



## International

### NORTH PACIFIC FISHERIES COMMISSION

**TOKYO MEETING REPORT:** A stepped up study of the origin and distribution of Pacific salmon was scheduled for next year by the International North Pacific Fisheries Commission at its meeting in Tokyo which ended on November 5, 1955.

The United States Section of the Commission on November 8 issued this report to the press:

A large increase in scientific studies to determine origin and distribution of Pacific salmon in the sea was decided upon by the United States, Canada, and Japan at the October 31-November 5 meeting of the International North Pacific Fisheries Commission in Tokyo, according to the United States Section and their advisers.

The United States Section for its part decided upon increased emphasis on ocean tagging as one of the lines of investigation offering good prospect of an early answer to the paramount problem, which is: determination of the origin and distribution of the salmon of the Pacific.

At the same time the United States Section will continue other scientific studies seeking to distinguish American and Asiatic salmon; research fishing and sampling to determine distribution of the salmon in the sea; study of racial characteristics which may reveal physical differences; oceanography studies to ascertain the effect of currents, temperature and the food supply of fishes, as it relates to the distribution of fish in the sea.

Concern of American people over recent trends in yield of Pacific salmon was emphasized to the International Commission at its first meeting by Milton Brooding, Chairman of the United States Section, who said in addressing the Commission:

"The people of my country are greatly concerned with the seaward migration of stocks of salmon of North American origin and we are moving as rapidly as possible in the direction of determining the ocean distribution of these stocks. We know they leave our shores after being spawned in our streams, and, we know that an important part of their life cycle is spent in the open sea. Further, we know that these fish are capable of migrating long distances. During the season just passed the United States catch has been extremely poor, with some runs a complete failure. In view of these facts, it must be obvious that our people are greatly concerned about what happens to these salmon during their sea life.

"So it is we come here today, greatly concerned because of the apparent loss of our fish in the open sea. This loss will affect salmon runs to come because without adequate present spawning in our American streams there will be inadequate future stocks to perpetuate the fishery."

While the 1956 operating schedule is not yet definite, Japanese spokesmen have indicated they would not expect to increase the number of vessels engaged in salmon operations in the Aleutian area in 1956. This position is a question for future discussion in line with the United States Section's great concern as expressed in its opening statement. The Japanese spokesmen did indicate a probable increase in operations for both salmon and crab in the Okhotsk Sea area, which is west of the Kamachatka Peninsula.

With regard to Japanese North Pacific operations during the 1955 season, the United States Section was informed that the Japanese had adhered strictly to their treaty assurances, and that in fact they had not fished within 7° of the area within which they had agreed to abstain from fishing salmon. While their operations began at 178° east longitude, the Japanese took the great majority of their 1955 catch from waters west of Attu, beyond the utter extremity of United States territory in the Aleutians.

Salmon sampling operations to determine distribution as distinguished from fishing for tagging purposes will also be substantially increased by all three nations party to the treaty.

Research fishing to provide racial samples and other scientific data will be conducted throughout the Bering Sea by United States and Japanese vessels, with some overlapping in the central part of the sea.

Vessels of three nations will conduct simultaneous fishing operations for scientific samples of the salmon population in a broad band all the way across the Pacific. The Americans and Canadians will work westward and the Japanese east, with sufficient overlapping to confirm the data developed. It is possible that United States and Canadian commercial fishing vessels will encounter Japanese research craft fishing for scientific samples in the area of overlap.

The increased emphasis on tagging, which received priority in the research program of the United States Section, was decided upon because of the encouraging results obtained in 1955 tagging work.

The tagging program was developed for the United States Section by W. F. Thompson, Director of the Fishery Institute of the University of Washington, which conducted the tagging investigation in 1955.

It is planned to tag large numbers of salmon in a broad band along both sides of the Alaska Peninsula and the Aleutian Islands, and extending if possible to the area of the Japanese pelagic fishery. In order to provide fish in physical condition to stand tagging and survive, specially adapted purse seines will be the principal fishing gear employed. Experimental work is continuing to develop improved tags, methods of tagging, and the technique of taking fish for tagging on the high seas.

The United States Section initiated a request that the nations concerned begin at once studies which will permit decision in 1958 on the qualification of fisheries for abstinence under the fundamental principle of the Treaty. This United States proposal was accepted by the Commission.

Attention was given to the king crab resource and the continuance of scientific studies for its conservation.

Edward W. Allen, one of the four United States Commissioners, was elected chairman of the Commission for 1956; George R. Clark of Canada was chosen Vice President, I. Fujita of Japan, Secretary. This was in line with the practice of rotating these offices between the three nations. The next meeting will be held in Seattle in November 1956. The Biology Committee of the Commission, which is charged with attempting to determine the distribution of North American and Asiatic stocks of salmon on the high seas, will meet at Honolulu on February 6 and again at Seattle on November 5, 1956, the United States Embassy at Tokyo reported on November 10.

Most United States studies will be made by the U. S. Fish and Wildlife Service and the Fisheries Institute of the University of Washington. The California Department of Fish and Game is cooperating by furnishing data already gathered.

#### INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA

ANNUAL CONFERENCE: The annual conference of the International Council for the Exploration of the Sea was held in Copenhagen October 24-November 11, 1955. The following member countries sent delegates: West Germany, Belgium, Denmark, Spain, Finland, France, Great Britain, Eire, Iceland, Norway, Netherlands, Portugal, and Sweden. Although not a member, the United States was represented by an observer, Andrew W. Anderson of the U. S. Fish and Wildlife Service.

The U.S.S.R. and Poland sent sizable observer teams to this year's conference. Reportedly, these teams contributed to the discussions and created the general impression that fisheries methods and research in those two countries have not lagged significantly behind developments in the West. It was also announced at the end of the conference that both the U.S.S.R. and Poland had applied for and been accepted as members of the Council.

The Council elected a Norwegian, H. W. Sverdrup, as President to replace the outgoing M. A. Dobson of Great Britain, a November 7 dispatch from the United States Embassy at Copenhagen reports.

#### TERRITORIAL WATERS

BRITISH-ICELANDIC NEGOTIATIONS ON ICELANDIC TERRITORIAL FISHING LIMITS: Negotiations between Great Britain and Iceland that have been afoot through the Organization for European Economic Cooperation for a settlement of the dispute regarding territorial fishing limits unilaterally imposed by Iceland have failed, states the October 28 issue of The Fishing News, a British fishery periodical. The last week in October an additional memorandum of some 26 pages in length was issued by the Icelandic Government. This was in reply to the British Government's 6,000-word memorandum issued by the British Foreign Office in May 1955 for the Council of Europe to which body the Icelandic Government had earlier submitted a complaint in a lengthy memorandum regarding its inability to market Icelandic fish in Great Britain.

The Icelandic Government's new statement comprises an introductory section, a section emphasizing the importance of fishing to Iceland, its view of the legal

position in relation to fishing limits, the claimed effects of its conservation policy, and lastly, a section complaining of the action taken by the British fishing industry.

#### NORTH PACIFIC OCEANOGRAPHIC SURVEY

OCEANOGRAPHIC STUDIES AID FISHERIES: Scientists of Canada, the United States, and Japan with more than 50 ships at their disposal have just completed a four-month survey of the North Pacific which is expected to make navigation safer, help develop marine resources, and aid Japanese farmers. The scientists of the three countries will meet in Hawaii in February 1956 to compare notes and assess the information obtained.

The survey charted for the first time the circular movement of Pacific waters north of 20 degrees north latitude. It was the first of an annual series. Another joint survey series by the United States, Japan, and Peru will begin in August 1956 and will cover equatorial waters between 15 degrees north latitude and 10 degrees south latitude.

Data collected this year included the temperature, salinity, and oxygen content of ocean currents to a depth of 500 fathoms. Plankton concentrations and fish distribution were also noted. Meteorological observations and findings on the relationship between the "Oyashio," or cold current running south; the "Koroshio," the warm current running north; the North Pacific current, and the California current were recorded. Although details were not disclosed, it was said that the observations solved the riddle of the unseasonable cold wave and abnormally warm winter of 1953/54 in Japan. Better weather forecasts will now minimize damage to crops in northeastern Japan by cold waves.

East of 175 degrees west latitude and south of the Aleutian Islands the survey was conducted by ships of the United States and Canada, while Japan covered the remaining waters to the west.

Cooperating organizations were: for Japan, the Maritime Safety Board, Tokyo College of Fisheries, Hokkaido University, Central Meteorological Observatory, Kagoshima University, and the Togai District Fisheries Institute; for the United States, the University of California, Pacific Fisheries Institute, and Washington University; for Canada, the Fisheries Board, Pacific Institute, and Asia-Pacific Observation Group.

#### WHALING

WHALERS PAY RATES INCREASED: The National Whaling Board has approved a six-percent increase in pay, bonus, and overtime rates for the 1955/56 whaling season, states The Fishing News (November 4, 1955), a British fishery periodical. This is the same increase as that negotiated between the Norwegian whaling companies and unions.

The Board comprises representatives of the British and South African whaling companies, the Navigators' and Engineer Officers' Union, and the National Union of Seamen.

#### FOOD AND AGRICULTURE ORGANIZATION

REPORT ON EIGHTH SESSION OF FAO CONFERENCE: The Eighth Session of the Conference of the Food and Agriculture Organization opened on November 4, 1955, in Rome, Italy. The Conference which is the chief legislative and policy-making organization of FAO (of which the United States and 70 other countries are members), was opened by the Director-General who referred to the work that had

been done by FAO in its first ten years, but he said, rather than look nostalgically to the past, it was better to look forward to the next decade and prepare to tackle the immense amount of work which was waiting to be done.



After three weeks of meetings on world problems in agriculture, forestry, fisheries, and nutrition, the Eighth Session of the Conference terminated November 25, 1955. During this period the member countries celebrated the tenth anniversary of FAO's founding in Quebec, Canada, 10 years ago.

Advisers to the United States delegation at the Conference include A. W. Anderson, Chief, Branch of Commercial Fisheries, Fish and Wildlife Service, U. S. Department of the Interior, and Charles E. Jackson, General Manager, National Fisheries Institute, Washington, D. C.

The Director of the Economics Division at the first meeting of the Commission-of-the-Whole on November 8 gave his statement on the "The World Food and Agricultural Situation" (Document C 55/CW/2). After referring to the printed document, the State of Food and Agriculture (C 55/4), which reviewed developments over the last decade, he pointed out that the present situation had not changed fundamentally since the 1953 Conference. Although there were some surpluses and stockpiles were growing, the per capita production of food in the world had not risen much because the purchasing power was not available.



Technical Committee on Fisheries meeting. Representatives of 29 countries and an observer from UNESCO attended.

After analyzing various factors concerned with production, distribution, marketing and consumption, stabilization of prices, and increase of farm incomes, etc., the Director of the Economics Division brought out the following as policies which the Conference should consider: (1) increased consumption; (2) reduced costs; (3) greater flexibility of production; (4) greater stability of prices; (5) increase in farm incomes; and (6) disposal of surpluses to speed economic progress in underdeveloped countries, without disturbing normal trade in those products.

The Director-General on November 11, in a comprehensive statement to the Commission-of-the-Whole, explained the factors which had influenced his decisions with regard to the 1956/57 Budget and the Management Survey Report. In making his decisions on the budget, he had kept very clearly in mind the principles on which the Organization was founded, and, in considering future budgetary requirements, had used the 1955 Program as a basis.

At the eleventh meeting of the Commission-of-the-Whole, the Chairman pointed out that delegations had suggested that special attention should be paid by FAO to practical field studies, particularly to work directed primarily towards improving production, such as plant protection, regional conferences, training centers, storage facilities, and desirable developments in fisheries, animal husbandry, and horticulture. Some delegations had emphasized work in nutrition and home economics. Regarding new activities, many countries felt the proposed survey of world resources would help in developing national programs.

#### TECHNICAL COMMITTEE ON FISHERIES:

Fishery problems were initially discussed in a Technical Committee on Fisheries. Representatives of 29 countries and an observer from UNESCO attended the meetings of the Committee. A. W. Anderson, Chief of the Fish and Wildlife Service's Branch of Commercial Fisheries, and Charles E. Jackson, General Manager of the National Fisheries Institute, Washington, D. C., served as United States representatives on the Committee.

The first meeting of the Technical Committee on Fisheries of the Eighth Session of the Conference was held on November 15. The agenda of the Technical Committee on Fisheries included the organization of the Committee; adoption of an agenda; review of the activities carried out by the FAO Fisheries Division during 1953/54-1954/55, program of work for 1956/57, including the item on the agenda of the Commission on Program Trends and Policy Questions, i. e., "The Rational Utilization of the Living Resources of the Sea (in cooperation with the United Nations Organization)."

At the First Meeting of the Commission on Program Trends and Policy Questions on November 15, the chairman proposed that the item on the "wise utilization of the living resources of the sea" should be referred to the Technical Committee on Fisheries to deal with initially, and the Committee should refer the item back to the Commission on Program Trends and Policy Questions should any specific policy matters arise.

New FAO Fisheries Program: The Committee was in general agreement with the conduct of past programs by the Fisheries Division of FAO and also concurred with the program proposed for 1956 and 1957 although it was necessary to indicate some items which could be delayed if the full budget allotment was not received. FAO had proposed about a 17-percent increase over its current budget but the final increases approved were about 10 percent for 1956 and 13 percent for 1957. However, the technical divisions--fisheries, forestry, agriculture, economics, and nutrition--will be able to carry on most of the work proposed as the greater share of the deductions were made in other parts of FAO's operations.

The Technical Committee on Fisheries gave the highest priority to work in the technological fields of production, processing, gear development, and fishing-boat design. It endorsed holding of an

international Gear Congress early in 1957 and a repetition of the very successful Fishing Boat Congress (first held in 1953) probably early in 1958.

Economics and Statistics activities also were highly commended and it was regretted that a scarcity of well-qualified economists was hindering the more rapid advancement of the program in this field. The publications were mentioned as proving extremely useful to the member countries. A series of ten proposed economic studies, including such subjects as governmental services to the fishing industry, fishery cooperatives, marketing, etc., were looked forward to with great interest. The first report, a pilot study on governmental services to the sea-fish industry of Great Britain is well under way and is expected to set a pattern for other countries and other studies.

Fishery biology activities deemed most significant were in the establishment of a common terminology and a standardization of research methods.

In general, the Committee suggested that regional activities be strengthened. It also commended most favorably on the Expanded Technical Assistance Program, a field which supplements the Regular Program, and one in which the Fisheries Division appears to have made a very good record of accomplishment.

Of the new activities proposed for initiation, the Committee recommended that these must take a lower priority than items in the Regular Program. Some concern also was expressed over the danger of spreading the Division's facilities and personnel too thin, especially since it is subject to requests for assistance from over 70 nations in all parts of the world. In accordance with the above recommendation, it was agreed that the suggested new activity involving a survey and appraisal of world agricultural, fishery, and forestry resources in relation to needs would be delayed or curtailed as required.

Substantial savings were made by eliminating provisions for meetings and consultations which it was thought would arise out of the International Technical Conference on the Conservation of the Living Resources of the Sea, convened by the United Nations at FAO headquarters in Rome from

April 18 to May 10, 1955. There appeared to be no need for the Fisheries Division to undertake such an activity. Similar savings were made by eliminating a requested post in the FAO Legislative Service to undertake special work on questions of international law affecting fisheries.

A suggestion in an FAO paper entitled "Role of FAO in the Development and Wise Utilization of Sea Fisheries" that FAO become active in the development of scientific criteria required to determine the need for conservational action, the appropriateness of measures to be adopted, and the effectiveness of these measures, particularly to furnish guidance to such arbitral commissions or other organs as might be established in accordance with the Draft Provisional Articles con-

**Report of the Technical Committee on Fisheries:** The Conference examined the results achieved in fisheries during the past two years as well as the program of work proposed by the Director-General for the next two years. It commended the Director-General upon the achievement of a program which was well conceived and properly balanced. It felt that future trends in the work on fisheries should be based upon the logical development of the present structure. It noted the necessity for strengthening the staff in order to implement the projects in the 1956/57 program and approved the measures suggested to accomplish this purpose.

It was felt particularly desirable that projects should continue to be undertaken which were consistent with the status of the Organization as an international body and that Member countries should continue to be encouraged to undertake work which could more appropriately be done nationally.

It was considered that, among the activities to be conducted under the Regular Program, those now in progress deserved the highest emphasis and that the danger should be avoided of spreading too few staff over too diverse a range of activities. Importance was attached to the concurrent development of production, processing, distribution and marketing in the domestic fisheries.

The Conference wished to draw special attention to the following aspects of the program of work for the next two years:

**FISHERIES BIOLOGY:** In the field of fisheries biology, the Conference considered that the establishment, first of all, of a common terminology and, secondly, a standardization of research methods deserved emphasis and that the initiative which had already been displayed in this direction must be commended. Such standardization of terms and methods was necessary in order that any one country might utilize the work done by other countries. It was regretted that it had not been possible to continue the work of preparing the schedules of scientific and common names of commercial species of fish since these contributed to the establishment of a common terminology.

The strengthening of the staff proposed to further the work of standardization and to assist in the preparation of a series of handbooks was considered desirable. It was thought that these handbooks should be compiled wherever possible by the Member countries and that the Organization would be mainly responsible for editorial work.

It was pointed out that the work on terminology undertaken in the field of biology was important both to UNESCO

concerning the High Seas as proposed by the International Law Commission, met with unanimous opposition. It was recommended that nothing be initiated in this field by FAO until the need for further guidance in such matters was more apparent.

The Conference accepted all of the recommendations originating in the Technical Committee on Fisheries. They will, therefore, guide the program of the Fisheries Division for 1956 and 1957.

Copies of the Report of the Technical Committee on Fisheries and the statement with regard to The Rational Utilization of the Living Resources of the Sea follow:

and to the Organization and, while the latter should play its full part in this, it was essential that close contact be maintained with UNESCO in its development. The coordination of work in the classification of plankton was noted and considered essential to the development of the fisheries.

**FISHERIES TECHNOLOGY:** The Conference fully endorsed the work carried out in the field of fisheries technology, including the strengthening of the staff. The method of presentation of the work in this field was approved and recommended for wider adoption.

It was noted that since the last Session of the Conference the gratifying results of the Congress on Fishing Boats held in Paris and Miami in 1953 had become fully apparent and stress was laid upon the desirability of a second Congress. If possible, this should be organized in three sessions in the Far East, America, and Europe and it was agreed that the feasibility of holding it simultaneously with the proposed congress on fishing gear and methods should be examined. It was hoped that the Organization would be able to promote a permanent international body to cooperate in the improvement in the design of fishing boats. At the same time the Organization should continue to take all possible steps to ensure the adequate circulation of information on fishing boat design. It was recommended that the staff of the Organization be strengthened to assist in this work in future and that if, in the meantime, savings were achieved in other directions they should be allocated to furthering work in this field.

The proposed congress on fishing gear and methods was considered to be of the highest importance. It was particularly requested that, since many of those likely to benefit by the proceedings would not be able to attend such a congress, wide dissemination of the information arising out of it should be made in forms appropriate to fisheries workers at all levels.

The collaboration with UNICEF on technological problems in the manufacture of fish flour was noted and the continuation of this work during 1956 and 1957 was approved.

**FISHERIES ECONOMICS AND STATISTICS:** The Conference approved the strengthening of the staff in the field of fisheries economics and hoped that this would permit further broadening of its activities. The Conference noted that the work was hindered by the scarcity of well-qualified economists conversant with conditions in the industry, and that this impeded the execution of projects in both the Regular Program and ETAP. The policy of employing on fisheries studies consultants from Member countries already engaged on similar or associated work was noted and highly

commended as a method of accomplishing a great deal of useful work at a minimum cost to the Organization. This policy, moreover, assisted in focusing the attention of prominent economists and administrators on the problems of the fishing industries, and their assistance could be expected to make important contributions towards the solution of such problems. The pilot study on governmental services to the sea-fish industry of Great Britain, at present being carried out in the United Kingdom, was considered to be useful both in itself and in setting a pattern which would be valuable when similar work relating was undertaken in relation to other countries. The Conference noted that until additional staff became available, work on economic appraisal in fisheries could be carried out on an ad hoc basis only.

It was considered that the publications of the Organization in the field of fisheries economics were proving extremely useful to Member Nations, and particular mention was made of the Yearbook of Fishery Statistics. It was recommended that standardization should be carried further and the Director-General was asked to draw the attention of Member countries wherever possible to the most desirable forms in which statistical returns might be compiled so as to provide a useful basis of comparison with those of other countries.

**REGIONAL ACTIVITIES:** Asia and the Far East: In reviewing the fisheries work accomplished by the Organization in Asia and the Far East, the Conference noted the consistent growth and development of the Indo-Pacific Fisheries Council over the past years. It felt that the work devolving upon the Secretariat in connection with the Council and the associated work in the Regional Office had now become so onerous that the Regional Office fisheries staff should be reinforced by an officer at an early opportunity.

One of the accomplishments of the Indo-Pacific Fisheries Council had been the strengthening of fisheries administration in the region. It was also considered that means should be found to develop leadership among communities of fishermen and that the appointment of an additional officer to the Regional Office would strengthen these activities. At the same time it was recognized that, however many persons were attached to the Regional Office, specialized advice was required from Headquarters from time to time. Visits from Headquarters staff had proved extremely valuable and it was only regretted that very often these were of comparatively short duration. It was recommended that Headquarters officers be assigned for longer periods to the Regional Office in order that they could the better cover the very extended area and diversity of conditions in the region. For this reason the Conference welcomed the increased allocation for travel proposed for work in this field in 1956/57. It was felt that a prerequisite of expert advice was familiarization of the officer with local conditions in the part of the world in which he was working.

The attention of the Conference was drawn to the existence of certain publications, at present available only in Japanese, which might be of benefit to other countries where the fishing industries operated under similar conditions, but it was recognized that considerable difficulties in translation would have to be overcome before this work could be undertaken.

**Europe and the Middle East:** The conclusion was reached that, as in Asia and the Far East, the work of the Organization generally in the area as well as that of the Secretariat of the Regional Council should be strengthened and extended. It was noted that the General Fisheries Council for the Mediterranean afforded the means of carrying out co-ordination of work being done by a number of governments and institu-

tions in the region to ensure standardization wherever possible. The Conference fully endorsed this line of approach.

**Latin America:** It was hoped that the Director-General would pay full attention to the importance of promoting the production of fish flour in the Central American countries and that specialized advice and assistance would be given on this project wherever possible. The importance to this area of the survey of resources was stressed and it was considered that the early formation of the proposed Fisheries Commission for Latin America (FCLA) might contribute much to fisheries work in that region.

**TECHNICAL ASSISTANCE ACTIVITIES:** The Conference recorded its appreciation of the Technical Assistance work carried out in fisheries. Much of this field work was directed towards immediate practical objectives and, by its nature, required continual guidance from Headquarters. The Conference felt that there should be an appropriate balance between the effort put into the Regular Program activities and the Technical Assistance work since the latter was dependent upon the Regular Program and both programs were mutually beneficial. The expansion of the Technical Assistance Program was approaching the limit which could be conducted by the existing and proposed Regular Program and Headquarters Technical Assistance staff. It was recognized that recruitment of experts to fit the particular posts required by requesting countries presented difficulties peculiar to the field of fisheries.

The systems of training were specially mentioned and the Conference hoped that it would be possible to hold a training center on fish processing technology in Latin America in 1956.

**PUBLICATIONS:** The publications program for 1956/57 was approved, including the provision made for revising the Handbook on World Fisheries Abstracts. The Abstracts were considered to be most useful in both practical and research work. It was noted that the sales of fisheries publications had been substantially increased, thus fulfilling the hopes of earlier sessions of the Conference. In this connection, the system adopted in the past two years of sending out press releases to fisheries journals all over the world relating to items of particular news value contained in the Organization's fisheries publications was noted and it was considered that these releases served an extremely useful purpose, were widely used and should be continued.

**The Rational Utilization of the Living Resources of the Sea:** The Conference noted with interest that the wise utilization of the living resources of the sea and particularly the conservation of such resources was subject to consideration by intergovernmental and international bodies. It recalled that in Article I of its Constitution, the Organization had been charged, *inter-alia*, with promoting and, where appropriate, recommending national and international action with respect to the conservation of natural resources. It considered that in the discharge of this function as regards the living resources of the sea the Organization might collaborate with existing bodies. It noted with satisfaction that the Director-General had been able to provide assistance to the United Nations in the preparation and conduct of the International Technical Conference on the Conservation of the Living Resources of the Sea held in Rome, in April 1955. The Conference was of the opinion, however, that, whilst the Organization will continue the more general program of developing the scientific basis of wise utilization of living aquatic resources, the promotion and development of the scientific criteria, which could be used to guide such arbitral commissions and other organs as might be established in

accordance with the Draft Provisional Articles concerning the High Seas as proposed by the International Law Commission in respect of judgements relating to conservation

**Technical Assistance in Fishery Development:** A review of FAO technical assistance in fishery development was presented to the Technical Committee on Fisheries. The review pointed out that while the type of assistance given to governments by experts varies from country to country, over-all during the past five years such assistance was rendered in eight fields of endeavor, and was about equally divided among them. These are as follows:

1. Assessment and management of fishery resources (marine and inland). Projects in this field have been conducted in such countries as Brazil, Chile, Costa Rica, Curacao, Ecuador, Finland, Iraq, Israel, Libya, Panama, Paraguay, Turkey, and Yugoslavia.
2. Experimental fishing in Iran, Iraq, Saudi Arabia, Somalia (Italian), and Turkey.
3. Development of a fishery resource, or the establishment of a pond fish industry in Burma, Ceylon, the Dominican Republic, Guatemala, Haiti, Honduras, India, Iran, Iraq, Israel, Jamaica, Nicaragua, Thailand, and Yugoslavia.
4. Design, mechanization, and development of fishing craft and gear in Brazil, Ceylon, Chile, Haiti, India, Liberia, Sudan, West Pakistan, Yemen, and Yugoslavia.
5. Marketing facilities in Chile, Ecuador, East and West Pakistan, Mexico, and India.
6. Fish distribution in Chile, Mexico, Turkey, and Yugoslavia.
7. Fish-preservation and processing in Brazil, Chile, Ecuador, Finland, India, Liberia, Yugoslavia, Thailand, and Turkey.
8. Fisheries administration (including establishment of statistical services) in Brazil, Burma, Colombia, Egypt, Finland, and Syria.

The FAO/TA program for 1956, as now before TAB and TAC, makes provision for 92 fishery posts in three categories, 78 of which have already been approved for Category I, compared with 60 fishery posts in 1955.

The 1956 program also will include one training center; and probably two. Also provision is made for about 14 fellows in Category I, compared with 14 in 1955 (28 further fellowships are provided in lower categories); and for some equipment for the experts and centers, probably around \$50,000. The over-all budget for fishery projects in 1956 will be in the neighborhood of \$800,000, compared with \$650,000 in 1955.

The types of fishery assistance to be rendered in 1956 will be in the same general fields as heretofore, with likely more emphasis on basic reconnaissance surveys in some countries to determine what types of technical assistance would be most useful to governments in the future. Heretofore,

measures, should not be initiated by the Organization until the need for further guidance in these matters was more apparent.

fishery officers of the FAO regular staff have made a large contribution in this connection. But with the greatly increased work load at Headquarters, because of an increase in Regular Program work as well as the Technical Assistance work, this has become limited.

In conclusion, the review stated: "You have probably been waiting for some news about accomplishments; in other words, of what value has this TA work been in reaching the objectives set forth five years ago: I wish I could tell you that fish production has been greatly increased and therefore people have much more food to eat; and that living standards have been raised over wide areas. But I regret that I can tell you none of these things. True, progress has been made in some sectors. Some fishermen have been shown and have adopted new fishing methods which catch more fish, improved fish cultural practices have increased fish populations, new fishery resources have been created through pond culture, biological programs have been started and are being carried forward, fish processing techniques have been improved, and fish marketing is conducted in a more orderly manner. But all in all, only a start has been made. Miracles cannot be expected overnight. It took 25 years to really establish a frozen food industry in the United States. It took years of research to manage effectively the halibut fishery of the Gulf of Alaska. Equally, it will be as many years before enduring results are apparent from TA work. Too many people need teaching and too few experts are provided or are available. It is a long-term program. The real hope for the future lies, therefore, in continuity of effort...."

**OTHER ITEMS OF INTEREST:** Atomic Energy: Peaceful Uses of Atomic Energy for Agriculture and Food Production was an agenda item discussed at the twelfth meeting of the Commission on Program Trends and Policy Questions. It was pointed out that there were serious problems concerning the peaceful uses of atomic energy, such as radio-active isotopes in the field of agriculture, fishery and food processing, and that FAO would be asked to participate in solving these problems.

**Food Surpluses and Scarcity:** FAO Director-General P. V. Cardon told the Conference that while technical aid has helped many countries improve production and distribution, we are simultaneously oppressed by problems of surpluses and scarcity and that the gap between the fortunate and less-fortunate countries appears still to exist and, in fact, even tends to widen.

The Director of FAO's Economics Division, in discussing the state of food and agriculture, said that short of drought or natural disaster, the potential production for the world as a whole is likely to be in excess of demand during the years immediately ahead. This leads to two conclusions, he continued. First, that if we are to make headway toward the FAO objectives, governments must give the same attention in the future to expanding consumption as they had given in the past and must continue to expand production. Second, we must



achieve greater flexibility of production so that we can produce what can be sold, where it can be sold, and can avoid further overproduction of commodities of which we already have too much.

United States Congressman Clifford R. Hope of Kansas told the opening session of the Conference that the most serious problem in the world's food and agriculture situation is no longer production, but the exchange and distribution of food. He said, "In the years immediately ahead the major emphasis should be on the fundamental economics involved in the distribution of food."

Oceanography: UNESCO's Observer on November 16 before the Technical Committee on Fisheries discussed UNESCO's policy in the preparation and implementation of its program relative to marine sciences and described briefly the evolution and prospects of this program, which is being undertaken in close collaboration with FAO.

UNESCO's action in this field is based on two principles. (1) an increased knowledge of oceanographical phenomena requires basic research which, by its nature, is impracticable without international collaboration; (2) in order that this fundamental research yield practical results capable of contributing to the economic development of the regions concerned, UNESCO's program must be directed in such a way as to give to FAO such scientific services as it may need in order to develop rationally the resources of the sea. We are therefore relying mainly on FAO to indicate in what direction it thinks that scientific research should be encouraged and co-ordinated. That is why we

have considered this program right from the start as being a joint program.

In May of this year, an experts' meeting was held at FAO Headquarters in order to elaborate a proposed statute for the Consultative Committee on Marine Sciences, with the mission of advising the Director-General of UNESCO on all questions that he might put concerning the development of international collaboration in this field and, insofar as it is related, of limnology and of the elaboration and implementation of research plans within the framework of the UNESCO program. The Committee will consist of nine members appointed by the Director-General of UNESCO and chosen from amongst an international panel of consultants formed in collaboration with FAO, on maritime meteorology, physical and chemical oceanography, marine biology, submarine geology and topography, and related questions of limnology.

The proposed statute is being submitted for the approval of the Executive Council which is at present holding its 42nd session in Paris.

An interim committee of the future Consultative Committee met last month in Tokyo,

The recommendations of the interim committee are at present being studied by the secretaries of the two Organizations and include, amongst other items, the organization of a joint FAO/UNESCO meeting on the "Productivity of the Sea," as well as the production, in collaboration, of a directory of institutions engaged in marine sciences research.

### CARIBBEAN COMMISSION MEETS

The Twenty-First Meeting of the Caribbean Commission was scheduled at Aruba, Netherlands Antilles, December 5-12, 1955, the U. S. Department of State reported early in December.

The Caribbean Commission (an international advisory body resulting from expansion of the original Anglo-American Caribbean Commission) serves to coordinate activities of the four member governments, France, Netherlands, the United Kingdom, and the United States, in their efforts to improve the economic and social well-being of Caribbean inhabitants.

Among the principal items for discussion at the Twenty-First Meeting of the Commission will be the Second Caribbean Fisheries Seminar.

### NORTH PACIFIC FUR SEAL CONFERENCE MEETS

The United States Government was represented by the following delegation at the North Pacific Fur Seal Conference which opened at Washington, D. C., November 28, 1955:

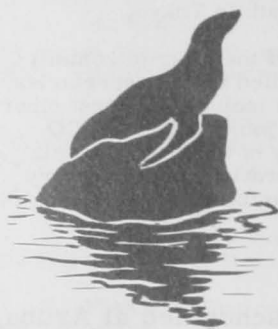
DELEGATES: The Honorable Wesley E. D'Ewart, (Chairman)  
Assistant Secretary of the Interior.

William C. Herrington, (Deputy Chairman)  
Special Assistant for Fisheries and Wildlife,  
Office of the Under Secretary, Department of State.

Arnie J. Suomela, Assistant Director,  
Fish and Wildlife Service,  
Department of the Interior.

ADVISERS: Douglas G. Chapman, Professor,  
University of Washington, Seattle, Wash.

- ADVISERS: (Contd.) Warren F. Looney,  
Office of the Special Assistant for Fisheries  
and Wildlife, Department of State.
- Conrad E. Snow,  
Assistant Legal Adviser for Far Eastern  
Affairs, Department of State.
- William M. Terry,  
Fish and Wildlife Service,  
Department of the Interior.
- Seton H. Thompson,  
Chief, Branch of Alaska Fisheries,  
Department of the Interior.
- Ford Wilke,  
Biologist-in-Charge, Fur Seal Investigations,  
Department of Interior, Seattle, Wash.
- Raymund T. Yingling,  
Assistant Legal Adviser for European Affairs,  
Department of State.



From 1911 to 1941 the seal herds were protected by the fur-seal treaty signed in 1911 by the United States, Great Britain, Japan, and Russia. So successful was this treaty in rehabilitating the seals that in 1941 Japan, as permitted by the treaty's provisions, terminated it on the ground that the animals had become so numerous as to harm Japanese fisheries. Since 1942 the United States and Canada have by agreement protected the Pribilof herd in the Northeastern Pacific waters. The purpose of the coming conference will be to extend multi-lateral protection again over all fur seals of the North Pacific, the U. S. Department of State announced on November 25.



## Australia

### EXPORTS OF SPINY LOBSTER TAILS: Exports of spiny lobster tails from

Western Australia point to a significant drop in the number of mid-gets exported during 1954/55, compared with 1953/54 (see tables 1 and 2). A small increase in the percentage of small-medium tails exported this year is also indicative of better stocks.

Table 1 - Australian Exports of Spiny Lobster Tails, November 1954 - April 1955

Size	Western Australia	South Australia	Tasmania	Total
	..... (Pounds) .....			
Midget (under 6 oz.)	377,220	25,065	25,035	427,320
Small (6-8 oz.)	957,695	67,495	44,700	1,069,890
Medium (8-12 oz.)	699,530	93,935	84,995	878,460
Large (12-16 oz.)	468,040	62,395	52,110	582,545
Jumbo (over 16 oz.)	118,390	35,050	64,565	218,005
Total	2,620,875	283,940	271,405	3,176,220

For Western Australia from the percentage of tail weight by grade it is significant that there has been an increase in the medium-grade tails as compared with the previous year. This increase however, is due partially to the change in weights of grading tails for export. The medium grade was previously from 9-12 oz., now it is 8-12 oz., inclusive. Thus from first observations it would appear that the state of the stocks has greatly improved. This may not necessarily be the case. However, the fall in the number of midgets being processed in Western Australia suggests that there has been an improvement in the stocks, according to the August 1955 Australian Fisheries Newsletter.

Assuming that production from South Australia and Tasmania remains about the previous year's figure, exports from Australia should approximate 4.4 million

**Table 2 - Percentage Comparison of Australian Spiny Lobster Tail Exports by Size**

State & Year	Midget	Small	Medium	Large	Jumbo	Total
..... (Percent) .....						
Western Australia:						
1954/55	14.4	36.5	26.7	17.8	4.6	100
1953/54	19.1	37.3	24.4	16.2	3.0	100
Tasmania, 1954/55	9.2	16.5	31.3	19.2	23.6	100
South Australia, 1954/55	8.8	23.8	33.1	22.0	12.3	100

pounds in 1955 and be worth US\$3.75 million. This is roughly US\$0.25 million higher than in 1953/54.

A study of the monthly freezings of spiny lobster tails in Western Australia reveals that 74.6 percent out of a total production of 1,466,975 pounds entered the freezers in the month of December 1954. It is also noted that the production of medium and large tails is at the lowest level in December.



### Austria

**FISH OIL AND CANNED FISH INCLUDED ON IMPORT LIST:** Fish and canned fish were included on an official list of commodities that may be imported into Austria from the United States without special license. Release of this list was the first major move by the Austrian government toward liberalization of imports from the dollar area, according to reports from the United States Embassy, Vienna.

The fishery items are described in the Austrian tariff as follows: Tariff No. 76: Fish oil. Tariff No. 170 b and e: Canned fish, lobster, crabs.



### Canada

**BRITISH COLUMBIA SALMON PACK, 1955:** The 1955 British Columbia salmon-canning season ended in November with a total pack of 1,406,230 cases (48 1-lb.

**British Columbia Canned Salmon Pack, 1950-55**

Species	1955	1954	1953	1952	1951	1950
..... Standard Cases (48 1-lb. cans to case) .....						
Sockeye (Red)	244,900	680,930	510,100	449,174	428,217	408,041
Spring (King)	18,003	14,066	12,177	9,064	13,631	9,133
Steelhead	1,801	3,732	2,724	3,752	3,648	3,243
Blueback	10,541	4,302	2,055	5,581	13,224	7,371
Coho (Silver)	175,164	124,084	108,115	58,514	300,521	109,272
Pink	830,602	335,777	793,382	675,836	735,494	446,516
Chum (Keta)	125,219	580,515	392,716	91,514	460,740	498,984
Totals	1,406,320	1,743,406	1,821,269	1,293,435	1,955,475	1,462,560

cans), the Canadian Department of Fisheries reported on November 23, 1955. This was a decrease of 19.3 percent from the 1954 pack of 1,743,406 cases. The pack of pink salmon was the best in the last six years, but the increased pack of pink salmon was more than offset by a sharp drop in the packs of sockeye salmon and chum salmon.

The 1955 salmon pack was 29.1 percent below the 1951 pack of 1,955,475 cases, but the 1955 pack of pink salmon was 4.7 percent higher than the pack of pink salmon in 1951, which was also a cycle year.

**BRITISH COLUMBIA SHRIMP FISHERY:** Shrimp is produced commercially in Canada only in British Columbia, reports the United States Embassy at Ottawa (September 14, 1955). Landings of shrimp in that Province in 1954 amounted to 855,300 pounds, valued at C\$116,064, as against 1953 landings of 1,151,600 pounds, valued at C\$143,991. Only a small proportion of the catch is processed frozen (see table).

Product	Unit	1954	1953
Fresh .....	lb.	47,400	192,500
Frozen .....	lb.	13,700	14,200
Meats (Peeled-Deveined) .....	lb.	188,600	220,800
Canned .....	cases (48 lbs.)	646	198

Most of the shrimp is caught off the lower mainland of British Columbia and Vancouver Island, and are taken in substantial quantities in each month of the year in the southern mainland area. In Vancouver Island waters the most productive season is December to May, although some shrimp are caught during the other months as well. In 1954 a total of 80 trawl nets and 1,640 shrimp traps were employed in the shrimp fishery.

As indicated in the table, most of the shrimp landed in British Columbia is processed as fresh and frozen shrimp meats, but some shrimp is sold round in fresh and frozen forms, with some meats canned. A substantial portion of the shrimp produced in British Columbia is sold on the domestic market. The United States is the principal foreign market and small quantities are exported to some other countries.



## German Federal Republic

**PREFABRICATION CUTS CONSTRUCTION COSTS OF FISHING VESSELS:** Prefabrication, standardization, and welding in the construction of fishing vessels makes it possible for West German shipyards to build fishing vessels cheaper than British shipyards. In recent months at least three major British fishery firms have ordered new vessels from German shipyards.

In view of the volume of work involved, a representative of The Fishing News, a British fishery periodical, toured most of the shipyards in Hamburg and Bremerhaven to find out why German shipyards were able to underbid British shipyards. The findings were published in the periodical's October 7 issue.

In one German shipyard, trawlers are almost 100-percent welded and it is only the largest ships which have any mechanical riveting.

But prefabrication was what fascinated the British touring representative most. He was shown prefabricated sections--a wheelhouse, a main deck, etc. Almost every part of a trawler is prefabricated and then simply assembled on the stocks by cranes. This utilizes labor more efficiently and results in savings in manhours.

And finally he believes the real answer which has enabled British owners to buy ships for so much less in Germany is standardization. This standardization leads to great economy in manhours, and thus some German yards are able to offer guaranteed delivery dates coupled with firm prices.

One famous yard has two standard designs--a German hull and an English hull (the needs of the industries in the two countries necessitate this).

German owners on the whole do not demand such fast ships as British owners. German trawlers appear to be broader in the beam than British vessels, which gives the latter a difference in speed of two to three knots.

Despite this difference it was pointed out that the German vessels have other advantages insofar as they are able to fish in weather which would debar narrower, faster vessels. Also one builder went so far as to guarantee a dry working deck for a German trawler in even the worst wind conditions.

Every trawler destined for Britain is virtually the same. The hull design is exactly the same in each case and it is only in such matters as auxiliary machinery and accommodations that they differ.

General building costs in Germany for materials, machinery, etc., are much the same as in Britain (if anything slightly higher) and it is only in the field of labor costs that money is saved.



## Iceland

ICELANDIC-CZECHOSLOVAKIAN TRADE AGREEMENT, 1955/56: A new Icelandic-Czechoslovakian trade agreement was signed at Prague on September 24, 1955, covering the period September 1, 1955, to August 31, 1956. The following are the agreed Icelandic exports of fishery products to Czechoslovakia with comparative data for the previous year's agreement:

Item	Quantity		Estimated Value FOB Iceland	
	1955/56	1954/55	1955/56	1954/55
	.(Metric Tons)		... (US\$1,000) ...	
Fish Fillets, frozen . . . . .	8,000	6,000	2,854	2,140
Herring, salted or frozen . . . . .	1,000	2,000	185	369
Fish Meal . . . . .	1,000	500	154	77
Totals . . . . .	10,000	8,500	3,193	2,586

In addition some exports of canned fish are included in the trade agreement.



## Japan

SALMON AND CRAB FISHING FLEETS, 1956: The Japanese Fisheries Agency according to press reports has decided upon the number of salmon and crab fishing fleets to be granted permits in 1956, states a December 6 dispatch from the United States Embassy in Tokyo. The number of fleets by area for 1956 as compared to 1955 is as shown in table.

Area	Salmon		Crab	
	1956	1955	1956	1955
Aleutian Area . . . . .	12	12	1	none
Okhotsk Sea . . . . .	7	2	4	2
Bristol Bay . . . . .	none	none	1	1
Western Bering Sea . . . . .	none	none	1	none

\* \* \* \* \*

CRAB MEAT PRODUCTION IN NORTH PACIFIC, 1955: Japanese factoryship crab-fishing fleets in the North Pacific in 1955 produced 206,850 cases (48- $\frac{1}{2}$ -lb.

cans) of crab meat. The expedition consisted of three fleets. The Tokei Maru fleet left the fishing grounds August 17; the Yoko Maru, August 16; and the Hakuyo Maru, September 10. The first of these fleets operated in the Eastern Bering Sea, while the other two fleets operated in the Okhotsk Sea. The fleets were fishing since April 1955.

\* \* \* \* \*

CANNED SALMON PACK ABOUT SOLD OUT: In spite of the fact that prospective exports of Japanese canned salmon to the United Kingdom were approximately halved by the recent Anglo-Japanese payments agreement, recent press reports state that this year's salmon pack has been almost sold out. Latest figures show that the total pack of floating and shore canneries reached an unforeseen 1,720,000 actual cases, of which 1,370,000 cases had been sold abroad by the end of October 1955. Of the remainder, 200,000 cases were packed for domestic sale, and about 50,000 cases which were packed for export failed to meet Japanese export standards and are being sold domestically. The balance available to fill foreign orders, therefore, was only about 100,000 cases, states a United States Embassy dispatch dated November 25 from Tokyo.

JAPANESE GOVERNMENT



Libya

TRIPOLITANIA TUNA INDUSTRY, 1955 FISHING SEASON: The catch of tuna during the 1955 fishing season (ended in July) in the Mediterranean Sea by seven Tripolitanian firms totaled 6,403 fish (1,350,000 pounds), according to a report from the United States Embassy at Tripoli. The average weight of the tuna was about 211 pounds each. This was the smallest tuna catch in 25 years. Prior to 1952 tuna production averaged close to 2,200,000 pounds a year, reached a total of 3,600,000 pounds in 1953, but dropped to 1,600,000 pounds in 1954. In addition to tuna, there was a catch of other fish which amounted to 200,000 pounds.

From the tuna, these firms reported a production of 712,000 pounds of canned tuna in oil and 62,000 pounds of canned tuna in brine in 1955.

The byproducts produced from the tuna canning operations and the fish other than tuna were: 38,000 pounds of salted byproducts, 19,000 pounds of tuna oil, and 65,000 pounds of fish meal for fertilizer.

The fishing areas were Zanzur, Zliten, Sidi Ben Laman, Fatima, Marsa Zuaga, Mamgub, Sabratha, Marsa Dila, and Marsa Dzeira.

Export data for tuna are not available for 1955, but it is likely that Italy continues to be the primary country of destination as in the past.



Mexico

WEST COAST SHRIMP EXPORTS GOOD FOR NOVEMBER 1955: During November 1955 excellent shrimp fishing was reported in the Gulf of Baja California. Imports of shrimp from Mexico into the customs districts of Arizona and California totaled 5,570,500 pounds--an increase of 2,066,900 pounds, or 59 percent, as compared with the imports into the same two states for November 1954. Shrimp imports through these customs districts are indicators of Mexico's west coast shrimp catch.

This development has been a boon to the shrimp industry of Mexico because the good catches came at a time when the shrimp catch in the Gulf of Mexico was poor.

The demand for shrimp in California was good during the month of November and prices quoted by importers at Los Angeles and San Diego increased about 10 cents per pound during the month.



## New Zealand

LARGE SHIPMENT OF SPINY LOBSTERS TO UNITED STATES: One of the largest shipments of frozen spiny (rock) lobster tails left New Zealand October 8 on the City of Edinburgh destined for New York City. The shipment consisted of 1,200,000 pounds, made up of 60,000 cases, according to an October 10 dispatch from the United States Embassy at Wellington. Spiny lobster exports from New Zealand to the United States have been expanding rapidly, and now are one of New Zealand's chief dollar earners. There has been some question raised in Parliament as to whether the extensive fishing for spiny lobsters in the South Island as a result of the export demand will result in depletion of the natural supply. It is reported that this trade in spiny lobster tails is very profitable.



## Norway

NORWEGIAN-RUSSIAN TRADE AGREEMENT SIGNED FOR THREE-YEAR PERIOD: Two trade agreements, the first covering commodity trade between Norway and Russia for a three-year period starting January 1, 1956, and the second enumerating additional amounts and commodities to be exchanged during calendar year 1956, were signed in Moscow November 15.

The three-year agreement replaced one that expired on December 31, 1954, and which was not renewed because the Russians were not prepared at the time to consummate long-term contracts. The new agreement calls for Norway annually to export to Russia fishery products as follows: 30,000 metric tons of hardened fat (presumably derived from fish oils); 50,000 metric tons of salted herring.

In addition to the basic amounts enumerated above, during calendar year 1956 Norway will deliver to Russia, among other products, 3,000 tons of hardened fat, 5,000 tons of frozen herring, and 3,000 tons of frozen fish fillets, according to a dispatch dated November 17, 1955, from the United States Embassy at Oslo.



## Peru

SHRIMP AND TUNA SURVEY: Following a survey (limited as to area covered and time spent) by a shrimp specialist of the U. S. Fish and Wildlife Service, representatives of the Peruvian Division of Commercial Fisheries, and two technical advisors from the U. S. International Cooperation Administration (ICA), it was concluded that the quantity of shrimp in Northern Peruvian waters was not sufficient to support a fishery. In addition to the survey conducted October 18-22, 1955, of shrimp fishing possibilities, the fishery for tuna was studied in the same area. It was found that the recently-introduced Japanese long-line method of fishing for tuna offered considerable promise.

It was reported by ICA's Technical Advisor to Peru that only two trawlers are fishing in the area from Caleta Cruz north to the Ecuadoran border. These vessels are steel trawlers, one of which is 48 feet long and the other is 60 feet in length. The larger vessel uses a beam trawl 27 feet in width at the mouth, and the other trawler a 35-foot otter trawl.

The survey party made a trip aboard the smaller vessel and in three drags of approximately 1-hour each, about 30 pounds of jumbo shrimp ranging from 4 to 15 per pound heads off were taken. Very few commercial fish were taken along with the shrimp and fishing for the most part was in depths of from 4 to 5 fathoms.

Five species of shrimp were identified by the Service's shrimp specialist, three of which are commercial species. The commercial varieties were Penaeus occidentalis, P. stylostris, and P. van name (previously unrecorded in Peru). Two smaller species not used in the commercial fishery were identified as Xyphopeneus sp. (sea bob), and a banded species black on white now being named and described by M. D. Burkenroad.

The northern Peru fishery for tuna, skipjack, and swordfish was not very productive at the time of the survey, due in part to rough seas and high winds which made fishing difficult. The 4 or 5 purse seiners were collecting about 20 to 30 metric tons of yellowfin and skipjack. The most promising development noted was the recently-introduced Japanese long-line which is now being used by several 28-foot and 35-foot swordfish boats, each carrying 10 to 20 baskets of 15 hooks each. The long-liners have been taking yellowfin and big-eyed tuna, swordfish, striped marlin, and various species of sharks in depths of from 15 to 50 fathoms.

Because of a lack of knowledge in operating long-line fishing gear, the production at present is not high. One of the problems is to obtain bait, as anchovies, sardines, and herring are very scarce along the northern Peruvian coast.

Considerable experimentation will be necessary to determine the best depths for fishing the long lines. Down to 20 fathoms, the sharks are very abundant along with swordfish and marlin. Yellowfin and big-eyed tuna are taken down to 50 fathoms. The big-eyed tuna are generally each over 125 pounds in weight with little commercial value. Markets for sharks and large big-eyed tuna are being sought in Europe.

Giant squid are very abundant and cause considerable loss both by stealing bait and damaging caught fish and large manta rays at times took away as much as a whole basket of line.

\* \* \* \* \*

REVIEW OF FISHING INDUSTRY: About 15 years ago, fishing in Peru was on a primitive scale and there was little processing of fishery products or byproducts. Today the fishing industry is an important part of Peru's economic wealth. The present worth of Peru's fishing industry is estimated at about almost US\$20 million.

Catch: Peru's catch has increased steadily year after year from 12 million pounds in 1939 to 290 million pounds in 1954. Bonito, tuna, swordfish, and herring (machete) landings have shown a more pronounced increase over the years. Bonito is the most important species landed and is found all along the Peruvian coast, but it is seldom fished in the extreme north. Tuna and swordfish, on the other hand, are found only from Paita to the Ecuadorian border in the north and from Mollendo to Chile in the south. In the 1953/54 season, tuna was also caught for the first time in commercial quantities off Chimbote. Machete, a fish similar to herring and shad, is landed mainly in Samanco, Callao, and in Ilo.



Bonito landings during recent years have not fluctuated very much, but yellowfin tuna, skipjack tuna, and swordfish landings have fluctuated considerably. Anchovy landings have increased from 15 million pounds in 1951 to almost 78 million pounds in 1954.

Table 1 - Peru's Commercial Fisheries Landings by Principal Species, 1951-52 &amp; 1954

Species		1954	1952	1951 <sup>3/</sup>
English Name	Peruvian Name	Scientific Name		
Tuna, yellowfin	Atun	<i>Neothunnus macropterus</i>		
Tuna, skipjack	Barrilete	<i>Katsuwonus pelamis</i>		
Bonito	Bonito & Chauchilla	<i>Sarda chilensis</i>		
Swordfish	Pez espada	<i>Xiphias gladius</i>		
Pacific mackerel	Caballa	<i>Pneumatophorus peruanus</i>		
Herring, shad	Machete	<i>Ethmidium chilcae</i>		
Drum	Lorna, corrina, & robalo	<i>Sciaena sp.</i>		
Sharks	Cazon & tollo	<i>Musteles sp. &amp; Scoliodon sp.</i>		
Anchovy (except bait)	Anchoveta	<i>Engraulis ringens</i>		
Others <sup>1/</sup>		2/ 77.7	35.1	15.0
Total		21.9	27.4	23.8
		289.7	248.6	213.6

... (Million Lbs.) ...

1/ Some of the more important species included are: white sea bass or ayanque (*Cynoscion annalis*), grunt or cabinza (*Isacia conceptionis*), sea trout or coco (*Paralichthys peruana*), mullet or lisa (*Mugil cephalus*), pejeblanco (*Caulolatilus princeps*), silverside or pejerrey (*Austromenidia regia*), pilchard or sardina (*Sardinops sagax*), and Spanish mackerel or sierra (*Scomberomorus maculatus*).

2/ Includes 500,000 pounds of shrimp.

3/ Based on data from the Direccion de Capitancias, Bureau of Fisheries and Wildlife estimates landings at 232.2 million pounds.

Note: Based on reports of port captains to Peru's Bureau of Fisheries and Wildlife. The Bureau does not regard these data as complete. Includes landings by Peruvian-based boats regardless of whether or not they are Peruvian flag boats. Data for 1953 not available by species.

The most active fishing ports in Peru are Callao, Mancora, Ilo, Chimbote, Paita, Talara, Huacho, Samanco, and Sechura.

Shrimp have been found near the Ecuador border and a new fishing industry, centered in Puerto Pizarro, has been developed in that area in the last few years. About

Table 2 - Peru's Commercial Fisheries Landings, 1947-1954 <sup>1/</sup>

Year	Quantity (Million Lbs.)
1954	289.7
1953	264.0
1952	248.6
1951	232.2
1950	184.0
1949	133.8
1948	104.8
1947	80.6

<sup>1/</sup> Bureau of Fisheries and Wildlife data.

500,000 pounds of shrimp were landed in 1954. Vessels have been adapted to shrimp trawling. Shrimp are packed in insulated boxes and delivered to freezers in this form. Some shellfish other than shrimp are gathered by men ashore, and mussels are harvested by diving for them around Callao, Huacho, Pisco, and Ilo.

**Vessels:** Most of the fishing boats used in Peru before 1940 were open double-bowed boats. In the north, from Sechura, south of Paita, to Moche, near Trujillo, "caballitos de totora" (long narrow rafts made of reeds) were used and are still used. However, in other areas now mostly row boats and sail boats are used to catch ground-

fish for the local markets. In 1949 there were 2,869 fishing boats registered with the Direccion de Capitancias, and of these, 577 were equipped with motors. It is estimated that motorized vessels operating in the fisheries now total about 630, and a substantial number of these are purse seiners. Most of Peru's fishing boats operate at short range from their base ports, but some of them fish more than 40 miles from their home ports and send their fish to market in packer boats. A fish pump for unloading fish is reported in operation in the port of Samanco.

**Processing Facilities and Production of Processed Fishery Products:** Refrigeration plants are now available in Paita, Chancay, Callao, and Ilo. These plants include freezing equipment capable of temperatures as low as -40° F. and holding rooms with temperatures of -10° F. to 0° F. These plants as well as some smaller ones in other ports have ice-making equipment. Total freezing capacity of the private land installations is about 400,000 pounds a day and their holding capacities total over 6 million pounds.

The Government has built a fishing terminal or market in Lima with a cold-storage plant which has a freezing capacity of 20,000 pounds a day and a holding ca-

Table 3 - Peru's Exports of Marine Products and Byproducts by Product and by Principal Country of Destination, 1954

Product	Quantity (1,000 pounds)											F. O. B. Value (equivalent in US\$1,000) 1/												
	United States	Puerto Rico	Canada	United Kingdom	Netherlands	Switzerland	Chile	Panama	Canal Zone	Argentina	Others	Total	United States	Puerto Rico	Canada	United Kingdom	Netherlands	Switzerland	Chile	Panama	Canal Zone	Argentina	Others	Total
Bonito, fresh	899	-	-	-	-	-	-	-	-	-	29	928	181	-	-	-	-	-	-	-	-	-	-	185
Tuna, frozen	10,033	954	-	-	-	-	-	-	-	-	-	10,987	648	92	-	-	-	-	-	-	-	-	-	799
Skipjack tuna, frozen	11,958	962	-	-	-	-	-	-	-	-	-	12,920	785	77	-	-	-	-	-	-	-	-	-	363
Swordfish, frozen	1,483	-	-	-	-	-	-	-	-	-	-	1,483	388	-	-	-	-	-	-	-	-	-	-	388
Canned tuna in brine	474	-	-	-	-	-	-	-	-	-	11	485	111	-	-	-	-	-	-	-	-	-	2	113
Canned bonito in brine	1,727	-	-	-	-	-	-	-	-	-	13	1,740	363	-	-	-	-	-	-	-	-	-	3	366
Canned skipjack in brine	28	-	-	-	-	-	-	-	-	-	-	28	6	-	-	-	-	-	-	-	-	-	-	6
Canned tuna in oil	1,026	-	-	531	189	871	-	-	-	151	477	3,245	266	-	161	43	218	-	-	-	-	53	117	857
Canned bonito in oil	15,693	-	1,149	6,658	477	327	-	98	112	-	1,437	25,951	3,654	-	391	1,744	88	87	-	33	28	-	370	6,465
Canned skipjack in oil	507	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	1	-	1
Shrimp, frozen	507	-	-	-	-	-	-	-	-	-	507	222	-	-	-	-	-	-	-	-	-	-	-	222
Fish oil	-	-	-	523	-	-	-	-	-	-	127	650	-	-	-	-	31	-	-	-	-	-	5	36
Sperm oil	588	-	-	386	7,498	1,570	-	-	-	-	997	11,039	31	-	17	478	-	111	-	-	-	-	39	694
Whale meal	1,138	-	-	-	-	-	-	-	-	-	286	1,424	35	-	-	-	-	-	-	-	-	-	11	66
Fish meal	25,132	-	-	296	2,144	-	-	-	-	-	3,326	30,888	969	-	-	13	85	-	-	-	-	-	99	1,165
Total	71,686	1,916	1,149	7,871	10,831	1,198	1,570	98	112	185	5,719	102,279	7,879	129	391	1,934	692	306	111	33	26	54	671	12,117

1/ Equivalent in U. S. dollars computed on exchange rate of 19.39 Peruvian soles equal US\$1 (one sole equals 5.03 U. S. cents).

capacity of 200,000 pounds. The market also is equipped with a flake-ice machine. Besides these facilities there are a number of refrigerated vessels working for fishing companies established in Peru.

Refrigeration facilities are principally used for tuna, swordfish, and bonito, and recently for shrimp.

The frozen fish industry started to develop in 1948 when 1.5 million pounds of frozen fish were exported, almost exclusively to the United States. Frozen fish are shipped principally from Mancora, Paíta, Talara, Ilo, and Chimbote.

There are at least 50 canneries in Peru which have operated at one time or another, but many of them have been inactive for several seasons or operate sporadically for only a few days each year. The most important canneries are located in

Table 4 - Peru's Exports of Marine Products and Byproducts, January-June 1955 and Annual 1953-54

Product	Quantity			F. O. B. Value 1/		
	Jan.-June 1955	12 Mos. 1954	12 Mos. 1953	Jan.-June 1955	12 Mos. 1954	12 Mos. 1953
	..... (1,000 lbs.) .....			..... (Equiv. in US\$1,000) .....		
Bonito, fresh	-	928	-	-	186	-
Tuna, frozen	5,018	10,987	4,399	342	700	198
Skipjack tuna, frozen	10,964	12,920	7,441	747	862	341
Swordfish, frozen	302	1,483	1,726	60	388	302
Canned tuna in brine	84	485	486	16	113	95
Canned bonito in brine	3,321	1,740	2,722	633	366	408
Canned skipjack in brine	3	28	109	1	6	20
Canned tuna in oil	1,071	3,245	1,580	255	857	328
Canned bonito in oil	17,333	25,951	18,528	3,697	6,465	3,362
Canned skipjack in oil	86	4	101	21	1	19
Shrimp, frozen	280	507	332	94	222	126
Fish oil	5	650	440	*	26	22
Sperm oil	5,355	11,039	7,904	365	694	356
Whale meal	705	1,424	442	38	66	19
Fish meal	25,193	30,888	23,339	1,127	1,165	814
Other	-	-	35	-	-	9
Total	69,720	102,279	69,584	7,396	12,117	6,419

\* Less than US\$1,000.  
 1/ Equivalent in U. S. dollars computed on exchange rate for 1953 of 19.89 Peruvian soles equal US\$1 (one sole equals 5.03 U. S. cents); for 1954 of 19.39 Peruvian soles equal US\$1 (one sole equals 5.16 U. S. cents); and for 1955 of 19.00 soles equal US\$1 (one sole equals 5.26 U.S. cents).

Chimbote, Samanco, Huarmey, Supe, Huacho, Chancay, Callao, Pucasana, Mollendo, and Ilo. The capacity of all canneries is about 21,000 cases (48 cans per case) a day, but canned fish production is considerably below this capacity.

Canned fish pack in 1954 amounted to 1.1 million cases (48  $\frac{1}{2}$ -lb. cans) as compared with 1 million cases in 1953 and 850,000 cases in 1951. The biggest bulk of the pack consists of bonito packed in oil. Fish is generally packed 7 ounces net contents for the solid pack, and 6 or 6 $\frac{1}{2}$  ounces net contents for grated fish, flakes, or chunk-and-flake packs. One-pound flat cans are also used for bonito and tuna, while one-pound tall cans are most often used for bonito or herring. Occasionally four-pound cans are used for institutional packs. Some small canneries pack sardines and other fish in oval cans.

Byproducts: Production of fish meal in 1954 totaled 14,040 tons and of whale meal, 647 tons. Whale oil production amounted to 769 tons and sperm oil production to 5,056 tons.

While most of the fish meal was exported, practically all the fish oil was consumed locally.

Production of fish meal was started on a small scale in 1945, but ex-

portation was not initiated until 1947. Expansion has been very rapid. In 1951 fish meal production totaled only 8,000 tons. Whole herring and anchovy and tuna cannery waste are utilized for making fish meal.

Foreign Trade: In 1954 Peru's exports of marine products and byproducts totaled 102 million pounds, substantially higher than the 70 million pounds exported in 1953. On the basis of quantity, fish meal and canned fish (mostly bonito and tuna) are the most important products exported, followed by frozen tuna and frozen swordfish. From the standpoint of value, canned fish (mostly bonito and tuna) leads all other types of marine products exports.

Peru's fishery products imports are rather small--slightly more than 1 million pounds in 1954.

In 1942 fish livers and salted fish were the most important products, by weight, exported by Peru. It was in that year that canned fish was first exported. In 1944, the sudden demand for salted fish created by UNRRA made it the biggest item in Peru's exports, but this market disappeared in 1947. In the meantime, canned fish exports increased steadily.

Consumption: Estimates indicate that Peru's per capita consumption of fishery products amounts to only 6.2 pounds a year.

Whaling: Peru's whale catch in 1954 was reported as 1,650 units, compared to 1,223 units in 1953.

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NEW BASE PRICE ON CANNED FISH IN OLIVE OIL FOR ASSESSMENT OF EXPORT DUTIES: In a supplement to a Supreme Resolution of November 18, 1954, which established base cost prices on canned fish for the assessment of export duties, a Supreme Resolution of September 20, 1955, fixes the following base cost prices for canned fish in olive oil, for the same tax purpose:

Table 5 - Peru's Imports of Fishery Products, January-June 1955 and Year 1954

Product	Quantity		C. I. F. Value 1/	
	Jan.-June 1955	12 Mos. 1954	Jan.-June 1955	12 Mos. 1954
	..(1,000 Lbs.)..		(Equiv. in US\$1,000)	
Cod and substitutes....	201	240	78	94
Sardines and similar fish	257	371	67	88
All other fishery products	251	682	85	280
Total.....	709	1,293	230	462

1/ Values of soles same as in table 4.

	Base Cost Price	Per Short Ton
	Peruvian Soles	US\$ Equivalent
Solid pack, in 7-ounce cans . . . . .	11,590.00	610
Flakes or grated, in 6.5-ounce cans . . . . .	11,270.00	593
Flakes or grated, in 6-ounce cans . . . . .	12,000.00	632

Thus a new classification for canned fish is established, and export declarations must contain in every case a statement as to the kind of oil used. The previous schedule established on November 1954 referred to canned fish in oil and brine, but did not make any distinction whatsoever with regard to the kind of oil.

The above table merely represents base cost prices for tax purposes and should not be taken as actual export prices, nor as the true cost of production.

The current export duty on fish is collected pursuant to Law No. 10545 establishing a 10-percent tax assessable on the difference between officially-fixed cost price at Peruvian ports and the declared f.o.b. export value. The same law prescribes the payment of an additional 10 percent tax, applicable when the export price exceeds by 25 percent the base price. These tax payments are deductible from gross income for income tax purposes.

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IMPORT DUTY ON SARDINES MODIFIED: Peru, under the terms of Article XXVIII of the General Agreement on Tariff and Trade has renegotiated a number of tariff concessions previously made under the GATT by withdrawing certain items effective October 1, 1955. In compensation for these withdrawals, Peru has made additional concessions among which are reductions of 1.2 percent in the import duty on sardines. The items of the tariff on which the new concessions were granted and which are bound under the GATT are:

Tariff item 89 and 90: Sardines and substitutes therefore, prepared in oil or in tomato or other sauces. The concession rate will be 0.60 (5.26 U. S. cents) soles per gross kilogram plus 13.5 percent ad valorem applied to the c.i.f. value.



## Portugal

SHRIMP PRODUCTION, 1950-54: Production of shrimp in Portugal is light, and prospects of increasing production are not good, according to official and trade sources, states a November 30, 1955, dispatch from the United States Embassy at Lisbon. Total commercial production for 1950-54 follows:

	1954	1953	1952	1951	1950
Metric Tons	31	37	39	48	57

All of the catch is consumed locally. There were no exports of shrimp in the period indicated.

\* \* \* \* \*

NORTHERN CANNERS ORGANIZE TO PROMOTE SALES IN UNITED STATES: The northern fishcanners have organized under the name of "Copnor-Conservas De Peixe, Lda.," to promote sales (possibly under a brand name) in the United States, states a United States consular dispatch (November 23) from Oporto. Information published in the October 1955 issue of Commercial Fisheries Review stated that 30 fish canners in Southern Portugal had also formed an organization for the same purpose.

In 1954, the production and exportation of Portuguese canned sardines, in which the northern plants have normally a share of about 50 percent, nearly doubled those of previous years. Production and export figures in the first nine months of 1955 were better than those in the corresponding period of 1954; but in October catches diminished and fresh fish commanded rather high prices. Demand is fair and stocks on hand are becoming depleted.

Notwithstanding favorable factors, the northern fish-canning industry could not start to recuperate the losses suffered in past years, due to the fact that canners went into competition both in buying fresh fish at high prices and in exporting the finished product at unprofitable prices.

To avoid such competition, exporters made arrangements to standardize export prices; an increase in export prices has been established, present prices being US\$9.50 C & F Leixoes per case of 100  $\frac{1}{4}$ -tins in pure olive oil and US\$9.35 in oil without keys, an increase of about US\$1 per case over previous export prices. Prices for export to Great Britain were fixed at US\$9.80 and US\$9.66, respectively.

According to the Boletim Mensal of the National Institute of Statistics, exports of canned sardines in the first nine months of 1955 totaled 33,962 metric tons with an f.o.b. value of US\$16.7 million, or about 41 percent more than the quantity and value exported in the same period of 1954 in which 23,227 metric tons of canned sardines were exported, valued at US\$11.8 million.

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CANNED FISH EXPORTS, JANUARY-JULY 1955: Portuguese canned fish exports totaled 4,825 metric tons (253,900 cases), valued at US\$2.4 million during July 1955; and 32,117 tons, valued at US\$16.4 million, during January-July 1955.

Species	July 1955		Jan.-July 1955		Species	July 1955		Jan.-July 1955	
	Metric Tons	1,000 US\$	Metric Tons	1,000 US\$		Metric Tons	1,000 US\$	Metric Tons	1,000 US\$
Sardines in olive oil . . . . .	3,681	1,766	25,786	12,703	Tuna & tunalike in olive oil . . .	298	227	1,221	909
Sardinelike fish in olive oil . .	293	189	2,669	1,781	Tuna & tunalike in brine . . . . .	67	34	417	210
Sardines & sardinelike fish in brine . . . . .	263	48	1,026	188	Mackerel in olive oil . . . . .	194	128	584	381
(Continued in opposite column)					Other fish . . . . .	29	14	415	228
					Total . . . . .	4,825	2,406	32,117	16,400

Portugal's export of canned fish in July 1955 continued at a high level, according to Conservas De Peixe, October 1955. During January-July 1955 Germany continued as the leading receiver with US\$3.1 million of canned fish (principally sardines), followed by Italy with US\$2.8 million (principally sardines and tuna), Great Britain with US\$2.1 million, and the United States with US\$1.7 million (principally 1,241 tons of sardines in oil or sauce, 10 tons of tuna and tunalike fish in oil, and 920 tons of anchovies).

\* \* \* \* \*

CANNED FISH TRENDS, JANUARY-MAY 1955: The pack of canned sardines in oil or sauce for January-May 1955 amounted to 3,948 metric tons (net weight). The May 1955 pack was 1,662 tons as compared with 1,502 tons in May 1954.

Product	Net Weight		Canner's Value		Product	Net Weight		Canner's Value	
	Metric Tons	1,000 Esc.	Metric Tons	1,000 US\$		Metric Tons	1,000 Esc.	Metric Tons	1,000 US\$
Sardines in brine . . . . .	296	1,304	43		Tuna in brine . . . . .	5	23	4	
Sardines in olive oil or sauce . .	3,948	82,044	2,158		Tuna in olive oil . . . . .	105	3,063	107	
Sardinelike fish in brine . . . . .	348	3,018	105		Tunalike fish in olive oil . . . . .	70	1,237	43	
Sardinelike fish in oil . . . . .	604	8,196	285		Other species (including shellfish) . . . . .	475	7,109	247	
Anchovies, rolled & fillets . . . .	716	21,698	755		Total . . . . .	6,587	74,309	2,584	
(Continued in opposite column)									

Note: Values converted to US\$ equivalent on the basis of 28.75 escudos equal US\$1.

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FISHERIES TRENDS, JULY 1955: Sardine Fishing: During July 1955 the sardine fishing was excellent both in terms of tonnage and value, states the October 1955 Conservas De Peixe, a Portuguese trade periodical. During the month, 9,811 metric tons of sardines were landed (value US\$1,278,000) as compared with landings of 6,394 tons (value US\$701,426) in July 1954. The canners purchased 5,377 tons of the total at a cost of US\$771,895. The balance was used for local consumption. The port of Matosinhos lead all others in the landings of sardines in July, followed by Portimao and Olhao.

Other Fishing: January-July landings of other fish were: tuna 1,177 tons (ex-vessel value US\$332,000), bonito 118 tons (value US\$14,933), mackerel 3,519 tons (value US\$439,000), anchovies 2,062 tons (value US\$430,000), and chinchard 18,064 tons (value US\$1,081,000).



## Spain

VIGO FISHERIES TRENDS, SEPTEMBER-OCTOBER 1955: Fishing: The fishing industry had a relatively good month in October 1955, although bonito was scarce, states a November 15 dispatch from the United States consul at Vigo. The drop in the catch of cod and the sharp drop in bonito were offset by the abundance of aguja, or needlefish, which the canners used as a substitute for sardine for the local market. The catch of sardines (principally from Portuguese waters, according to reports) was almost 495 metric tons, by far the largest monthly catch of the year to date. Other preferred varieties were caught in fair quality.

September 1955 was also a relatively good month for the fishing industry. There was a sharp drop in the catch of bonito, which brings a good price in the local market, but there was an increase in the catch of sardines. This species continues to be scarce, which constitutes the chief worry of the fishermen and canners since up until a few years ago it was the backbone of the industry, an October 11 dispatch reports.

Fish Canning: The fish-canning industry in October 1955, despite the lack of bonito, worked at a fair level because of the large catch of agujas, the relative abundance of jurel (Trachurus trachurus) and sardines. Bocarte, from which fillets of anchovies are prepared, were much scarcer than last month, only about 66 tons were caught as compared with 853 tons for September.

The canning industry during October 1955 bought 5.9 million pounds, or approximately 34 percent, of the total landings at Vigo as compared with September when they purchased 5.2 million pounds, or approximately 36 percent, of the total landings. In October 1954 they purchased 3.4 million pounds, or approximately 26 percent, of the catch.

In August 1955 purchases were 5.4 million pounds or 36 percent of the total landings; and in September 1954 purchases were 6.9 million pounds, or 42 percent of the total landings.

The fish-canning industry operated at far below capacity in September 1955. However, September can be considered a fair month, although not as good as August and considerably below September 1954. Bonito (a highly desirable variety) landings totaled only 300,000 pounds as compared to 1,400,000 pounds in July and 1,500,000 pounds in August 1955. The catch of anchovy, on the other hand, totaled almost 1,900,000 pounds as compared with July and August when none were caught. Sardines, which in past years was the principal variety canned, continued to be

scarce (only 600,000 pounds were landed). Agujas (needlefish), canned for local consumption as a substitute for sardine, were abundant.

The chronic shortage of tin plate, which has plagued the industry for some time, continued with no immediate relief in sight.



## Union of South Africa

FISHERY TRENDS, FALL 1955: Signs of keener competition in some of the Union of South Africa's overseas markets for its fishery products, particularly pilchards and jack mackerel (maasbanker), are apparent, according to the Director of Fisheries. However, the reported recent development of a strong demand for canned jack mackerel in the southern United States has made up in part for the reduced exports of canned pilchard to the United States and other countries.

Landings of pilchard and jack mackerel have been seasonally variable of late and stocks of canned fish are said to be low. Prices reportedly have advanced a little as a result of the limited supplies.

Bad weather during October also hampered the fishery for spiny lobster off Cape Town, but catches now are improving and the demand for this commodity is good, states an October 31 dispatch from the United States Consulate at Cape Town.

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FISHERIES RESEARCH TO BE EXPANDED: Plans are now being made by the Division of Fisheries, Cape Town, to step up research in the Union's West Coast pilchard and jack mackerel (maasbanker) fisheries. According to the Division's director these plans include the addition of 10 new scientific positions to his division; the construction of further laboratories at the Division's research center at Sea Point, near downtown Cape Town; and the construction of 3 new research vessels, costing about US\$434,000.

The plans also include the completion of a new shore laboratory and living quarters at Stompneus, about 120 miles from Cape Town, which will cost about US\$28,000. The Stompneus laboratory is expected to be available as a substation of the Fisheries Division by the end of November 1955, a dispatch (November 4) from the United States Consulate at Cape Town states.

The research vessels are to include one of 100 feet, most probably of steel, costing about US\$238,000, and two of 75 feet, costing about US\$98,000 each, and built of wood. It is understood that all these vessels will be built in South Africa by local firms. They will be somewhat similar in design to United States fishing vessels operating off the United States Pacific coast but will be modified to fit scientific needs and the local conditions in South African fishing waters.

The capital expenditure of US\$490,000 involved in the construction of the shore laboratory and living quarters at Stompneus, the additional laboratories at Sea Point, and the three research vessels reportedly will be advanced by the Fisheries Development Corporation. It is understood that the South African Government is the sole stockholder of this corporation, which was created in 1949 by Parliamentary action.

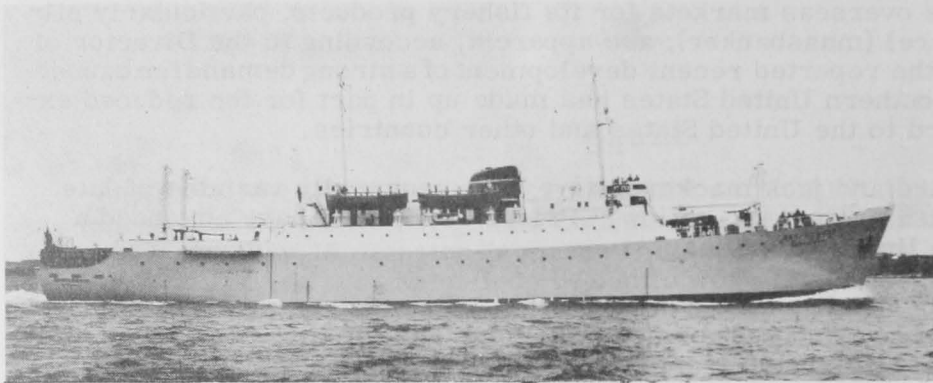
The main object of the research work of the Fisheries Division is to put fish conservation measures in the Union on a scientific basis. The Director feels that the present measures of the South African Government limiting the annual pilchard

and jack mackerel catch to 500,000 tons a year and restricting the number of fish plants and fishing boats are arbitrary and have little scientific basis, and that the only way the Union can conserve its fisheries properly is by making a long-term study of fish species in South African waters and their environment.



## U. S. S. R.

GERMAN-BUILT FACTORYSHIP TRAWLERS RAPIDLY NEARING COMPLETION: The construction of 24 factoryship trawlers was reported in the July 1955



The M/V Dobrolubov, one of the 24 factoryship trawlers being built in Kiel, West Germany, for the U.S.S.R.

(pp. 72-73) issue of Commercial Fisheries Review as taking place in East Germany, but actually the trawlers are being built by a shipyard in Kiel, West Germany. More details on these vessels appeared in the October 1955 (pp. 82-85) issue of the Review.

Of the 24 factoryship trawlers, 6 have already been delivered and others are being equipped or are on the slipways, according to a November 24 letter from the Kieler Howaldtswerke Aktiengesellschaft of Kiel which is building the trawlers. All 24 trawlers will probably be delivered by the end of 1956. The firm building the trawlers supplied the following details regarding the trawlers being built for the U.S.S.R.

In 1954 the Sudo Import Co., Moscow, placed an order for building factory trawlers with the Kieler Howaldtswerke Aktiengesellschaft; the first trawler was completed in the spring of 1955.

The fundamental idea of this novel vessel type was that the catch was to be processed and frozen on board, the incidental catch and the offal were to be used for fish meal, and the livers processed into liver oil or canned. Not only was whole fish to be frozen, but fillets were also to be mechanically prepared, packed, and frozen on the vessel.

Taking these requirements into consideration, it was determined that the processing plant should extend over the greater part of the main deck. In order to obtain a continuous flow when processing, it appeared advantageous to fish over the stern. For this purpose a slipway was fitted aft over which the net was to be hauled in.

The handling and processing of the catch is as follows: From the working deck aft on which the net is emptied, the fish are conveyed via a chute on to the factory deck situated underneath. On this chute there are several places at which the fish are eviscerated. The offal passes to the fish meal factory, whereas the livers are conveyed to a sorting table and from there go into canning preserves or liver oil. The dressed fish pass via a heading machine to the filleting machine. The fillets are then mechanically skinned and weighed into fixed-weight blocks. The blocks are placed in collection trucks and deep frozen in freezing tunnels. After the freezing process, they are glazed and mechanically packed. Conveyor belts carry the



packages to the refrigerated cargo holds where they are stored. However, it is also possible to freeze and store whole fish.

The vessels have a length of 246 feet between perpendiculars, a moulded breadth of 44 feet, a tonnage of 2,555 GRT. and 1001 NRT. A Diesel engine of 1900 B. hp. serves as a propelling unit and gives the vessel a speed of approximately 12 knots. There are about 100 men in the crew because the processing operation works two shifts.

During the trial trip of the factory trawler Puschkin in the Barents Sea, the catching gear and the factory plant have in practice worked extremely satisfactorily. It was evident that fishing over the stern is better and easier than hauling in the net over the side as is customary. The apprehensions repeatedly expressed that by hauling up on the stern slipway the fish would be squashed or the net damaged have not proved true. The factory unit has, notwithstanding that it was operated by an unskilled staff, worked very well. The required freezing capacity was even exceeded by 12 percent.



## United Kingdom

BRITISH FIRMS TO MARKET HIGH-QUALITY FISH MEAL: The white-fish meal manufacturers of Hull and Grimsby, England, announce that they are pooling their resources to market a new high-quality white-fish meal, the first in the world to carry a triple guarantee of quality and purity. It will be sold under a brand name, according to the October 14 issue of The Fishing News, a British fishery periodical.

The Hull factory is the biggest producer of white fish meal in the world with an annual output of 35,000-40,000 metric tons. The Grimsby plant is the second biggest in Britain, producing 25,000-30,000 tons annually. Together the factories produce about 70 percent of the white fish meal manufactured in Britain and utilize about half the total weight of white fish landed at the two ports.

The protein content is guaranteed to be at least 66 percent; the oil content to be less than 4 percent; and the salt content to be less than 2 percent.

The chairman of the Hull company explained that both concerns were nonprofit-earning companies worked on a cooperative basis. Every processor, trawler owner, fish merchant, fish curer, etc., connected with the fishing industry in the two ports is a shareholder.



## Venezuela

JAPANESE BOAT TO FISH FOR TUNA: The Japanese tuna fishing boat Bozo Maru is expected to arrive in Venezuela in December 1955 to engage in tuna fishing off the island of La Blanquilla. La Blanquilla is about 100 miles north of Barcelona. The boat will be operated by Japanese for a Venezuelan-Japanese company, according to a November 8 dispatch from the United States Embassy at Caracas.

Japanese fishermen have explored the fishing grounds in the Caribbean and are believed to have found tuna in commercial quantities.

It is believed that the Japanese vessel will fish with long lines.

