



International

CONCURRENT OAS AND FAO
CONFERENCES ON AGRICULTURE

SIGNIFICANT FACTORS IN FISHERIES DEVELOPMENT:

Development of fisheries in Latin America was a topic of discussion at the Concurrent Organization of American States and the Food and Agriculture Organization Conferences on Agriculture in Mexico City, August 8-20, 1960. This was the Fifth OAS Conference on Agriculture and the Sixth FAO Regional Conference for Latin America.

The discussion of the development of fisheries revolved primarily around three proposals that had been submitted and which were approved. These were:

1. A Mexican proposal to encourage countries to establish agricultural fish-cultural services to convert inland waters into new sources of food supply.
2. A Mexican resolution recommending that the Governments pay more attention to fishery administration and research, to take into consideration the facilities of FAO and OAS, and that the Directors of FAO and OAS give the greatest possible attention to international conferences, seminars, and scholarships in the fishery sciences and especially to fishing administration.

3. A Panamanian recommendation to establish in Panama, in cooperation with other Governments of the region, a regional fishery institute to undertake studies, investigations, experiments, training, and extension in all branches of fisheries. This proposal asks the Director-General of FAO to assist the interested Governments in requesting money from the United Nations Special Fund for financing and for the preparation of plans for the institute.

EUROPEAN COMMON MARKET

EFFECTS OF EEC AND EFTA ON SCANDINAVIAN FISHERIES:

Speaking at the Nordic Fisheries Conference, held in Karlskrona, Sweden, August 16-18, 1960, the Danish Fisheries Ministry declared that development of the European Economic Community or Common Market (EEC) and the European Free Trade Association (EFTA) posed many new problems for the European fishing industry. However, he continued, the interests of the Scandinavian countries were so closely identified that they should be able to pursue the common policy necessary to insure satisfactory competitive conditions for their fisheries.

The Minister focussed his attention on marketing problems in the new European economic area organizations, while pointing out that combined fish exports from Denmark, Iceland, Norway, and Sweden during 1959 totaled about 100 million Danish kroner (US\$14.5 million) more to EFTA than to EEC customers. He listed as the principal problems: (1) the relationship of Finland and Iceland to the market formations; (2) a satisfactory solution within EFTA of the fresh fish question; and (3) the accommodation of Scandinavian export interests within EEC, where tariff and quota restrictions loom especially large and where, moreover, internal fishery policy has not yet been determined.

Without attempting to offer definitive solutions to these problems, he did point out that the expected general expansion of trade within EFTA should have a wholesome effect on the trade in fish products, regardless of whether or not tariffs are eliminated on fresh fish and related items. The direct advantages to be derived from the Stockholm Treaty, he continued, are that tariffs and quotas will be gradually removed for canned fish, frozen fillets, fish oil, fish meal, and fish solubles, always allowing for the possibility that this might backfire against Sweden and Denmark, to the added advantage of Norway. Denmark itself can expect a substantial increase in imports of canned fish, the only fish product on which a Danish duty is imposed at present. Portugal will probably supply a large portion of this increase, with higher grades of canned fish coming from Norway and Sweden, the latter especially furnishing herring in other than airtight containers.

With regard to opportunities afforded Scandinavian fisheries for expansion in EEC markets, the Minister asserted that there are powerful elements within the EEC countries striving for protectionism and self-sufficiency in fishery production. At the same time, however, there are circles within these countries which understand clearly the foolishness of such a policy and see the greater benefits of a common European fishing policy and free trade, such as have hitherto been striven for in negotiations within the Organization for European Economic Cooperation.

We must hope, he concluded, that the liberal forces will prove to be the most influential within EEC and will prevent the adoption of restrictive fishery policies. However, the EEC tariffs which will become effective on January 1, 1962, do not reflect a particularly liberal attitude but on the contrary contain certain duty increases which might have an appreciable effect on some exporting countries.

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At the subsequent annual meeting in Copenhagen of the Danish Fish Trade and Ocean Fishery Association, the organization's president predicted that the formation of the EEC would force Danish fishermen to bear the cost of a heavy duty on fish exported to West Germany, thus cutting into the fishermen's profits. He saw little hope for effecting a downward revision of the duty by bringing the matter before GATT.

Speaking at the same meeting, the Danish Fisheries Minister was less pessimistic about the ability of Danish fishermen to find profitable markets for their catches. And he asserted that the German marketing problem would not have been completely solved had Denmark refrained from joining the EFTA or even had she joined the EEC. (United States Embassy, Copenhagen, September 15, 1960.)

EUROPEAN FREE TRADE ASSOCIATION

IMPORT TARIFFS REDUCED:

On July 1, 1960, seven countries in Western Europe reduced by one-fifth their protective import duties on practically all the industrial products coming from each other.

At the same time insofar as these seven countries still limit imports from each other by "quota" or quantitative import restriction, these quotas are being relaxed to allow 20 percent more trade.

It is proposed that, by 1970 there will be free trade in the goods covered by the Convention of the European Free Trade Association. The full membership makes up a single market with a population of 90 million. The seven countries (Austria, Denmark, Norway, Portugal, Sweden, Switzerland, and the United Kingdom) are among the most important international traders, and these are interesting facts about them:

1. Three-fifths of their foreign business is outside Europe altogether. In the case of Britain 75 percent or more of her trade is outside Europe; 50 percent of her total trade is with her Commonwealth partners.
2. The seven countries do about a quarter of their business with the European six, or European Common Market countries (Germany being their main trading partner).

3. The seven countries enjoy a higher average standard of living than the rest of Europe.

The high living standards of the 90 million people in the EFTA have been established by the importation of goods; for these countries are not endowed by nature to be self-suffi-

cient. Their strength has been built up by buying and selling abroad.

The seven countries need foreign goods, and as they prosper through freer trade among themselves, the demand for imported goods will grow.

They are not likely to fall into a protective ring. They are pledged in GATT to consider the reciprocal reduction of tariffs on a world-wide basis. They are ready to find common cause with the other European group--the European Economic Community--in a United Europe, if terms acceptable to both groups can be negotiated.

In the meantime EFTA is going ahead--reducing barriers to trade between its members. (British Affairs, September 1960.)

Note: See Commercial Fisheries Review, July 1960 p. 47.

FISHING LIMITS

ICELAND-UNITED KINGDOM NEGOTIATE ON FISHING LIMITS:

The Icelandic Ministry for Foreign Affairs announced September 21, 1960, that talks with the United Kingdom on the two-year-old dispute over the Icelandic 12-mile fishing limit were due to open in Reykjavik October 1.

Both Icelandic opposition newspapers greeted the announcement with alarm and predicted disaster. Both papers called for popular manifestations against compromise of the 12-mile limit.

In September, 79 British trawlers were reported to be operating in waters adjacent to Iceland, but outside the 12-mile limit in accordance with the truce being observed by the British fishing industry. (United States Embassy, Reykjavik, September 22, 1960.)

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BRITAIN AGREES TO RECOGNIZE NORWAY'S FISHING LIMITS:

Britain and Norway on September 29, 1960, announced that they had agreed that British trawlers may fish up to six miles off Norway for the next ten years (ending October 31, 1970), but after that must keep at least 12 miles off the Norwegian coast.

The agreement was concluded in Oslo, but it must be ratified by the Parliaments of

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both countries before it becomes final. Until ratification, British trawlers will continue to fish up to 4 miles of the Norwegian coast. The agreement is a compromise between Norway's claim to territorial and fishing limits of 12 miles (from which all foreign trawlers would be excluded) and Britain's refusal to recognize the claim.

Also, the agreement covers the registration and identification of vessels, the marking of fishing gear, and the regulation of fisheries as between different types of vessels. It provides for both parties not to fish in specified areas in certain seasons. The purpose of the rules is to avoid interference with fishing and damage to fishing gear. Rules will apply to the waters off Norway in which United Kingdom and Norwegian vessels are fishing, including the 6-12 mile zone during the transitional period.

Traditionally, the British government has never recognized the right of any other state to prohibit fishing beyond a three-mile limit. Norway was the only country which Britain had conceded could move the fishing limits to four miles.

Under the new agreement, British vessels will be able to fish between six and 12 miles off the Norwegian coast until October 31, 1970. After that, the British trawlers will be barred inside 12 miles of Norway's shore.

Four limited areas in the 6- to 12-mile belt will be prohibited to fishing vessels of either Britain or Norway in certain seasons.

The Anglo-Norwegian fishery negotiations took place in Oslo from September 22-28, 1960, and ended successfully.

In reaching this agreement, both sides have had in mind the importance of resolving on a practical basis the problems which will arise in the light of Norway's declared intention to extend the fishing limits around its coasts, and of reconciling, to the greatest possible extent, the interests of the fishing industries of both countries that good relations may be maintained. With this aim it was agreed that as far as possible the agreement should be based on the proposal put forward jointly by the Governments of the United States and Canada at the second United Nations Conference on the Law of the Sea in 1960 and which obtained 54 votes, including those of the United Kingdom and Norwegian Governments.

The enforcement of the rules will be a matter for the fishery protection vessels of both countries acting in cooperation and cases of infringement will be a matter for the flag countries of the vessels concerned to prosecute in their own courts. It has, however, also been agreed that in the 6-12 mile zone during the transitional period, the regulation of the fisheries shall be a matter for the Norwegian fishery protection vessels only, and although they will have no power to arrest United Kingdom vessels, they will be able to collect evidence of any infringements and report them to the United Kingdom authorities.

As soon as acceptance by the respective Governments has been obtained, the agreement will be signed, subject to approval by the United Kingdom Parliament and the Norwegian Storting, as soon as possible. (United States Embassy in London, September 30, 1960.)

FOOD AND AGRICULTURE ORGANIZATION

MEETING ON FISHERIES
CREDIT HELD IN PARIS:

Participants from 30 nations attended Food and Agriculture Organization (FAO)-sponsored technical meeting on credit for fishery industries, held in Paris, France, from October 17-22. The meeting was open to all FAO member countries.

More than 60 participants, representing nations as globally diverse as Japan and Peru, considered some 34 papers prepared for the meeting.

The meeting was designed to provide an exchange of views on the solution of problems in the organization and day-to-day administration of government credit programs for fisheries. Special attention was paid to conditions in underdeveloped countries and to how experience gained elsewhere can be usefully applied in organizing credit services in those countries.

The Secretary of the Conference pointed out that the exceptional risks connected with the production and distribution of fish have made it difficult for the industry to obtain private credit on acceptable terms. While the purpose of the meeting was not to discuss whether or not governments should or should not assist fishery industries through extending credit, he said much could be gained by joint study of existing credit policies and operations.

The agenda included the following principal subjects:

1. Objectives of credit policy in developed countries and their implications for the general character of credit assistance.
2. Objectives of credit policy in underdeveloped countries and their implications for the general character of credit assistance.
3. Organizational aspects of fisheries credit schemes.

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4. Operational aspects of fisheries credit schemes.

5. Coordination, review, and appraisal of credit policies.

A list of the papers presented follows:

Sources of Loan Funds for Cooperatives, by FAO Secretariat, based on a study by Miss M. Digby, Secretary, The Plunkett Foundation for Cooperative Studies, FAO Consultant. FIFA/WP/1, in English, French and Spanish.

Government Credit Schemes for Fishery Industries in the Indo-Pacific Region, by FAO Secretariat. FIFA/WP/2, in English, French, and Spanish.

Organization and Management of Credit Cooperatives, by FAO Secretariat, based on a study by Miss M. Digby, Secretary, The Plunkett Foundation for Co-operative Studies, FAO Consultant. FIFA/WP/3, in English, French, and Spanish.

Government Credit Facilities for Fishermen in Madras State, by P. I. Chacko, Deputy Director of Fisheries, Madras State, India. FIFA/WP/4, in English.

Le Régime des Bonifications d'Intérêt en faveur de l'Armement et Le Crédit maritime mutuel en France, notices presentées par la Direction des Pêches maritimes, Marine marchande, Paris. FIFA/WP/5, in French.

Le Crédit à l'intention des Industries des Pêches dans la République togolaise, Commentaires sur l'Ordre du Jour par M. R. Desport, Vétérinaire-Inspecteur, Service de l'Élevage et des Industries Animales, Lomé. FIFA/WP/6, in French.

Sources of Credit for Fishery Industries in Denmark, by B. Dinesen, Fisheries Secretary and Chairman of the Board of the Royal Danish Fisheries Bank, Copenhagen. FIFA/WP/7, in English.

Government Credit Facilities for Fishermen in Bombay State, Comments on the FAO Draft Agenda by C. V. Kulkarni, Director of Fisheries, Bombay, India. FIFA/WP/8, in English.

Credit Facilities for the British Herring Industry, by H. H. Goodwin, General Manager, Herring Industry Board, Edinburgh. FIFA/WP/9, in English.

Note on Fishery Credit Schemes in West Bengal, by K. C. Saha, Director of Fisheries, West Bengal, India. FIFA/WP/10, in English.

Le Crédit à l'intention des Industries des Pêches au Portugal, Projet de Réponse aux Questions à l'Ordre du Jour, par le Capitaine de Frégate Renato Sequeira de Brito, Cabinet de Estudos das Pescas, Lisbonne. FIFA/WP/11, in French.

Government Financing of the Fishing Industry in the United States of America, by C. Eldred Peterson, Chief, Branch of Loans and Grants, Bureau of Commercial Fisheries, U. S. Department of the Interior. FIFA/WP/12, in English.

Le Crédit dans la Pêche belge, par P. Hovart, Secrétaire du Conseil professionnel de la Pêche, Ostende. FIFA/WP/13, in French.

An Examination of Arguments for Special Credit Policies for Fishing Industries, by J. Wiseman, London School of Economics and Political Science, FAO Consultant. FIFA/WP/14, in English, French, and Spanish.

Credit Assistance for the Promotion of Fish Marketing in the Federal Republic of Germany, by Dr. Hans Wilhelm Kurjo, Secretary of the Förderungsdienst für den Fischabsatz G.m.b.H., Bremerhaven. FIFA/WP/15, in English.

The Structure of Fisheries Finance in Japan, by Kohei Teshima, Data and Statistics Section, Fisheries Agency, Tokyo. FIFA/WP/16, in English.

Credit for Fishery Industries in the Netherlands, by Drs. G. J. Lienesch, Director of Fisheries, Ministry of Agriculture and Fisheries, The Hague. FIFA/WP/17, in English.

The Fisheries Development Corporation of South Africa Limited, Its Establishment, Functions and Operations, by Cecil von Bonde, General Manager, and W. H. Stoops, Secretary. FIFA/WP/18, in English.

The Economic and Social Effects of Public Credit in the Fishing Industry of Jamaica, by A. J. Thomas, Fisheries Officer, FIFA/WP/19, in English.

Le Crédit destiné aux industries des Pêches belges, par R. H. M. de Graef, Secrétaire d'Administration, Administration de la Marine et de la Navigation Intérieure, Belgique. FIFA/WP/20, in French.

Proyecto para la administración de un fondo de empréstitos destinado a la concesión de créditos para pequeños pescadores, presentado por el Banco Central del Ecuador. FIFA/WP/21, in Spanish.

Reglamentaciones vigentes relacionadas con el otorgamiento de créditos para la industria pesquera por parte del Banco Industrial de la República Argentina, y del Banco de la Nación Argentina, presentado por la Dirección General de Pesca de la República Argentina. FIFA/WP/22, in Spanish.

Organization of Credit and Finance in the Fish Industry of the Federal Republic of Germany. FIFA/WP/23, in English.

Pilot Experiment in Changing the Mode of Credit in a Marine Fishing Village, by G. N. Mitra, Director of Fisheries, Orissa, India. FIFA/WP/24, in English.

The Provision of Credit to Fishermen in Uganda, by A. D. Grimmer, Assistant General Manager, Uganda Credit and Savings Bank, Kampala. FIFA/WP/25, in English.

Fishery Credit in Japan, by Shinkichi Katayanagi, President, National Federation of Fisheries Cooperative Associations, Tokyo. FIFA/WP/26, in English.

Economic Information needed for Fishery Loan Policy Considerations, by Walter H. Stolting, Chief, Branch of Economics, Division of Industrial Research, Bureau of Commercial Fisheries, Fish and Wildlife Service, United States Department of the Interior. FIFA/WP/27, in English.

Small Boat and Gear Insurance for Canadian Fishermen, by I. S. McArthur, Chief Administrator, Fishermen's Indemnity Fund, Department of Fisheries, Ottawa, Canada. FIFA/WP/28, in English, French, and Spanish.

International (Contd.):

Institutional Lending to the Icelandic Fish Industries, by Gudmundur B. Ólafsson, Chief of Administration, Iceland Bank of Development. FIFA/WP/29, in English.

A Fishery-Economist's View on Public Credit for Fishery Industries, by A. G. U. Hildebrandt, ec.drs., Chief Fisheries Division of the Agricultural Economics Research Institute, The Hague, Holland. FIFA/WP/30, in English.

Credit Aid for the British White Fish Industry, by E. S. Holliman, Assistant Chief Executive, White Fish Authority, London. FIFA/WP/31, in English.

The Operation and Administration of Credit Schemes in the British White Fish Industry, by E. S. Holliman, Assistant Chief Executive, White Fish Authority, London. FIFA/WP/32, in English.

Statistical and Economic Review of the Credit Aid Schemes in the White Fish Industry in Great Britain, by E. S. Holliman, Assistant Chief Executive, White Fish Authority, London. FIFA/WP/33, in English.

Finance to the Fishery-Industry in the Netherlands, by Drs. R. G. E. Vissers, National Herstel Bank, The Hague. FIFA/WP/34, in English.

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PLAN TO STANDARDIZE NAMES OF MEDITERRANEAN FISH:

The first attempt to standardize the names of fish in order to make fishery statistics comparable among Mediterranean countries has been undertaken, in the form of an illustrated draft catalogue issued by the Food and Agriculture Organization (FAO). The catalogue, containing the names of fish of commercial importance in the Mediterranean, was distributed to members of the General Fisheries Council for the Mediterranean (GFCM) when the council met in Rome, September 22-28, 1960.

The book contains sketches of 250 fish, with their chief characteristics, species, order, and family. Wherever possible the fish's common name has been given in each of the languages of the 12 GFCM member nations.

The need for a catalogue became evident when Mediterranean fisheries experts found they had difficulty in interpreting national statistics for publication, since the same fish was often designated under different names. Some fish were not named at all. This made the assessment of catches and their commercial value extremely difficult.

For instance, the sturgeon is simply known as "sturgeon" in English and is untitled or may be known by a multiplicity of names in Egypt, Israel, Tunisia, and Turkey, as far as FAO's Fisheries Division can determine. The name of a particular type of sole exists in Italian, but is unavailable in the languages of the other 11 Mediterranean nations, although the fish probably exists in the waters off these countries.

The catalogue lists all fish of commercial importance in the Mediterranean--such as the sea horse--

and not just fish that are edible. The sea horse is currently in vogue for use in costume jewelry.

Fish such as herring, cod, haddock, coalfish, and halibut, not caught in the Mediterranean but found in Mediterranean markets, are listed separately in the catalogue. Eighteen kinds of rays, beginning with the guitarfish and ending with the devilfish, are listed. Twenty-eight types of sharks, from the "Darkie Charlie" to the six-gilled shark, are depicted in the book.

The catalogue is so bound that its pages may be removed and filed according to the language classification of each Mediterranean country.

GENERAL FISHERIES COUNCIL FOR THE MEDITERRANEAN

TWO NEW FISHERY PROJECTS URGED BY COUNCIL:

Two projects requiring special financial support by member countries and calling for studies by the Food and Agriculture Organization (FAO) were recommended on September 26, 1960, by the utilization committee of the General Fisheries Council for the Mediterranean (GFCM). The committee's recommendations, which were subject to approval by the GFCM at its plenary session on September 28, 1960, deal with standardizing fish packing and tuna preservation.

The group said that it is extremely advisable to standardize fish packing in all of the 12 GFCM member countries. It suggested that FAO undertake a study on the international standardization of fish packing, based on a limited number of boxes with specific dimensions and built for a specific species of fish. The member countries would contribute to the study by making their experts available and by special financial support.

It was also suggested that FAO begin a study of tuna preservation using the GFCM country that offers the best possibilities for the study. The investigation would deal with both the supply of raw material and with manufacturing. The other member countries would supply data to aid the experiments and also contribute special financial support.

In outlining part of the program for the GFCM's Seventh Session, to be held two years hence, the utilization committee drew the attention of the Council members to developing fish-meal production for human consumption. It also suggested standardizing the process of manufacturing semipreserved fish with special regard to the European Common Market.

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The recommendations of the utilization committee, as well as recommendations from the four other GFCM committees, will be used by the GFCM to draw up its program of work for 1960-62.

Delegates present at the Sixth Session of the GFCM represented Spain, France, Monaco, Italy, Yugoslavia, Greece, Turkey, Tunisia, Morocco, Israel, and the United Kingdom (Malta), plus an observer from Libya and observers from nine international organizations.

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CANNING AND MIGRATION STUDIES OF MEDITERRANEAN TUNA PLANNED FOR 1961-62:

An international attempt to improve the tagging and canning of Mediterranean tuna has been mapped out for action by the General Fisheries Council for the Mediterranean (GFCM) during the next two years.

The Council, after ending its sixth session held in Rome at the Food and Agriculture Organization (FAO) headquarters, adopted recommendations and resolutions put forward by its five working committees. Among them were resolutions calling for joint action in the field of tagging tuna, an oceanographic survey of the eastern part of the Mediterranean Sea, and a study by FAO of technical problems related to canning tuna.

The Council secretary said that the wealth of tuna known to inhabit the area is likely to provide a great deal more food fish for the consumer and more income for the producer if there is a concerted effort towards rational exploitation.

The program would involve financial support from the GFCM member countries, and participation of the members in providing data necessary to proceed with experiments and research; one country would be chosen as the site of the canning studies.

The tuna program was part of the 1961-62 work schedule adopted by the Council. Also included were several projects to be undertaken with FAO assistance and with special financial support from GFCM member countries.

The Council voted to undertake tagging tuna in the Mediterranean in cooperation with an FAO world meeting on tuna and related species to be held in 1962. Council members would circulate information on their tagging programs and return tags to all institutes involved in the program. It agreed to establish an over-all research program on tuna, based on oceanographical and biological information.

The Council also asked for the assistance of FAO's Fisheries Division in testing and introducing new techniques for finding and catching fish and in standardizing fish packing. These programs would require assistance by experts from the member countries plus special financial support.

The group voted to draw up a catalog of names of molluscs and crustaceans found in the Mediterranean and a catalog listing freshwater fish found in the Mediterranean area.

GREAT LAKES FISHERIES COMMISSION

CANADA APPOINTS NEW COMMISSIONER:

The Canadian Minister of Fisheries has announced the appointment of Dr. J. R. Dymond as one of the Canadian Commissioners administering the Great Lakes Fisheries Treaty.

Dr. Dymond's appointment was made to fill the vacancy caused by the death of Dr. Harkness.

INTERNATIONAL ASSOCIATION OF FISH MEAL MANUFACTURERS

INDUSTRY PROBLEMS OUTLINED AT PARIS CONFERENCE:

The President of the International Association of Fish Meal Manufacturers, speaking at the first annual conference held in Paris, France, September 27-30, 1960, outlined some of the problems facing the fish-meal and oil industry. He stated:

"The outstanding problem which has produced a crisis in the industry in many countries is the fall in world prices due to overproduction and this transcends in importance any other problem, because without prosperity no section of the industry can function properly. In particular is this so with regard to scientific research where progress in techniques and improvements can be seriously affected.

"Everyone here knows what has happened. There is no need to elaborate on it and we are all wondering what is going to happen next.

"Whole industries have ceased functioning, with all the effects that this has had on ancillary industries such as boat building, engineering, ice factories, transport, etc., with the result of unemployment and personal hardship as well as financial loss.

"All fish meal producers have been seriously affected-- some of those who fish for fish meal find themselves unable

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to pay the fishermen their usual prices for fish and some have had to reduce prices or cut production altogether. Those countries who use fish offal almost entirely have had to reduce their prices to the fish trade so that in both cases the fishing industry of the country is affected.

"The majority of countries have, however, experienced bad times in the past and they have sufficient financial resources by way of reserves or because of the general prosperity of the fishing industry in their country to weather this storm. Obviously the countries who depend solely on offal will continue to produce. The fishing trade of their countries must give them the offal even if necessary without payment.

"It is not impossible to suppose that the governments concerned will cease to remain passive in the light of the threat to the prosperity of these basic industries and will take steps to give protection.

"Discussions among the fish-meal producing countries, so that each can have a fuller appreciation of the others problems will be of considerable value. The whole subject is so complex and in a condition of continual change that it cannot be otherwise than useful to have all the information available.

"For a moment let me remind you of some of the conditions which have led to the present state of the market:-

"The sudden extraordinary rise in production without a corresponding increase in demand.

"Accumulation of stocks.

"Inefficient marketing, i.e. lack of a well-thought-out system of distribution and marketing designed to protect both producers and buyers.

"Substantial quantities of fish meal being produced of poor quality.

"Reports in certain cases that contracts are not being properly fulfilled, with the result that buyers are involved in heavy losses and with the resulting lack of confidence in future business.

"Continued price cutting, the result of overproduction and excessive competition.

"Speculation by large and small people, which has been the cause of heavy losses.

"With regard to overproduction there is no magic formula for the industry or for any of our countries which will put things right. Personally, I feel that each country must endeavor to work out its own solution and it may be that eventually some sort of plan may be evolved on which the association can take a hand, but one thing that we cannot do is to interfere unasked in any country's business affairs. All that we can say is that amongst the members of this association there is considerable experience, which is at the service of the entire industry.

"I would suggest consideration of two things:-

"1. Improvement in standard of quality.

"2. Consideration of some form of International Contract.

"With regard to the first, quality is of the utmost importance to the farmer and compounder. Only a very small percentage of the ration is supplied by fish meal and buyers will not grudge a reasonable premium for quality.

"If, therefore, we can give the buyer any additional guarantee to the usual chemical analysis of protein, oil and minerals, then we should do so. I am thinking principally of digestibility.

"I would like to ask our scientific advisors how far they think we can go in giving additional guarantees and I suggest that manufacturers should concentrate on producing a top-grade fish meal on which buyers could rely for quality and manufacturers should take all steps possible to see that second-grade fish meals do not compete with first grade, but are segregated for other uses or carefully marketed where they would not affect the marketing of top-grade quality fish meal.

"With regard to consideration of some form of international contract, if it were possible to have one form of contract only, I feel that it would help marketing and help stability of prices, but I do not mean to imply doubts on old established contracts such as are used today. I did, however, refer previously to lack of confidence because of the losses which were caused by bad performance of contracts and it is this that I have in mind in suggesting that something be done to tighten up contracts, so that buyers can place more reliance on them.

"I feel that this Association should have all the support which manufacturers throughout the world can give it. . . ." (Fisheries Council of Canada, Bulletin, October 3, 1960.)

INTERNATIONAL CONFERENCE ON FISH IN NUTRITION

UNITED STATES FISHING INDUSTRY
PLEDGES SUPPORT TO CONFERENCE:

Various segments of the United States commercial fishing industry, meeting in Washington, D. C., have pledged their support in making the coming world nutritional fishery conference a success, the U. S. Department of the Interior reported on October 19, 1960.

The conference will be held in Washington, D. C., September 19-27, 1961, under the auspices of the Food and Agriculture Organization (FAO). It will be officially known as the International Conference on Fish in Nutrition. About 400 representatives from more than 50 nations are expected to attend.

A suggested agenda for the conference is being prepared by the Food and Agriculture Organization. Speakers will include some of the world's leading scientists in this field. Numerous other arrangements for the meeting will be handled by the U. S. Bureau of Commercial Fisheries.

Initial steps for the conference were taken last year when the United States delegation to the Tenth Food and Agriculture Organization Conference in Rome urged the calling of such a meeting. The State Department accepted the invitation of the FAO for the United States to be the host country.

The fundamental purpose of the meeting is to assemble the scattered information on the nutritive value of fish, to assess this information, and to stimulate future scientific investigation on this food source.

One result would be to delineate the role of fish and fishery products in adding to the supply of protein foods in both developed and underdeveloped areas of the world.

Other objectives are to stimulate international exchange of information pertaining to fish as a food and to prevent needless duplication of research; to provide the basis for future conferences on more specific aspects of the nutritional value of fishery products; to provide technical and economic information on available marine food resources to combat present world-wide nutritional deficiencies and to meet future expanded world food needs; to provide information on present world production and utilization of fishery products and to determine factors that may enhance the availability and utilization of these products.

The conference will consider the nutritive aspects of fish and fishery products both as they pertain to human needs and to use in animal feed. It will be a scientific meeting with scientists from many nations, drawn from the industry, educational institutions and government, presenting reports.

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Main topics which are being considered include such things as the role of fish in world nutrition, the chemical composition of fish and fishery products, contribution of fish and fishery products to the diets of various nations; fishery products in animal nutrition; possibilities for increasing fish consumption.

Under such main titles would be reports on the amino acid composition of the protein in fishery products; fats, oils, and related components; food values of fresh fish compared with processed fishery products; minerals and vitamins in fish; incidence of malnutrition, by regions; fish in dietetics, including geriatric diets; utilization of fish flour; fish proteins and their importance in preventing malnutrition; fish derivatives in feed for swine, calves and poultry, and for fur bearing animals; economic and social incentives for increasing production; and methods of consumer education.

The Washington meeting of the representatives of several fishery organizations was called by the Bureau of Commercial Fisheries to acquaint the industry with current thinking on program and arrangements and to solicit suggestions and comments. The group expressed itself generally in favor of the proposed program and made several suggestions regarding it.

Bureau officials are working actively with interested groups in the United States to complete recommendations on the subject matter for the conference agenda. FAO will consider these recommendations, and those of the member nations, in preparing the final agenda. Once the agenda is firm, FAO will issue to the world's scientists, active in research that will further the use of fish as food, an invitation for them to offer reports on their work. These reports will be screened by an FAO scientific committee and those of pertinence and high scientific quality will be presented at the conference.

INTERNATIONAL COOPERATION ADMINISTRATION

SPONSORS STUDY OF MARINE RESOURCES OFF COASTS OF VIETNAM AND THAILAND:

A study of the marine resources in the Gulf of Thailand and the South China sea, waters which border many countries of Southeast Asia, is being sponsored by the U. S. International Cooperation Administration (ICA) in support of the interest of Thailand and Vietnam in learning more about the seas which border their coasts.

As a result of the ICA sponsorship, the Scripps Institution of Oceanography of the University of California and the George Vanderbilt Foundation at Stanford University have jointly undertaken a marine biological and oceanographic survey of this vast area. The term of the project is for a period of two years with the possibility that it might be extended for some additional period.

The investigations are being conducted by the Scripps research vessel Stranger, a 300-ton, twin screw, motor vessel. Near-shore investigations are being conducted along the Gulf coasts of Thailand and the sea coasts of

Vietnam from smaller boats provided by agencies of the two countries.

Highlights of the Naga Expedition, as it is called, were given in a speech by the Captain of the Stranger at an American Association Luncheon on July 20, 1960, in Bangkok.

A major reason for the project and the basis for its stated objectives is that although the seas adjacent to the borders of Thailand and Vietnam may well be one of their richest natural resources, adequate, systematic investigation and analysis of the scope required has never been accomplished. Principal stated objectives are directed toward but are not necessarily limited to: (a) providing information and scientific basis for the development of marine economic resources of Vietnam and of Thailand; (b) preparation of a well-documented collection of fishes, invertebrates, and marine plant life; (c) preparation of handbooks summarizing the features of marine fauna and ecology in the area and for the identification of marine species of known and potential commercial importance; (d) training of young marine scientists and technicians; (e) encouragement of the marine sciences in the general region; and (f) promotion of the exchange of scientific information in the marine sciences.

Each of these objectives is worthy of a full-scale supporting program, but the major effort should be directed towards carrying out the kind of basic studies which will lead to an understanding of the oceanography of the region, including the circulation, methods of enrichment, primary productivity, and of the nature, distribution, and abundance of the important marine resources. In accomplishing this, it is hoped to recognize and attack one or more specific problems, in the solution of which it is possible to demonstrate the practical application of scientific findings.

INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA

COLD-WATER FLOW FROM ARCTIC OCEAN INTO NORTHEAST ATLANTIC AFFECTS AREA'S FISHERIES:

Findings of "great value" to fishery research have resulted from the international expedition, completed in mid-1960, which set out to find the overspill of cold "heavy" water on the ridge between the Faroe Islands and Iceland.

International (Contd.):

A scientist from the Marine Laboratory, Torry, Aberdeen, who organized and led the expedition, stated on his return to Aberdeen last week that it was "a magnificent example of international cooperation."

Survey ships of five nations--Britain, Russia, Germany, Norway, and Iceland--took part in the three-weeks survey.

The head of the hydrographic section at Torry, used the Laboratory's research vessel Explorer as flagship, and the research ships of the nations kept in radio contact with each other during the three weeks.

The objective was to try to trace the overflow of cold "heavy" water from the deep Arctic into the Northeast Atlantic, which is believed to have highly important after-effects on Northwest European fisheries.

The idea was to carry out a survey on each of the three weeks so that the overflow might be traced and measured. The scientists would have felt that their efforts had been rewarded had they found the overflow but once.

Instead they located it on every occasion, and a great deal of valuable data was collected with instruments operated to the depth of 2,500 meters (8,200 feet).

This "overflow" is believed to affect the flow of nutrient salts in deep oceanic waters, these salts being fertilizers of the marine vegetation on which fish feed. White fish are dependent on this continental shelf for their food and the expedition was, therefore, concerned with the question of the fertilization of the region, which is about 200 miles wide.

"We made a survey three times, with a week's interval between," the British scientist stated.

He produced charts at a press conference to show how successful the scientists had been in gauging the extent and direction of the overflow.

The expedition was sponsored by the International Council for the Exploration of the Sea and the British scientist is chairman of the council's hydrographic committee.

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

SEVENTH ANNUAL MEETING IN BRITISH COLUMBIA:

The Seventh Annual Meeting of the International North Pacific Fisheries Commission was held in Vancouver, British Columbia. The Commission, composed of representatives from Canada, Japan, and the United States, held its formal opening session on November 7, 1960. The week-long plenary sessions of the Commission were preceded by three weeks of meetings of a number of scientific and technical committees.

The Commission, established in 1953, is responsible for developing solutions, on a scientific basis, for fishing problems which arise between the three countries in the high-seas areas of the North Pacific Ocean.

Under the terms of the North Pacific Treaty, Japan has abstained from fishing salmon, halibut, and herring along the North American coast. Canadian fishermen also abstain from fishing salmon of United States origin in the Bering Sea. In order for a stock of fish to qualify for continued abstention, it must be demonstrated that it is being fully and scientifically exploited and properly conserved by the countries which are allowed to continue to fish. The Commission is required to review the conditions for abstention each year and to determine whether or not the stocks in question continue to qualify. The abstention questions, with their broad background of research and scientific information, occupied a major part of the Commission's attention at this annual meeting.

The Commission also concerned itself with studies of the proper location for the dividing line for salmon fishing. At present Japan refrains from fishing for salmon east of a line which runs north and south along the 175th west meridian, some 2,000 miles west of Vancouver. An extensive research program has been carried out to discover whether or not this line most equitably divides salmon of Asian and North American origin.

At the present meeting, action on confirmation or adjustment of the dividing line depended in part on whether or not the Commission received from its sponsoring governments an agreed interpretation of the principles on which drawing of the line should be based. At

International (Contd.):

its 1959 meeting, held in Seattle, the Commission referred this question of Treaty interpretation back to the sponsoring governments and, at the present time, was still awaiting an agreed interpretation.

Strong emphasis was given to the task of analyzing and publishing the great volume of research material which has accumulated from the Commission's investigations on the high seas. These investigations, in which all three countries have taken part, have contributed a tremendous amount of information about the fisheries resources of an area that was largely unknown when the Commission began its work.

Preliminary committee meetings, participated in by many prominent fisheries scientists from each of the three countries, were held in Nanaimo during the week of October 17, at Harrison Hot Springs during the week of October 24, and in Vancouver during the week of October 31.

Four Commissioners represented each of the member nations. They were accompanied by staffs of advisors and experts, bringing the total number of participants in the meeting to approximately 100. Observers from a number of other international fisheries organizations and from the U. S. S. R. were expected to attend the sessions.

The United States delegation was led by Commissioner Milton E. Brooding of San Francisco with fellow-Commissioners Edward W. Allen of Seattle, John H. Clawson of Anchorage, Alaska, and Arnie J. Soumela, Commissioner of the United States Fish and Wildlife Service.

Experts and advisors accompanying the United States delegation included Donald L. McKernan, Director of the U. S. Bureau of Commercial Fisheries, Washington, D. C.; W. C. Herrington, of the U. S. Department of State, Washington, D. C.; Dr. J. L. McHugh, Chief, Division of Biological Research, Bureau of Commercial Fisheries, Washington, D. C.; C. L. Anderson, Commissioner of Fisheries of Alaska; Milo Moore, Director of Fisheries, State of Washington, R. W. Schoning, Director of Fisheries, State of Oregon; R. S. Croker, Chief, Marine Fisheries Branch, California State Department of Fisheries; C. E. Atkinson, Director of the Biological Laboratory of the U. S. Bureau of

Commercial Fisheries, Seattle; and Dr. W. F. Royce, Director of the Fisheries Research Institute, University of Washington. A number of scientists and industry advisors from Alaska, the Pacific Coast States, and Washington, D. C., accompanied the United States delegation.

ITALY-YUGOSLAVIA RENEW FISHING AGREEMENT

On August 16 in Belgrade, Yugoslavia, representatives of the Italian and Yugoslav Governments agreed to renew a fishing agreement regulating the fishing rights in the Adriatic. The original accord was signed in November 1958 and has been in effect since that date. The renewal makes no change in the existing provisions, will take effect on September 1, and will be valid for eighteen months. (United States Embassy, Rome, August 26, 1960.)

Note: See Commercial Fisheries Review, February 1959 p. 40.

WEST EUROPEAN FISHERIES ORGANIZATION

WEST EUROPEAN FISHERY
COMMUNITY PROPOSED:

The West European Fisheries Organization held its annual convention in Hamburg on September 15 and 16, 1960, attended by delegates from Sweden, Norway, Denmark, England, Holland, Belgium, France, Portugal, and West Germany. Discussions centered around proposals by the British Trawler Association for the establishment of a West European Fishery Community.

The Fishery Community would create a link between the European Economic Community and the European Free Trade Association. Its goals would include the establishment of a common fish market, common access to all fishing grounds, the appointment of authorities to ensure adherence to existing fishing conventions, and the preservation of fish stocks. Finally, the West European Fishery Community would be designed to promote sound development of the fishing trades of the contracting parties and, if possible, agreement upon a common external tariff.

The delegates also discussed possibilities for preserving present territorial fishing limits and the detrimental effects of Peruvian fish meal exports on their national fisheries. They stated their desire to have the North-east Atlantic Fisheries Convention of 1959 ratified as soon as possible.

International (Contd.):

WHALING

ANTARCTIC WHALE CATCH FOR 1959/60 SEASON EXCEEDS QUOTA:

Contrary to earlier reports, the catch of baleen whales in the Antarctic for the 1959/60 pelagic season was over, not under, the ceiling catch of 15,000 blue-whale units fixed by the International Whaling Commission. The catch totaled 15,510 units as compared with 15,235 units taken in the 1958/59 season.



Table 1 - Antarctic Whaling Fleets and Production, 1958/59 and 1959/60

Season	Fleets	Catchers	Baleen Whales	Oil		Sperm Whales	Oil	
				Long Tons			Long Tons	
1959/60	20	217	32,214	309,343		4,165	32,015	
1958/59	20	235	30,824	269,741		5,451	42,032	

During the 1959/60 season the Netherlands and Norway operated outside the International Whaling Convention from which they withdrew in 1959, after the five nations which participate in Antarctic pelagic whaling had failed to agree on national quotas within the ceiling.

The 32,214 baleen whales taken last season comprised 26,412 fin, 3,234 sei, 1,338 humpback, and 1,230 blue whales.

Table 2 - Antarctic Pelagic Whaling, 1960

Country	Fleets	Catchers	Baleen Whales	Oil (Bbls./)	Bbls. Per Blue-Whale Unit	Sperm Whales	Oil (Bbls.)
Norway	8	70	9,246	588,450	128.9	1,430	63,438
Japan	6	69	10,959	551,255	105.7	1,398	65,876
United Kingdom	3	31	3,983	237,420	124.9	454	20,360
U. S. S. R. 2/	2	34	5,988	337,903	121.2	840	40,397
Netherlands	1	13	2,038	141,031	135.9	43	2,019

1/6 barrels of oil equal one long ton or 2,240 pounds.
2/The U.S.S.R. catch excludes 203 minke and 55 killer whales.

Official results of the 1959/60 season, as compiled by the Committee of International Whaling Statistics at Sandefjord, Norway, and subject only to final adjustment are shown in table 2. (Australian Fisheries Newsletter, July 1960.)

COMMISSION MEETS IN LONDON:

Research programs and management practices covering the world's whale populations, with particular reference to the Antarctic region stocks, were thoroughly reviewed at the twelfth meeting of the International Whaling Commission, London, England, June 20-24.

Represented at the meeting were the governments of Argentina, Australia, Canada, Denmark, France, Iceland, Japan, New Zealand, South Africa, Sweden, the U. S. S. R., the United States, and the United Kingdom. Argentina acceded to the Convention on May 18, 1960. There were also present observers from the Food and Agriculture Organization of the United Nations, the International Council for the Exploration of the Sea, Norway, the Netherlands, Italy, and Portugal.

The Commission was addressed by the Parliamentary Under-Secretary of State for Scotland in the United Kingdom Government, who pointed out that the growing need for the conservation of marine resources had been given world recognition in recent years. Two of the world's leading whaling nations--Norway and the Netherlands--had withdrawn from the International Whaling Convention as a result of failure outside the Convention to rationalize the fishing efforts of the countries participating in Antarctic pelagic whaling. Nevertheless discussions on the harmonization of claims were continuing outside the Commission and their success was earnestly hoped for.

Although Norway and the Netherlands were no longer party to the Convention, catch limits

for their fleets had been set for the 1959/60 Antarctic season. The three Antarctic pelagic whaling countries remaining party to the Convention had operated within the ceiling of 15,000 blue-whale units, which was the maximum permitted catch established by the Commission for whaling in the Antarctic. Within that ceiling, Japan and the United Kingdom

International (Contd.):

had set limits for their fleets; the agreement between the five Antarctic pelagic whaling countries which had been sought outside the Commission would have allocated 20 percent of the total permitted catch for the U. S. S. R. The Commission is empowered to determine the size of the Antarctic pelagic whaling quota, but not how it is split up between the floating factory expeditions.

During the 1959/60 season 20 expeditions from these five countries operated in the Antarctic and caught a total of 15,433 blue-whale units in a season lasting 99 days, compared with 69 days in the three preceding seasons. This figure comprised 1,230 blue whales, 26,415 fin whales, 1,338 humpbacks, and 3,234 sei whales. The total catch in the 1958/59 season had amounted to 15,301 blue-whale units, composed of 1,191 blue whales, 25,837 fin whales, 2,394 humpbacks, and 1,402 sei whales. A total of 4,173 sperm whales was taken by all the Antarctic pelagic expeditions in the 1959/60 season as compared with 5,451 in the previous season. The 1959/60 Antarctic pelagic whaling season produced 2,048,159 barrels of baleen and sperm oil; in the previous season the yield was 2,052,010 barrels.

Antarctic land stations in 1959/60 caught 757 blue-whale units, compared with 807 the year before; the sperm whale catch was 89 against 215 in 1958/59. The oil production was 97,673 barrels, about 5,000 less than the previous year.

Outside the Antarctic, 47 land stations and three floating factories were in operation in 1959. A total of 21,500 whales was taken, compared with 24,700 in 1958. The production of whale oil amounted to 326,700 barrels (at six barrels to the ton), about 12,000 barrels more than in 1958, but the production of sperm oil at 343,400 barrels was some 59,000 barrels less.

The unsatisfactory position arising from the withdrawal from the Convention of two of the five Antarctic pelagic whaling countries occupied much of the Commission's attention. A resolution was finally adopted appealing to the Netherlands and Norway to rejoin the Convention in the interests of effective conservation action, which should include an arrangement for the sharing of the total catch and the introduction of an international system of inspection.

To assist these purposes the Commission decided by 7 votes against 2 votes with 4 abstentions to suspend for the 1960/61 and 1961/62 seasons the Antarctic blue-whale unit limit. This action was taken with reluctance and on the understanding that if Norway and the Netherlands should not soon rejoin the Convention, the suspension would be revoked.

In this same context the Commission adopted a resolution asking their Ad Hoc Scientific Committee to carry out a detailed and specified program to improve the collection and interpretation of data, including the use of the latest methods of studying animal populations. The Commission also resolved to appoint three scientists in the field of population dynamics and drawn from countries not engaged in pelagic whaling in the Antarctic to assist in the assessment of the condition of the Antarctic whale stocks and in the determination of any measures that would increase the sustainable yield. The three scientists would report to the Commission within a year of their appointment and would work with the Ad Hoc Scientific Committee.

In setting up this special group of scientists, the Commission signified their intention that the Antarctic catch limit should be brought into line with the scientific findings not later than July 31, 1964, having regard to the provisions of Article V(2) of the Convention.

The International Whaling Commission gives effect to the conservation aims of the Convention through amendments of a Schedule to the Convention requiring a three-quarters majority of those present and voting for their adoption.

Apart from the suspension of the blue-whale unit limit, two other amendments were adopted.

The first of these forbids pelagic whaling expeditions from taking humpback whales in the Antarctic sector to the south of West Australia during the next three seasons; while in the Antarctic sector to the south of East Australia and New Zealand the present open season of four days for pelagic whaling for humpbacks is to be reduced for those three seasons from 4 days to 3 days. Australian and New Zealand land stations catch humpback whales belonging to the same stocks that inhabit those Antarctic sectors and the Commissioners of their respective

International (Contd.):

Governments stated that conservation measures were in force which were reducing the catches made by those land stations.

The second amendment shortens the period during which pelagic whaling expeditions may take blue whales in the Antarctic. The season for taking blue whales there will henceforth open on February 14 instead of February 1 and will end as before on April 7. The purpose of this change is to give additional relief to a species of whale the population of which are thought by the Commission's scientific advisers to be in an increasingly serious condition. This amendment was adopted without opposition.

The Commission considered the report of an expert Working Party which had been set up after the Eleventh Meeting to study the question of the humane slaughter of whales. It was noted that at present there was no conclusive evidence that killing whales by electrical means was more humane than the present method of the explosive harpoon and that the chief criterion was the speed of killing. There were no other methods likely to prove more humane. There was a prospect, however, of further progress towards the development of a satisfactory and effective electric harpoon, and the Commission agreed with the suggestion of the Working Party, which will continue in being, that to this end there should be consultations at a technical level between representatives of the whaling industries.



Angola

FISHERIES PRODUCTION AND EXPORTS, 1958-59:

Fish production in Angola declined during 1959, continuing a trend evident since 1957. Landings dropped from 278,054 metric tons in 1958 to 267,170 tons in 1959. The decrease in sardine landings was the most marked, from 92,185 tons in 1958 to only 44,601 tons in 1959. The mackerel landings were also down about 50 percent. Horse mackerel

Table 1 - Angola's Production of Processed Fishery Products, 1958-59

Product	1959	1958
	(Metric Tons)	
Canned fish	1,264	1,282
Dried fish .	23,586	28,332
Fish meal .	46,170	47,803
Fish oil .	4,859	7,254

landings were up a bit and small horse mackerel landings increased by 50 percent. These are the main species used by the fishing industry to produce fish meal and oil. The spiny lobster landings quadrupled and shrimp landings in 1959 remained about the same as in 1958, both at high levels.

The decline in the industry by fishing centers and species of fish was mixed. The main impact of the lower landings was felt in the Mocamedes fishing area where the catch dropped from 171,829 tons in 1958 to 152,245 tons in 1959. The sardine catch of this port was one-eighth that of the previous year. Fish landings in the Benguela area actually increased from 98,342 to 107,025 tons, but the ex-vessel price received declined from 68,856 to 51,088 contos (US\$2,383,000-\$1,773,000). The Luanda fishing area was the least affected of the major producing areas; it had an average year and benefited from the greatly increased spiny lobster catch. The spiny lobster fishermen there caught 25 tons of lobsters worth 608 contos (US\$21,100), as compared with the previous record catch of 7 tons worth 191 contos (US\$6,600) in 1958. The fishermen of Santo Antonio do Zaire also enjoyed a profitable year, but this area is of little importance to the fishing industry.

The plight of the industry has been caused by decreased fish catches, many uneconomic factories using primitive techniques, and world-wide overproduction of fish meal which has lowered the international price to a level below the Angolan cost of production. Studies were begun during the year which were aimed at a complete reorganization of the industry and a concentration of production on such primary products as dried and canned fish with a de-emphasis on such products as fish meal and oil. At present fish meal is the principal product of the Angolan industry. By the end of 1959 it was apparent to all that

Table 2 - Angola's Exports of Fish Meal and Dried Fish, 1958-59

Product	Quantity		Value			
	1959	1958	1959		1958	
	(Metric Tons)		Contos	US\$	Contos	US\$
Fish meal	51,228	81,243	205,620	7,135	289,599	10,021
Dried fish	13,965	16,476	75,900	2,634	90,008	3,114
1/1,000 escudos.						

some kind of drastic action was required to assist the industry over its present financial crisis and to begin making preparations to meet the long-term difficulties. First steps in these programs were taken by the government by suspending the collection of income

Angola (Contd.):

Table 3 - Average f.o.b. Prices for Angolan Fish Meal Exports, 1950-59

Product	Year									
	1959	1958	1957	1956	1955	1954	1953	1952	1951	1950
Fish meal	139.14	123.18	120.76	131.14	139.45	129.07	123.88	112.80	102.77	122.49

Note: Portuguese escudos converted to US\$ at rate of 28.9 escudos equal US\$1 for 1950-58, and 28.82 escudos equal US\$1 for 1959.

taxes from the fishing firms in 1959 and the creation late in December 1959 of the Fund to Support the Fishing Industry. The capital for the Fund was to come from a tax on gasoline sales and an annual subsidy from the Government. It would grant loans to fishing firms. (United States Embassy, Luanda, September 20, 1960.)

* * * * *

FISH MEAL INDUSTRY TRENDS,
FIRST HALF OF 1960:

A price differential or subsidy on fish meal exports was authorized by Angolan Legislative Diploma No. 3054 of August 10, 1960, but this authority had not been exercised up to the end of September 1960.

The "Fund to Aid the Fishing Industry" is empowered to grant to the fishing industries an unspecified amount of money as a subsidy to cover part of the price differential between the international market quotations for fish meal and the local cost of production. This subsidy is a reimbursable, interest-free loan. The power to grant the subsidy is retroactive to July 1, 1960.

Country of Destination	Quantity	Value		Average F. O. B. Prices Per Metric Ton	
		Metric Tons	Escudos	Escudos	US\$
Portugal . . .	5,375	16,508	577	3,071	107.37
Mozambique . .	122	414	14	3,393	118.63
West Germany .	755	2,343	82	3,103	108.49
Italy	1,891	5,482	192	2,899	101.35
Other	1,688	4,745	166	2,811	98.27
Total	9,831	29,492	1,031	3,000	104.87

Note: Escudos converted at rate of 28.6 escudos equal US\$1.

The Angolan Government states that subsidy payments have not yet been made. Industry representatives have been led to believe that a differential of US\$10 a metric ton will be paid to them. A Luanda fishmeal producer states that he had recently exported 200 tons of fish meal at a price of US\$75 per metric ton f.o.b. He believes that he will receive the \$10 subsidy from the Government, but considers that since his costs were \$100 per ton he was still losing \$15. Since then prices are said to have im-

proved, a sale allegedly having been made on September 27 for \$92 a ton f.o.b. (United States Embassy, Luanda, September 28, 1960.)



Argentina

IMPORT SURCHARGES REMOVED
ON NEW FISHING VESSELS:

The Argentine Government has issued two decrees governing the domestic shipbuilding industry and the importation of vessels, provisions of which affect the fishing industry. According to Article 1, paragraph b of Decree No. 10,032 of August 26, 1960, new vessels of up to 3,000 metric tons gross weight may be imported free of surcharges for use as fishing vessels or for refrigerated transportation. This exemption from import surcharges will be effective for two years from the date of issuance of the decree. Article 5 of the same decree specifies that no exemption is made for used vessels; the import surcharges remain at 150 percent. The Government will compensate domestic shipbuilders for the loss of these protective surcharges with a subsidy.

Article 5 of Decree No. 10,033 of August 26, 1960, declares that the Government will pay shipbuilders of vessels under 3,000 metric tons gross weight which are to be used as fishing vessels or refrigerated transport a 40-percent subsidy based on the average European cost of such vessels. The complete text of these decrees was published in the Boletin Oficial of September 1, 1960.

For several years the Argentine Government has recognized the necessity of reequipping and expanding the fishing fleets, but until these decrees had been issued nothing concrete had been done to achieve that goal. While the fishing industry awaited eagerly the publication of these decrees, prior to their issuance opinion was divided as to the form they should take. Cannery owners sought only to lower the import surcharges on fishing vessels. Owners of fishing vessels, who in most cases operate their own

Argentina (Contd.):

boats and upon whom the canneries depend for supplies, opposed the lowering of surcharges without the simultaneous creation of special credit facilities for their use. They claim that only the canneries have sufficient resources to import new vessels. It would appear that the decrees as issued favor the canneries in this dispute. In fact, the surcharges on less expensive used vessels were not lowered. It was such used vessels that the fishermen had intended to purchase. However, it is reported that the Government is studying the creation of special long-term, low-rate credit facilities for the fishermen. (United States Embassy, Buenos Aires, September 21, 1960.)

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FIRST TWO FISHING VESSELS IMPORTED UNDER NEW DECREE:

The first two fishing trawlers to be imported under the recent Argentine decree removing import surcharges from such vessels were due to arrive in the Port of Mar del Plata the week of October 3, 1960, according to press reports. The vessels were purchased by a cannery in Mar del Plata.

The trawlers (Neptune and Mar del Plata) were constructed in Denmark. They are steel-hulled, 25.6 meters (84 feet) in length, and have 350-hp. motors. Reportedly the vessels are equipped with modern electronic equipment, and nylon nets. The holds have a capacity of 1,000 boxes of 50 kilograms each (about 110,000 pounds), according to an October 6, 1960, report from the United States Embassy in Buenos Aires.

**Australia****NEW SPINY LOBSTER FISHERY REGULATIONS FOR WESTERN AUSTRALIA:**

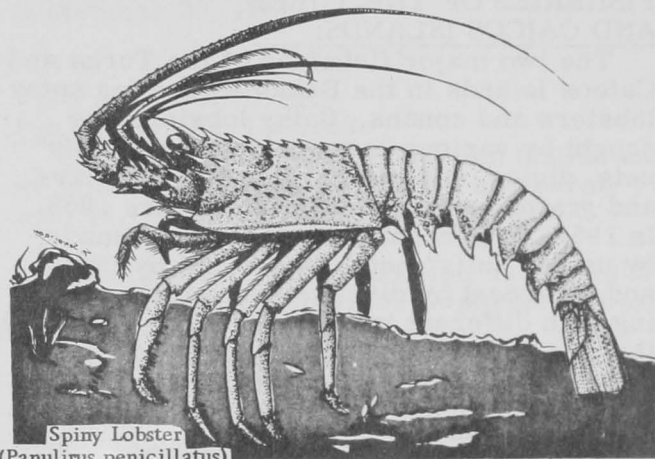
New regulations for the spiny lobster fisheries of Western Australia were published in the Western Australia Government Gazette of May 20, 1960. These suggestions supersede those published June 27, 1958, in the same publication.

(1) Fishermen and boats engaged in the taking of crayfish or spiny lobster between the 30th and 33rd parallels of south latitude

may not during the same calendar year be so engaged anywhere between the 28th and 30th parallels.

(2) Fishermen and boats so engaged between the 28th and 30th parallels may not during the same calendar year be so engaged anywhere between the 30th and 33rd parallels.

(3) Save as mentioned in clauses (4), (5), and (6) hereunder, no restrictions in regard to the operations of fishermen or boats engaged in taking crayfish anywhere between the 28th and 33rd parallels shall be applied in relation to waters north of the 28th parallel or south of the 33rd parallel.



(4) Fishermen and boats engaged in the taking of crayfish in the Abrolhos Islands area, as defined in clause (5) hereunder, shall not be permitted during the whole of the Abrolhos Islands season to engage in the taking of crayfish elsewhere.

(5) No freezer-boat shall engage in the taking of crayfish in the Abrolhos Islands area, or in the Abrolhos Islands area possess, store, cut up, handle, preserve or treat crayfish or portions of crayfish. The Abrolhos Islands area comprises the whole of the Western Australian waters bounded by lines starting from the intersection of 28 degrees South Latitude and 113 degrees 50 minutes East Longitude and extending southeasterly to the intersection of 30 degrees South Latitude and 114 degrees 40 minutes East Longitude, thence west to 113 degrees East Longitude, thence north to 28 degrees South Latitude and thence east to the starting point.

(6) Freezer-boats shall be permitted to catch crayfish north of the 28th or south of the 33rd parallel and to process their own

Australia (Contd.):

catch, but shall not be permitted to process crayfish caught by any other boat or person.

(7) Freezer-boats shall be permitted to process crayfish caught by other boats or persons north of the 7th parallel of South Latitude. (Australian Fisheries Newsletter, July 1960.)



Bahama Islands

FISHERIES OF THE TURKS AND CAICOS ISLANDS:

The two major fisheries of the Turks and Caicos Islands in the Bahamas are for spiny lobsters and conchs. Spiny lobsters are caught by various means, including "bully" nets, diving, and traps. The use of spears and grains has been prohibited since 1958. In 1959, 62 percent of the catch was made by using "bully" nets, 30 percent by traps, and 8 percent by divers. Comparative fishing with different traps or pots has indicated that the Jamaica-type traps gave better results in both shallow and deeper waters than the Cuba, Florida, and Honduras types. Most effective bait was two-day-old conch meat and shark meat.

A United States firm has an exclusive export license for frozen lobster tails. Exports have ranged from 35,200 pounds to 128,640 pounds of spiny lobster tails over the last 9 years (average 90,928 pounds). The spiny lobster tails are graded for export into 7 categories, according to weight. They are shipped by air (3 hours flight) in 40-pound cartons, up to 300 cartons per flight, from South Caicos to Miami, where they are loaded into refrigerated trucks for shipment to New York City. An export duty of US\$0.01 a lobster is levied.

The Caicos Islands have for many decades shipped dried conch meats to Haiti. Average shipments between 1941 and 1955 were about 3 million meats, and about 2.2 million meats per year from 1956 to 1959. The dried meats average 3 ounces each and their export value is from 6-8 shillings (US\$0.84-1.12) per 100. While in the past the shells were not utilized, a Florida firm obtained a 3-year export license in 1960 for 500,000 to 750,000 shells per year. An

export duty of US\$0.01 is levied on every 5 shells. Prices paid are 30 shillings (\$4.20) per 100 for large, 21 shillings (\$2.94) for medium, and 14 shillings (\$1.94) for small shells. (West Indies Fisheries Bulletin, May/June 1960.)



Belgium

CANNED FISH AND SHELLFISH OFFERING PRICES TO ANTWERP IMPORTERS:

Canned fish and shellfish importers in Antwerp, Belgium, in early September reported the following c.i.f. offers for imported canned fish and shellfish:

Offering Prices (c.i.f.) to Antwerp Importers of Canned Fish

Product and Origin	Cans/Case & Contents Weight	Price c.i.f. Antwerp
		US\$ Per Case
Salmon:		
Fancy pink (Japan)	48/16-oz.	18.62
Kiltie Fancy Pink (Canada)	48/16-oz.	24.67
Keta (chum) (Japan)	48/16-oz.	17.64
Delmonte Red (U. S.)	48/16-oz.	38.65
Lobster:		
National Banner (Canada)	48/6½-oz.	40.69-43.26
	48/2¾-oz.	22.44
	24/13-oz.	40.17
King Crab:		
Chatka (U.S.S.R.)	96/7-oz.	55.00
Fancy Quality (Japan)	48/6½-oz.	28.80-29.00
Tuna:		
In oil (Japan)	48/7-oz.	7.00-7.60
In oil, Customer's label (Peru)	48/7-oz.	6.40-6.80
Pilchards (sardines):		
Booth's (U. S.)	48/15-oz.	9.25
Customer's label (Japan)	48/15-oz.	7.80-7.90
Customer's label (Japan)	96/7½-oz.	9.30
Customer's label (S. Africa)	48/15-oz.	7.84-8.05
Sardines:		
Olive oil (Portugal)	100/¼-club ¹ / ₄	9.20-9.50
Olive oil (Morocco)	100/¼-club ¹ / ₄	8.40

Note: From United States Consulate in Antwerp, September 9, 1960.



British Guiana

NEW POLICY TO ENCOURAGE DEVELOPMENT OF FISHING INDUSTRY:

The Government of British Guiana has decided on a policy to encourage the development, by local or foreign capital, of the fishing industry. The concessions and conditions for establishment of locally-incorporated companies for the purpose of engaging in shrimp trawling, with the employment of mainly Guianese labor, include: (1) duty-free import of machinery, etc., and of fishing vessels with equipment, and (2) the Government control of disposal of catches

British Guiana (Contd.):

on the local market, in accordance with the Fisheries Ordinance and Regulations, but without restrictions on imports. Companies will be subject to local income tax as levied generally on companies and individuals, but the Government would be prepared to consider granting an income tax holiday for the processing and canning of fish, crustaceans, and all types of seafood and marine products and the manufacture of fish meal, but will not grant a tax holiday for fishing and freezing and/or packaging. Imports of supplies, other than fishing vessels and machinery for canning or fish meal plants, will be subject to import duty, and exports of shrimp and fish to an export duty, which is at present $1\frac{1}{2}$ percent ad valorem.

A French company plans to set up a plant for fish processing and for the manufacture of fish meal and other products in Berbice. It is proposed to establish a fishing base, complete with boats and refrigeration plant and a shrimp-culture station on approximately 1,000 acres of swamp land. The Government is expected to participate in the latter project. (West Indies Fisheries Bulletin, May/June 1960.)

**Canada****BRITISH COLUMBIA VESSELS FISH FOR TUNA OFF CALIFORNIA COAST:**

Fair catches of albacore tuna were landed during the week ending September 23 by four British Columbia salmon seiners. It is reported that the fish were caught mainly by salmon seines, but in part on trolling lines. Catching albacore by salmon seines required fast sets. The vessels, which left Vancouver early in September, were out 18-21 days but poor weather made it impossible to seine for the first 8-9 days, when trolling was tried with no great success. One vessel caught 2 tons and another 5 tons by trolling. A third vessel, Blue Pacific I, with the best catch (30 tons), made one seine set of about 10 tons. The Pacific Belle was second high boat with 16 tons, Skardale next with 15 tons, and the Dominator (70-foot steel combination halibut-herring vessel) with $6\frac{1}{2}$ tons. In the case of the Dominator, it was reported that the noise of the rings as the seine net was let out frightened the "wild" albacore away. In one set on a "huge body

of fish" they took only a single fish that had been gilled in the mesh. Most of the fishing was done 100 miles southwest of the mouth of the Columbia River.

At the dock the fish were graded out when unloaded. About 15-20 percent were graded as Number 2 fish because of splits and bruises. A British Columbia packing firm bought the albacore at \$300 a ton for Number 1 and \$150 a ton for Number 2.

A British Columbia fishermen's union is asking that the Canadian Government charter 6 British Columbia seiners for exploratory fishing to develop a Canadian tuna fishery. (The Fisherman, a fishery trade periodical, September 23, 1960.)

* * * * *

FISH MEAL AND OIL PRODUCTION, 1958-59:

Canadian fish-meal production amounted to 72,393 short tons in 1958 as compared with 77,177 tons in 1959.

Canadian fish-oil production during 1959 was estimated at 7,737,000 Imperial gallons.

The price paid to British Columbia fishermen for herring, the main species of fish used for reduction, was C\$13 per short ton during the last few months of 1959. The Canadian authorities state that most companies did not resume buying after the Christmas close-down.

Waste from the fresh fish-processing (filleting) plants is the chief raw material used by the fish-meal plants on the Atlantic Coast.

Most but not all of the producers of fish meal and oil are members of industry associations. On the Pacific Coast the group is known as the Fisheries Association of British Columbia; for the Atlantic Coast, the group is the Atlantic Fisheries By-Products Association. (United States Embassy in Ottawa, July 20, 1960.)

* * * * *

LABELING REQUIREMENTS FOR CANNED SARDINES ANNOUNCED:

The Canadian Inspection and Consumer Service, Department of Fisheries, Ottawa, Canada, has issued a ruling on the labeling of canned fish marked "Sild" or "Brisling" imported into Canada.

Canada (Contd.):

It is the view of the Department of Fisheries that for informative labeling, the word "Sardines" should be used in association with the words "Sild" or "Brisling." Furthermore, the words "Brisling Sardines" or "Sild Sardines" shall be displayed in letters of equal height and prominence. However, where the word "Sardines" only appears on the label, it will not be necessary to indicate whether the contents are "Sild" or "Brisling."

In order to give the importers time to conform to the labeling requirements of these products, the Department of Fisheries will permit the use of existing stocks of labels until March 31, 1961. All imports of "Sild" and "Brisling" packed after that date will, however, be required to comply with these labeling requirements.

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OUTLOOK FOR THE GEORGES BANK SCALLOP FISHERY:

History of Fishery: Georges Bank supports the world's largest scallop fishery. United States boats started extensive commercial fishing on this Bank in the early 1930's and since then there has been a continuous history of good production. After World War II, United States landings increased and since 1955 they have remained in the neighborhood of 18 million pounds of shucked meats annually.

Canadian boats began scallop fishing on Georges Bank just after World War II. At that time few boats were equipped for offshore scallop fishing and until 1952 one or two boats made intermittent trips to the Bank. Other areas such as St. Pierre Bank and Port au Port Bay, Newfoundland, were fished by some boats. Since 1952, however, the Canadian offshore scallop fleet has concentrated almost exclusively on Georges Bank and has expanded rapidly. Annual landings have risen steadily and in 1959 reached 4.3 million pounds. So far, 1960 landings have continued this rising trend.

Canadian crews have become much more efficient at scallop fishing, but the primary cause of increased Canadian landings is the build-up of the offshore scallop fleet. From one or two boats prior to 1952, the fleet has increased to 20 boats and indications are that more boats will be constructed. The

United States fleet has also expanded and over 70 boats now sail out of New Bedford. The result is that steady, increased pressure has been placed on Georges Bank scallop stocks.

Fluctuating Limits: In any natural population, there is a limit to the number of animals that can be caught. This limit is variable because variable natural conditions regulate reproduction and abundance. For example, in the Digby scallop fishery we have found that great abundance changes are related to water temperature at spawning time. Georges Bank scallop stocks also show great year-to-year changes in success of reproduction. These changes are usually uncontrollable but sometimes they are predictable.

In the past year there has been a great abundance of market-size scallops on Georges Bank. An accurate estimate of their age is difficult but it appears that almost all the scallops now being fished were spawned in the same year--either 1954 or 1955. A few of these were fished in early 1959, but by late 1959 they constituted the bulk of the catch and 1960 large catches depend almost entirely on this single year-class. We do not understand why this one spawning was so successful but with continued research we hope to find the answer. Even if we can't explain the situation, we are able to predict the effects it will have.

Predicted Decline in Landings: Canadian and United States scientists have been sampling the Georges Bank scallop population on both commercial and other beds for several years. Many of the samples have been taken with a small-mesh drag, which captures both market-size scallops and small scallops that must grow for several years before they reach commercial size. Counts of these undersize scallops give a fair idea of what the future holds for the fishery. For instance, we were able to foresee the 1959-60 increase in landings from the tremendous number of scallops just under commercial size which came up in our early 1959 samples.

Our 1960 samples contain very few small scallops. The year-class being fished now is very abundant but the next one or two year-classes appear to be much below normal. This means that undoubtedly catches will decline significantly when this abundant year-class is fished out. From our information it appears that catches will begin to decrease by the end of this year and will remain low for at least two years.

Canada (Contd.):

Effects of Decline: It is difficult to predict the extent and the effect of greatly reduced landings from the fished areas. In most fisheries when production drops in one area the fleet moves to other grounds. The scallop fishery is somewhat different than other fisheries; first, because scallop stocks do not move about like schools of cod and haddock; and second, because no other area has extensive scallop populations like those found on Georges Bank. Furthermore, Georges Bank has been well explored and it appears to have no areas, fished or unfished, which have extensive quantities of young scallops. It is doubtful if other parts of the Bank can make up for the big drop in catches from regularly fished areas.

Our offshore fleet will probably be unable to turn to other regions to offset reduced catches from Georges Bank. Scallop beds in the Gulf of St Lawrence are too small and their production too variable from year to year. Surveys of other offshore banks indicate that scallops are too sparse to make fishing commercially attractive for an extensive period of time. The fleet will probably have to be satisfied with the small catches it will be able to take on Georges Bank. Total production from our whole coast as well as from Georges Bank will probably remain low for at least two years.

Reduced catches may encourage some Georges Bank fishermen to shuck many of the small scallops they now throw overboard. This would be a short-sighted policy. In the first place it would require more shucking effort to produce every pound of meat. Secondly, it would probably delay recovery of the stocks of large scallops to more abundant levels.

Planning Adjustment: It is hoped that releasing this statement now will aid the offshore scallop fishery to plan for the changes we have predicted. Our research program is continuing and it is planned to make periodic reports to industry on the status of the Georges Bank scallop population.

--By N. Bourne, Biological Station,
Fisheries Research Board of Canada,
St. Andrews, N. B.
(September 1960).

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12-MILE FISHING LIMIT UNDER CONSIDERATION:

Canadian Government authorities have under "active consideration" the declaration of a 12-mile fishing limit off Canada's sea coasts, according to the October 19, 1960, Ottawa Journal. But the paper did not indicate when a decision would be announced. The present fishing and territorial limit for Canada is three miles.



Cuba

PROGRAM TO BUILD 570 NEW FISHING VESSELS ANNOUNCED:

The Cuban press has announced that on October 1 work was started on the construction of 570 new fishing vessels from 33-75 feet in length in ten shipbuilding centers located from Camaguey to Pinar del Rio under the supervision of the Naval Construction Office of the Fisheries Department of the National Institute for Agrarian Reform (INRA).

According to the press account, 205 units of the sigma type, 33 feet in length, will be constructed in the first stage of the shipbuilding plan, in the following shipbuilding centers: Puerto Esperanza 40; Surgidero de Batabano 20; Cardenas 40; Caibarien 30; Isabela de Sagua 30; Cienfuegos 15; Nuevas 15; and Santa Cruz del Sur 15.

Later on, other types will be built, including the Omicron, 75 feet in length. The stated purpose of the fishing vessel program is to stimulate to the greatest possible extent the fishing and shipbuilding industries in Cuba in order to foster economic development. The shipbuilding plans were said to have been finalized at a meeting of the heads of workshops and provincial delegates of Ship Construction held in the INRA's Fisheries Department on September 16, 1960. (The United States Embassy in Havana reported on September 26, 1960.)



Denmark

DISPUTE OVER PROFIT-SHARING BETWEEN VESSEL OWNERS AND CREWS AT ESBJERG ENDS:

Upwards of 500 fishing vessels were idle early in September 1960 in the Danish West

Denmark (Contd.):

Jutland fishing port of Esbjerg as a result of a controversy which began August 22 between the vessel crews and vessel owners over the division of profits. Originally affecting only the herring boats, the tie-up spread to virtually the entire Esbjerg fleet. As of early September the controversy had already cost the fishermen of Esbjerg about ten million kroner (about US\$1.5 million) in shares. Esbjerg is Denmark's largest fishing port, the value of the annual catch landed there topping 75 million kroner (US\$10.9 million).

The trouble began when the Esbjerg Fishing Captains' and Vessel Owners' Association refused to accede to the demand of the Fishermen's Union that crew members be accorded a share in the annual profits of a vessel. Under terms of the current agreement, crew members share in a portion of the value from the sale of each trip, but the remainder of the value is accumulated by the captains and owners in a reserve fund and then divided up between themselves on an annual basis. The crew members now want a slice of this portion as well.

After many days of refusing to enter into discussions except each on his own terms, the Owners' Association and Union representatives sat down on September 6 and reached a preliminary agreement to discuss differences.

The tie-up came to an end on September 15, after the Fisheries Minister had stepped in to promote peace between vessel owners and crew members.

Terms of the agreement, worked out by the vessel owners and crew member representatives and ratified by the Fishermen's Union, provide for those crew members who are share fishermen to be given shares of reserve-fund payments as well as shares in immediate sales. The share fishermen maintained that the captains were in a position to direct an unfair portion of the receipts into the reserve fund at the expense of that portion which was shared with crew members.

Other work and wage conditions under contention were deferred for later discussion. One specific point not gained by the Fishermen's Union was its demand that all vessels fishing for the cooperative herring

oil factory agree to hire only union crew members.

Fishing vessels began to put off from Esbjerg soon after the agreement was ratified. (United States Embassy, Copenhagen, September 7, 1960.)

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FOREIGN TRADE IN FISH MEAL AND MARINE OILS, 1959:

Exports: In 1959 Danish exports of fish meal amounted to 58,770 metric tons, valued at US\$10.7 million. The United Kingdom and the Netherlands were the principal buying nations (see table 1).

Type and Destination	Qty.	Value	
		Metric Tons	1,000 Kroner
Herring Meal:			
Finland	1,782	2,342.0	339.6
Sweden	1,695	2,132.0	309.1
Belgium-Lux. .	501	618.0	89.6
Czechoslovakia.	626	778.0	112.8
France	540	706.0	102.4
Holland	13,185	16,629.0	2,411.2
Ireland	759	970.0	140.7
Italy	809	1,086.0	157.5
Switzerland ...	2,024	2,628.0	381.1
United Kingdom	30,456	38,747.0	5,618.3
West Germany .	2,858	3,566.0	517.1
East Germany .	703	874.0	126.7
Egypt	60	79.0	11.5
Mexico	40	54.0	7.8
Philippines ...	76	100.0	14.5
Total	56,114	71,309.0	10,339.8
Other Fish Meal:			
Sweden	210	249.0	36.1
Belgium-Lux. .	118	73.0	10.6
Czechoslovakia.	96	111.0	16.1
Gibraltar	5	6.0	.9
Holland	449	461.0	66.8
Italy	10	12.0	1.7
Switzerland ...	20	24.0	3.5
United Kingdom.	378	368.0	53.4
East Germany .	671	779.0	113.0
West Germany .	699	678.0	98.2
Total	2,656	2,761.0	400.3
Grand Total ...	58,770	74,070.0	10,740.2
1/Values converted at rate of one krone equals US\$0.1450.			

During the first four months of 1960 Danish fish-meal exports amounted to 9,841 metric tons, valued at 7 million kroner (US\$1.0 million), compared with 26,000 tons, valued at 27.5 million kroner (US\$4.0 million) for the same period in 1959. As of June 1960 the average export price was approximately 60 øre a kilogram (US\$78 per short ton) as compared with 1.16 kroner a kilogram (US\$152 per ton) a year earlier. Peruvian competition was blamed for the price decline; however, Peruvian prices also declined from US\$140 to \$70 a metric ton over the same period.

Denmark (Contd.):

It was reported that stocks of fish meal and oil were accumulating in Denmark in July of 1960, with consequent downward pressure on the price of industrial fish for reduction. Two Esbjerg marine oil factories reduced their prices for industrial fish to 14 øre per kilogram (US\$18 per short ton) in June 1960. Danish fishermen have attempted to market their industrial catches abroad, but have found that the prices in Norway dropped from 17 to 12 øre per kilogram (US\$22 to \$16 per ton), and in Holland, down to 8 øre per kilogram (US\$10 per ton).

Danish exports of fish solubles amounted to 1.5 million kroner (US\$217,500) in 1957, and increased to almost 7 mil-

Table 2 - Denmark's Imports of Fish Meal by Type and Origin, 1959

Type and Origin	Qty.	Value	
		Metric Tons	1,000 Kroner
Herring Meal:			
Iceland	523	617.0	89.5
Norway	241	251.0	37.8
Total	764	878.0	127.3
Other Fish Meal:			
Iceland	8,404	9,557.0	1,385.8
Norway	3,970	4,532.0	657.1
United Kingdom ...	300	335.0	48.6
Total	12,674	14,424.0	2,091.5
Grand Total	13,438	15,302.0	2,218.8

lion kroner (US\$1.0 million) in 1958, and to 11 million kroner (US\$1.6 million) in 1959 (of which the United States received an amount valued at 10 million kroner or US\$1.5 million). But only 129 metric tons were shipped to the United States in the first four months of 1960 as compared to 23,000 tons for the year 1959. Whereas in 1959 United States importers paid prices ranging from US\$80-95 per short ton, this year they

Table 3 - Denmark's Imports of Marine-Animal Oils ^{1/} By Type and Country of Origin, 1959

Type and Origin	Qty.	Value	
		Metric Tons	1,000 Kroner
Herring Oil:			
Norway	191	346.0	50.2
Sweden	518	606.0	87.9
West Germany	5,342	6,708.0	972.7
Portuguese W. Africa	504	638.0	92.5
Peru	1,103	1,198.0	173.7
United States	519	663.0	96.1
Total	8,177	10,159.0	1,473.1
Medicinal and Veterinary Train Oil:			
Iceland	311	485.0	70.3
Norway	1,325	2,254.0	326.8
United Kingdom ...	57	127.0	18.4
West Germany	504	775.0	112.4
Total	2,197	3,641.0	527.9
Grand Total	10,374	13,800.0	2,001.0

^{1/}Does not include imports of 7,164 tons of whale oil.

would not accept shipments priced at \$35 per ton freight inclusive. It is reported that the United States is now covering its needs for fish solubles by domestic production, and that there are large stocks of fish solubles now in storage on the East Coast. For this reason, Danish producers are storing fish solubles in the hope that the market will improve in the future.

Imports: In 1959 Denmark imported 13,438 metric tons of fish meal, principally from Iceland and Norway; it was valued at US\$2.2 million (see table 2).

Denmark's 1959 imports of marine oils amounted to 8,177 metric tons of herring oil, valued at US\$1.5 million, and 2,197 tons of medicinal and veterinary train oil, valued at US\$2.0 million (see table 3). (United States Embassy, Copenhagen, June 21, 1960.)



Ecuador

FISH MEAL AND OIL INDUSTRY:

The Ecuadorean fish-meal industry is based principally on the utilization of waste from tuna canning supplemented by crudely-processed sun-dried fish. Production of meal is estimated to be about 500 tons a year. Neither oil nor stickwater are produced. All meal currently produced in Ecuador is used within the country for animal feed.

There is only one mechanical dryer in operation. It is connected with a tuna cannery at Manta. It is a batch dryer, using steam, that can handle about 1½ tons of cooked tuna scrap in six hours. However, since the material is not pressed to extract the oil, it has been found preferable to process the scrap in the dryer for two hours and then sun-dry it on the ground for six days before milling and bagging. Although the protein content is lowered somewhat by this method, the oil content is brought down appreciably.

The tuna heads, since they are removed from the whole fish before cooking, are processed separately. The heads are retained until the lot of fish for the day has been cooked, then they are cooked and placed in the dryer for two hours, and sun-dried later. The tuna viscera are discarded.

The tuna meal, which comes from skipjack tuna, is reported to run between 50 and 70 percent protein with the heads yielding the lower values.

There are several small operations near Valdivia and Salinas that sun-dry thread herring (pinchagua, *Opisthonema libertate*). Processing is simple. The fish are cooked and then spread on the ground to dry and when dried, ground into meal.

Before the world-wide drop in fish-meal prices, several persons were interested in installing fish-meal equipment. But with the break in the market, these projects have been abandoned.

In Manta there are 25 small bait-boats fishing for skipjack and four more under construction. These boats are all privately owned--mostly by fishermen. They are 40 to 50 feet long and carry crews of 15 to 20 men. When a mothership is not available, the boats return to port daily to unload the catch since the boats are not equipped with refrigeration nor do they carry ice. The fishermen were reported to be receiving 1,100 sucres (about US\$65) per short ton for skipjack. The thread herring fishermen are said to be paid 10 to 11 sucres per 100 pounds (about US\$11.24-12.36 per short ton).

Tuna meal, in quantity lots to distributors, was quoted in October 1960 at 70 sucres per 100 pounds (about US\$78.60 a short ton), f.o.b. plant.

Ecuador (Contd.):

Export charges on meal consist of a tax of 10 sucres (about 67 U. S. cents) a metric ton (gross weight) plus port charges of 1/4 of one percent of the f.o.b. price.

There are no import duties on fish meal imported for fertilizer. If it is imported for animal feed the duties are 10 centavos a kilo (about US\$6.67 a metric ton) specific plus 3 percent ad valorem. In either case, whether imported as feed or fertilizer, there are certain other charges. These consist of:

1. 135 sucres per 100 kilos (about \$90 a metric ton) for pier taxes.
2. 9.5 percent of f.o.b. value for consular fees.
3. 2.0 percent of f.o.b. value additional fee.
4. 5.0 percent of c.i.f. value for Comision de Valores.
5. 1.0 percent of c.i.f. value additional fee.

According to the Banco Central del Ecuador no fish meal was imported in 1958 or 1959, and during the first five months of 1960 only a sample of about 211 pounds was imported. According to this same source fish-meal exports began in 1957 when 188 metric tons were exported. In 1958 exports were 47 tons and in 1959 they amounted to 295 tons. There have been no exports of fish meal since October or November 1959.

There are no indications that processing procedures will be changed in the near future nor are there any plans for utilizing the stickwater or the oil.

Owing to increased poultry production, the consumption of fish meal in Ecuador has been increasing during the past 2 or 3 years. Annual consumption of fish meal is still quite small and there is no indication of any great increase in the immediate future. The fish meal is used chiefly in poultry feed since it is reported that prepared feeds are still too costly for pigs. Local production of meal will probably take care of all immediate requirements.

The principal oil imports of marine origin are whale and cod oil. During the first five months of 1960, according to the Banco Central, 83.9 metric tons of whale oil, 10.7 tons of cod oil, and 4.2 tons of fish oil were imported. There is no indication that local production will be able to replace these imports in the near future.

It does not appear probable that Ecuador soon will be in a position to provide any quantities of fish meal or oil for export. The production of tuna meal is limited to cannery waste and the country can probably consume all that is produced.

Two other sources of meal and oil appear to be present—the pinchagua (thread herring) and the anchoveta (*Cetengraulis*), but it is probable that the stocks of these two species are limited in abundance since they are reported not to occur along the entire coast. Their distribution is scattered. The anchoveta is reported to be most abundant in the Gulf of Guayaquil while the pinchagua is more prevalent in the vicinity of Salinas and near Esmeraldas. The pinchagua is now being used for fish meal to some extent but there are no plans for expansion. (United States Embassy, Mexico City, report of October 11, 1960.)



Egypt

LOAN BY UNITED STATES TO AID SHRIMP FREEZING FIRM:

The Development Loan Fund on October 24, 1960, announced the signing of a United

States Government loan of \$200,000 to a privately-owned company of Alexandria, Egypt, to help expand and improve its present vegetable and fruit canning and shrimp freezing operations.

The project involves the procurement in the United States of a shrimp grader and shrimp freezing equipment plus equipment for processing vegetables; boiler and related equipment; and workshop and laboratory equipment. This equipment will provide the company with facilities to balance its operations for year-round production rather than seasonal fluctuations, and the freezer equipment will allow year-round storage of shrimp.

This is one of the priority projects in the first Five-Year Industrial Plan of the Egyptian Region of the United Arab Republic. The Region has sought to establish a sounder balance between production of food crops and nonfood market crops, in order to reduce its dependence upon food imports. All of the vegetable and citrus fruits are grown locally, and the shrimp is available from the local fishing industry. Hitherto lack of facilities for processing and for deferred merchandising of perishable crops has discouraged producers.

Note: Also see Commercial Fisheries Review, November 1959 p. 64.

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IMPORT LICENSES FOR MORE JAPANESE CANNED FISH ISSUED:

The Government of the United Arab Republic has announced that it would issue import licenses on canned fish from Japan for the second time this year. The amount of the licenses will be US\$1,000,000--more than the usual amount of \$800,000. In the past, some 70 percent was for canned mackerel-pike, about 20 percent for tuna canned in oil, and about 10 percent for "horse-mackerel" and common mackerel. This time, since light-meat tuna in oil is almost unobtainable and production of "horse mackerel" is short, possibly about 90 percent of the licensed amount will be for canned mackerel-pike.

Accordingly, exports of mackerel-pike of 100,000-120,000 cases are expected for Egypt and the Japanese exporters want to stabilize sales by putting a quantitative agreement into practice. If it is impossible, they desire to conclude a price agreement only and this is being studied by a committee organized for that purpose. (Suisan Tsushin, September 7, 1960.)

German Federal Republic

FISH-MEAL PRODUCTION, FOREIGN TRADE, AND CONSUMPTION:

Production: Fish-meal production in Western Germany increased from 83,100 metric tons in 1958/59 to 94,000 tons in 1959/60 (July 1959-June 1960), with herring meal showing the greatest increase.

Foreign Trade: Imports of fish meal increased from 140,800 tons in 1958/59 to 179,200 tons in 1959/60, while exports remained fairly constant at 9,000 and 9,500 tons, respectively. During 1958/59 Peru supplied 41 percent of the fish meal imports, but in 1959/60 that country supplied 72 percent. In the first half of 1959, fish meal imports were 79,000 tons; the same amount was imported the second half of 1959. But in January-June 1960 they climbed to 100,000 tons.

Consumption and Stocks: It is anticipated that fish-meal consumption will rise sharply by the end of 1960 (see table 1).

The increased domestic production and imports of fish meal are being absorbed by the large production of hogs

FOREIGN TRADE IN MARINE-ANIMAL OILS, 1958-1959:

Exports: Marine oil exports (fish, fish-liver, whale, etc.) from West Germany increased from 20,100 metric tons in 1958 to 33,400 tons in 1959. While only 60 percent of the 1958 exports were edible marine oils (fish, fish-liver, and whale), 96 percent of the 1959 exports were edible.

Table 1 - West Germany's Exports of Marine-Animal Oils, By Type, 1958-1959

Type	1959	1958
. . . (Metric Tons) . . .		
Edible:		
Marine and similar fats	6,000	4,800
Other marine fats & oils	26,000	7,200
Total	32,000	12,000
Industrial:		
Whale oil and fat	100	300
Other marine fats & oils	1,300	7,800
Total ^{1/}	1,400	8,100
Grand Total	33,400	20,100

^{1/}Does not include industrial-use marine fatty acid exports-- 3,200 tons in 1959 and 2,200 tons in 1958.

Norway buys the greater part of Germany's marine oils, with Denmark and Sweden receiving lesser yet significant amounts. The United States buys no marine oils from West Germany.

Imports: Imports of edible marine oils (fish, fish-liver, whale, etc.) into West Germany decreased from 129,100 metric tons to 121,900 tons in 1959. Smaller require-

Table 2 - West Germany's Imports of Marine-Animal Oils, By Type, 1958-1959

Type	1959	1958
. . . (Metric Tons). . .		
Edible:		
Whale oil	67,800	70,500
Other marine oils	54,100	58,600
Total	121,900	129,100
Industrial:		
Whale oil and fat	12,200	8,300
Other marine oils & fats	10,900	5,700
Total ^{1/}	23,100	14,000
Grand Total ^{2/}	145,000	143,100

^{1/}Does not include industrial-use marine fatty acid imports-- 8,500 tons in 1959 and 9,000 tons in 1958.
^{2/}Evidently does not include fish-liver oils and degrass (tanning fat of marine origin).

ments in the margarine industry caused this decline. Industrial marine-oil imports increased from 14,000 tons in 1958 to 23,000 tons in 1959.

In 1958 West Germany received 21,300 tons of fish oil from the United States out of a total of 64,300 tons imported. This compared with 22,000 tons from the United States in 1959 out of a total of 65,000 tons.

Table 1 - Western Germany's 1/Supply and Distribution of Fish Meal, 1958-60

	1959/60	1958/59
. . . . (Metric Tons). . . .		
Stocks beginning of year ^{2/}	3,700	4,700
Production (In plants with more than 10 employees):		
Cod meal ^{3/}	15,800	14,000
Fish meal ^{3/}	52,500	48,300
Herring meal ^{3/}	22,100	16,800
Total large plant production	90,400	79,100
Other production ^{4/}	4,500	4,000
Grand total production	94,900	83,100
Imports	5/ 179,200	5/ 140,800
Total Supply	277,800	228,600
Exports	9,500	9,000
Consumption	261,400	215,900
Stocks ^{6/}	6,900	3,700

^{1/}Includes West Berlin; and Saarland since July 1959.

^{2/}At beginning of year in hands of fish-meal industry.

^{3/}Requirements:

	Minimum		Maximum	
	Protein	Ca Phosphate	Fat	Salt
 (Percent)			
Cod meal	60	18	3	3
Fish meal	55	15	8	5
Herring meal	55	8	12	8

^{4/}Includes meal from shrimp waste.

^{5/}Peru supplied 129,300 tons in 1959/60 and 57,400 tons in 1958/59.

^{6/}End of year.

and increased poultry production. But because fish meal prices in the first half of 1960 were so low and oil cake prices high, there no longer is an incentive to substitute vegetable protein for animal protein. (U. S. Foreign Agricultural Service Report, Bonn, October 4, 1960.)

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German Federal Republic (Contd.):

Table 3 - West Germany's Imports of Marine-Animal Oils, By Type and Country of Origin, 1959

Type and Origin	Quantity Metric Tons
Fish-Liver Oils:	
Denmark	372
Iceland	402
Norway	466
Others	446
Total	1,686
Whale Oil and Whale Fat:	
United Kingdom	1,626
Iceland	507
Holland	3,218
Norway	36,068
Portugal	1,219
Union of South Africa, etc.	310
United States	871
Peru	3,409
Japan	29,785
Australia	2,617
Others	341
Total	79,971
Other Marine Fats and Oils:	
Belgium	394
Denmark	6,169
United Kingdom	689
Holland	3,838
Norway	7,297
Portugal	3,341
Sweden	319
Angola	4,371
Morocco	511
Union of South Africa, etc.	1,198
Canada	1,549
United States	21,986
Peru	8,833
Japan	3,790
For re-export	530
Others	199
Total	65,014
Degras^{1/}:	
Holland	314
Sperm Oil:	
Destination not given	17
Grand Total	147,002
^{1/} Tanning fat of marine origin.	

Norway, Japan, and the United States are the primary suppliers of marine oils to West Germany. (U. S. Foreign Agricultural Service Report, Bonn, April 14, 1960.)

* * * * *

IMPORTS, EXPORTS, AND PRODUCTION OF EDIBLE FISH OILS, 1957-59:

The shrinking West German market for edible fish oil (not including fish-liver oil, whale oil, etc.) has been accompanied over the past few years by slowly declining imports and sharply increasing exports. Trade sources say that lessening domestic demand has resulted mostly from a growing consumer preference for margarine made of vegetable fats and oils. Prices of imported edible fish oil dropped an average of 20.3 percent during 1957 through 1959. (See table 1.)

West German production of fish oil, after declining to 19,193 metric tons in 1958, rose again to 25,065 tons in 1959. This increase was attributed primarily to the availability of more raw material as a result of the higher percentage of fish declared unfit for human consumption in 1959. In addition, fish oil production aboard West German trawlers continued to increase. In 1957 production amounted to 21,155 tons. (It is estimated that West Germany produced an additional 6,000 tons of cod-liver oil in 1959. Almost 70 percent of that production went into medical and veterinarian uses. The remaining 30 percent was exported, primarily for vitamin extraction. An insignificant amount was used for margarine.)

Trade sources estimate that approximately 95 percent of the West German 1959 production of edible fish oil was exported. Exports increased from 7,236 tons in 1958 to 25,985 tons in 1959. Several reasons have been given for this development.

In the first place, the Scandinavian countries and the Netherlands were willing to pay more for West German fish oil than West German margarine manufacturers were. Norway took nearly 56 percent of West German fish oil exports in 1959, reportedly because (a) its own production dropped considerably, and (b) an estimated 60 percent of the Norwegian output was exported under a long-term contract to Russia. (See table 2.)

West German imports of edible fish oil during the past three years declined steadily but slowly, from 59,383 tons in 1957 to 54,465 tons in 1959. The pattern of imports during these three years changed significantly. Imports from Iceland, Angola, and the Union of South Africa dropped considerably, while Denmark, the Netherlands, Peru, and Japan developed into volume suppliers. Most of the change in the import pattern is ascribed to the relatively lower prices at which edible fish oil was offered by the latter group of countries.

Throughout the past three years, the United States continued to account for the biggest share in West German imports. After a drop from 28,527 tons, or 48 percent of total West German edible fish oil imports in 1957, to 21,294 tons, or 37 percent in 1958, United States shipments increased again to 21,986 tons or 40.4 percent in 1959. However, United States fish oil managed to maintain its leading position in the West German fish oil

German Federal Republic (Contd.):

market only through a 20 percent reduction in its prices during the past three years. (See table 3.)

many is said to have developed a decided preference for United States menhaden oil, to the processing of which it has become accustomed.

Table 1 - West Germany's Imports of Edible Fish Oils^{1/} by Country of Origin, 1957-59

Country	Quantity			Value ^{2/}					
	1959	1958	1957	1959		1958		1957	
	.. (Metric Tons) ..			DM1,000	US\$1,000	DM1,000	US\$1,000	DM1,000	US\$1,000
Denmark	4,827	2,041	1,059	3,519	838	1,513	362	937	223
Great Britain	508	508	-	410	98	394	94	-	-
Iceland	251	7,464	5,463	198	47	6,092	1,450	4,871	1,160
Netherlands	3,329	2,489	1,585	2,291	545	1,839	438	1,353	322
Norway	5,296	6,233	5,687	4,477	1,066	5,757	1,371	6,212	1,479
Portugal	1,286	759	900	911	217	589	140	851	203
Angola	2,891	5,641	9,423	2,149	512	4,254	1,013	8,310	1,979
Morocco	255	151	-	156	37	111	26	-	-
Union of South Africa	1,199	9,241	4,664	844	201	6,836	1,628	4,020	957
Canada	1,549	1,645	411	1,190	283	1,342	320	412	98
United States	21,986	21,294	28,527	16,145	3,844	17,188	4,092	26,247	6,249
Panama	-	-	239	-	-	-	-	209	50
Peru	7,098	-	1,136	4,543	1,082	-	-	1,011	241
Japan	3,790	-	25	2,968	707	-	-	20	5
Other	200	86	264	162	39	64	15	247	59
Total	54,465	57,552	59,383	39,963	9,516	45,979	10,949	54,700	13,025

^{1/}Exclusive of fish-liver oil, whale oil, and other marine oils.

^{2/}Values converted to US\$ at rate of DM4.20 equals US\$1.

Prospects for imported edible fish oil in the West German market are difficult to judge. The marketing potentiality of foreign oil would seem to depend to a considerable

From a long term point of view, competition between domestic and foreign fish oil suppliers in the West German market is expected to become keener, not only because

Table 2 - West Germany's Exports of Edible Fish Oils^{1/}, 1957-59

Country	Quantity			Value ^{2/}					
	1959	1958	1957	1959		1958		1957	
	.. (Metric Tons) ..			DM1,000	US\$1,000	DM1,000	US\$1,000	DM1,000	US\$1,000
Denmark	4,209	3,556	989	3,118	742	2,752	655	882	210
Netherlands	2,561	1,596	1,541	1,874	446	1,244	296	1,423	339
Austria	-	-	19	-	-	-	-	23	5
Norway	14,672	1,070	-	10,397	2,475	787	187	-	-
Sweden	4,543	1,014	1,703	3,301	786	874	208	1,558	371
Total	25,985	7,236	4,252	18,690	4,449	5,657	1,346	3,886	925

^{1/}Exclusive of fish-liver oil, whale oil, and other marine oils.

^{2/}Values converted to US\$ at rate of DM4.20 equals US\$1.

extent on the possibility of German fish oil finding a market abroad. This involves such imponderables as (1) the size of the fish catches in countries now buying German edible fish oil, (2) the development of consumer preferences with regard to consumption of butter and of higher quality vegetable margarine, and (3) in the case of Norway, continued exports of fish oil to Russia.

German trade sources like to think that, at least in the coming few years, their sales of fish oil abroad will continue to be high. Consequently, they expect West German needs for imported fish oil to remain high, although declining slowly. It is predicted that United States menhaden oil will continue to account for a major percentage of over-all West German fish oil imports. A leading margarine-producing company in West Ger-

Table 3 - Average Imports, Exports, and Ex-Plant Prices in West Germany for Edible Fish Oils, 1957-59

Country of Origin	Average Prices for Imports C.I.F. German Border Points					
	1959	1958	1957	1959	1958	1957
	DM Per Metric Ton			US\$ Per Metric Ton		
Denmark	729	741	885	173.57	176.43	210.71
Iceland	790	816	892	188.10	194.29	212.38
Netherlands	688	739	854	163.81	175.95	203.33
Norway	845	924	1,092	201.19	220.00	260.00
Angola	743	754	882	176.90	179.52	210.00
Union of So. Africa	704	740	862	167.62	176.19	205.24
Canada	768	816	1,003	182.86	194.29	238.80
United States	734	807	920	174.76	192.14	219.05
Peru	640	-	890	152.38	-	211.90
Japan	783	-	787	186.43	-	187.38
Country of Destination	Average Prices for Exports F.O.B. German Border Points					
Denmark	741	774	892	176.43	184.29	212.38
Netherlands	732	779	924	174.29	185.47	220.00
Austria	-	-	1,198	-	-	285.23
Norway	709	735	-	168.81	175.00	-
Sweden	727	862	915	173.10	205.24	217.86
Average Ex-Plant Prices for Domestic Product						
Total Production	698	740	833	166.19	176.19	198.33

German Federal Republic (Contd.):

the demand for fish oil by the margarine industries at home and abroad is expected to decline progressively, but also because foreign suppliers will probably step up their own production. Trade sources have pointed out that Russia is rapidly expanding its fisheries, and that it may ultimately buy less Norwegian fish oil. In that event, German producers would try to find a greater outlet in the home market. Moreover, increased competition is expected from less developed countries which cannot easily channel their growing fish catches into human consumption because of a lack of processing and distribution facilities. For these countries, the reduction of fish to oil and meal is the easiest way of utilizing their catches, and, according

to local trade sources, their low production costs can have a depressing effect on edible fish oil prices. (United States Consulate in Bremen, May 17, 1960.)

* * * * *

FUNDS FOR THE SUPPORT OF THE FISHING INDUSTRY:

Appropriations and expenditures by the West German Federal Government for the support of the commercial fishing industry amounted to DM17.2 million (US\$4.1 million) and DM10.7 million (US\$2.6 million), respectively, for the fiscal year ending March 31, 1960. Beginning with April 1, 1960, the fiscal year April-March was changed to a calendar year and funds amounting to DM13.2 million (US\$3.2 million) were appropriated for a transitional nine months period.

Appropriations and Actual Expenditures by the West German Government for the Support of the Fishing Industry, Fiscal Year 1959/60 and April-December 1960

Purpose	Fiscal Year 1959/60 ^{1/}				Fiscal Year 1960 ^{2/}	
	Appropriations		Actual Expenditures		Appropriations	
	DM1,000	US\$1,000	DM1,000	US\$1,000	DM1,000	US\$1,000
(1) Subsidy on Diesel fuel used by luggers and cutters	4,000	959	3,300	791	2,625	629
(2) Temporary special support program for the lugger and cutter fisheries in the form of medium term loans	480	115	429	103	-	-
(3) Revolving loan fund to aid in the construction and modernization of cutters	350	84	NA	NA	200	48
(Total amount of revolving fund)	(5,000)	(1,199)	NA	NA	(5,200)	(1,247)
(4) Loans from the amortization of ERP investments in West Germany for the construction of factory trawlers	6,000	1,439	NA	NA	5,200	1,247
(5) a. Subsidy of interest rates on commercial loans for the construction and modernization of luggers, cutters and factory trawlers	400	96	355	85	225	54
b. Subsidy of interest rates on commercial loans for the building of central freezing and distribution facilities.	100	24	NA	NA	-	-
c. Subsidy of interest rates to avoid financial distress to trawler companies; forced to convert from interest-free to interest-bearing commercial loans	100	24	NA	NA	-	-
(6) Management Advice Program for the cutter fishing trade	100	24	91	22	150	36
(7) Search for and exploration of new fishing grounds and improvement of catching techniques	800	192	NA	NA	830	199
(8) Contribution to the German Scientific Commission for the Exploration of the Seas, Bonn	150	36	151	36	169	40
(9) Operation and maintenance of the fishery research vessel Anton Dohrn	805	193	688	165	563	135
(10) Federal Fisheries Research Institute, Hamburg	1,967	472	3/3,318	796	1,894	454
thereof: a. construction of a new building for the Institute ^{4/}	(300)	(72)	3/(1,383)	(332)	(743)	(178)
b. construction of a new building for the Biological Institute, Helgoland ^{5/}	-	-	3/627	150	-	-
c. testing of fish products	(9)	(2)	NA	NA	(6)	(1)
(11) Operation and maintenance of the Federal Fisheries Policing and Protection Service, consisting of 3 vessels	1,941	465	1,701	408	1,339	321
(12) Contribution to international organizations:						
a. International Council for the Exploration of the Seas, Copenhagen	24	6	24	6	30	7
b. Overfishing Convention of 1946, London	3	1	3	1	3	1
c. International Council for North Atlantic Fisheries	10	2	9	2	17	4
Total	17,230	4,132	10,697	2,565	13,245	3,175

^{1/}April 1-March 31.

^{2/}April 1-December 31. In 1960 the German Government changed its fiscal year to a calendar-year basis, and the 1960 fiscal year became a transitional year covering a period of 9 months.

^{3/}Expenditures in excess of appropriations in 1959/60 were made possible by surplus funds from appropriations made in previous years.

^{4/}Total cost of the project: DM4,449,000 (US\$1,066,900).

^{5/}Total cost of the project: DM4,700,000 (US\$1,127,090).

NA = Not available.

Note: 4.170 Deutsche marks equal US\$1.

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German Federal Republic (Contd.):

NEW TYPE CANNED FISH CONTAINER DEVELOPED:

A leading fishing and canning firm of Bremerhaven, West Germany, recently started selling its canned fishery products in a new type of container developed by a firm located in Hannover.

The innovation in this new type of container is the lid construction. Rather than soldering or crimping the lid on top of the can, the processor places it on a rubber ring fitted on the rim, and it is held in place by a partial vacuum. The procedure is similar to the way housewives preserve food in glass jars. The can is opened easily by pulling a small tongue attached to the rubber ring and protruding from under the top.

Containers of a similar construction have been on the German market for some time, but can be used only for fish products prepared with chemical preservatives and permit storage only for a short period. The Hannover firm succeeded in solving the problem of adapting the rubber ring to form a better seal that will last over a long-term storage period. Reportedly, a patent has been obtained on this invention.

Some experts were quoted as saying that the new container will revolutionize canning procedures, states a dispatch from the United States Consul in Bremen.



Hong Kong

SHRIMP EXPORTS AND RE-EXPORTS, 1952-1959 AND JANUARY-JUNE 1960:

Shrimp exports by Hong Kong to the United States reached a peak of about 4.1 million pounds in 1958 and dropped off rapidly in 1959 following the ban on shrimp imports from Hong Kong to the United States that be-

	Total Exports	Exports to U. S.	Total Re-Exports ^{2/}	Re-Exports to U. S.
 (1,000 Lbs.)			
January-June 1960	164.5	-	886.8	-
1959	828.0	514.4	2,013.0	-

^{1/}Beginning January 1, 1959, shrimp are listed separately in export statistics.
^{2/}Includes shrimp imported into Hong Kong from Communist China and re-exported.

came effective on June 17, 1959. The ban on shrimp exported to the United States from Hong Kong was imposed because the Hong Kong shrimp exports included a large percentage of shrimp produced in Communist China.

	1958	1957	1956	1955	1954	1953	1952
Total	6,559.1	2,975.3	1,667.5	410.1	44.7	7.8	37.5
To United States	4,139.0	1,560.2	578.3	67.2	-	-	-

Note: Prior to January 1, 1959, exports of shrimp were included in basket category "crustacea and molluscs, fresh, chilled, and frozen."

In addition, the ban on shrimp exports from Hong Kong to the United States has affected the sale of shrimp landings through the Government Fisheries Marketing Organization. During April 1958-March 1959 more than 4.9 million pounds of shrimp were marketed through that Organization in contrast to only about 1.1 million pounds for the fiscal year ending March 31, 1960. Due to the export ban to the United States, most of the shrimp landed by Hong Kong fishermen or imported from Communist China by-passed the Marketing Organization and were sold in various large retail markets in Hong Kong and Kowloon.

April 1959-March 1960	April 1958-March 1959	June 1957-March 1958
..... (1,000 Lbs.)		
1,149.1	4,930.5	3,864.4

It is estimated that Hong Kong shrimp fishermen are capable of landing about 4.5 million pounds (exclusive of shrimp from the China mainland). Most of this production is consumed locally and potential exports of Hong Kong-caught shrimp are estimated to be about 1 million pounds. (U. S. Consul in Hong Kong, September 22, 1960.)



Iceland

EX-VESSEL PRICE FOR SOUTH COAST HERRING HIGHER:

The price to be paid by Icelandic processors to drift-net herring vessels for the south coast herring catch was announced September 21, 1960. The price is 1.80 Icelandic kronur per kilogram (2.15 U. S. cents a pound) for herring for salting and freezing, compared with 1.60 kronur (2 U. S. cents a pound) last year.

This increase will give a greater premium to processing of the catch for salting and

Iceland (Contd.):

freezing rather than for rendering into meal and oil. The Herring Production Board has been criticized by the Communist press for not directing a larger proportion of the summer herring catch for salting. Some salted herring contracts with Eastern European countries could not be filled. It may be possible to complete certain of them with south coast herring.

* * * * *

FISHERIES TRENDS, SECOND QUARTER 1960:

Total landings from the Icelandic cod fisheries during the first half of 1960 increased to 198,246 metric tons from about 180,000 tons for the same period of 1959. The total catch of all species rose to 296,629 metric tons during the first half of 1960 from about 259,000 tons for the same period of 1959.

Table 1 - Icelandic Fishery Landings by Principle Species, January-June 1958-60

Species	January-June		
	1960	1959	1958
	(Metric Tons ^{1/})		
Cod	198,246	179,893	199,746
Haddock	17,776	10,403	13,147
Saithe	4,246	6,004	7,136
Ling	3,953	1,542	2,815
Wolfish (catfish)	6,639	7,697	8,351
Cusk	5,223	2,270	4,089
Ocean perch	18,002	42,740	18,399
Halibut	775	474	523
Flounders	402	497	498
Herring	39,732	6,104	24,675
Other	1,635	1,375	1,207
Total	296,629	258,999	280,586

^{1/}Weights are gutted fish with heads on, except herring which are whole or round.

The value of the catch was up sharply due to better landings of the more valuable cod, haddock, and herring. The only notable decline was in the ocean perch landings. Ocean perch is a less valuable product per pound and is shipped mostly to the Soviet Union. The slump in the summer herring season was not registered until July, and was not reflected in landings for the first six months of 1960. The increase in cod landings was partly due to concentration on this kind of fishing and to the failure of the ocean perch fishery, as well as the good prices received by some trawlers in selling fresh cod and haddock on ice in England. The motor fishing vessels had relatively good fishing for cod in Icelandic waters, partly as a result of the general absence of foreign and Icelandic trawlers from the 12-mile limits area. Icelandic trawlers and motor boats benefit-

ed when British trawlers agreed to remain outside the 12-mile limit from the Law of the Sea Conference in May 1960 in Geneva until the middle of July and then until the middle of October.

During the January-June 1960 period there was a marked trend toward free world markets. A larger proportion of the catch was processed by air-drying and salting rather than freezing. The Soviet Union and satellites import frozen rather than dried and salted fish. Based on its estimate of the quality of the north coast herring catch, the Herring Production Board permitted only a relatively small proportion to be salted. The lion's share went for fish meal and oil, for which the world market prices are very low.

Table 2 - Icelandic Fishery Catch by Type of Vessel, January-June 1958-60

Type Vessel	January-June		
	1960	1959	1958
	(Metric Tons ^{1/})		
Motorboats	239,840	182,257	192,206
Trawlers	56,789	76,742	88,380
Total	296,629	258,999	280,586

^{1/}All weights are of gutted fish with heads on, except herring which are whole.

The dramatic decline in the proportion of the landings by trawlers, as compared with the motorboats, continued during the first half of 1960 when the trawlers accounted for only 19.1 percent of the landings as compared with 29.6 percent during the first half of 1959, and 39.1 percent during the first half of 1956. The build-up by delivery of new vessels to both the trawler and motor boat fishing fleets continued during the quarter. There was also great activity in equipping the motor vessels for the north coast herring fishery with new nylon nets, new retrieving gear, and new electronic equipment, the United States Embassy in Reykjavik reported on September 30, 1960.



India

JAPANESE TO AID IN DEVELOPMENT OF FISHERIES:

Two fishery development projects to be undertaken with Japanese collaboration have been approved by the Indian Government for inclusion under the US\$50 million credit agreement between India and Japan signed on February 4, 1958. A large Japanese fishing company will collaborate with an Indian company in shrimp fishery operations at Cochin.

India (Contd.):

The second project involves a survey of the Mangalore coast in Mysore State. Other Japanese firms are reported to be negotiating with Indian companies for the formation of joint ventures for fishing operations, ice-making, cold-storage and canning plants, and the manufacture of fish nets.

The projects appear to be the direct outcome of India's increased interest in exploitation of the considerable fishery resources along the Indian coast and in the Indian Ocean and the resultant visit to Japan in March 1960 of a three-member team of Indian officials. The Japanese offers indicate that the conditions set down by the Indian Government for foreign participation in Indian fishery operations have not seriously handicapped negotiations for foreign collaboration. (United States Embassy, New Delhi, October 8, 1960.)

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SHRIMP PRODUCTION AND FOREIGN TRADE, 1959:

In 1959, India produced 27,632 metric tons of penaeid shrimp and 37,805 tons of non-penaeid shrimp.

The three most important varieties of fish and shellfish exported by India in 1959 were dry-unsalted "bomlas," dry-salted fish, and shrimp (frozen, dried, and canned). India's total shrimp exports were valued at 15 million rupees (US\$3.15 million) in 1959; the United States received an amount valued at 4.6 million rupees (US\$966,000), or 30.7 percent of the total and Burma came next with 4.3 million rupees (US\$903,000). The other principal countries buying shrimp from India in 1959 were Ceylon, Hong Kong, and France. (United States Embassy, New Delhi, October 5, 1960.)



Israel

FISHING INDUSTRY SUFFERS REVERSES:

The uncertain situation prevailing in the Israel's deep-sea fishing industry was underlined during August 1960 by the news that only 12 Israeli trawlers were operating in 1960 in the Mediterranean, as compared with about 24 in 1959. Several of the trawlers thus displaced were transferred to the Red Sea, and others were reportedly ear-

marked for fishing in the Persian Gulf. This will not prevent, however, at least three of the vessels from being laid-up entirely.

In view of the large sums invested during recent years in expanding and improving the local fishing fleet, and the fact that several additional trawlers are now on order abroad, this development calls for some explanation. A partial one is found in the recent suspension of fishing near Turkish waters, following a number of incidents involving the impounding of Israeli trawlers by Turkish coast-guard vessels on the grounds of their having entered Turkish territorial waters. But the fact must be faced that the Eastern Mediterranean as a whole is not over-endowed with fishery resources. Any further expansion of deep-sea fishing will thus be dependent on the dispatch of Israeli vessels to more distant grounds. Two large trawlers designed for ocean fishing on order were expected to arrive late in 1960.

A crucial consideration would appear to be the fact that, despite the large population increase in the interval, the total quantity of fish marketed in Israel fell by approximately 18 percent between 1954 and 1959. This marked decline in per capita consumption has not, of course, been the result of the development of a sudden aversion to fish as such, but of the improved food situation in general. In 1954, eggs, meat, poultry, and milk products were scarce and relatively expensive. Today the supply position has improved and prices are, with few exceptions, within the reach of all. The brunt of the decline in fish consumption has been borne by imports, which declined from some 15,000 tons in 1954 to under 7,000 tons in 1959. Well over half of these latter imports were herring in brine, i.e. were noncompetitive as far as the local fish landings are concerned. The total marketing in 1959 was about 19,500 metric tons and the importance of competitive imports (mainly frozen fillets) is negligible. Any large-scale increase in the local Israeli's landings will have to be taken up almost entirely, therefore, by increased per capita consumption. Whether such an increase in consumption can reasonably be anticipated must be regarded as at least a matter of conjecture.

Therefore, before any further decisions are taken involving the allocation of additional funds for investment in fisheries, a thorough study needs to be made of present and probable future demand for fish and fish products--

Israel (Contd.):

against the background of known plans regarding agricultural production and the establishment of new food industries. Should such an investigation indicate the existence of potential additional demand, the next step would be to carry out a survey of likely fishing grounds and to estimate the economic future of long-range ocean fishing, taking into account both the transportation costs involved and the prices likely to be realized in the Israeli market. (The Israel Economist, August 1960.)



Italy

FISH-BODY OIL PRICES AS OF SEPTEMBER 1960:

The September 1960 prices of the basic three types of fish-body oil (excluding whale oil and seal oil) which are of interest to the Italian Market are as follows according to a Genoa importer:

(a) Herring oil, straw-colored, filtered, 0.5 to 1 percent acidity: Norwegian kroner 150 per 100 kilos (about US\$210 a metric ton or 9.53 U. S. cents a pound), net weight c.i.f. Genoa (no charge for containers, i. e., steel drums).

(b) Not specified fish-body oil, light ruby colored, filtered, 10 percent acidity: Norwegian kroner 130 per 100 kilos (about US\$182 a metric ton or 8.26 U. S. cents a pound), net weight, c.i.f. Genoa (no charge for containers, i. e., steel drums).

(c) Not specified fish-body oil, dark ruby colored, filtered, 30 to 40 percent acidity: Norwegian kroner 90 per 100 kilos (about US\$126 a metric ton or 5.72 U. S. cents a pound), net weight, c.i.f. Genoa (no charge for containers, i. e., steel drums).

The Genoa importer stated that there are a great number of different kinds of fish-body oil which are imported, but gathering prices for all of them would be really impractical. Importers supply themselves generally from Norway.

The importer stated that in Italy no customs duties are levied on fish-body oils; however, he said that other costs should be taken into account to obtain the actual cost

at the Port of Genoa, for customs-cleared goods. Other costs are unloading expenses, freight-forwarder assistance cost, statistical duties, exchange tax, and other costs. In general, importers figure that the c.i.f cost should be increased by 10 lire per kilo (about \$16.11 a metric ton), as an over-all estimate of such charges, the United States Embassy in Rome reported September 22, 1960.

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TUNA IMPORTS AND THE COMMON MARKET:

The present Italian import duty on fresh or frozen tuna is 20 percent on the invoice price. This product is listed under fresh and frozen fish (Italian Customs Item EX-03.01-B-Ib). The proposed European Economic Community (EEC) or Common Market rate is 25 percent, the first step to achieve this rate to be effective December 31, 1960. In applying the 25-percent duty to each of the Common Market countries, the following formula is to be used:

1. If the national rate is within 15 percent of EEC's 25-percent rate, the national tariff will be increased or decreased to 25 percent.
2. If the national tariff is more than 15 percent of EEC's 25-percent rate, the national tariff shall be reduced or increased by 30 percent of the difference between the EEC duty and the national duty.

Revisions in national tariffs will be made every four years until the uniform EEC rate is attained. EEC, however, is planning to accelerate these revisions.

Italian officials, on the basis of Article 25, paragraph 3, of the Rome Treaty, had requested of the EEC Commission that it be given a duty-free quota, no limit, on imports of fresh and frozen tuna. This request was possible because tuna is listed in Annex II, G List, of the Treaty under agricultural products.

On March 2, 1960, an Accord was signed at Rome which would permit Italy to import "Sea Fish, Fresh, Refrigerated, or Frozen, whole, headed, or cut into pieces" free of duty, quantities unlimited. This Accord, in accordance with the Treaty's definition of customs duties relating to products on the "G" list, provides that EEC countries may ask authorization to import new lots of fish if it can be justified that the current trade in a product should be conducted in the traditional manner to the advantage of consumers and industries. In the case of tuna, the frozen product is required to provide Italian canning plants with raw materials.

The March 2 Accord has no termination date and is supposed to be effective December 31, 1960. At first France objected to the Accord but withdrew its objections and the Accord was signed. The Accord permits other countries of the EEC to apply to the Commission for a duty-free quota but so far no other countries have submitted a request.

Italian officials stated that the Accord cannot come into force, or the proposed 25-percent tariff applied, until new provisions for a common agriculture policy have been determined. Therefore, as far as Italy is concerned the 20-percent national duty on fresh and frozen tuna remains in force until such policy is determined.

Besides the import duty, Italy has a number of national taxes applied both to domestically-produced products and to imports of fresh or frozen tuna. These are as follows:

1. A 0.2-percent tax applied on the invoice price, this tax to be used for research.
2. A 0.05-percent tax for administration expenses.

Italy (Contd.):

3. A 3.3-percent tax applied on all transactions. In effect this means that every time a product changes hands, this tax is collected both on imports and on domestically-produced tuna.

4. In the case of duty-free imports (as would be the case if the EEC Accord on fresh or frozen sea fish becomes effective), there would be a tax of 20 percent on the invoice price. Thus, the proposed duty-free tuna imports would be subject to a tax equivalent to the present import duty.

In the case of imports of canned tuna into Italy, the general rate is 40 percent, but this has been temporarily reduced to 27 percent. The proposed Common Market rate is to be 25 percent. According to a new decision of the EEC Council, the EEC duty will be reduced to 20 percent in order to foster increased international trade in this product. This decision was made May 11, 1960. It is proposed that the first reduction to achieve the uniform rate will be effective December 31, 1960, providing that (as in the case of fresh and frozen tuna) provisions for a common agriculture policy will have been determined.

Table 1 - Italy's Imports of Fresh and Frozen Fish^{1/}, January-June 1960 and 1957-59

Origin	Quantity			
	Jan.-June 1960	1959	1958	1957
(Metric Tons).....			
Japan ^{2/}	14,434	18,079	13,599	9,560
Other	16,713	33,621	32,503	33,465
Total	31,147	51,700	46,102	43,025
	Value			
(US\$1,000).....			
Japan	4,115	5,205	3,591	2,873
Other	6,495	10,395	11,878	11,689
Total	10,610	15,600	15,469	14,562

^{1/}Includes salt-water fish only and not otherwise specified.
^{2/}Believed to be almost entirely frozen tuna.
 Values in lire converted to US\$ at rate of 620.6 lire equal US\$1 for January-June 1960 and 1959, 624.0 lire equal US\$1 for 1958, and 624.89 lire equal US\$1 for 1957.

Since the Italian duty of 27 percent on canned tuna will eventually be reduced to 20 percent, the first reduction will be 30 percent of the difference between the present and the uniform rate, thus bringing the Italian duty down to 24.9 percent on December 31, 1960. The second 30-percent reduction is planned for four years later, but under the proposed acceleration plan it may come sooner.

Besides the research, administrative, and transaction taxes mentioned above for fresh and frozen tuna, there is a 65-lire tax on each kilogram (about 0.5 U. S. cents a pound) of oil in canned tuna.

Italian needs for tuna are estimated to be at least 20,000 metric tons annually. Italian production, however, has averaged only about 2,500 tons annually (2,877 tons in 1957, 2,985 tons in 1958, and 2,064 tons in 1959). The rest of the tuna supply comes principally from Japanese landings at Italian ports.

The price of the imported tuna, c.i.f. Italy, has ranged between 160 and 180 lire per kilogram (about US\$234-263 a short ton). Price as of September was about 177 lire per kilogram (about US\$259 a short ton) for frozen tuna.



Japan

EXPORTS OF CANNED TUNA (EXCLUDING TUNA IN BRINE), 1956-59:

Exports of canned tuna by Japan, exclusive of canned tuna in brine, in 1959 totaled 1,400,172 cases or about 25.7 percent higher than the average exports of 1,114,238 cases for the 1956-59 period. From 1956 to 1959 there was a sharp increase in exports of canned tuna in oil to "other" countries. In 1959, West Germany was Japan's best customer for canned tuna in oil, accounting for about 30 percent of the total. Canada and Switzerland were also important buyers of Japanese canned tuna in oil during the 1956-59 period.

Japanese Exports of Canned Tuna (Excluding Tuna in Brine) by Principal Destinations, 1956-59

	1959	1958	1957	1956
Exports by Country of Destination (Cases)				
West Germany	420,710	287,729	255,656	146,598
Canada	155,869	148,888	141,927	130,330
Switzerland	107,030	77,104	111,277	136,733
The Netherlands	45,204	33,146	51,970	62,512
Belgium	89,259	69,582	73,152	85,581
Britain	74,740	58,051	73,765	23
Saudi Arabia	72,335	50,146	52,082	24,234
Lebanon	68,065	22,756	59,357	27,433
Italy	46,280	37,330	152,486	77,653
Others	320,680	156,574	249,472	203,234
Total	1,400,172	941,306	1,221,144	894,331
Exports by type of product:				
In oil	1,375,401	881,437	1,197,448	887,521
Other than oil or brine	24,771	59,869	23,696	6,810

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EXPORTS OF CANNED FISHERY PRODUCTS, JANUARY-MAY 1959-60:

Japanese Exports of Canned Fishery Products, January-May 1959-60

Product	1960 January-May			1959 Jan.-May
	United States	Canada	Other Countries	Total
(Cases) ¹			
Crab	26,823	648	58,803	86,274
Tuna:				
In oil	-	73,702	518,329	592,031
In brine	802,039	-	-	802,039
Other	100	2,251	29,130	31,481
Total Canned Tuna	802,139	75,953	547,459	1,425,551
Mackerel-pike	5,663	1,730	526,953	534,346
Sardine	288	-	349,183	349,471
Salmon trout	65,464	154	236,961	302,579
Other fish	2,283	100	243,236	245,619
Shellfish	106,185	25,973	19,010	151,168
Other aquatic products	1,762	55	326	2,143
Total	1,010,607	104,613	1,981,931	3,097,151

Japan (Contd.):

Exports of canned fishery products by Japan during the first five months of 1960 amounted to 3,097,151 cases or about 1.0 percent less than the 3,129,939 cases exported in the similar period of 1959. In the first five months of 1960 exports of canned tuna (oil, brine, and other) were up 13.2 percent, but canned crab and salmon exports were down sharply as compared with the January-May 1959 period.

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TUNA VESSELS OPERATING IN THE ATLANTIC OCEAN:

About 50 Japanese tuna vessels were operating in the Atlantic Ocean as of September 1960, and half of them transship their catches to the United States and Italy in addition to Yugoslavia and other countries. The Japanese Fisheries Agency intends to adjust tuna exports to Yugoslavia. Accordingly, future exports to Yugoslavia will be based on what that country alone can consume or use. (Fisheries Economic News, September 17, 1960.)

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IMPORT RESTRICTIONS REMOVED ON SOME FISHERY AND RELATED PRODUCTS:

The Japanese Ministry of International Trade and Industry on September 22, 1960, published a list of 74 commodities to be placed under the Automatic Approval and Automatic Fund Allocation Systems on October 1, 1960. This new list covers agricultural and aquatic products and is intended as a supplement to an earlier list of 257 items of a more general nature scheduled for inclusion on the same date.

Included in the list are the following fishery and related products: frog meat, fresh, chilled or frozen; breeding fish; fish roe, live; fish, live, n.e.s.; rainbow trout, fresh, chilled or frozen; abalone, fresh, chilled or frozen; abalone, salted or dried; seed oysters; oysters, fresh, chilled or frozen; oysters, salted or dried; crustacea, molluscs and the like, for breeding purposes (excluding oyster seed); crustacea, molluscs and the like, live (excluding for breeding purposes); fish, fish products, and fish preparations in airtight containers (including crustacea and molluscs but excluding salmon eggs); and fish rods of bamboo. (United States Embassy in Tokyo, September 28, 1960.)

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MARINE-OIL EXPORTS AND CONSUMPTION, 1958-59:

Total exports of marine-oils during 1959 by Japan amounted to 103,564 metric tons and are expected to increase to about 117,460 tons in 1960 (see table 1).

Table 1 - Japan's Exports of Marine Oils, 1959 and 60

Type	1960 ^{1/}	1959
. . . (Metric Tons) . . .		
Edible:		
Cod-liver oil	1,520	1,368
Shark-liver oil	80	104
Fish-liver oil	1,600	1,338
Fish oil	260	482
Whale oil	90,000	81,280
Total	93,460	84,572
Inedible:		
Sperm oil	24,000	18,992
Grand Total	117,460	103,564
^{1/} Estimates.		

The larger part of Japan's production of marine oils is exported in the form of whale oil; however, considerable amounts of whale oil and fish oil are used in the domestic pro-

Table 2 - Japan's Utilization of Marine Oils, April 1, 1959-March 31, 1960

Type	Margarine & other Processing	Manufacturing Industry	Domestic Consumption	Exports	Total Production
. (Metric Tons)					
Whale oil	14,200	2,300	16,500	90,370	106,870
Fish oil	26,600	11,800	38,400	2,850	41,250
Sperm oil	-	33,300	33,300	1,600	34,900
Totals	40,800	47,400	88,200	94,820	183,020

duction of margarine. Inedible sperm oil is used extensively by other industries (see table 2). (U. S. Foreign Agricultural Service Report, September 28, 1960, Tokyo.)

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SALMON SHARK EXPORTS TO ITALY INCREASE SHARPLY:

Japanese salmon shark ("porbeagle") exports to Italy have increased sharply since last year. As of mid-September 1960, exports since January 1, 1960, had reached more than 1,000 metric tons, almost twice as much as last year. The price is \$320 a metric ton c.i.f., the same as last year. Although there are certain problems with quality, further expansion is expected if the quality of the product improves, since demand in the Italian market is estimated to be 2,000 tons a year.

The exports are used for steaks and the Japanese industry is said to be expecting much from this new product of the Kesenuma area in Miyagi Prefecture.

Japan (Contd.):

When the first order was received from Italy in 1957, exports were limited to about 50 tons a year under the agreement to ship salmon shark in return for Italy's rice and mercury exports, but later orders gradually increased.

This species of shark is abundant during the summer months and was previously bought by the Japanese makers of paste products almost at the buyer's price. This year, however, Japanese manufacturers were forced to pay the same prices that Italian importers paid and there is even a tendency for a shortage. More than 50 percent of the salmon shark caught on the Sanriku fishing grounds are landed at Kesenuma, and freezing the shark has become an important industry in that area. (Fisheries Economic News, September 21, 1960.)



Mexico

FOREIGN TRADE IN MARINE OILS:

Table 1 - Mexico's Imports of Marine Oils, January-July 1959-60		
Item and Origin	Jan.-July	Jan.-July
	1960	1959
	... (Metric Tons) ...	
Fish Liver Oils:		
United States	-	-
Norway	70	81
Great Britain	-	7
Total	70	88
Cod Oils:		
United States	74	44
Norway	289	208
Great Britain	-	6
Germany	6	-
Total	369	258
Whale Oils:		
United States	33	18
Great Britain	36	4
Germany	15	8
Norway	18	13
Italy	-	3
Total	102	46
Fish Oils, Other:		
United States	0.3	13
Great Britain	3.0	11
Norway	2.0	15
Other Countries	0.4	-
Total	6.0	39
Total all Oils	547	431

Exports: During the first seven months of 1959 Mexico exported 75 metric tons of whale oil and 327 tons of fish oil to the United States, as compared with 68 tons of whale oil and 33 tons of fish oil for the same period of 1960. This represents a decline of 25.1 percent in volume of marine oils exported to the United States. The United States was the only buyer for Mexico's whale and fish oil.

Imports: Mexico's imports of marine oils from all countries increased from 431 tons during the first seven months of 1959 to 547 tons for the same period in 1960. Imports of cod oil and whale oil from the United States increased, while imports of other fish oils from the United States declined (see table 1). (U. S. Foreign Agricultural Service Report, Mexico City, September 30, 1960.)

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SHRIMP FISHERY TRENDS,
MID-SEPTEMBER 1960:

The price dispute between the shrimp fishermen's cooperative and the vessel owners at the Gulf of Mexico port of Ciudad del Carmen was settled on September 16, 1960. Separate agreements at other shrimp fishing ports or areas were reached earlier in the month. The agreements are for two years and expire on August 31, 1962.

Increases of 160 pesos per metric ton of headless shrimp (about 0.58 U. S. cents a pound) were agreed to for the west coast ports of San Felipe, Baja California, and Mazatlan, Sinaloa. The Guaymas price increased 225 pesos (about 0.82 U. S. cents a pound). In the above ports the increases cover all sizes of shrimp.

A new system, which has been prevailing in Ciudad del Carmen and Campeche, was introduced at Salina Cruz, Oaxaca. This consists in paying the fishermen more for large than for small shrimp. Shrimp counting 30 to the pound headless and under are considered large and 31 count and over are small. The fishermen will receive 3,500 pesos per metric ton (US\$280 a ton or 12.7 U.S. cents a pound) for large shrimp and 2,265 pesos a metric ton for small (US\$181.20 a metric ton or 8.2 cents a pound)^{1/}. However, if the ex-vessel or price to the boat for small shrimp is more than 9,300 pesos a metric ton (\$744 a ton or 33.8 cents a pound), the same price (3,500 pesos or \$280 a ton) will be paid for small as for large shrimp.

At Ciudad del Carmen and Campeche changes consisted in the dropping of one deckhand; a lesser amount paid for small shrimp; an increase in the amount paid for large shrimp; an increase in food allowance, and fixed daily wages for the crew while a boat is on the ways for repairs.

The Gulf of California shrimp fleets, on the opening of the season on September 16, left the various ports and were not expected back until the latter part of the month.

Salina Cruz landings were reported to have improved somewhat. Boats were said to be landing around two tons per trip. Prices to vessel owners dropped during August.

During the last half of August, Carmen and Campeche landings improved. At Carmen they averaged around 2,000 pounds a trip and about 1,750 pounds at Campeche. This increase in size of landings reflected a change in species composition. At Carmen during the first half of the month about 50 percent of the shrimp were pink, 30 percent white, and 20 percent brown. This changed during the second half to about 40 percent white, 35 percent pink, and 25 percent brown. At Campeche the landings ran about 90 percent pink, 8 percent brown, and 2 percent white during the first half of August and about 93 percent pink and 1 percent each white and brown during the second half of the month.

Shrimp sizes at Carmen did not vary much during August. They were about equally divided throughout the month between 30 per pound (headless) and under and 31 count and over. At

Mexico (Contd.):

Item	After September 16, 1960				Prior to September 16, 1960			
	Large Shrimp		Small Shrimp		Large Shrimp		Small Shrimp	
	Pesos Per Metric Ton	US\$ Per Metric Ton	Pesos Per Metric Ton	US\$ Per Metric Ton	Pesos Per Metric Ton	US\$ Per Metric Ton	Pesos Per Metric Ton	US\$ Per Metric Ton
Crew's Share:								
Captain	850	68.05	360	28.82	700	56.04	362.6	29.02
Engineers	650	52.04	310	24.82	500	40.03	312.5	25.02
Winchman	400	32.03	240	19.22	350	28.02	240.0	19.22
Cook	400	32.03	220	17.61	330	26.42	210.0	16.81
Hand	-	-	-	-	330	26.42	210.0	16.81
Total	2,300	185.15	1,130	90.47	2,210	176.93	1,335.0	106.88
Cooperative's Share:								
Severance tax	220	17.61	220	17.61	220	17.61	220.0	17.61
Administration	200	16.01	200	16.01	200	16.01	200.0	16.01
Total	420	33.62	420	33.62	420	33.62	420.0	33.62
Grand Total ..	2,720	217.77	1,550	124.09	2,630	210.55	1,755.0	140.50

Table 2 - Payments Other Than Shares by Mexican Gulf of Mexico Vessel Owners

Item	September 16, 1960			
	After		Prior	
	Pesos	US\$	Pesos	US\$
Food, per-man-per-day	9	0.72	8	0.64
Social Security, per-boat-per-month	1/500	40.03	1/500	40.03
Wages per-day while vessel under repair:				
Captain	25	2.00	2/	2/
Engineer	20	1.60	2/	2/
Winchman	15	1.20	2/	2/
Cook	15	1.20	2/	2/

1/Cuidad del Carmen boat owners will pay 400 pesos per-boat-per-month until Social Security is inaugurated at this port at which time they will pay 500 pesos.
2/Individual arrangements with boat owners.

Table 3 - Ex-Vessel Shrimp Prices Early September 1960 At East and West Coast Mexican Ports

Size (No. heads-off shrimp per lb.)	Carmen-Campeche (All species)	Salina Cruz (Brown only)
(U. S. Cents Per Lb.),.....	
Under 15	58-61	48
15-20	55-60	48
21-25	49	38
26-30	45	34
31-35	40-42	-
31-40	-	24
36-40	35-36	-
41-50	30-31	20
51-65	25-26	-
51 and over ...	-	15

Campeche sizes decreased from about 80 percent 30 count and under during the first half to about 60 percent during the second half. (United States Embassy, Mexico City, September 20, 1960.)

1/These payments represent the net share for the crew and not the prices paid the vessel (ex-vessel prices).

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WEST COAST SHRIMP FISHERY TRENDS:

The closed season on shrimp fishing in the Guaymas area ended on September 1, 1960, for inshore areas and on September 15 for deep-sea fishing. The landings for the first months following the closed season are usually good, with production falling off just prior to the next closed season. First reports indicate that shrimp production this year will follow the established pattern.

Shortly before the opening of the new shrimp season the fleet owners and the co-operatives reached an understanding and signed an agreement governing their relationships for the next two years.

The shrimp season in the Mazatlan area for deep-sea fishing opened on October 1, 1960. The season in shallow-water shrimp fishing in that area opened early in September with catches in the areas north of Mazatlan reported "good" and the areas to the south "fair." (United States Consulate in Nogales, October 3, 1960.)



Netherlands

BILLS PASSED APPROVING WITHDRAWAL FROM WHALING CONVENTION AND REGULATING ANTARCTIC WHALING:

The Netherlands First Chamber on September 27, 1960, approved bills endorsing the Netherlands' withdrawal from the International Whaling Convention and giving the Government the authority to issue regulations governing whaling by Dutch vessels.

During debate on the first bill, the Minister of Agriculture rejected the suggestion from a Labor Party member that the Netherlands follow Norway's example and rejoin the Convention. He reportedly said that the Dutch position of waiting until its conditions had been met before rejoining was "more realistic" than the Norwegian course of rejoining subject to conditions.

Passage of the 1960 Whaling Act enables the Netherlands Government to ensure that the Netherlands Whaling Company observes such provisions of the Convention and Schedule to the Convention as the Government may desire. (United States Embassy, The Hague, September 29, 1960.)

Note: Also see Commercial Fisheries Review, Oct. 1960, p. 75.



Norway

FISH MEAL PRODUCTION, 1958-60:

In 1958, Norway's total fish-meal production amounted to 118,900 metric tons of which 100,000 tons were herring meal. In 1959 fish-meal production totaled 128,000 tons, of which 110,000 tons were herring meal and 18,000 tons of other fish meal. As of July 1960, the Norwegian herring catch had been poor--total estimated production of herring meal for 1960 is only 70,000 tons. (U. S. Foreign Agricultural Service Report, July 27, 1960, Copenhagen).

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FOREIGN TRADE AND PRODUCTION OF MARINE OILS, 1956-1960:

Production: Norway's total production of marine-animal oils was 203,720 metric tons in 1959, or about the same as the 201,981 tons produced in 1958. The estimated production of marine oils in 1960 indicates a drop of about 20 percent to 164,000 tons (table 1).

Table 1 - Norway's Production of Marine Oils, 1956-60

Type	1960 ^{1/}	1959	1958	1957	1956
. (Metric Tons)					
Cold-cleared cod-liver oil	15,000	15,900	11,900	10,300	12,400
Other fish-liver oils	1,400	1,400	4,600	3,700	4,500
Herring oil	26,000	40,000	34,000	67,424	110,828
Total Fish Oils	42,400	57,300	50,500	81,424	127,728
Seal oil	5,000	4,500	5,500	4,700	5,000
Sperm Oil:					
Antarctic	10,947	15,097	20,751	16,874	22,569
Norwegian shore stations	400	216	672	227	469
Total Sperm Oil	11,347	15,313	21,423	17,101	23,038
Whale Oil:					
Antarctic	104,387	125,480	123,946	153,167	121,898
Norwegian shore stations	800	1,127	612	769	649
Total Whale Oil	105,187	126,607	124,558	153,936	122,547
Grand Total	163,934	203,720	201,981	257,161	278,513
^{1/} Forecast.					

The nine Norwegian Antarctic pelagic expeditions and the one Norwegian shore station at Husvik Harbor produced 125,480 tons of whale oil and 15,097 tons of sperm oil during the 1958/59 season, a decline from the previous season. Preliminary results from the 1959/60 season indicate a further reduction of 18 percent in whale oil and sperm oil production since only 104,387 tons of whale oil and 10,947 tons of sperm oil were produced (table 2). The Norwegian production of whale and sperm oil from the 1958/59 Antarctic season was sold, as usual, through the Norwegian whaling companies' common marketing pool.

Table 2 - Norwegian Production of Whale and Sperm Oil, 1959-60

Area and Year	Whale Oil	Sperm Oil	Total
. (Barrels) ^{1/}			
Pelagic Production, Antarctic:			
1959/60 ^{2/}	588,450	63,438	651,888
1958/59 ^{3/}	712,884	84,502	797,386
1957/58	732,106	122,569	854,675
1956/57	857,326	98,273	955,599
1955/56	657,872	131,517	789,389
Husvik Harbor, South Georgia:			
1959/60 ^{2/}	25,230	920	26,150
1958/59 ^{3/}	24,799	4,252	29,051
1957/58 ^{4/}	-	-	-
1956/57	47,381	1,393	48,774
1955/56	62,141	1,787	63,928
Shore Stations in Norway:			
1959 ^{2/}	6,626	1,271	7,897
1958 ^{3/}	3,598	3,951	7,549
1957	4,525	1,337	5,862
1956	3,834	2,930	6,764
1955	6,158	1,830	7,988
^{1/} One long ton equals 6 barrels.			
^{2/} Preliminary.			
^{3/} Revised.			
^{4/} Not in operation.			

Herring oil production in 1959, although not as poor as in 1958, was still far below the average for preceding years. Only about 40,000 tons of herring oil were produced in

Norway (Contd.):

1959. In 1960, however, the catches of herring as well as deliveries to the oil and meal factories were lower than for many years, and the oil production may only reach 26,000 tons. But since the late start of the 1960 herring fishing suggests a lower fat content, the 1960 production may be less than 26,000 tons.

Production of fish-liver oils rose from 16,500 tons in 1958 to 17,300 tons in 1959. On the other hand, seal-oil production (varies between 4,000 and 5,000 tons annually) dropped slightly in 1959 to about 4,500 tons.

Norwegian whale oil from the 1958/59 Antarctic season was sold at prices varying from £72 10s. to £78 (US\$203 to \$218.40) a long ton. The average price was £73 2s. 4d. (\$204.73) a long ton as compared with £72

Exports: During 1958 and 1959 Western Germany and the United Kingdom were the principal receivers of Norwegian Antarctic whale and sperm oil. Total whale and sperm oil exports remained relatively stable during that period (see table 2).

Norway's exports of all marine oils and byproducts continued stable during 1958-59 (see table 3). The bulk of these exports was crude whale oil and edible marine-animal oils.

Imports: Norwegian imports of marine oils increased from 15,713 metric tons, valued at US\$3.4 million, in 1958, to 55,766 tons, valued at US\$10.7 million, in 1959 (see table 4). Increase was due chiefly to larger imports of crude herring oil from Western Germany and menhaden oil from the United States.

Stocks and Utilization: From 1956 to 1959 Norway augmented her lower production of

Table 3 - Norwegian Exports of Marine Oils and Byproducts, 1958-59

Products	Quantity		Value			
	1959	1958	1959	1958	1959	1958
	.. (Metric Tons) (Kr. 1,000) (US\$1,000) ..	
Whale oil, crude ^{1/}	92,719	95,099	131,421	135,911	18,399	19,000
Whale, sperm and bottlenose oil	13,408	14,353	14,890	19,719	2,085	2,757
Herring oil, crude	625	240	666	307	93	43
Seal oil, crude	3,248	4,144	4,434	5,786	621	809
Fish-liver oils	18,444	17,763	33,503	34,429	4,690	4,813
Refined marine oils, edible	1,026	1,661	1,868	3,330	262	465
Refined marine oils, other	3,259	1,252	3,621	1,946	507	272
Marine-animal oils, polymerized, oxidized, etc., edible	678	592	1,223	1,134	171	159
Hardened fats from marine-animal oils, edible	44,651	39,469	85,111	77,735	11,916	10,867
Hardened fats from marine-animal oils, for technical use	8,329	7,503	14,137	12,657	1,979	1,769
Fatty acids from marine oils and products from sperm and bottlenose oils	8,056	4,221	14,239	10,126	1,994	1,416
Other products	777	2,238	1,531	4,465	214	624
Total	195,220	192,546	306,644	314,219	42,931	43,927

^{1/}Includes deliveries from Antarctic expeditions.

Note: Values computed at rate of: 1959 - one krone equals US\$0.1400; 1958 - one krone equals US\$0.1398.

(\$203) a long ton the preceding season. The average price for the 1958/59 season production for sperm oil was £50 1s. 3d. (\$140.17) a long ton as compared with £64 19s. 9d. (\$181.96) a long ton for 1957/58 season production.

marine oils by drawing on stocks (table 5). Almost all marine oils are consumed in the form of hardened fats as raw material for the margarine industry. The use of hardened marine oils by the Norwegian margarine industry increased from 52,681 metric tons

Table 4 - Norwegian Imports of Marine Oils, 1958-59

Type	Quantity		Value			
	1959	1958	1959	1958	1959	1958
	.. (Metric Tons) (Kr. 1,000) (US\$1,000) ..	
Whale oil, crude	5,432	2,326	8,579	3,798	1,201	531
Sperm and bottlenose, oil, crude	50	589	59	731	8	102
Herring oil, crude	39,478	6,632	49,752	8,352	6,965	1,168
High-potency (vitamin A) oil	961	919	6,425	5,610	900	784
Cod-liver oil	521	-	785	-	109	-
Veterinary fish-liver oil	1/	5	1	3	2/	2/
Industrial fish-liver oil	7,125	4,548	9,698	5,280	1,358	738
Residual fish-liver oil	2,199	694	1,139	538	160	75
Total	55,766	15,713	76,438	24,312	10,701	3,399

^{1/}Less than one-half ton.

^{2/}Less than US\$1,000.

Norway (Contd.):

Table 5 - Norwegian Stocks of Marine Oils, 1956-59

Type	Quantity			
	As of December 31			
	1959	1958	1957	1956
Herring and whale oil, crude	38,459	44,580	71,764	67,981
Other marine oils	198	311	355	439
Total	38,657	44,891	72,119	68,420

in 1958 to 57,091 tons in 1959. (U. S. Foreign Agricultural Service Report, July 27, 1960, Copenhagen.)

CONDITIONAL READHERENCE TO INTERNATIONAL WHALING CONVENTION ANNOUNCED:

On September 23, 1960, the Norwegian Government announced that it intended to readhere to the International Whaling Convention but that it would not be able to continue to adhere to the agreement unless (1) the Netherlands returns to the Convention; (2) the U. S. S. R. catch does not exceed 20 percent of the total whale quota; and (3) the other whaling nations reach agreement on the distribution of the remaining 80 percent of the total quota. (United States Embassy in Oslo, September 30, 1960.)

in their share of the proceeds of whaling operations, and pay for Sunday work. The increase altogether would amount to 7-8 percent. Balloting on the agreement was light, but a clear majority voted in its favor, the United States Embassy in Oslo reported on September 30, 1960.



Peru

EXPORTS OF MARINE PRODUCTS, JANUARY-JUNE 1959 AND 1960:

Exports of principal marine products by Peru during January-June 1960, amounted to 322,156 metric tons (valued at US\$29.9 million)--up almost 109.2 percent in volume and 47.7 percent in value from the 153,975 tons (valued at US\$20.2 million) exported in the first six months of 1959. Exports of 285,503 tons of fish meal (valued at US\$23.9 million) were higher by 131.0 percent in quantity and 64.5 percent in value in the first half of 1960 as compared with the same period of 1959. The average export value of fish meal per metric ton during the first six months of this year was only \$83.70 a metric ton--down sharply from the average price of \$117.52 a ton during January-June 1959. Fish oil exports also increased substantially (up 92.2 percent in quantity and 120.1 percent in value)

Peruvian Exports of Principal Marine Products, January-June 1959 and 1960

Marine Products	2nd. Quarter 1960			January-June 1960			January-June 1959		
	Qty.		Value 1/	Qty.		Value 2/	Qty.		Value 2/
	Metric Tons	Million Soles	US\$ 1,000	Metric Tons	Million Soles	US\$ 1,000	Metric Tons	Million Soles	US\$ 1,000
Fish meal	137,412	300.6	10,899	285,503	660.8	23,899	123,580	390.7	14,524
Fish (frozen, canned, etc.)	8,243	50.8	1,842	16,776	106.6	3,855	17,208	116.4	4,327
Fish oil	8,272	24.5	888	13,175	32.2	1,382	6,926	16.9	628
Sperm oil	473	1.6	58	5,281	17.5	633	4,031	13.6	506
Whale meal	-	-	-	308	0.5	18	1,825	5.4	201
Fertilizer (guano)	-	-	-	1,114	2.5	90	405	1.0	37
Total	154,400	377.5	13,687	322,156	826.1	29,877	153,975	544.0	20,223

1/F. o. b. values, converted at rate of 27.58 soles equal US\$1 for 2nd Quarter of 1960.
2/F. o. b. values, converted at rate of 27.65 soles equal US\$1 for first half of 1960 and 26.90 soles equal US\$1 for first half of 1959.

WHALING CREWS RECEIVE WAGE INCREASE:

Crews of Norwegian whaling vessels have voted to accept a wage agreement negotiated on their behalf by the Seamen's Union with employer representatives, with the assistance of voluntary mediators. The crews are to receive a 5 percent increase in wages and

this January-June from the first six months of 1959.

FISHING VESSEL FLEET AS OF JULY 1960:

As of July 1960 some 2,018 Peruvian-flag vessels and 113 United States-flag ves-

Peru (Contd.):

sels were engaged in commercial fishing in Peruvian waters. Excluding rowboats and vessels with sails from the total number of vessels, there were 991 motor-powered Peruvian-flag vessels and 113 United States-flag vessels engaged in commercial fishing.

Total Number of Vessels Engaged in Commercial Fishing in Peruvian Waters			
Vessel Type	Number of Vessels		Type of Equipment Used
	Peruvian Flag	U. S. Flag	
Purse seiners	445	5	Nylon nets, 200-500 fathoms, by 5 fathoms in depth
Bonito vessels (Boniteros)	185	-	Nets of 20-30 fathoms by 5 fathoms in depth
Tuna clippers	-	108	Pole-and-line fishing & fishing for bait
4-ton vessels for various types of fishing	354	-	Hook-and-line & trawls
Whaling vessels	7	-	Harpoons
Rowboats	77	-	Nets & hook-and-line
Sailboats	950	-	Nets & hook-and-line
Total	2,018	113	

This number compares with an estimated 700 motor-driven fishing craft in operation in 1957 and an estimated 800 powered domestic fishing vessels engaged in fishing operations as of December 31, 1958, the United States Embassy in Lima reported on September 23, 1960.



Philippines

CANNED FISH RETAIL AND WHOLESALE PRICES, MAY 3-JULY 1, 1960:

Retail and wholesale prices, May 3-July 1, 1960, for canned sardines and canned salmon in Manila were:

Product	Wholesale US\$/cs	Retail US\$/Can
Canned sardines:	(48 15-oz. Cans)	
U. S. brand	11.25-12.00	27.5-32.5
Japan brand	10.50-10.90	25.0-27.5
Canned salmon:	(48 16-oz. Cans)	
U. S. brand	1/	57.5-80.0
Other imported brands	1/	65.0-85.0

1/No quotations.



Portugal

CANNED FISH EXPORTS, FIRST HALF 1960:

Portugal's exports of canned fish during the first half of 1960 amounted to 25,994 metric tons. Sardines comprised the bulk of these exports with 85.6 percent of the total, followed by anchovy fillets (7.9 percent).

Portuguese Canned Fish Exports, First Half 1959 and 1960		
Product	January-June	
	1960	1959
. . . (Metric Tons ^{1/}) . . .		
In Oil or Sauce:		
Sardines	22,244	24,819
Chinchards	412	24
Tuna & tuna-like	997	1,184
Anchovy fillets	2,062	3,296
Mackerel	125	2,032
Others	154	1,295
Total	25,994	32,626

1/Case data not available.

2/Probably included in others.

During this period Portugal's most important canned fish buyers were Germany with 5,752 tons followed by England with 3,450 tons, the United States with 3,064 tons, Italy with 2,276 tons, France with 1,947 tons, and Belgium-Luxembourg with 1,670 tons. (Conservas de Peixe, July and August, 1960.)

* * * * *

CANNED FISH PACK, FIRST HALF 1960:

The Portuguese pack of canned fish, in oil or sauce, for the first half of 1960 amounted to 11,809 metric tons or 669,000 cases. Sardines accounted for the bulk of the pack with 51.8 percent of the total; tuna and tuna-like fish followed with 24.8 percent. (Conservas de Peixe, August 1960.)

Portuguese Canned Fish Pack, First Half 1959 and 1960				
Product	January-June			
	1960		1959	
	Metric Tons	1,000 Cases	Metric Tons	1,000 Cases
In Oil or Sauce:				
Sardines	6,114	322	5,200	273
Sardine-like fishes	-	-	468	24
Chinchards	288	15	-	-
Mackerel	119	4	185	7
Tuna and tuna-like	2,934	104	2,691	96
Anchovy fillets	2,119	212	3,257	325
Others	235	12	524	27
Total	11,809	669	12,325	752

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FISHERIES TRENDS, SECOND QUARTER 1960:

During the second quarter of 1960, Matasinhos was the leading sardine fishing port

Portugal (Contd.):

in Portugal. Sardine landings improved during the early part of the quarter in central and southern Portuguese coastal cities, such as Setubal, Lagos, and Portimao. Some concern was expressed by the canners for the higher sardine ex-vessel prices during May and June, and a possible adverse effect on canned fish exports.

Sardine landings for January-June 1960 amounted to 20,479 metric tons. In addition, there were landings of 1,043 tons of anchovy and 9,763 tons of chinchard. Other species landed, for which data are available only for January-May 1960, were 690 tons of tuna, 89 tons of mackerel, and 32 tons of bonito.

Portuguese canned fish exports declined by 5,695 metric tons when compared with the second quarter of 1959, mostly due to a noticeable drop in sardine exports; likewise, the canned fish pack declined by 622 tons. (Conservas de Peixe, June through August 1960.)



Spain

BALEARIC ISLANDS SHRIMP FISHERY:

Many species of shrimp are caught by Spanish fishermen, mostly by trawling. The white shrimp (*Parapenaeus longirostus*) constitute the principal source of income for the smaller vessels that fish in the southern part of Spain. This species is little known in the Balearic Islands in the Mediterranean.

The pink shrimp (*Aristeus antennatus*) and the "chorizo" shrimp (*Aristeomporpha foliacea*) are the two principal species that the fishing fleet catches in the Balearic Islands and part of the Levant area. Each species is found in its own area and depth zone.

The shrimp fishing fleet of the port of Palma, in the Balearic Islands, leaves port early (about 1:00 a.m.) daily. The vessels stay out fishing until the early afternoon and usually make two drags.

The shrimp, after being brought aboard, are sorted from the small fish and trash, and packed in boxes with ice.

Since the initiation of shrimp fishing at greater depths in 1948, shrimp landings in the Balearic Islands have increased.

Shrimp Landings in the Balearic Islands (Spain), 1948-58 ^{1/}	
Year	Quantity
	Metric Tons
1958	309.4
1957	177.3
1956	154.4
1955	145.9
1954	116.9
1953	121.1
1952	94.9
1951	69.5
1950	53.9
1949	18.9
1948	16.2

^{1/}Does not include shrimp caught in waters adjacent to the Balearic Islands but landed in other ports.

Shrimp landings in the Balearic Islands are at their peak in late summer, and with exception of the winter months, landings are good.



U. S. S. R.

NEW FREEZER-FACTORYSHIP COMPLETED:

A Leningrad, U. S. S. R., shipyard has delivered a new combination freezer-factoryship, according to the August 17, 1960, issue of *Leningradskaja Pravda*. The 10,000-ton vessel is named *Simferopol* and has made its trial trip. The vessel has a freezing capacity of 100 metric tons of fish or whale meat per 24 hours and is intended to transport fish or whale meat. (*Fiskets Gang*, September 16, 1960.)



United Kingdom

FISH MEAL PRODUCTION AND FOREIGN TRADE, 1955-59:

Production: From 1955 to 1959 the United Kingdom's domestic production of white fish meal remained fairly constant, while imports of white fish meal and herring meal increased considerably (see table 1). In 1959 the United Kingdom produced 78,300 long tons of fish meal, 73,700 tons (94 percent) of which was white fish meal and the balance, 4,600 tons, of herring meal.

The availability of domestically-caught herring for reduction in Great Britain has been decreasing in recent years,

United Kingdom (Contd.):

Year	Domestic Production of White Fish Meal	Imports of White Fish and Herring Meal
 (1,000 Long Tons) . . .	
1959	74	147
1958	74	113
1957	75	109
1956	79	108
1955	77	91

and because of this the Herring Industry Board felt it could not commit itself to increased offerings of herring meal for sale during the first nine months of 1959 as compared with 1958. The Herring Industry Board was of the opinion that Peruvian meal, then offered for sale at 20 percent less, would not have any immediate harmful effect on the herring industry, as most buyers were already committed to purchases of domestic meal until March 1960.

Imports: Imports of Peruvian fish meal increased from 11,000 tons in 1958 to over 30,000 tons in 1959--the trend was still upward during the early months of 1960. There was also a substantial rise of imports from Norway and Denmark. Prices of domestic white fish meal in the United Kingdom held firm until the latter part of 1959, but from then on the increased imports began to have a marked effect on prices, to the detriment of the domestic fishing industry. Peruvian fish meal and oil gave the United Kingdom considerable competition in the European market.

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CRUDE WHALE AND HERRING OIL UTILIZATION INCREASED:

Utilization of crude whale and herring oil in Great Britain increased from 72,600 long tons during the first half of 1959 to 78,000 tons during the same period of 1960. (U. S. Foreign Agricultural Service Report, London, October 5, 1960.)

* * * * *

EFFECT OF PRESERVATIVES ON FISH MEAL AND OIL QUALITY:

The studies by the British Torry Research Station on the preservation of whole fish and fish waste prior to processing into fish meal and oil were summarized in Food Investigation Technical Paper No. 6. The report has been re-issued and brought up to date by the inclusion of more recent work on the nutritional value of preserved material. The new publication appears as Torry Technical Paper No. 2, Preservation of Fish and Fish Offal for Oil and Meal Manufacture.

It is now clear that, although formaldehyde or nitrite may be used effectively in the stor-

age of whole fish, it would not be advisable to contemplate storage of minced material with these preservatives. Valuable flesh and tissue proteins react with these chemicals, and the lysine in the protein can be shown to be rendered partially unavailable by both chemical and biological methods of testing.

Storage of minced material would be ideal for production of meal and oil by azeotropic processes and this therefore is disappointing. Meals made from whole fish and large pieces of offal treated with preservatives are of high biological value as only the skin and surface proteins react with the chemicals.

The original paper stimulated exchange of information with other countries, and it has been possible to reproduce some of their data in the new report.

It is interesting to note the lengthy periods for which white fish offal can be stored under the climatic conditions in Newfoundland and the beneficial effects of preservation for even a few hours storage as in the United States menhaden industry.

Formaldehyde with chlortetracycline reduced the bacterial count in 48 hours by 250,000 times. The significance of this in connection with odors from reduction factories warrants consideration. (The Fishing News, September 16, 1960.)

* * * * *

NEW FREEZE-DRYING PROCESS INCREASES SHELF LIFE OF FOODS:

A new food-preserving process, which reportedly increases the shelf life of foods to approximately two years, has been commercially developed by a British company and is being viewed with interest by several United States food companies, according to the Food Field Reporter of July 4, 1960. The process, known as Accelerated Freeze-Drying, will be used commercially for the first time anywhere by a British firm for a wide range of vegetables slated for export. Installation is expected by February 1961.

It is reported that this new process provides a logical advance in the prepacked food market and an alternative to deep-freeze methods of food preservation.

Technically, the process employs heating and drying of foods in a vacuum. The food is maintained at temperatures below freezing while it still has water content. In this way, the moisture in the frozen state converts to vapor without passing through the liquid phase. The effect is that all the natural flavor and color of the food is restored when the water is replaced. The process does not collapse the cells of the food. With the addition of water, the food regains its natural fresh appearance.

Besides cutting earlier standard freezing process time by one-third, food processed by Accelerated Freeze-Drying

United Kingdom (Contd.):

weighs less than half the normal weight of food. As a result, transportation costs are drastically cut.

Foods processed by Accelerated Freeze-Drying have been subjected to various tests. Numerous tasting panels have judged the quality of the products to be equal to fresh foods and superior to foods preserved by other methods.

The British army has been conducting trials using freeze-dried foods to determine their applicability for use in the armed forces. Both the decrease in weight of the products and their compactness were cited as especially important factors.

Foods subject to freeze-drying could either be cooked in advance or processed raw. The only thing really required is to cut them sufficiently to enable the process to work on the food surface equally.

Originally, extensive research and development on the new process was carried out by the British Ministry of Agriculture, Fisheries and Food. The new system of dehydration was discovered accidentally about five years ago at the ministry's Aberdeen, Scotland, experimental factory.

An accident during experiments with a new vacuum-drying process actually brought about the discovery of freeze-drying. The food was first frozen and then placed between heated metal plates which turned the ice crystals into vapor without melting them. At this time, someone accidentally left open a valve in the machinery.

A severe vacuum was set up which froze the food solid and caused the dehydration process to be cut to one-sixth the ordinary time. As a result, the drying time was reduced from 48 to 8 hours.

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NEW PLANT TO PRODUCE FROZEN-FISH DINNERS:

A new fish-processing factory at Grimsby, England, will soon be producing fish dinners, many of them for countries overseas. The factory has an area of 34,000 square feet, is equipped with the most modern machinery and handling equipment, much of it specially designed.

Its owners are among Britain's largest producers of quick-frozen foods, and export frozen fish, fruits, and vegetables to more than 40 different countries, among them the United States and Canada, Australia, Nigeria, Ghana, Southern Rhodesia, Kenya, Uganda, Nyasaland, Uruguay, British Honduras, the Bahamas, Siam, Ceylon, Fiji, Cyprus, Egypt, and Kuwait.

All conveyors and other equipment have been designed for easy cleaning and all conveyor belts are made of nontoxic materials.

The factory also has a cold-storage capacity of 300 tons, which operates at a temperature of -20° F.

A unique feature of the factory is a screw conveyor used to dispose of the fillet waste which is deposited into the conveyor.

A 20-inch screw conveyor passes under each filleting line below floor level, driving the offal forward into a 24-inch transverse screw conveyor carrying it across the factory floor and transferring it to an inclined screw conveyor. This takes the offal 85 feet to the top of a six-ton hopper from which it is discharged into waiting trailers.

There are 360 feet of conveyors and the type used has several advantages, among them the ability to force the offal towards the disposal point in a regular flow. The conveyors are completely enclosed for safety reasons and, while the offal cannot overflow, the system can easily be cleaned.

The conveyors are cleaned out thoroughly by steam at the end of each day's work. Adequate inspection plates are included on each conveyor to facilitate cleaning, but access to the screws cannot be gained while the conveyors are in motion.

All fish trunks and trays are thoroughly washed before use and another unusual feature of the factory is that the washing machine has been installed in the roof so that production space at floor level is used to maximum advantage.

The washing machine tank holds 1,500 gallons of water heated to a temperature of 200° F.

There are separate compartments for the cleaning of fish trunks and trays which are taken to and from their compartments by overhead conveyors. (The South African Shipping News and Fishing Industry Review, June 1960.)

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REVIEW OF RESEARCH ON FISHERY BYPRODUCTS:

The United Kingdom is presently conducting extensive research directly concerned with fishery byproducts. Descriptions of work undertaken in the fields of the preservation of the raw material, the capacity of steam-jacketed fish-meal dryers, and concerning odors, follow:

United Kingdom (Contd.):

Preservation of Raw Material: Re-infestation by blow-fly larvae of herring otherwise satisfactorily preserved with nitrite-formaldehyde, despite the initial kill, is a serious practical problem in summer.

Spraying the surface of the mass of preserved fish with a 0.25 percent aqueous emulsion of pyrethrum has been found to be a promising alternative to the use of undesirably high levels of nitrite-formaldehyde. Further work is necessary to determine the frequency of pyrethrum spraying which may be necessary. It will depend on the duration of residual activity after spraying and on how long the surface of the mass of fish remains unbroken (e.g. by addition or withdrawal of fish).

Experiments with preservatives are being extended to material at present discarded at sea from fishing vessels. This would include viscera and unsalable species of fish. Facilities aboard existing vessels would be limited and two possibilities are envisaged: (a) dumping the material into a tank containing enough preservative solution to cover a full load, or (b) spraying a prescribed amount of a much stronger solution of preservative on to each standard measure (e.g. bucketful) of fish or viscera before tipping it into a tank. Preliminary experiments have shown both methods to be feasible, but the choice and amount of preservative require further consideration and experiment. Nitrite is more toxic than formaldehyde, looks innocuous, and has no odor. The objectionable odor of formaldehyde might afford a desirable safeguard against inadvertent contamination of food or drinking water on the trawler. Used alone, formaldehyde above a certain level causes so much toughening of fish that it does not break down adequately in the cook-and-press stage of the fish-meal plant. The amount of preservative should be varied according to the prevailing temperature. Thus, under British summer conditions, formaldehyde alone at 0.6 percent of the weight of the fish, applied as a spray, would be marginal for a 3-weeks' fishing trip, but would be excessive in winter.

Both formaldehyde and nitrite can react with the free amino group of the lysine component of the fish proteins. Lysine which has so reacted and is thus excluded from the chemically-determined "available" lysine has now been found to be unavailable to

chicks. Hence the chemical test is significant when applied to meals made from preserved fish. These findings further emphasize the desirability of preserving fish whole, or in large pieces, where only the surface layer will react with the preservative.

Fish Meal Pilot Plant: Studies are continuing concerning the factors that influence the capacity of steam-jacketed fish-meal dryers. Previous work showed that a straight-line relationship exists between capacity and the cube of the shaft speed, in the range 6-14 r.p.m. Although this simple relationship is not maintained at higher speeds, an increase of 50 percent in plant capacity can be achieved by increasing the shaft speed from the customary 10 to 30 r.p.m.

Experiments involving the introduction of heated air into the dryer have been postponed following difficulties due to bones choking a rotary air lock fitted to the meal outlet. However, capacity has been shown to increase when increased amounts of ventilating air are drawn through the dryer. The limit to this is just below the air velocity at which meal hold-up occurs. To obtain the fullest use of this ventilating air it is recommended that the exhaust vapor off-take duct should be as near as possible to the raw material inlet. This would necessitate the provision of some form of air seal at the inlet, e.g. a hopper of fish waste.

Odors: Pilot-scale tests at a commercial herring-meal factory with a venturi scrubber have been followed by experiments on a similar scale with a specially-built scrubber. One primary consideration was the necessity of ensuring only a low-pressure drop with a high gas-flow rate. At the same time the scrubber was designed to test combinations of water and chemical treatments, with a variety of packings, i.e. it was a flexible research tool. Although it has provided a mass of useful information, there are still many problems in the economical deodorization of the enormous volumes of gaseous effluent from pneumatic dryers.

Deodorization of a steam-heated or other type of indirect dryer is a potentially simpler problem. Pilot-scale experiments involving a completely closed cycle, with total recirculation of the scrubbed air, must await the fitting of a satisfactory air lock on the meal outlet. Tests with both water and chemical scrubbers are continuing. (Torry Research

United Kingdom (Contd.):

Station, Annual Report 1959, Department of Scientific and Industrial Research.)

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ULTRAVIOLET LIGHT USED FOR PURIFICATION OF OYSTERS:

Scientific use of ultraviolet light is playing a vital part in extensive plans to restore to Poole Harbour, Dorset, England, part of its lost importance in British fisheries. Two groups are trying to re-establish the harbor as one of the country's leading sources of oysters--a position it enjoyed in past centuries.

One of the keys on which success may possibly rest is an installation using germicidal lamps, a system which has been the subject of experiments by the British Ministry of Agriculture and Fisheries. It is also in use in Cornwall and Wales and is being considered by a firm in Colchester, a town renowned for its oysters.

The group consists of part-time oystermen. To meet Ministry of Health requirements concerning bacteriological levels in oysters, leaders of the group worked out details of an ultraviolet lighting purification system. The result has been the installation of a purification plant, built by the group, of three 30-watt germicidal tubes.

All the oysters gathered by the group of part-time oystermen and also by the second group (formed of local professional fishermen) are now being passed through the plant, the fishermen's group using it under an agreement.

The group of "amateurs" started their oyster project in 1953. In September 1958, they formed themselves into a company, with 42 shareholders, and now have more than 500,000 oysters laid in three beds, each of 30 acres, in the harbor.

Oysters gathered from the beds in the harbor are placed in one of two purification tanks--40 feet x 10 feet, and two feet deep--built by the group members at a small headquarters on the harbor foreshore. Then, over a period of 12 hours, the water in the tanks is circulated under the germicidal tubes.

The three-foot lamps are housed just above the water level in a 60-gallon tank, through which the sea water from the main purification tank is passed at the rate of 50 gallons per minute.

To ensure that the ultraviolet light focuses directly on all the water, this is passed at a wafer-thin depth, over a weir, which divides the 60-gallon tank into two sections. Then as the sea water is being returned in the main tank, it is passed through an aeration system.

An official of the amateur group says: "Our calculations show that we need leave the oysters in the main tank for only 12 hours. In that time, with the constant purification of the water, they pass out sufficient impurities to bring them well within the limits allowed by the Ministry of Health." (The South African Shipping News and Fishing Industry Review, June 1960.)



IMPORTANCE OF CHILLING FISH

If fish is kept at an indoors summer temperature, say, 75° F., the number of bacteria will increase at a rapid rate, and the meat will be spoiled in a very short time indeed. Fortunately, however, the rate of multiplication of bacteria can be reduced by cooling. While it takes only half an hour for a young bacterium to grow and divide into two at summer temperatures, the process takes several hours at the temperature of melting ice (32° F.). At 77° F., 500 bacteria grow to the enormous number of several hundred millions in two days. At 32° F. (ice temperature) the same initial number of bacteria require 14 days to become several hundred millions. In practice spoilage begins to become obvious in fish like cod and haddock only after the numbers of bacteria have gone up to several million bacteria per sq. in. of skin surface.

For practical purposes the quickest, safest and easiest way to cool fish to about 32° F. and keep them at that temperature is to surround them and mix with them liberal amounts of crushed ice. Simply putting fish without ice into a chill room at 32° F. will cool them down very much more slowly even if the fish are laid out singly. Fish contained in wooden boxes put into a chill room without ice will cool down even more slowly since wood is a good heat insulator. Direct and intimate icing, therefore, because of its superior cooling action ensures that spoilage of the fish during the cooling down period is reduced to a minimum. Once fish has been cooled to 32° F. by icing, it can be kept at that temperature only by ensuring that sufficient ice envelops it to absorb heat coming in from its surroundings.