 69.4 percent. (United States Embassy, Tokyo, November 1963.)

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CANNED TUNA SALE TO THE UNITED STATES:

The Tuna Standing Committee of the Japan Canned Foods Exporters Association decided that the first canned tuna sale to the United States in the business year which began December 1, 1963, should consist of 100,000 cases. Since this quantity is exactly half that which the Canned Tuna Packers Association approved for release for the first sale, the two organizations expected to meet to resolve their differences. (Suisan Keizai Shimbun, December 15, 1963.)

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NEW TYPE CANNED TUNA PRODUCT DEVELOPED:

A new canned tuna product--"tuna steak"--has been developed by a Japanese fishing company. Seasoned with soy sauce and cooked in vegetable oil, the product is said to be very tender and meaty in taste, unlike the usual tuna pack in which some fish odor is generally present. The "tuna steak," which is packed in 160-gram (5.6-oz.) cans, was placed on sale on the Japanese domestic market on December 1, 1963, and retailed at 60 yen (17 U. S. cents) per can.

The Japanese firm is reported to be experimenting with other cooking and seasoning methods for the manufacture of specialty packs suitable for export to foreign countries. (Suisan Tsushin, December 2, 1963.)

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FROZEN TUNA EXPORT MARKET IN EARLY DECEMBER 1963:

The Japanese frozen tuna export market, which had been described as favorable early in December 1963, had turned sluggish due to few tuna vessel arrivals in Japan and resultant high ex-vessel prices. The market quotation for frozen gilled-and-gutted yellowfin for export to the United States from Japan proper was US$375 a short ton c.& f. However, the ex-vessel price of yellowfin when converted to the c.& f. export price reportedly is equal to US$390 a short ton. This situation has resulted in very few export contracts being concluded with United States tuna buyers, according to reports.

On the other hand, the European frozen tuna import market is reported to be firm. Japanese frozen gilled-and-gutted yellowfin exported to Italy were reported to have brought US$400-410 a metric ton c.& f. Frozen gilled-and-gutted big-eyed tuna were said to be selling for US$325-330 a metric ton c.& f., and mixed shipments of big-eyed

Japan (Contd.):

and yellowfin tuna (with a preponderance of big-eyed) sold for $340 a metric ton.

Reportedly, yellowfin tuna made up about 30 percent of the total catch of tuna in the Atlantic Ocean for the first 11 months of 1963. (Suisancho Nippo, December 7, 1963.)

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ALBACORE TUNA EX-VESSEL PRICE TRENDS, NOVEMBER-DECEMBER 1963:

The Japanese ex-vessel price for albacore tuna increased sharply in the latter part of 1963. In late November, the ex-vessel price of albacore at Kesennuma ranged between 90-120 yen a kilogram (US$227-302 a short ton), with a high of 136 yen a kilogram ($343 per short ton) reported on November 30. On December 6, the ex-vessel price of albacore at Kesennuma was reported as 115-159 yen a kilogram ($290-401 per short ton), and at Shimizu 165-185 yen a kilogram ($416-467 per short ton). However, on the same day, about 16 short tons of frozen albacore landed at Yaizu sold at ex-vessel prices of 70-130 yen a kilogram ($176-328 per short ton). A day earlier, on December 5, the ex-vessel price of frozen albacore at Yaizu ranged from 100-165 yen a kilogram ($252-416 a short ton).

During the following week (December 14), 1,650 pieces of albacore landed at Kesennuma brought from 120-160 yen a kilogram ($302-403 a short ton); and at Miyako, an undetermined quantity of albacore landed on the same day sold for 146-158 yen a kilogram ($368-398 a short ton). On December 10 at Shimizu, 390 pieces of albacore brought ex-vessel prices of 110-160 yen a kilogram ($277-403 a short ton). (Suisan Keizai Shimbun, December 6, 7, 11, and 15, 1963, and other periodicals.)

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FROZEN TUNA EXPORT MARKET TRENDS, MID-DECEMBER 1963:

The Japanese export frozen tuna market as a whole was considered dull in mid-December 1963, with few export agreements concluded with United States tuna buyers. However, one large United States packer was reported seeking frozen gilled-and-gutted yellowfin tuna in Japan and offering US$10 a short ton above the existing Japanese f.o.b. export price of $325 a short ton. The same firm was also said to be offering nearly $30 a short ton above the prevailing export market price for tuna loins. Reportedly, the United States firm planned to ship tuna purchased in Japan to its Puerto Rico plant on a chartered freighter in late December. (Suisan Tsushin, December 16, 1963, and other sources.)

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NEW FROZEN TUNA EXPORT REGULATIONS PLANNED:

The Japan Export Frozen Tuna Producers Association met December 12, 1963, and appointed chairmen of those committees which are expected to meet early in 1964 to begin drafting tuna export regulations for fiscal year 1964 (April 1964-March 1965). The committees involved are the Direct Export Committee, the Atlantic Ocean and Indian Ocean Committees, and the Tuna Loin Committee.

The chairman of the Producers Association has been delegated the responsibility of appointing a committee to study the problem involving the landing of frozen tuna at overseas tuna bases, such as American Samoa. Under current regulations, Japanese vessel owners operating vessels out of certain overseas tuna bases can only operate "ice" boats and must land their catches in fresh form. (Suisan Tsushin, December 14, 1963.)

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DENMARK CONTRACTS TO IMPORT FROZEN TUNA:

Denmark is reported to have contracted to purchase 250 metric tons of Atlantic Ocean-caught frozen tuna (160 tons of bluefin and 90 tons of big-eyed) from Japan. The sale, negotiated by a Japanese trading company, reportedly was contracted at export prices of US$425 per metric ton for gilled-and-gutted bluefin and $365 per metric ton for gilled-and-gutted big-eyed, both prices c.i.f. Esbjerg and Skagen, Denmark. Shipment was expected to be made by the end of 1963.

This is believed to be the first time that Japanese frozen tuna have been exported to Denmark, which normally purchases bluefin tuna from Norway. Norway had a poor bluefin season in 1963 and was unable to supply Denmark's demand, hence the special pur-

apan (Contd.):

ase from Japan. (Suisan Tsushin, Decem-er 7, 1963.)

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UNA FISHING TRENDS IN EQUATORIAL ACIFIC, NOVEMBER 1963:

An examination of catch statistics as of ovember 30, 1963, reveals that Japanese na vessels fishing the vast equatorial wa-rs of the Pacific Ocean (from the vicinity Samoa to the waters off the Philippine Is-nds and off Borneo) averaged about one etric ton of tuna per day per trip. Very w vessels caught over two tons per day. ue to extremely poor fishing during the first months of 1963 in the equatorial Pacific cean, many vessels in December 1963 re-rtedly moved to the fishing grounds south-st of Australia, where they were catching n average of 1.5 metric tons a day, as com-red to an average of 3-4 tons a day in 962. Also, many Japanese tuna vessels ere reported to have moved to the tuna rounds in the eastern South Pacific. Those essels were said to be averaging 2.5-3 tons er day. (Suisancho Nippo, December 9, 963.)

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UNA TRANSSHIPMENT OPERATIONS T DURBAN, SOUTH AFRICA:

A large Japanese fishing company has es-olished a 5,000-ton transshipment target in 64 for its base in Durban, South Africa. To eet the target, the firm is actively encour-ging Japanese tuna vessel owners, opera-ng vessels in the Indian Ocean, to deliver eir catches in 1964 to Durban. At least 7 na vessels delivered their catches to Dur-n in late 1963. The Japanese firm's 1963 eration at Durban (started in June 1963) as reported to be less than successful.

For the period June-November 1963, trans-hipments[1/] of frozen tuna to Japan proper om Durban totaled: 739 metric tons of ound albacore; 373 tons of gilled-and-gutted ellowfin; 74 tons of yellowfin fillets; 10 tons f round big-eyed; 138 tons of big-eyed fil-ets; 116 tons of dressed spearfish; 60 tons f spearfish fillets; and 75 tons of shark. Suisancho Nippo, December 13, 1963.)

1/Transshipments to the United States not permitted.

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NEW LONG-LINE GEAR TESTED OFF WEST AFRICAN COAST:

A Japanese fishing company has dispatched the 350-ton tuna-fishing vessel Koyo Maru to the Atlantic Ocean to explore the waters off Angola, Congo, and South-West Africa. Reportedly, the vessel will test a new type of gear described as "vertical long-line" designed to fish tuna and other fish of that type at different depths simultaneously. (Suisan Tsushin, December 11, 1963.)

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FISHING VESSEL CONSTRUCTION PERMITS, LATE 1963:

On December 7, 1963, the Japanese Fisheries Agency issued permits for the construction of 84 fishing vessels, including 47 tuna vessels. Of the tuna vessels, 42 were vessels of the 39-ton class. In November 1963, the Agency authorized the construction of 140 39-ton vessels. (Suisan Keizai Shimbun, December 15, 1963, and other sources.)

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FISHING VESSEL CONSTRUCTION PERMITS, NOVEMBER 1963:

During the month of November 1963, the Japanese Fisheries Agency issued permits for the construction of 240 fishing vessels. Of these, 140 were permits for the construction of 39-ton tuna vessels, for which fishing licenses were not required in 1963 but will be required in 1964. In addition, the Agency issued permits for the construction of 18 tuna vessels ranging in size between 70-300 tons gross (mostly over 200 tons), two 19-ton portable tuna-fishing boats, and two 3,430-ton distant-water trawlers. The trawlers are expected to be assigned for operation in the Bering Sea. (Suisan Keizai Shimbun, November 7, 17, & 29, 1963; and other sources.)

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GOVERNMENT STOPS APPLICATIONS FOR PERMITS TO CONSTRUCT SMALL TUNA VESSELS:

Effective December 7, 1963, the Japanese Fisheries Agency stopped accepting applications for permits to construct 39-ton tuna fishing vessels by publishing in the Government Gazette the ministerial ordinance relating to the establishment and requirements of the newly designated "coastal (offshore) tuna fishery" (north of 10° N. lat. and west of 160° E. long.). Under this ordinance, tuna vessels in

Japan (Contd.):

the 20- to 39-ton size classification, which heretofore operated freely without fishing licenses, will henceforth be brought under a licensing system. At the same time, the operation of tuna vessels in the 20- to 50-ton size category will be restricted to the "offshore tuna fishery."

The Fisheries Agency had been flooded in October and November 1963 with applications for permits to construct 39-ton tuna vessels when it became apparent that the Government intended to regulate the operation of this class of vessels. Reportedly, to control the flow of applications for licenses to operate tuna vessels in the newly designated fishery, including application for permits to construct new 39-ton vessels, the Agency published the ministerial ordinance somewhat earlier than generally anticipated.

The number of tuna vessels in the 20- to 50-ton size classification to be licensed for operation in the newly established "offshore tuna fishery" was scheduled for governmental decision in January 1964. Reportedly, the Agency intends to restrict the number of operational vessels to about 1,200 vessels, although it is estimated that the Agency, as of December 7, was in receipt of over 2,000 applications to operate tuna vessels in the "offshore tuna fishery." (Suisan Tsushin, December 9, 1963.)

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LICENSES APPROVED FOR DISTANT-WATER TRAWLERS:

The Japanese Fisheries Agency on November 28, 1963, met with the Central Fisheries Coordination Council (highest government-industry advisory group on fisheries) to review applications for distant-water trawl licenses filed before the October 18 deadline by Japanese fishing companies. At that meeting, the Fisheries Agency approved the Council's recommendation that the government license a total of 18 vessels for distant-water trawl operation and also adopted the Council's proposed licensing requirements for those vessels.

Licensing requirements and number of trawlers approved for distant-water operation are:

(1) The two Japanese fishing companies currently operating over 10 trawlers in the Atlantic Ocean shall not be granted licenses to operate additional trawlers in that ocean.

(2) Regardless of the number of applications submitted by the fishing companies, not more than one trawler license shall be issued to any company for each area of operation.

The 13 vessels newly licensed for operation in the Atlantic Ocean (off Africa) are 6 vessels of 299 gross tons; 1 vessel of 500 tons; 1 vessel of 1,500 tons; 1 vessel of 2,000 tons; 1 vessel of 2,500 tons; 1 vessel of 2,800 tons; 1 vessel of 3,000 tons; and 1 vessel of 3,500 tons. The 5 vessels licensed to operate in the Southwest Pacific (off Australia and New Zealand) are as follows: 1 vessel of 299 tons; 1 vessel of 990 tons; 2 vessels of 1,850 tons; and 1 vessel of 2,000 tons. (Nihon Keizai Shimbun, November 29, 1963; Suisan Tsushin, November 28, 1963.)

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ATLANTIC TRAWL FISHERY TRENDS, NOVEMBER-DECEMBER 1963:

The Japanese trawler Aoi Maru No. 2, (1,104 gross tons), which had been operating in the North Atlantic Ocean off Newfoundland for approximately a year, arrived at the Japanese port of Nagoya on November 24, 1963. The trawler was scheduled to depart for the North Atlantic fishing grounds again in late January 1964. (Suisan Tsushin, November 27, 1963.)

The Japanese Fisheries Agency authorized Japan's two largest fishing companies to conduct experimental trawl fishing in the Atlantic Ocean off Argentina for a period of one year, beginning December 1, 1963. One of the companies plans to use the 1,800-ton trawler Taiyo Maru No. 66. The other company will work from the 1,100-ton trawler Ikoma Maru. The Fisheries Agency has defined the experimental trawling area as the waters south of latitude 25° S. and west of longitude 40° W. (Suisan Keizai Shimbun, December 11, 1963.)

The Fisheries Agency is reported to have under study a plan to permit distant-water trawlers, operating out of overseas bases such as those in the Atlantic Ocean, to transfer their catches at sea. The plan, if ap-

Japan (Contd.):

proved, is expected to assist materially the operating efficiency of trawlers under 1,000 gross tons. (Suisan Keizai Shimbun, December 11, 1963.)

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SAURY FISHERY PRODUCTION AND EXPORT TRENDS LATE NOVEMBER 1963:

The Japan Saury Sales Company was reported early in December 1963 to have contracted to sell a total of 90,000 cases of canned saury (80,000 cases of No. 1 small and 10,000 cases of No. 4) to Egypt. The sale was concluded at export prices of US$6.54 per case for No. 1 small and $6.53 per case for No. 4, f.o.b. Japan, with shipment to be made pending issuance of an import license by the Egyptian Government. The import license was expected to be issued by the end of 1963.

Saury fishing in Japan, which was very poor as of early November, picked up sharply after mid-November with 4,000-5,000 metric tons per day being landed. The increased landings resulted in a sharp drop in the ex-vessel price, from the US$103 a ton reported in early November to about $50 a ton in late November. To stabilize landings and prices, the National Saury Production Adjustment Association began to curtail fishing operations by closing the fishery for 48-hour periods every 5-7 days, depending on fishing conditions. On December 5, the ex-vessel prices of saury at the fishing ports of Kesenuma, Onagawa, and Ishinomaki had recovered somewhat and were quoted at $71-78 a ton. (Suisan Tsushin, December 2, 7, & 9; Nihon Suisan Shimbun, November 27, 1963; and other sources.)

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PLANS CALL FOR DOUBLING SALMON HATCHERY FACILITIES:

In 1962, Japan's Fishery Agency began a three-year program to double the number of artificially hatched salmon to 1,000 million fish a year. However, a curtailment of funds reduced the capital from US$1,667,000 a year to $750,000 a year. Due to this development, the privately supported Japan Fisheries Association, contributor of one-third of the funds for the Government program (initial plan $556,000 a year, now $250,000), is planning to initiate its own program to supplement the present plan. To this end the Fisheries Association will establish a new salmon hatchery in Eastern Hokkaido costing about $278,000 over a two-year period.

It is evident that the Japanese authorities are putting considerable effort into the improvement of their facilities. One of the best stations is at Abashiri on the Sea of Okhotsk where modern facilities are producing about 20 million small salmon a year. That station is particularly effective because the salmon are released into a lake for further growth before leaving for the sea.

One problem, however, that remains outstanding in Hokkaido is the effect on naturally spawned salmon of industrial waste and agricultural chemicals which are increasingly polluting the rivers. (United States Embassy, Tokyo, December 3, 1963.)

* * * * *

UNMANNED OCEANOGRAPHIC STATIONS TO BE SET UP OFF COAST:

The Japanese Fisheries Agency has announced a three-year plan to establish 42 unmanned oceanographic observation towers off various coastal areas of Japan beginning in FY 1964 (April 1964-March 1965) as part of a long-range program to forecast oceanographic and fishing conditions. The unmanned towers will continuously record oceanographic conditions in coastal waters where severe changes in sea conditions are believed to exert considerable influences on the coastal fisheries. Initially 10 of these towers will be installed off nine prefectures during FY 1964. (Suisan Keizai Shimbun, November 27, 1963.)

Malaysia

MARKET TRENDS FOR IMPORTED CANNED SARDINES:

A recent survey of Malaysian markets shows that sales of United States canned sardines are as popular as other brands in the higher income groups and that there is no particular preference as to type of can or pack. In the lower income groups, canned sardines from Japan (which are lower-priced and of acceptable quality) are reported to be most popular. United States sardines packed in to-

Malaysia (Contd.):

Type and Price of Canned Sardines by Country of Origin			
Size, Type of Can and Pack	c.i.f. Price/Case		Country of Origin
	M$	US$	
100/3¾- to 4-oz. without key (dingley):			
Soybean oil	28.00	9.15	Canada
Tomato sauce	28.00	9.15	"
Olive oil	75.00	24.50	"
100/3¾- to 4-oz. (flats)	28.00	9.15	Canada
48 or 24/15-oz. (oval cans):			
Tomato sauce	34.00	11.11	Japan
Natural or brine	39.00	12.75	"
48 or 24/8-oz. (oval cans):			
Tomato sauce	18.00	5.88	Japan
Soybean oil	18.00	5.88	"
Natural or brine	19.00	6.21	"
48 or 24/15-oz. (tall cans):			
Tomato sauce	42.00	13.73	U. S. (Calif.)
Natural or brine	42.00	13.73	"
100/5-oz. (tall cans):			
Tomato sauce	32.00	10.46	U. S. (Calif.)
Natural or brine	32.00	10.46	"

mato sauce in 5-ounce tall cans are also popular with the lower income groups. Many stores reported that they have discontinued selling canned herring and pilchard, especially United States brands, because of a lower demand, due mainly to price and lack of supplies. Canned salmon and horse mackerel from the United States are not much in demand, although in the lower income groups there is a market for Japanese horse mackerel packed in tomato sauce. With the exception of the higher income groups, the lower income groups prefer canned fish packed in tomato sauce.

The information in the table on canned sardines marketed in Malaysia was obtained from the survey. (United States Embassy, Kuala Lumpur, December 20, 1963.)

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FISHERIES TRENDS, THIRD QUARTER 1963:

A temporary ban on trawling in Malaysian waters was imposed by the Government in July 1963. Trawling permits had been sought by many prospective enterprises, including a number backed by joint Japanese-Malaysian interests. The lifting of the trawling ban depends on the completion of plans being drawn by the Ministry of Agriculture and Cooperatives to ease the hardships that trawl fishing will cause fishermen using more primitive methods.

In September 1963, prospects for improved east coast fishery marketing facilities were brightened by a M$1.5 (US$490,000) million Canadian contribution through the Colombo Plan. The money will provide cold-storage facilities at several locations. The first freezing plant will be installed at the port of Kuantan in 1964 and used by the Government to popularize local frozen fish. (United States Embassy, Kuala Lumpur, November 26, 1963.)

Morocco

CANNED FISH EXPORTS, JUNE-SEPTEMBER 1962-63:

Exports of canned fish by Morocco during June-September 1963 were substantially higher than for the same period in 1962, but lower than in 1961. Total canned fish exports amounted to 963,942 cases during June-September 1963 as compared with 897,382 cases in 1962, and 1,053,531 cases in 1961. Exports of sardines during the 4-month period of 1963 totaled 728,542 cases as compared with 733,574 cases in 1962 and 828,393 cases in 1961. Canned tuna exports amounted to 36,737 cases during June-September 1963 as compared with 60,125 cases in 1962. Exports of other fish rose to 198,663 cases from 103,684 cases in 1962. (United States Embassy, Rabat, November 28, 1963.)

Netherlands

VIEWS ON NORTHEAST ATLANTIC AND EUROPEAN FISHERY POLICIES:

The Netherlands Minister of Agriculture and Fisheries has announced that the Northeast Atlantic Fisheries Commission, set up under the 1959 Northeast Atlantic Fisheries Convention, will hold its first meeting in The Hague, May 11-17, 1964, at the invitation of his Government. The meeting should show whether participants are willing to implement the Convention's provisions which are designed to prevent overfishing in the northeastern section of the Atlantic Ocean. As far as the Netherlands is concerned, measures going beyond those laid down in the previous Convention are acceptable only if made subject to international inspection.

herlands (Contd.):

The Minister welcomed a British initiative inviting European Economic Community (EC) and European Free Trade Association (EFTA) countries as well as Ireland, Iceland, and Spain to an international conference in London on December 3, 1963, to discuss the problem of unilateral extension of national fishing limits. In addition other problems were aired including access to fishing areas, trade in fish, fisheries policy, and police supervision.

The Government is also in favor of a common EEC fisheries policy which would rule out any national measures detrimental to Community partners and preferably make territorial waters of EEC countries accessible without restriction to all fishermen of all present or future members. (United States Embassy, The Hague, December 10, 1963.)

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STER INDUSTRY DECLINES:

In the 1961/1962 season, a total of 30 million oysters was harvested in the Netherlands, but a few more years may see the end of this century-old oyster culture which is concentrated around the port of Yerseke in Zeeland, the province of islands in southwest Holland. The Oosterschelde estuary (which is the cradle of the Dutch oyster industry) will be cut off from the sea by the construction of the Delta flood-prevention dyke. That famous oyster area will become a lake unfit for oyster culture when the Delta project is completed in about 10 years.

The intense winter cold of the 1962/1963 season created a crisis in the industry. Out of 150 million oysters, only 0.05 percent survived, and those few were not capable of continuing propagation. Under normal circumstances, Dutch oyster farmers would not have hesitated to import foreign oysters to continue their trade. But shortly after the winter disaster, the threatened industry was further discouraged by cancellation of the Government's project to develop an artificial oyster-rearing basin. (The artificial rearing project was said to have failed because of changes in the structure of the Delta flood control project.)

It was reported in the fall of 1963 that only 13 of the 150 Dutch oyster farmers would continue their culture. The others had various choices. Indemnification was expected from the Government. Some were reported to be planning to switch to mushroom farming. Others were discussing the possibility of seeking new areas for oyster cultivation in foreign countries. (Fishing News, October 4, 1963.)

Note: See Commercial Fisheries Review, November 1961 p. 58.

Nicaragua

SPINY LOBSTER FISHING REGULATIONS ESTABLISHED:

By a decree, effective November 20, 1963, the Government of Nicaragua has established regulations on spiny lobster fishing in Nicaraguan waters. The regulations are as follows:

Article 1. It is forbidden to catch, buy, keep, process, store, transport, sell, and export lobsters which show external eggs, as well as to remove them by any means.

Article 2. It is forbidden to catch lobsters whose length is inferior to 20 centimeters (7.9 inches), measured from the "pinzers" to the terminal part of the tail.

Article 3. Upon the violation of the dispositions contained in the present decree, when reported by the respective inspector, the Director of Natural Resources of the Ministry of Economy is authorized to impose a fine on the violator, not higher than Five Thousand Cordobas ($5,000 or about US$714) and not less than One Thousand Cordobas ($1,000 or about US$143). In case of repetition of the offense, the imposed fine can be increased to double in each case. The payment will be effective by law.

Besides the established sanctions in the above paragraph, the respective authorities can impose on the offender the following penalties: thirty days of arrest, confiscation of the seized lobster, of the working implements, and the cancellation of the license or fishing permit.

Article 4. In case of arrest, referred to in the above article, the police judges

Nicaragua (Contd.):

will be competent in their respective jurisdictions, admitting all proofs and resources established by the Law. (United States Embassy, Managua, December 12, 1963.)

Norway

EXPORTS OF CANNED FISH, JANUARY 1-SEPTEMBER 28, 1963:

Norway's total exports of canned fish in January 1-September 28, 1963, were 10.5 percent less than in the same period of 1962. The decline affected all of Norway's principal canned fish products.

Norwegian Exports of Canned Fish, January 1-September 28, 1962-63

Product	1/1963	1962
	(Metric Tons)	
Brisling	3,782	4,479
Small sild	10,289	10,781
Kippered herring	2,318	3,175
Soft herring roe	621	719
Sild delicatessen	321	369
Other canned fish	2,410	2,428
Shellfish	1,147	1,388
Total	20,888	23,339

1/Preliminary.

In 1963, the small sild canning season opened on May 2. By October 26, 1963, the small sild pack amounted to 537,087 standard cases, up 15.6 percent from the pack of 464,470 cases in the same period of 1962.

The 1963 brisling packing season extended from June 4 to October 15. At the close of the 1963 season, a total of 276,904 standard cases of canned brisling had been packed, a decline of 33.6 percent from the pack of 416,887 cases in the previous year. The Norwegian brisling catch was rather poor in the fall of 1963.

The production of canned mackerel up to October 12, 1963, amounted to 1,365 metric tons as compared with 2,062 tons by the same date in 1962. (Norwegian Canners Export Journal, November 1963.)

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PROPOSED REFINANCING OF STATE-CONTROLLED FISH-PROCESSING COMPANY:

A Government proposal for the refinanci of A/S Finmark og Nord-Troms Fiskeindust (FiNoTro), a fish-processing company oper ating seven plants in the Troms and Finmar Counties of northern Norway, was submitte to the Norwegian Storting (Parliament) in la 1963. More than 90 percent of the stock of FiNoTro is owned by the Government and th rest of the shares are held by various fishin unions and the Norwegian Society of Coopera tives. The proposed refinancing would provide FiNoTro with N. Kr. 12 (US$1.7 million) to modernize its plants, and Kr. 2.5 million ($350,000) to settle certain debts. A total of Kr. 10 million ($1.4 million) of the company's Kr. 14.5 million ($2.0 million) share capital is considered lost and is to be written off. The Storting was asked to grant Kr. 12 million ($1.7 million) in the current fiscal year for new share capital in FiNoTro, and to authorize the Norwegian Ministry of Finance to transfer Kr. 2.5 million ($350,000) from a special fisheries fund to FiNoTro. The remainder of the capital needed will be supplied by the other shareholders in FiNoTro. The bill also recommends certain measures designed to improve the efficiency of the company, including a reorganization of its management. Two of the seven plants making up FiNoTro are to be closed down. (United State Embassy, Oslo, Norway, December 7, 1963.)

Panama

SPINY LOBSTER EXPLORATORY FISHING PROJECT CONCLUDED:

M/V "Pelican" Cruise 16 (December 5-19, 1963): The last survey of stocks of spiny lobsters off Panama by the chartered commercial fishing vessel Pelican was conducted during a 2-week cruise in December 1963 when experimental and simulated commercial lobster fishing was carried out in the northwest section of the Gulf of Panama. The cruise off Panama was one of a series conducted by the U. S. Bureau of Commercial Fisheries through an interagency agreement with the U. S. Agency for International Development (AID) Mission to Panama as an Alliance for Progress program.

nama (Contd.):

The total catch during the cruise in De-
ber 1963 amounted to 2,847 lobsters
758 pounds). The catch was composed of
4 spiny lobsters (Panularis gracilis) or
5 pounds, and 1,813 rock lobsters (Scyl-
ides sp.) or 1,503 pounds.

The first week of the cruise was devoted
raining and involved the use of 180 wood-
t traps. During that time, 154 lobsters
pounds) were caught.

During the second week, operations were
ntered in the San Carlos-Rio Hato area
ere trawling on rocky bottom was conduct-
with a 40-foot shrimp trawl rigged with
stic mud rollers and a tickler chain. Of
total of 45 drags (averaging 90 minutes
ch), 40 were successful in taking lobsters.
e total trawling catch was 990 spiny and
03 rock lobsters. The best drag produced
lobsters. Gear damage was limited to 1
n net and 4 broken tickler chains.

Comparative drags made during daylight
nighttime revealed no discernable differ-
es in catch rate, indicating good possibili-
s for successful round-the-clock commer-
l fishing.

The presently unused rock lobster, which
f excellent quality in both meat yield and
or, appears suitable for commercial ex-
itation.

A brief visit was made to the scallop fleet
ch was working the beds discovered dur-
Pelican Cruise 15 in September 1963.
15 vessels in the area were each fishing
two 6-foot dredges. Due to high catch
es, the fishermen were allowing only 5 to
inutes per drag. Full vessel loads were
ng taken in two days of fishing, working
y during daylight hours.

The M/V Pelican was scheduled to return
the United States in early 1964.

See Commercial Fisheries Review, December 1963 p. 76.

ru

SHING INDUSTRY
NG-RANGE FORECAST:

In Peru, an annual growth rate of 5 per-
t for the tuna industry and 12 percent for the fish meal industry during the current decade is predicted by the Peruvian National Society of Industries in a publication based upon material from the Peruvian Central Reserve Bank's study "Programacion del Desarrollo."

The forecast of 5 percent growth in the tuna industry for the period 1961 to 1971 was based on estimated domestic Peruvian consumption alone. Increased Japanese competition in foreign tuna markets could limit the growth of Peruvian export tuna sales.

It was estimated that the international market for fish meal could reach 3 million metric tons per year by 1967. Assuming Chilean production may reach 550,000 tons, Icelandic 150,000 tons, South African 230,000 tons, and other countries 300,000 tons, the demand for Peruvian meal could still reach 2 million tons. This assumption was the basis for the prediction that Peruvian fish meal production increases for the period 1961 to 1971 should average 12 percent per annum. The future of fish oil production was viewed as uncertain, and no estimate was made of possible increases. Production of sperm oil and whale meal will remain about at present levels, according to the forecast. (United States Embassy, Lima, December 5, 1963.)

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ESTIMATED EXPORTS OF FISH MEAL AND FISH OIL, 1963:

Unpublished estimates of Peru's 1963 exports of fish meal and fish oil were: fish meal, 1,160,000 metric tons; fish oil, 106,863 tons. Fish meal stocks on hand as of September 30, 1963, were estimated to be 114,659 tons. No estimates were given on stocks of fish oil on hand as of that date.

Although Peru's production of fish meal in 1963 was expected to be less than earlier predicted, the January-October 1963 production was well ahead of the same period a year earlier (903,437 metric tons as against 819,638 tons).

Exports of fish meal in 1963 were up from 1962 as a result of the good world demand, and stocks of both fish meal and fish oil at the end of 1963 were expected to be lower than usual. (United States Embassy, Lima, December 20, 1963.)

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Peru (Contd.):

FISH MEAL EXPORT AGREEMENT EXTENDED:

By the Supreme Decree of December 12, 1963, the Peruvian Government ratified for another three years the international fish meal export agreement which was originally signed in Paris on October 1, 1960, by representatives of the Peruvian National Fisheries Society (Sociedad Nacional de Pesqueria) and the international Fish Meal Exporters Organization (FEO).

FEO establishes quotas for fish-meal exporting countries in order to maintain a balance between supply and demand. Under the original Paris agreement, Peru was allocated an export quota of 600,000 metric tons. Due to the rapid expansion of the fish meal market, the Peruvian quota has been steadily increased, having been set at 1 million long tons for 1963 and 1.2 million long tons for 1964. (United States Embassy, Lima, January 3, 1964.)

Poland

LANDINGS OF MARINE PRODUCTS AND SIZE OF FISHING FLEET, 1962-63:

Poland's target for ocean fish landings in 1963 was reported by the periodical Zycie Warszawy of December 13, 1963, to be more than reached. The prediction was that the 1963 marine fish landings would be at least 207,000 metric tons. As a result of the good landings, market supplies for home consumption increased. The target for the 1964 ocean fish landings has been set at 222,000 tons.

Table 1 - Poland's Fleet of Fishing Vessels, 1950, 1955, and 1960-1962

Type of Vessel	1962	1961	1960	1955	1950
	(Number of Vessels)				
Factory trawlers	5	2	1	-	-
Super trawlers 1/	66	57	53	8	-
Other trawlers	9	11	13	20	24
Lugger-trawlers	46	46	50	34	-
Luggers	1	3	3	3	3
Cutters	545	538	532	397	338
Auxiliary vessels	3	3	3	2	-
Total	675	660	655	464	365
Total Gross Registered Tons	104,900	91,700	87,600	43,200	18,200

1/Motor type B-20, steam type: B-14 and B-10.

In 1962, Poland's marine fish landings were down 3.1 percent from the previous year due to a sharp decline in the herring catch. Cod landings, however, were up substantially from 1961 and there were good increases for sprats and other species.

Table 2 - Poland's Marine Landings of Fishery Products, 1950, 1955, and 1960-1962

Fishery	1962	1961	1960	1959	195
	(Metric Tons)				
Groundfish	47,300	40,800	51,100	40,300	48,2
Herring	76,100	93,600	93,600	52,000	9,5
Sprats	13,700	11,300	9,900	5,100	1,2
Other	27,100	23,600	13,400	9,700	7,3
Total	164,200	169,300	168,000	107,100	66,2

Poland's fleet of sea fishing vessels continued to expand in 1962. The fleet gained 3 factory trawlers that year, as well as 9 super trawlers, and 7 cutters. There was a decline in the number of smaller trawlers and vessels classified as "luggers." The gross registered tonnage of the fishing fleet in 1962 was 14.4 percent greater than in 1961, and was about five times greater than in 1950. (Concise Statistical Yearbook of Poland, 1963.)

Note: See Commercial Fisheries Review, February 1963 p. 87.

Portugal

CANNED FISH EXPORTS, JANUARY-SEPTEMBER 1963:

Portugal's total exports of canned fish during the first 9 months of 1963 were down 7.8 percent from those in the same period of 19 due primarily to lower exports of sardines. The decline was partly offset by a considerable increase in exports of mackerel. Sardines accounted for 73.7 percent of the 1963 exports of canned fish, followed by mackerel with 9.8 percent, anchovy fillets with 7.4 percent, tuna and tuna-like fish with 5.6 percent and chinchards with 2.9 percent.

Portuguese Canned Fish Exports, January-September 1962-1963

Product	January-September			
	1963		1962	
	Metric Tons	1,000 Cases	Metric Tons	1,000 Cases
In Oil or Sauce:				
Sardines	33,924	1,785	39,305	2,067
Chinchards	1,341	71	1,626	85
Mackerel	4,504	180	1,722	69
Tuna and tuna-like	2,590	86	2,833	94
Anchovy fillets	3,434	343	4,253	425
Others	258	14	214	11
Total	46,051	2,479	49,953	2,751

Portugal's principal canned fish buyers during January-September 1963 were Italy

rtugal (Contd.):

h 7,664 metric tons, followed by Germany h 7,397 tons, the United Kingdom 5,276 ts, the United States 5,073 tons, France 1 tons, and Belgium-Luxembourg 2,992 ts. (Conservas de Peixe, November 1963.)

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NNED FISH PACK, NUARY-SEPTEMBER 1963:

Portugal's total pack of canned fish in oil sauce in the first 9 months of 1963 was wn about 25 percent from that in the same riod of 1962. The decline was due mainly a sharp drop in the pack of sardines.

Portuguese Canned Fish Pack, January-September 1962-1963

Product	January-September			
	1963		1962	
	Metric Tons	1,000 Cases	Metric Tons	1,000 Cases
Oil or Sauce:				
ardines	19,818	1,043	30,781	1,620
hinchards	2,315	123	2,724	143
ackerel	5,414	216	5,838	233
na and tuna-like	5,381	180	4,856	162
nchovy fillets	2,956	296	3,938	394
hers	347	18	433	23
Total	36,231	1,876	48,570	2,575

Landings of sardines in January-Septem- 1963 totaled 65,285 tons. For January- gust, tuna landings were 905 tons and bonito tons--mostly used for canning. (Conser- de Peixe, November 1963.)

uth-West Africa

OTAS FOR 1963 AND 1964 LCHARD FISHERY INCREASED:

The Walvis Bay fishing industry in South- st Africa has been granted an additional chard quota of 60,000 short tons for the 3 season, to be divided equally among the factories. This makes a total quota for 1963 season for the pilchard industry of 0,000 tons, 100,000 tons per factory. By the d of August the total catch was 433,285 tons.

In announcing this extra quota the South- st Africa Administration stipulated that it uld not be a permanent increase.

The extra quota prolonged the season at lvis Bay for another month and the first tories closed early in October.

Most of the production from this extra quota was reduced to fish meal and used to meet an order from Japan for 20,000 tons of fish meal. Delivery of this order was due late in 1963 or early in 1964. It is also understood that the Japanese have been very impressed with the quality of South African fish meal.

The extra quota had to be granted to enable the industry to meet this order, as earlier production was sold in advance. It was estimated that at the end of the normal season the industry had about 5,000 tons of fish meal on hand.

The extra 60,000 tons have been given on the licenses of the two new fishing concerns in South-West Africa which were licensed by the Administration to catch and process pilchards into fish meal and oil. This means that the existing six factories will pay a share to the new companies for use of part of their quota.

At the time the new firms were licensed it was decided to fix the permanent yearly quota for the South-West African pilchard industry at 90,000 tons per factory, or 720,000 tons for the industry.

The two new factories must be in full production by the start of the 1965 season and may in the meantime work their quota through an existing factory. (The South African Shipping News and Fishing Industry Review, October 1963.)

Sweden

FISHING INDUSTRY TRENDS, 1962, AND ESTIMATE FOR 1963:

Summary: An oversupply of herring in 1963 forced prices down and checked the record prosperity experienced by the Swedish fishing industry in 1962. The large herring landings in 1963 were expected to result in new limitations on landings by both Sweden and Denmark. The extension of fishing limits by other countries has not yet affected Swedish fishermen, but an agreement made with Norway will handicap Swedish shrimp fishermen in 1965. No large change in the structure of the Swedish fishing fleet is expected within the next few years.

Sweden (Contd.):

Table 1 - Swedish Over-all Fishery Landings[1/], by Principal Species, 1961-1962

Species	Quantity		Value			
	1962	1961	1962		1961	
	(Metric Tons)		1,000 S. Kr.	US$ 1,000	1,000 S. Kr.	US$ 1,000
Herring	145,121	133,435	86,685	16,676	66,029	12,703
Baltic herring	16,520	16,100	11,104	2,136	10,727	2,064
Sprat	5,054	4,949	4,589	883	4,473	861
Cod	30,600	30,839	22,552	4,339	22,770	4,380
Haddock	3,321	4,410	3,993	768	4,918	946
Whiting	3,051	1,468	2,328	448	1,263	243
Ling	1,227	1,214	1,696	326	1,550	298
Other cod species	4,270	3,612	4,458	858	4,043	778
Flatfish	3,308	3,137	5,427	1,044	5,176	996
Mackerel	14,627	13,593	10,796	2,077	8,719	1,677
Eel	1,742	1,911	12,413	2,388	11,403	2,194
Salmon	1,339	1,564	6,078	1,169	7,586	1,459
Shrimp	5,724	4,462	25,763	4,956	20,304	3,906
Other shellfish	1,534	1,774	5,879	1,131	5,862	1,128
Unclassified fish	4,073	4,009	5,166	994	5,120	985
Industrial fish	41,433	26,255	7,316	1,407	4,336	834
Total	282,944	252,732	216,243	41,600	184,279	35,452

1/Includes landings in foreign ports.

Table 2 - Swedish Fishery Landings in Swedish Ports and in Foreign Ports, by Principal Species, 1961-1962

Species	Landings in Swedish Ports		Landings in Foreign Ports	
	1962	1961	1962	1961
	(Metric Tons)			
Herring	51,766	62,556	93,355	70,879
Baltic herring	16,520	16,100	-	-
Sprat	4,872	4,736	182	213
Cod	29,005	30,118	1,595	721
Haddock	2,779	3,946	542	464
Whiting	1,742	1,158	1,309	310
Ling	1,210	1,196	17	18
Other cod species	2,961	2,787	1,309	825
Flatfish	3,186	3,055	122	82
Mackerel	5,405	6,780	9,222	6,813
Eel	1,742	1,911	-	-
Salmon	1,339	1,564	-	-
Shrimp	5,712	4,460	12	2
Other shellfish	1,528	1,773	6	1
Unclassified fish	3,719	3,637	354	372
Industrial fish	31,958	21,883	9,475	4,372
Total	165,444	167,660	117,500	85,072

Landings: In 1962, Swedish fishery landings were up 12.0 percent in quantity and 17 percent in value from those in 1961, due to heavier direct foreign landings and higher prices in foreign ports. But in 1963 an over supply of herring filled cold-storage plants, drove prices down, and caused Swedish fishermen's income to drop by almost 30 percent. Limitations on landings in Swedish and Danish ports in 1963 were imposed too late to prevent market gluts. In the first half of 196 direct landings by Swedish vessels in Danish and West German ports totaled 66,813 metric tons as compared with 45,345 tons in the same period of the previous year.

Foreign Trade: In 1962, Danish over-all exports of fishery products (including direct landings in foreign ports) were up 15.7 percent in quantity and 29.8 percent in value from those in 1961. Again, the increase in exports was due mainly to larger direct landings in foreign ports by Swedish vessels. Export landings and shipments of fresh and frozen fish accounted for almost 97 percent of the total exports. The leading buyer of Swedish fishery products was Denmark, followed by West Germany and East Germany.

Swedish imports of fishery products in 1962 were up 11.2 percent in value from those in 1961, but the quantity was almost the same in both years. Norway was the leading supplier of Swedish fishery imports, followed by Denmark and Iceland.

Fishing Fleet: The value of the Swedish fishing fleet in 1961 was calculated to be S. Kr. 217.5 million (US$41.9 million) for fishing craft and Kr. 76.4 million ($14.7 million) for gear, indicating a total investment of Kr. 293.9 million ($56.6 million). It was estimated that in 1962 the value of fishing vessels increased by 25 percent and that of gear by 3 percent. In the first half of 1963, only 1 new

Table 3 - Swedish Exports[1/] of Fishery Products, by Commodity Group, 1960-1962

Product	1962			1961			1960		
	Million S. Kr.	Million US$	1,000 Metric Tons	Million S. Kr.	Million US$	1,000 Metric Tons	Million S. Kr.	Million US$	1,000 Metric Tons
Fresh and frozen fish	100.1	19.2	149.0	76.3	14.7	128.7	69.1	13.3	119.5
Fresh and frozen fish fillets	0.9	0.2	0.4	1.0	0.2	0.4	1.0	0.2	0.3
Salted, spiced, or sugar-salted herring	2.9	0.5	2.0	2.0	0.4	1.6	3.5	0.7	3.4
Other salted, dried, and smoked fish	0.4	0.1	0.0	0.4	0.1	0.0	0.5	0.1	0.1
Shellfish	1.4	0.3	0.5	1.0	0.2	0.5	1.0	0.2	0.4
Canned fish and shellfish	9.9	1.9	2.0	8.2	1.6	1.8	8.2	1.6	1.9
Other prepared fish products	1.1	0.2	0.3	1.0	0.2	0.2	1.8	0.3	0.5
Total	116.7	22.4	154.2	89.9	17.4	133.3	85.1	16.4	126.1

1/Included are direct landings by Swedish fishermen in foreign ports: in 1962--117,500 metric tons, valued at Kr. 69.9 million (US$13.4 million); in 1961--85,300 metric tons, valued at Kr. 40.6 million ($7.8 million); and in 1960--66,100 metric tons, valued at Kr. 30.2 million ($5.8 million).

weden (Contd.):

Table 4 - Value of Swedish Exports[1] of Fishery Products, by Country of Destination, 1960-1962

ntry of Destination	1962	1961	1960
	(Million Swedish Kronor)		
mark	74.3	35.3	25.5
: Germany	11.1	18.4	21.5
nce	2.5	1.4	0.8
ted Kingdom	1.9	3.5	3.1
way	2.8	1.9	1.5
ted States	2.5	2.8	2.6
t Germany	14.8	19.6	22.1
er countries	6.8	7.0	7.6
otal Value of Swedish Fishery Exports[1]	116.7	89.9	2/84.7

Includes the value of direct landings in foreign countries.
Does not agree exactly with corresponding total in table 3.

teel trawler was delivered as compared with 8 in 1962. It appears that the modernization of the Swedish fishing fleet has leveled off with Swedish fishermen carefully studying market developments before planning further investments.

The number of full-time Swedish fishermen in 1962 was 8,967, only a small decrease from the 9,041 reported the previous year. Better fishery employment opportunities on the west coast in 1961 halted that area's downward trend and arrested the national decline in fishing employment evident since 1946.

Outlook: Little change in the structure of the Swedish fishing fleet is anticipated in the next few years. The size of vessels used by Swedish fishermen is not expected to exceed 100 feet, the size of the largest trawlers now in use. Modernization of the fleet will continue on a small scale in the form of more powerful engines and more efficient gear and equipment. The number of fishermen is expected to decrease in the areas where fishing is not as profitable as employment in other industries. This will particularly affect the number of fishermen on the east and south coast of Sweden.

Herring: The large herring landings in 1962 and particularly in the summer and fall of 1963 revealed that the organizations concerned with landings and prices do not have sufficient control over the situation during periods when there is an oversupply. Representatives of Swedish and Danish fishery organizations in late 1963 discussed the question of landings in Danish ports. Danish fishermen and their organizations, which had previously neglected limitations on herring landings and the maintenance of minimum prices on herring for consumption, agreed to follow the principles established by Swedish fishermen and their organizations. The heavy landings were partly the result of a good supply of 1960 class herring, but the increase in the number of fishing vessels from Denmark, West and East Germany, and the United Kingdom contributed to the large landings. Swedish fishery organizations have emphasized the importance of having a domestic processing industry with a high capacity, but fluctuations in the market have been a hampering factor.

It has been suggested that Swedish west coast fishermen could change over from fish-

Table 5 - Swedish Imports[1] of Fishery Products, by Commodity Group, 1960-1962

Product	1962			1961			1960		
	Million S. Kr.	Million US$	1,000 Metric Tons	Million S. Kr.	Million US$	1,000 Metric Tons	Million S. Kr.	Million US$	1,000 Metric Tons
sh and frozen fish	39.3	7.5	14.3	33.3	6.4	14.0	31.1	6.0	13.0
sh and frozen fish fillets	26.5	5.1	8.1	18.1	3.5	5.9	17.0	3.3	5.8
ted, spiced, or sugar-salted herring	32.9	6.3	24.8	35.0	6.7	27.3	22.4	4.3	19.5
er salted, dried, and smoked fish	8.1	1.6	2.1	9.2	1.8	2.7	7.0	1.3	2.2
llfish	8.9	1.7	2.0	7.6	1.5	1.6	5.4	1.0	1.0
ned fish and shellfish	21.0	4.0	3.7	19.5	3.7	3.4	20.1	3.9	3.4
er prepared fish products	9.9	1.9	2.8	9.1	1.7	3.0	8.0	1.5	3.0
Total	146.6	28.1	57.8	131.8	25.3	57.9	111.0	21.3	47.9

Included are direct landings by Danish fishermen in Swedish ports: in 1962--600 metric tons, valued at Kr. 2.5 million (US$0.5 million); in 1961--200 metric tons, valued at Kr. 1.6 million ($0.3 million); and in 1960--100 metric tons, valued at Kr. 0.6 million (US$0.1 million).

Table 6 - Value of Swedish Imports[1] of Fishery Products, by Country of Origin, 1960-1962

ntry of Origin	1962	1961	1960
	(Million Swedish Kronor)		
nada	1.7	2.0	1.8
nmark	42.1	38.4	31.7
st Germany	-	-	0.1
land	21.2	19.3	9.8
pan	2.4	2.0	3.6
rway	58.8	49.9	45.8
land	2.0	1.1	1.4
rtugal	3.6	3.0	2.6
viet Union	7.3	7.9	8.3
ited States	1.7	1.7	1.2
est Germany	1.5	2.0	1.8
her countries	4.3	4.5	3.1
Total Value of Swedish Fishery Imports	146.6	131.8	2/111.2

Includes the value of direct landings by Danish fishermen in Swedish ports.
Does not agree exactly with corresponding total in table 5.

Sweden (Contd.):

ing for herring to fishing for white fish. But the supply of white fish in the North Sea has been smaller than usual and herring fishing is under normal circumstances much more profitable. In addition, the craft and gear used by those fishermen have been adapted particularly to herring fishing.

As can be seen from recent import data (table 5), Sweden imports large quantities of salted, spiced, and sugar-salted herring. Previously, Swedish fishermen were actively engaged in herring fishing with drift nets in Icelandic waters, but for various reasons this type of fishing ceased. In 1963, however, the west coast fishermen's organization put up a guarantee, and 8 west coast trawlers made a 2-months trip to Icelandic waters in order to fish for herring with floating trawls. The experiment was not completely successful as out of an anticipated catch of 4,000 barrels, the vessels returned with only 2,000 barrels of salted herring. Bad weather with heavy storms and a general poor supply of herring were the reasons for the disappointing result. It was proved, however, that it is possible to catch Icelandic herring with floating trawls. The experiment also showed a possible way for the fishing organizations to decentralize fishing areas and landing ports, thus reducing the number of vessels in certain overworked areas and limiting landings in certain ports.

Shrimp: Shrimp fishermen on the northern part of the Swedish west coast will be excluded as of January 1, 1965, from a rich deep-water area in the Oslo Fjord. The west coast fishermen's organization has complained bitterly over the agreement between Norway and Sweden creating the exclusive area and will request financial assistance from the Swedish Government for the loss that fishermen may suffer. The organization has also proposed a Swedish import ban on Norwegian shrimp and crab, claiming that Norwegian fishermen are selling shellfish at prices which make it impossible for Swedish fishermen to compete. (United States Consulate, Goteborg, November 29, 1963.)

Taiwan

SHRIMP EXPORTS INCREASED IN 1963:

Exports of shrimp to Japan and the United States were reported by the Industrial Development and Investment Center of the Republic of China to have amounted to about 250,000 pounds prior to the date of the report (October 31). As of that date, an additional 120,000 pounds were ready for shipment to Japan. The Center estimated that 500,000 pounds of shrimp valued at about US$500,000 would be exported in 1963. (Taiwan Industrial Panorama, October 31, 1963.)

U.S.S.R.

FISHERIES CATCH GOAL INCREASED FOR 1964:

A 1964 goal of 4.9 million metric tons of fishery landings (including whales and other marine mammals) has been announced by the Soviet press. The 1964 goal represents an increase of about 8.9 percent over the estimated 1963 Soviet catch of 4.5 million tons. In addition to working developed fishing areas in 1964, the Soviet Union plans to send a fishing expedition into the Arabian Sea. Exploratory cruises will be conducted in the East China Sea and in the area off Iceland. (United States Embassy, Moscow, January 3, 1964.)

* * * * *

MARINE FISHERY PRODUCTION GOALS FOR 1963 EXCEEDED:

The Soviet periodical Izvestiva has announced that the 1963 U.S.S.R. plan for production of fish, marine animals (including whales), and other marine fishery products has been fulfilled ahead of schedule, with the total catch for 1963 estimated at 4.5 million metric tons. In 1962, the Soviet catch goal of 3.9 million metric tons was also reached ahead of schedule. (United States Embassy, Moscow December 6, 1963.)

* * * * *

SPECIFICATIONS OF FISH FACTORYSHIPS BUILT BY WEST GERMAN SHIPYARD:

A contract to build 8 floating fish factories for the Soviet Union was negotiated in August 1963 by the Government-owned shipyard at Kiel, German Federal Republic. Although

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

ress reports at the time of the announcement of the contract stated that the vessels ere to be of approximately 17,000 tons deadeight each, shipyard officials now state that e vessels will be of 10,000 tons deadweight ch. Other specifications of the vessels: er-all length 545 feet; beam 79 feet; molded aft 49 feet; draft 25 feet; engine 5,600 hp. esel; and estimated speed 14 knots.

Unlike the whaling mothership Vladivostok d her sistership the Daljnij Vostok, which ere built for the Soviets by the same shipd, the 8 vessels on order will not be deigned for whaling but will have facilities for rocessing fish oil, fish meal, and frozen and anned fish.

The vessels are scheduled for delivery uring 1965 and 1966 and it is not now known what areas they will operate. From a echnical point of view it is reported that ey will be capable of operating in a full rctic to tropic range. (United States Conulate, Hamburg, December 20, 1963.)

ote: See Commercial Fisheries Review, October 1963 p. 67; une 1963 p. 70; February 1962 p. 93.

nited Kingdom

ANNED FISH MARKETING TRENDS:

The per capita consumption of canned fish in the United ngdom increased steadily between 1953 and 1958, rising ne 113 percent in the 5-year period. On the other hand, per ita consumption of canned fish in the United Kingdom is still ow that in the United States. The relatively smaller use in e United Kingdom offers an opportunity for increasing sales, rticularly since the British market for convenience foods is wing.

Imports satisfy 90 percent of the British market for canned nery products. Between 1958 and 1962, the value of the imrts averaged US$95 million per year with, however, some le annual fluctuations.

Canned salmon accounts for about two-thirds of British mports of fishery products. Since the removal of exchange controls in 1958, British purchases of canned salmon in the United States have averaged $6 million per year, varying from $7 million to $3 million per year. In 1962, the United Kingdom took about 75 percent of all United States canned salmon exports.

Value of British Imports of Canned Fishery Products, 1958-1962 and 5-Year Average

Canned Fishery Product	1962	1961	1960	1959	1958	5-Year Avg. 1958-1962
	(Million US$)					
Salmon	84	43	60	84	69	68
Brisling & sild sardines, pilchards, & sturgeon roe	6	7	7	8	8	7
Other canned fishery products	26	17	21	16	20	20
Total	116	67	88	108	97	95

Canned brisling and sild sardines, pilchards, and sturgeon roe imports (which are dominated by exclusive suppliers) account for about seven percent of the value of British canned fishery imports. Excluding those products as well as canned salmon still leaves British canned fishery imports valued at about $20 million per year. These include various packs of crabs, tuna, shrimp, lobsters, oysters, clams, sardines, roe, fish paste, and other products.

Tuna is not presently a widely recognized canned fishery product in the United Kingdom. Canned tuna imports were valued at only about $2 million in 1961, the only year for which statistics are available. Peru supplied 80 percent of that total. British tuna consumption is probably less than three percent of canned salmon consumption. However, distributors say consumption is increasing and, in view of the growing importance of convenience foods, there is every reason to believe that high-quality tuna could be marketed on a large scale, if supported by adequate advertising. There is certainly a sales potential at least as a specialty food.

A display of canned fishery products at a Trade Center exhibit in the United Kingdom could attract attention from British distributors, buyers, caterers, and other consumers. Foods other than fish could be included in an exhibit since most buyers and importers handle a variety of lines. (United States Embassy, London, December 13, 1963.)

* * * * *

STERN TRAWLING REVIEWED AT CONFERENCE:

"Stern trawling" was the subject of the first major conference organized by the British White Fish Authority. The meeting was held in Grimsby, England, September 10-11, 1963. The 300 or more delegates from nine countries were a clear indication of the anxiety of both the catching and construction sides of the industry to put stern trawling under the microscope in order to assess its true potential. Although some nations and some individual companies have already made the decision to adopt stern fishing completely, there are still those who regard it as being economic only for large distant-water vessels. This conference offered an ideal opportunity for experiences to be compared and arguments for and against to be put forward.

Many of the delegates were representing ancillary industries such as engine builders, hauling gear manufacturers, and so on, all vitally interested in the various techniques so far employed on stern trawlers, and in their effectiveness. In a comparatively new field such as this, shipbuilder, owner, and gear manufacturer must pool resources in order to achieve the most effective solution for hauling and shooting the trawl.

United Kingdom (Contd.):

The subjects covered by the speakers tended to conform to this pattern. A British speaker set the scene by stating the problems of the trawler owner contemplating his first stern trawler and the economic factors which he has to consider. For the designer, a West German spoke on structural, layout and stability problems and later on hauling methods, trawl deck length, etc. Later speakers described operational experience with existing vessels; a Norwegian described how the Hekktind, Vaagtind, and smaller Hessatral and Hessagut were designed to suit the legislative and economic restrictions of Norway; a Frenchman spoke on the Thalassa and Hiram I and another speaker described Colonel Pleven II. British experience was illustrated by talks on the Junella and on the Fairtry's.

The latter half of the meeting looked toward future trends, with papers from two experts of the White Fish Authority.

Certain key points of discussion were of especial interest, and the views of various speakers on those points follow:

While the stern trawler had undisputed advantages as a long duration freezer vessel, its catching power as a fresh-fish trawler must be compared with that of the less expensive side trawler. Quicker handling of the gear and ability to work in worse weather gave the stern trawler an advantage in time actually spent fishing, but this could be offset by the higher speed of the conventional vessel, which also had a morale-boosting effect on the crew, said one British speaker. In practice, a 13-knot stern trawler compared with a 15-knot side trawler in catching power. Another British speaker had observed a desirable trend on the Junella, namely a higher average age of crew, which suggested that the stern trawler might help solve labor problems, and this was confirmed by another British speaker who had found that stern trawling seemed to attract the crew most suited to it. The Junella spent 327 days out of 365 at sea and with eight men on deck could haul, change a trawl, and shoot again in 30 minutes. The Vaagtind's trawl was on the bottom for 58 percent of her sea time, and the time taken to change a trawl was 10 minutes.

The shelterdeck stern trawler, with its extra freeboard and high ramp aft was inherently safer than a side trawler. This assumed that there were ample freeing ports on deck as that there were no 'tween deck apertures open. There was little evidence to show that following seas could be a great danger, but a stern gate could minimize the risk; fish hatches must be able to be closed quickly, and though pneumatics were fast, they could freeze. Hydraulics can do the job in four seconds, however. A safety gate of the Fairtry type, which rose vertically by hydraulic power, could clear most cod end bags at a man's waist height so that he has something to grasp if swept aft. Stability was good on a stern trawler and there was less danger from icing.

It should not be imagined that the stern trawler's warps always lay fair behind her. Angles of 90 degrees to the vessel had been experienced and with the towing point so far aft, manoeuvring was difficult. One solution suggested was a bow propeller or "thruster," utilizing spare electric capacity when towing. The other possibility was a rudder nozzle, unless some method could be found of taking the towing strain further forward.

For the same reasons, it was difficult to come round on fouled gear as a side trawler could. Most could be cleared by hauling the ship back over the gear and using sheer force, though the Fairtry ships, with their after gallows, had found it possible to go astern between the warps, and so tow the gear free. It was important that the shape of the stern and the design of the warp fairleads was such that up-and-down warps and warps at 90 degrees horizontal angle should not chafe the hull plating.

Opinion was general that, in order to get the trawl aboard in no more than three heaves, the slip deck, or trawl deck should be as long as possible--75 feet being favored as a minimum. However, as one speaker pointed out, it was questionable whether the one heave eliminated by carrying the deck right forward was worth the loss of weather protection. The advantage of the Colonel Pleven II observation bridge wing was considerable, however. As for the system whereby the bight of the net was left trailing aft, the speaker thought this would be a drawback when having to change grounds or steam back over the tow. He thought there was a risk of over-complication of hauling gear, and enumerated no less than 10 wires and messengers which had to be operated. To use independent, specialized winches and capstans would mean 7 of these--too much for remote control by one man. Proper-

nited Kingdom (Contd.):

arranged through divided fairleads, they fered no problem to the whipping drums. he Fairtry's had used an independent cod d winch, with spring accumulator gear to sorb surge and had found it ideal. They so had a warping capstan aft for an out- l messenger when shooting.

The French speaker described in detail, e special movable warp fairlead fitted to e sides of the Thalassa's ramp to prevent e danleno butterfly fouling the rampslip and stop chafe between ramp and warp, bridles, c. This seemed to provoke little interest, ssibly because the detailed description sug- sted a lengthy procedure. In fact, there emed little to choose between hauling meth- ds, the long-established Fairtry method eming to hold its own with newer systems. mphasis was placed on the need for a bar- er around which the bobbins could be hove ght to stop them rolling and split cod ends ere favored by several speakers--they stop- d the "bag" rolling and they halved the nance of loss through torn meshes. The Va- gtind had hauled a 35-ton bag without trouble nd in one heave. Rollers at the top of the mp were no longer considered to damage e catch, and saved much chafe. "Ulstrom" as now widely used for the whole trawl and e Norwegian oval trawl door was recom- ended by British experience.

The split-trawl winch, with mechanically- iven warp guiding gear was generally ac- pted as the future pattern. There was a der acceptance, too, of hydraulic power, mote control, and (with one notable excep- n) multiple specialized winches in key po- ions. Another British speaker, in discuss- g the Ross Daring, was quite confident that e skipper could handle the winch from the eelhouse.

There was some concern over winch akes. On a side trawler, friction was ap- ied to the warps by their circuitous path und the bollard fairleads, but on a stern awler the winch brakes took the whole load hen paying away the warps. Some improve- ent had been made on the Fairtry vessels using special linings, but one British peaker thought that some tensioning system as desirable. A Norwegian discussed the e of regenerative braking, by which the inch drives its motor, which acts as a gen- rator and applies braking effort. However, this required specially designed worm gear, or better, bevel gear, which would take the reverse loads. Although hydraulics would act in this way, there was a danger of damage should a high pressure system be overspeed- ed. One speaker reported no trouble, proba- bly due to slower shooting speeds. No men- tion was made of warp tensioning or metering devices, and the United States-type powered drum for winding on the trawl was criticized on the grounds that net repair and inspection was made difficult.

The conference ended with papers by the two White Fish Authority experts. One of the speakers suggested the need for designing now for the pattern of fisheries which we can expect in, say, 10 years' time. He had in mind the possibility of a greater protection of home grounds and greater exclusion from distant grounds, which could call for a more efficient inshore and near-water fleet. A number of "standard" designs were described, some of which had already been built in Nor- way. The other British expert discussed the relative merits of various engine arrange- ments, Diesel electric drive, and stern trawl- er specification generally.

In closing the meeting, the chairman of the White Fish Authority made an outspoken ap- peal to trawler owners, asking them to be less secretive and more ready to add their experi- ence to the general pool of knowledge. (World Fishing, November 1963.)

Venezuela

NEW SHRIMP-PROCESSING PLANT:

A new Venezuelan shrimp-processing plant was opened on the west side of the Paraguana Peninsula, northeast of Maracaibo, Venezuela, during the latter part of 1963. The plant ca- pacity is not known. The new firm, which is associated with a Philadelphia fishery firm, plans to process and export shrimp to the United States. The plant is adjacent to the Gulf of Venezuela which, together with Lake Maracaibo, are the principal fishing areas of shrimp vessels operating in Venezuela. (Unit- ed States Embassy, Caracas, December 24, 1963.)