



## International

### EUROPEAN COMMON MARKET

#### LOWERS CUSTOMS DUTIES:

The Council of Ministers of the European Economic Community (popularly called the Common Market) issued a press release on December 3, 1958, concerning measures which will be taken by the six member states on January 1, 1959.

The following measures, among others, will enter into effect as of that date:

Customs duties on industrial products, except for products coming under the regime of the European Coal and Steel Community, will be subject to a tariff reduction of 10 percent. This reduction will apply to all members of the Organization for European Economic Cooperation (OEEC), all members of the General Agreement on Tariffs and Trade and all other countries entitled to most-favored-nation treatment. However, no reduction will be made on commodities where the present duty is equivalent to or below the rate of the future Common External Tariff. (This will apply to a large number of commodities in the Benelux tariff.)

The reductions will be provisional and will be applied for an indefinite period. No reciprocity is required, although the Common Market countries will welcome similar measures by countries benefitting from these reductions.

In cases where the rates of the Common External Tariff are not yet known--as, for example, the rates on items listed in the so-called G List appended to the Rome Treaty--each of the Common Market member states will determine which reductions are to be granted outside countries.

Most nonagricultural quotas applied by member states of the Common Market to European members of the OEEC are to be increased an average of 20 percent with each individual quota automatically increased by a minimum of 10 percent. It is not yet clear whether the benefitting countries will be expected to grant reciprocal benefits to the Common Market member taking the quota action.

The French representative to the OEEC Council gave notice that the French Government, in addition to the tariff reduction, will liberalize 40 percent of its imports from the OEEC on January 1, 1959.

Note: Also see *Commercial Fisheries Review*, January 1959, pp. 13-20.

### FISHERIES AGREEMENTS

#### ITALIAN-YUGOSLAV FISHERIES AGREEMENT REVISED:

The three-week old negotiations for a fisheries agreement between Italy and Yugoslavia ended on November 20, 1958, with the signing at Belgrade of a new agreement valid through two fishing sessions to April 30, 1960. The major changes over the previous arrangement were shortening of the period covered by one-half year; the substitution of the coast of Montenegro for Istria; a delimitation for Italian boats of 11 square miles in the Gulf of Trieste, and the setting up of new procedures for handling of trespassing, other violations, and the prosecutions involved.

The news agency *Italia* in its official release stressed that the Italo-Yugoslav aim was reciprocal resolution of problems in the spirit of increasing cooperation in the hope that sincere understanding would produce highly profitable results for both nations.

This is the third agreement signed. The Italians will pay 900 million lire

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(about US\$1.4 million) for the term of the agreement for certain concession zones, the United States Embassy at Rome reported in a November 28, 1958, dispatch.

## FOOD AND AGRICULTURE ORGANIZATION

## ATOMIC ENERGY EXPECTED TO AID WORLD FISHERIES DEVELOPMENT:

Atomic energy, particularly through the use of radioisotopes and radiation in research, will play an increasingly important part in the development of the world fishery resources, states the Chief of the Atomic Energy Branch of the Food and Agriculture Organization (FAO), Rome, Italy.

This prediction is in a report on "The Potential Contribution of Atomic Energy to Development in Agriculture and Related Industries," published by FAO in English, French, and Spanish. The report covers power applications, the use of radiation in food preservation and processing and in plant breeding, the value of radioisotopes in research, and the significance of research to the development of agriculture and related industries which, of course, include fisheries.

Referring to radioisotopes, the report says that use of them can "accelerate and enhance the contributions of research to the development of world fisheries." While about three-quarters of the world's surface is occupied by water, it provides less than 2 percent of the world's food supplies, but that this 2 percent represents about 10 percent of the animal protein consumed.

"Every effort should therefore be made to increase world fish production," the report declares. "This can be achieved by extension and intensification of current fishing operations, by improved management of those operations and by effecting advantageous changes in the fisheries resources themselves."

Such a program calls for the comprehensive investigation of the resources and in such research radioisotopes can be of particular help "in measuring the basic production of water areas, in following the passage of nutrient material through the successive links of the food chains of fish of economic value to man, and in various other parts of the program."

The success of such research "will permit a better planning of fishing operations" and more efficient use of resources.

The report also points out that the application of nuclear-derived power could be of considerable significance to the fishing industry, particularly "for use in mother and factory vessels of fishing and whaling fleets operating over long periods at great distances from their bases, especially in the Antarctic."

It points out that present power plants in fishing boats, including fuel tanks, occupy about 40 percent of the available space on board. The introduction of small nuclear propulsion plants could radically change the situation. "The size of the vessel could be decreased, or its speed increased, or the fish-hold space or fish-processing space increased for the same sized hull."

While his report deals largely with agriculture, it is of considerable interest to all engaged in fisheries.

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## SPONSORS FIRST WORLD SCIENTIFIC MEETING ON SARDINES:

The first world scientific meeting on the biology of sardines is being organized by the Food and Agriculture Organi-

zation (FAO) and will be held at FAO's Rome, Italy, headquarters, September 14 to 21, 1959.

The world sardine catch is worth about \$50,000,000 a year and represents about a fourth of the total world commercial catch of fish, crustaceans, molluscs, etc. Sardine stocks are, however, subject to considerable fluctuations which often have disastrous economic consequences for fishermen and the fishing industry.

"These fluctuations, which, so far, are unpredictable, sometimes affect entire stocks," pointed out the secretary of the world meeting, speaking at FAO headquarters. "Fishery biologists, of course, have been studying the problem for many years, but so far have not been able to review together the work they have done in various parts of the world, exchange experience and ideas, and discuss the further research needed to solve this problem.

"The forthcoming meeting will enable them to do these things and will lead, we hope, to world-wide collaboration in probing the mystery of the fluctuations in sardine stocks," he continued. "About 100 countries and territories are directly concerned in sardine fishing."

The genus *Sardina* and the related genera *Sardinops* and *Sardinella* will be considered together, in view of their biological affinities, under the common name of sardines, which is used in many countries.

"This designation should not be taken as an official standard name for industrial and commercial purposes," FAO pointed out.

Many Governments concerned have been invited to send representatives to the meeting. Private research institutions concerned with the biology of sardines and the effect of fisheries on sardine stocks are also invited to participate. Some 15 international organizations have been invited to send observers.

The meeting will review the present knowledge of the development of the commercial sardine fisheries, the biology of the stocks, the environments of sardine populations and the fluctuations in stocks, and catches.

These various discussions will be based on synopses prepared by FAO and on papers presented by the participants. It is hoped that the meeting will consider future international cooperation in dealing with the problems of fluctuation, and how such cooperation can be made effective.

## GENERAL AGREEMENT ON TARIFFS AND TRADE

## REPORT ON 13TH SESSION AT GENEVA:

The 37 Contracting Parties to the General Agreement on Tariffs and Trade (GATT) ended their 13th Session at Geneva, Switzerland, with new decisions that international action is needed to stimulate world trade. The conference agreed on the need for common action in three key areas of international trade--tariff reduction, study of the effects of agricultural protection, and the export problems of underdeveloped areas.

The GATT is a multilateral trade agreement whose participating countries account for almost 85 percent of world trade. Its main features are schedules of agreed tariff rates, provisions limiting the use of nontariff measures to regulate trade, and procedures for consultations on specific trade problems. The annual sessions of the GATT Contracting Parties constitute the principal world trade forum.

The 13th Session opened October 16 with a meeting of ministerial representatives, who reviewed the current international trade scene.

Program for Expansion of Trade: The Contracting Parties agreed that intensified efforts

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should be made to expand international trade, the field of particular competence of the General Agreement. They identified three areas where such efforts should be concentrated. Two of these were the trade difficulties cited in the Haberler Report (a study of trends in international trade, prepared by four experts)--the effects of protectionism throughout the world on agricultural trade and the relatively low rate of growth in the export trade of the less developed countries. A third area was the tariff field. Three separate committees were set up for these areas.

In proposing another round of multilateral tariff negotiations, the United States pointed out that negotiations beginning in mid-1960 would fit in with the need for the six member countries of the European Economic Community to adjust their existing tariff concessions before taking their first step on January 1, 1962, toward a common external tariff.

European Economic Integration: Since the last Session of the Contracting Parties, the Rome Treaty establishing a European Economic Community (the European Common Market) among France, Italy, Federal Germany, Belgium, the Netherlands, and Luxembourg has entered into force. During the year, efforts have also been continued to negotiate a European Free Trade Area, which would associate multilaterally the Common Market, the United Kingdom, and other members of the Organization of European Economic Cooperation (OEEC). The six countries of the EEC will, after a transitional period of about 12 years, have a customs union, within which there will be no restrictions on the flow of trade and which will apply a common external tariff to imports from outside the Community. The proposed free trade area would also eliminate restrictions on trade among member states, but allow each member to maintain its own tariffs against imports from nonmembers.

The GATT recognizes, subject to certain conditions, the desirability of such arrangements because of their trade-creating potential. The Contracting Parties approved, with some technical amendments, the approach regarding the European Economic Community which had been developed at the meeting of the Intersessional Committee in April-May of 1958, with reference to the procedures for consultations among the Common Market countries and other contracting parties, and to the decision to postpone any final determination as to the status of the Rome Treaty under the General Agreement. The Contracting Parties therefore agreed, without prejudice to the legal questions which may arise, that multilateral consultation shall take place between the Community and those contracting parties that believe that their trade interest may be adversely affected as the result of specific measures decided on by the Community.

In considering the matter, the Contracting Parties agreed normal procedures of the General Agreement could be adapted to handle problems arising in this situation and, further, that the same approach might profitably be applied in other cases

where the interests of a number of contracting parties were involved.

The United States representative commended the EEC on the progress that it had achieved. He expressed the belief that any problems could be settled without interfering with the Community's effective development and called attention to the consultation procedures as a means for dealing with specific difficulties. Various delegations, including that of the United States, recalled certain areas of concern but were willing generally to await developments under the terms of the Treaty.

The Contracting Parties noted that negotiations for a European Free Trade Area were continuing and expressed the view that, at such time as the agreement might be signed, it should be made available to GATT for review and comment.

Balance-of-Payments Import Restrictions: The Contracting Parties agreed on procedures for the first series of annual consultations which the revised provisions of the Agreement require be held with countries maintaining import restrictions to conserve foreign exchange. Consultations will be held next year with 16 of these countries. As in the past, the United States will seek through these consultations to encourage the consulting countries to relax their remaining restrictions as rapidly as possible.

During the session, the Contracting Parties held consultations on import restrictions with Australia, Ceylon, Ghana, and the Federation of Malaya, and the Federation of Rhodesia and Nyasaland. Under the authority of a special provision of the Agreement, each of these countries maintains certain import restrictions that discriminate against imports from the dollar area. Ceylon, however, announced shortly after its consultation that it was abolishing its few remaining discriminatory restrictions. Ghana and Malaya, which came into the Agreement last year, consulted for the first time. The Contracting Parties formally concluded a consultation with New Zealand, which reported substantial progress in reducing its discrimination against dollar area goods. The Contracting Parties also began consultations with the United Kingdom. These will be resumed in the spring of 1959, along with the other consultations scheduled for next year.

The Contracting Parties continued their discussion with the Federal Republic of Germany on dismantling its remaining import restrictions, originally applied for balance-of-payments reasons. These discussions began in 1957, when the International Monetary Fund reported that Germany no longer needed to use import restrictions to protect its foreign exchange reserves.

The United States, joined by other countries, expressed continued concern that, despite Germany's economic progress, a variety of important agricultural products and some industrial items are still subject to import controls. The United States expressed particular concern with the discriminatory character of remaining restrictions.

The Contracting Parties decided that interested countries should jointly consult with Germany re-



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garding restrictions that will be maintained by Germany after December 31, 1958. This consultative group, which will include United States representatives, will meet in Geneva early next year. The Contracting Parties expect to consider the report of the consultative group at their next session, scheduled for April 1959.

The United States consulted bilaterally with certain countries maintaining import restrictions (Japan, Denmark, Norway, Ceylon, Australia, Brazil, the Netherlands, the Dominican Republic and the Federation of Rhodesia and Nyasaland), with a view to easing specific problems which have arisen in United States trade with these countries. A full and frank exchange of views was achieved in all cases, and some relaxations of existing restrictions on specific goods were obtained.

Tariff Adjustments: At Cuba's request the Contracting Parties established a Tariff Negotiations Committee to steer the various renegotiations on which Cuba expects soon to embark in connection with its current tariff revision. These negotiations will be conducted under the procedures of Article XXVIII, and perhaps Article XVIII, as agreed in a decision taken at the 12th session. The negotiations themselves will not begin until a later date, and the United States will not, for its part, join in such negotiations until after the usual opportunity has been given to interested parties to submit their views.

The Session also approved the text of a Protocol to embody the results of the tariff renegotiations conducted with Brazil. This Protocol will be open for signature later in the year.

Organizational Arrangements: To improve the administration of the General Agreement, two short sessions of the Contracting Parties each year, extending for three weeks, will take the place of annual sessions lasting 6 to 8 weeks. This arrangement will expedite the transaction of regular GATT business, and permit more timely and effective consideration of new and urgent problems.

The Contracting Parties also decided that, while the Intersessional Committee would be given general authority to conduct intersessional business on their behalf, some responsibilities would also be assigned to working parties which would continue in existence between sessions. Member countries were urged to provide qualified permanent representatives in or near Geneva, who could effectively and responsibly represent their countries in dealing with the GATT Secretariat and with the resident representatives from other countries.

New Participants: Switzerland is currently engaged in tariff negotiations with a substantial number of contracting parties as a step towards provisional participation in the General Agreement. At the 13th Session, the Contracting Parties adopted a declaration and a resolution which, when accepted, will bring into effect the results of these negotiations and will establish the rules of the General Agreement as governing commercial relations between contracting parties and Switzerland.

Yugoslavia has expressed the wish to establish closer relations with the Contracting Parties and to contribute through this association to the establishment of mutually advantageous commercial relations with the Governments which are parties to the GATT. The Contracting Parties established a working party to report to the 14th Session on the terms on which the Government of Yugoslavia might be brought into association with the Contracting Parties. The Working Party is also to report on the advisability of further study on the possible development of such association into full participation in the General Agreement.

The Cambodian Government informed the Contracting Parties that Cambodia had decided in principle to accede to the General Agreement. Pending formal accession, Cambodia will apply *de facto*, on a reciprocal basis, the provisions of the General Agreement in the conduct of its trade with the Contracting Parties. The question of United States participation in tariff negotiations with Cambodia was reserved for later decision.

Japan has been a contracting party since 1955, but a number of GATT countries have availed themselves, with respect to Japan of a provision which permits non-application of the General Agreement. As they have at previous Sessions, the United States and several other countries supported Japan's request for full application of the General Agreement by all GATT countries. India announced that it is now applying the General Agreement fully toward Japan.

The bilateral discussions initiated with the British delegation sought to obtain further relaxation of import restrictions applied to conserve dollar resources by the United Kingdom. Frozen halibut, frozen salmon, mild-cured salmon, canned pilchards, and canned shrimp were among the items for which more liberal trade terms with the United States were sought. No conclusions were reached at the meeting, but negotiations are continuing with the British.

NEXT SESSION: The Contracting Parties agreed to hold their next session in Geneva in March 1959, and to accept the invitation of Japan to meet in Tokyo in October 1959.

## GREAT LAKES FISHERY COMMISSION

MEETING HELD IN ANN ARBOR, MICH:

A meeting of the Great Lakes Fishery Commission was held at Ann Arbor, Mich., December 3-5, 1958. Both Canada and the United States presented reports on sea lamprey control and research conducted by both countries in the Great Lakes. The reports gave an account of progress and revealed that the results obtained by both countries were about identical, particularly on sea lamprey control methods.

United States commercial landings of lake trout for 1958 were estimated to be



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close to one million pounds: Michigan 700,000 pounds, Wisconsin 250,000 pounds. Ontario's lake trout landings were estimated to be about the same as in 1957.

The recommendations made by the Special Committee for the Commission's consideration and approval were:

1. Added emphasis and development in introducing lake trout possessing superior qualities; and selective breeding of trout using hybrids of lake and brook trout that can produce an early-maturing and fast-growing trout.

2. To hatch and rear all available eggs so that hatchery-reared lake trout can be introduced in Lakes Michigan and Huron to establish breeding populations following control of the sea lamprey.

3. That the maximum capacity of existing facilities is calculated at 3.7 million yearlings, which is inadequate, and that additional facilities be provided by 1963 for rearing another 2 million yearling lake trout.

4. That an adequate system of sampling native and hatchery lake trout populations be established in order to gain more knowledge of abundance, distribution, growth rate, and survival of both native lake trout and planted stock.

The Commission's Scientific Advisory Committee considered a prospectus for Lake Erie fishery research. This prospectus recommended studies of (1) the environment (including basic physical and chemical data), (2) life histories of the most important species of fish (of which there are 15 in Lake Erie), (3) population studies (including age and size composition, sex ratio, etc.), and (4) yield (including compilation of catch statistics, refinement of sampling procedures of the commercial fishery, and determination of optimum yields). In addition to these biological studies, there were recommendations for studies of gear development, technology, marketing, and economics. Finally, there was an addendum to cover Lake St. Clair.

The proposed studies there would be similar to those in Lake Erie.

There was also a discussion of the plans for lamprey control in fiscal years 1959 and 1960. It was pointed out there were 13,000 to 16,000 second-feet of stream to be treated in Lake Michigan. To treat 8,000 second-feet per year as planned would require 132,000 pounds of chemical at \$3.50 per pound for a total of \$460,000. It was stated that the studies in Lake Superior should be completed before those in Lake Michigan are started. There was extensive discussion of the means of carrying out the treatment program and coordination between Canada and the United States. There was a suggestion for a team for stream treatment, which would travel either in Canada or in the United States. There was also some discussion of a continuation of barriers. Their chief function would be to (1) check on the effectiveness of the lampricide treatment and (2) to prevent re-infection.

The Plenary Session convened December 4 with all Commissioners present. The report on lamprey control and research in Canada pointed out that there were some 20 electrical barriers that were in operation on the Canadian side of Lake Superior. He was able to report significant decreases in the populations of lampreys in the barriered streams. There was a kill of over 3,000 lampreys at barriers in 1958. Investigations by divers at the Sault Ste. Marie Locks revealed no significant migration of lampreys through those locks.

The United States report on 1958 progress in Great Lakes fishery investigations pointed out the development of successful lampricide treatment in 1958. The poisoning of eight streams in the fall of 1958 under the new control program was reported. Kill of lamprey larvae in these streams was reported practically complete and destruction of fish was either nil or negligible.

Reports of cooperating state organizations were given for Wisconsin and for Michigan.

In the final Plenary Session, the Commission called for recommendations of

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the Scientific Advisory Committee on changes in the fiscal year 1959 program. It was indicated that there should be some showing of savings in this fiscal year and that there should be justification of changes from the original program.

There was also a report on the work of the lake trout restoration committee. It showed that considerable progress has been made on preparations for lake trout restoration. State, Federal, and Provincial agencies collected a total of 2,300,000 lake trout eggs in 1958. These agencies have on hand a stock of some 36,000 brood fish. Although only 27 percent of these are mature at present, 74 percent will be mature by 1962. Some 740,000 fry are available for distribution. The Ontario Department of Lands and Forests has a very significant research program to develop hybrid trout. These hybrids are crosses between speckled trout and lake trout and the objective is to produce a fish with the desirable characteristics of the lake trout and the early maturity of the speckled trout. It is expected that by 1964 the agencies will be producing 4,500,000 yearlings, but capacity is available for only 3,700,000. The committee, therefore, made a strong recommendation for additional rearing capacity to be ready by 1963.

A resolution regarding coordinated fishery regulations among the Great Lakes political units was adopted by the Commission.

It was agreed that the next meeting would be held at Ottawa in April 1959.

## (NORTH EUROPEAN) INTERNATIONAL FISHERIES CONVENTION

## PERMANENT COMMISSION MEETS IN DUBLIN:

The Seventh Meeting of the Permanent Commission set up under the (North European) International Fisheries Convention of 1946 took place in Dublin, November 25-28, 1958. Delegations attended from all 14 of the Member Governments: Belgium, Denmark, Federal German Republic, France, Iceland, Ireland, the Netherlands, Norway, Poland, Portugal, Spain, Sweden, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland. Observers represented the United States Government, the International

Council for the Exploration of the Sea, the Food and Agriculture Organization of the United Nations and the International Commission for the Northwest Atlantic Fisheries.

The main subject under discussion was the Report by the Chairman of the Committee set up by the Commission at their Sixth Meeting held in London in October 1957 to consider what were the precise difficulties of member countries as regards the application of the present mesh provisions of the 1946 Convention and what might be done to meet those difficulties consistent with the purposes of the Convention. Accompanying this report was a report by a subcommittee of scientists giving a detailed and comprehensive survey of the sole fisheries in the North Sea and the whiting fisheries in the North Sea, the Irish Sea, and the Channel, together with similar information about the other major fisheries which might be mingled with them and of mixed fisheries both for nonindustrial and industrial purposes.

This report was welcomed by the Commission as a major contribution to their understanding of many of the outstanding conservation problems facing Member Governments in the area covered by the Convention. They agreed to make arrangements to have this document published by the International Council for the Exploration of the Sea.

The Commission took this scientific document as the basis of their deliberations on the problems presented by the report of the Committee on mesh difficulties. These problems were concerned with the sole fisheries, the whiting fisheries and mixed fisheries.

The Commission agreed, that, as regards the sole fisheries, there was no obstacle in the way of effective enforcement of the 75-mm. (2.95-inch) mesh. As regards the whiting fisheries, a proposal was considered to provide on an experimental basis for a 60-mm. (2.36-inch) mesh for whiting in certain parts of the Irish Sea and the Channel. The Commission was, however, unable to agree that this proposal should at present be pursued.

As regards the mixed fisheries, general concern was expressed about the effect on protected species if this kind of fishing developed, and it was agreed that such developments should be kept under review. The Commission also agreed that the provisions in the Convention, whereby 10 percent by weight of each total landing of protected species which was not intended for human consumption might consist of undersize fish, was extended to May 1, 1962.

The Commission also considered a proposal put forward by the Norwegian Delegation for an increase in the mesh size to 130 mm. (5.12 inches) in the northeastern part of the Convention area. It was agreed that further scientific study should be undertaken to investigate the effect of an increase of mesh of that order. The Commission agreed to resume consideration of the matter at their next meeting.

The Commission considered the question whether the Convention should be amended to permit the use of certain kinds of chafing gear in order to prevent wear and tear of nets. They agreed un-

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animously to recommend to member Governments that a precisely-defined chafing gear, similar to that permitted under the rules of the International Commission for the Northwest Atlantic Fisheries, should be permitted for nets of 110-mm. (4.33-inch) mesh.

A review of reports by Contracting Governments on infractions of the rules of the Convention was discussed and the Commission agreed to undertake steps to ensure greater uniformity in such reports and to provide Governments with more detailed information of the enforcement arrangements by all member Governments concerned.

The Commission expressed their appreciation of the valuable work undertaken for them by the International Council for the Exploration of the Sea and, as a token of this appreciation, decided to make a contribution of £400 (US\$1,120) to the funds of the Council.

The Permanent Commission of the International Fisheries Convention of 1946 was set up to consider at regular intervals the conservation measures provided for under that Convention for the protection of certain species of fish in the North-East Atlantic, the Arctic, and dependent seas. The Convention provides for minimum mesh sizes for certain types of nets. There are also regulations regarding the landing of immature fish under which the major species of demersal fish cannot be landed if they are below a certain size; the size varies with each species.

The Convention area, so far as the application of mesh sizes is concerned, is divided into two parts. In the waters around Iceland, off Northern Norway, Bear Island, and the Arctic 110-mm. (4.33-inch) mesh is applied. In the waters around Great Britain and Ireland, however, the present minimum mesh size laid down for manila and sisal trawls is 75 mm. (2.95 inches) although, under present regulations, this minimum size is to be increased by 5 mm. (0.2 inch) in 1961. There are slightly different mesh sizes laid down for "light" trawls and seine nets.

Irish fishermen are at present concerned only with the 75-mm. (2.95-inch) area.

Note: Also see Commercial Fisheries Review, September 1958, p. 76.

### NORTH PACIFIC FUR SEAL COMMISSION

#### SECOND ANNUAL MEETING HELD:

The North Pacific Fur Seal Commission adjourned its Second Annual Meeting on December 13, 1958. The Commission, which was established under the provisions of the 1957 Interim Convention on Conservation of the North Pacific Fur Seals, signed at Washington on February 9, 1957, opened its Second Annual Meeting in Washington, D. C., on December 8.

The Commission reviewed the results of the 1958 scientific research programs of the four Member Governments--Canada, Japan, the Union of Soviet Socialist Republics, and the United States--regarding the fur seals of the North Pacific Ocean. The Commission also approved a coordinated plan for research during the 1959 season. Each country on the Commission was represented by a Commissioner and advisers.

Canadian Commissioner George R. Clark was elected Chairman of the Commission, to serve through the next Annu-

al Meeting, and Japanese Commissioner Kenjiro Nishimura was elected Vice-Chairman. Other members of the Commission are Aleksandr A. Ishkov for the Union of Soviet Socialist Republics, and Arnie J. Suomela for the United States.

It was agreed that the next Annual Meeting of the Commission would be held in Moscow beginning January 25, 1960.

The Commission has as its major responsibility investigation of the fur seal resources of the North Pacific Ocean. The objective of this investigation is to determine the measures which will make possible the maximum sustainable yield from these resources, with due regard for their relation to the productivity of other living marine resources in the area. In accordance with a plan developed by the Commission at its First Meeting, research agencies of the four Governments are carrying on research at sea, while United States scientists carry on research on the breeding grounds on the Pribilof Islands in the Eastern Bering Sea, and Soviet scientists do similar work on the Commander Islands in the Western Bering Sea, and on Robben Island in the Okhotsk Sea. The investigations are concentrated on dynamics of the fur-seal populations, distribution and migration at sea, feeding habits, and harvesting methods.

Investigations at sea will begin in early February 1959 on both sides of the Pacific. Investigations at the rookeries will begin in the early summer as the seals arrive at the end of their annual migration to the breeding grounds.

Under the provisions of the Interim Convention, commercial harvesting of seals at sea is prohibited. All harvesting is done on the breeding grounds under the control of the United States on the Pribilof Islands, and under the control of the Soviet Government on Robben Island and the Commander Islands. The proceeds of the annual harvest are shared according to an agreed formula among the four Governments.

Note: Also see Commercial Fisheries Review, February 1958 p. 56.

### NORTHWEST ATLANTIC FISHERIES COMMISSION

#### NINTH ANNUAL MEETING:

The Ninth Annual Meeting of the Northwest Atlantic Fisheries Commission will be held in Montreal, Canada, during the week beginning June 1, 1959. In the week preceding the meeting, various meetings of the Standing Committee on Research and Statistics and Groups of Scientific Advisers to Panels will take place.



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#### OCEAN PERCH SYMPOSIUM:

A joint International Commission for the Northwest Atlantic--International Council for Exploration of the Sea symposium on ocean perch (*Sebastes*) will be held in Charlottenlund, Denmark, in connection with the Statutory Meeting of ICES in October 1959. ICES has accepted an invitation from ICNAF to co-sponsor the symposium and has declared their



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readiness to accommodate the Symposium. After consideration with ICES, the symposium will take place in the week following the ICES Meeting, i.e. October 12-16, 1959.

There is increased activity in the fishery for ocean perch or redfish in the central part of the Northwest Atlantic Convention Area. The greatly expanded fishery in the Labrador area, the increased Canadian yields around Newfoundland, and the new extensive fishery by the U.S.S.R. northeast of the Grand Bank and around Flemish Cap point to a greatly increased and increasing importance of the ocean perch in the Convention Area. This development calls for intensified study of the major problems in ocean perch biology. It is to be hoped that the ocean perch symposium will further the solution of these problems.

A considerable part of the area to which the ocean perch fishery now has been extended was explored a few years ago by the Newfoundland Station of the Fisheries Research Board of Canada. The report from the Station pointed out that possibilities for a development of the fishery to these areas existed.

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OTOLITH EXCHANGE PROGRAM:

The Commission's cod otolith exchange program, which was set up following a recommendation of the Committee on Research and Statistics, is developing satisfactorily. In this program the same sample of otoliths is studied independently by scientists of different countries. It is believed that the analysis of their reports and discussions arising from them will result in a greater consistency in the interpretation of the growth rings of the otoliths. Six samples from Subarea 1, six from Subarea 3, and four from Subarea 4 are now being circulated among interested scientists. (Newsletter No. 30, dated December 15, 1958, issued by the Commission for August-December 1958.)

NORWEGIAN-RUSSIAN SEALING AGREEMENT

Norway and the U.S.S.R. have signed an agreement (with annex) on measures for the regulation of the seal catch and the preservation of seal stocks in the northeast Atlantic. The agreement, signed in Oslo on November 22, 1957, came into force with the exchange of the instruments of ratification at Moscow on June 27, 1958. The agreement was registered by Norway on August 25, 1958. (U. N. Statement of Treaties and International Agreements--Registered or Filed and Recorded with the Secretariat during August 1958.)

SOUTH PACIFIC COMMISSIONFISHERIES DEVELOPMENT PROGRAM:

The South Pacific Commission program for fisheries aims at a better exploitation of marine resources in the South Pacific area, the bringing into production of natural waters by stocking them with various edible fish species, and the promoting of fish culture in ponds where conditions appear suitable.

Active work in the program commenced in July 1954 with the appointment of a Fisheries Officer.

Fisheries planning and implementation take place in close cooperation with territorial administrations and populations.

At its seventeenth session the Commission approved the creation of a technical committee on fisheries, to advise the Commission on the development of the project.

A three-month Fisheries Training Course, held under the auspices of the Commission and of the Food and Agriculture Organization, ended on February 21, 1957. The Course was attended by 25 trainees from 14 Pacific island territories, and by 4 observers. Fishing operations, fishing gear, fishing craft, and fish culture were the four main subjects covered by the curriculum. Most territorial administrations succeeded in making good use of the trained personnel.

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An outstanding result of the stocking of natural waters was observed in Lake Siwi, on Tanna Island in the New Hebrides, where a very small breeding stock of *Tilapia mossambica*, introduced in July 1958, produced in less than 17 months a fish population estimated at well over one million. In spite of an exceptional drought which caused extremely high mortality, the fish are solidly established and the local population has started to catch and consume them.

During visits to territories and through the distribution of technical publications, advice has been given on inland fisheries, transfers of trochus and mother-of-pearl shell, and coastal deep-sea fisheries. (South Pacific Commission, Annual Report, 1957, pp. 13-14.)

### UNITED NATIONS

#### DEEP OCEAN TRENCHES UNSUITABLE FOR DISPOSAL OF RADIOACTIVE WASTE:

Beneath the oceans there are great valleys. Nineteen ocean "trenches" are over 4.5 miles deep and some are thousands of miles long. In the search for "burial grounds" for the disposal of radioactive wastes, which may become a problem when the atomic industry develops on a world-wide scale, those "trenches" seemed likely places. It was assumed that they were troughs of stagnant water. There, so the argument went, the dangerous elements, in their concrete-and-metal coffins, would lie undisturbed for centuries until their radioactivity was spent.

This assumption was questioned three years ago at the first United Nations International Conference on the Peaceful Uses of Atomic Energy. At the second meeting in Geneva, in September 1958, the illusion was finally dispelled.

In the intervening years the U.S.S.R. ship *Vityaz* carried out oceanographic investigations of 12 of these trenches. The findings of the expedition have shown that the trenches are unsuitable places for the disposal of radioactive waste.

At the conference, U.S.S.R. reported in detail on the Tonga Trench, which extends southward for nearly 700 miles from the Samoa Islands to the Kermadec Islands. The Soviet expedition found that, by comparison with the findings of the Danish *Galatea* expedition in 1952, the deep-water temperature had risen. This showed that even at the greatest depth a change of water takes place in as brief a space as five years. The distribution of oxygen and phosphates and the presence of living organisms consuming oxygen at every depth showed that the water was actively mixing, horizontally and vertically. Thus, the dangerous materials with

long-lived radioactivity will be liable to break loose and escape upward into the upper layers of water. There marine life would become radioactively infected and form a biological chain reaction which would end up in the food of human beings.

This warning was reinforced, at the Conference, by the representative from the Woods Hole Oceanographic Institution (United States). He showed that there was a kind of biological elevator in the sea which would bring radioactive materials from the deeps to the surface. Sea organisms, he showed, concentrated the fission products so that the plankton in the Bikini test area of the Pacific had 470 times more radioactivity than the water itself.

In life, the marine organisms would pick up, concentrate, and transfer the radioactivity from the contaminated layers of the ocean to the uncontaminated. In death, the organisms would sink toward the bottom and the fission products, bound up in their skeletons, would increase the radioactivity in the depths. Thus there would be an upward and downward movement of radioactivity, apart from any mixing of the upper and lower waters. This drastically changes the picture which assumed that the transfer between the deeps and the surface would take about 300 years.

Both Britain and America have been dumping radioactive materials in the Atlantic trenches but of a kind and on a scale which so far gives no cause for concern. The British explained that the only material they had so far deposited was contaminated machinery from Harwell. The total amount of radioactivity deposited in eight years in the deeps, by the British, amounted to about 600 curies, an insignificant amount in dilution. The Americans have carried out regular surveys of their "ocean graveyards" and have found no evidence of any increase in the radioactivity of the water.

The disposal of radioactive liquid wastes in coastal waters is another matter. The British have had a long experience of disposing of this kind of "sewage" from their atom factory at Windscale in Cumberland. A pipeline carried the effluent two miles beyond the high-water mark into the Irish Sea. This is very mild radioactivity, since the main fission product wastes are concentrated and stored inland. The discharging into the sea is carried out under strict supervision of government inspectors and under public health regulations already established. To inspection at the source is added strict and continual hydrographic and biological surveys of the sea and the shoreline. As part of this program, over 35,000 fish were caught and marked and some recaptured under a planned fishing program. These, like the edible seaweed and the sands of the shore, have given little indication of any increase in radioactivity which might cause concern.

The U.S.S.R. scientists at the Conference took a very strong line that no radioactivity of any kind should be disposed of in open waters, or on land, under any conditions in which it might seep into the ground water. They reported that even their mild effluent is run into concrete ditches and sealed off by concrete.

It was made abundantly and consistently clear that the disposal of waste so far has not been on a scale, or in circumstances, which constitute a present public health hazard.

## International (Contd.):

The insistence of the many technical papers presented on this subject was on the precautions necessary for the future. What was emphasized was that a great deal more research must be done before any kind of "dumping" could be tolerated. The only safe method of storage is in tanks in which the radioactive substances are allowed to decay--and some of them will take centuries to do so. To the complications of storage is added the fact that in giving off their radiation the elements are producing heat which, in given circumstances, will cause the tanks to boil--and go on boiling for 100 years. (World Health Organization news release, November 1958.)

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#### GENERAL ASSEMBLY COMMITTEE APPROVES SECOND LAW OF THE SEA CONFERENCE:

A second international conference of plenipotentiaries on the Law of the Sea was approved by the Legal Committee (Committee Six) of the United Nations General Assembly on December 4, 1958. Meeting at United Nations in New York City, the Committee approved the second conference to be held at Geneva in July or August 1959. The purpose will be to determine the extent of territorial waters and fishing limits, which were left unsettled by the first international conference.

The final recommendation of the Sixth Committee, with the addition of one inconsequential amendment, was the same as the proposal of the United States and 10 other nations, and was approved by a vote of 42 for and 28 against with 9 abstentions.

An amendment, which did not pass, to the United States resolution supported by the Soviet Bloc and a majority of the Latin American Republics would have postponed any action and consideration of this matter until the next session of the General Assembly. This amendment was defeated by a one-vote majority, with 37 for, 38 against, and 5 abstentions.

It is anticipated that the General Assembly will endorse the meeting. The Committee felt that the conference would "contribute substantially to the lessening of international tensions. . ."

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#### GENERAL ASSEMBLY VOTES FOR SECOND LAW OF THE SEA CONFERENCE:

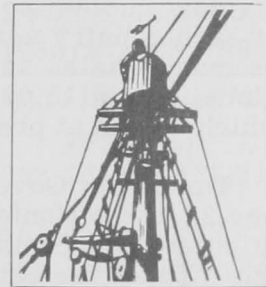
The United Nations General Assembly on December 10, 1958, voted to hold the second International Conference on the Law of the Sea in March or April 1960. This action, which amended the proposal of the Sixth Committee for an earlier meeting (summer of 1959), was adopted by a vote of 68 for, 6 against, and 3 abstentions. The United States voted for the amendment proposing the later date.

The move to hold the meeting at a later date was initiated by Mexico, Ecuador, and others. It is reported that one of the major reasons why the later date was desired by certain Latin American republics and others was that it gave them another meeting of the General Assembly and a February 1960 meeting of the Organization of the American States to prepare their positions for the second conference on the law of the sea.

#### WHALING

##### FIVE NATIONS DISCUSS DIVISION OF 1958 QUOTA:

Representatives of Great Britain, Norway, Russia, Holland, and Japan attended a conference held in London the latter part of November 1958. The conference was convened by Great Britain with the objective of securing an agreement for individual quotas rather than a global quota for countries whaling in the Antarctic.



The growing expenditure on whaling by Russia and Japan made the conference a critical one. These countries are mounting an increasing number of expeditions. The cost of one whaling expedition from Britain costs between £6-£8 million (US\$16.8-22.4 million), and a poor catch can be disastrous. Japanese companies have the advantage of a large domestic market for whale meat for human consumption and of low wages. The Russian



## International (Contd.):

fleet appears to be subsidized. Whale oil prices are falling because of lower margarine consumption and large supplies of other oils.

Unlike Japan, Russia is outside the existing agreement between Holland, Norway, Japan, and the United Kingdom, which limits the number of whale catchers to be used in the 1959 season. Norway has threatened to withdraw from the International Whaling Convention of 1946, and it is suggested Great Britain might do likewise, on account of the large cost of financing, which spells disaster if the catch is poor. If the total catch permitted can be equitably divided, this would not be necessary.

The London Daily Telegraph of November 17 suggested that the International Whaling Convention of 1946 might break down if Russia does not agree to a system of voluntary individual quotas for signatories of the Pact, rather than the existing global quota. It said the International Whaling Commission, of which 17 countries are members, has so far served its purpose of conserving whale stocks. But five nations were to meet on November 19 to discuss voluntary individual quotas, so as to avoid the race of each country against the other to get as many whales as possible before the global quota (15,000 blue-whale units) which exists at present is filled.

The Soviet Government on November 27 at the Conference agreed to a stipulated percentage of the total quota--one-fifth of the catch taken by the five nations.

In further consideration of the whaling problem, a four-man Norwegian delegation led by the Minister of Industries visited Moscow from November 3-6, 1958, to discuss Russia's plans to expand its Antarctic whaling fleets.

The Delegations attending the London Whaling Conference concluded their deliberations on November 27, 1958, and agreed upon certain recommendations to their Governments.

The recommendations would have effect for a 7-year period beginning with the 1959/60 Antarctic pelagic whaling season and include two important proposals. The first is that there should be an over-all limitation of the number of fleets operated by the five nations in the Antarctic. The U. S. S. R. would be able to add not more than three new factoryships to her existing fleet while the total number of factoryships operated by the other four countries would not be increased. The second is that the annual total catch authorized under the International whaling Convention of 1946 should be allocated between the five nations participating in the fishery. Twenty percent of the annual total catch would be allocated to the U. S. S. R.; and there would be further discussions about the allocation of the remaining 80 percent with a view to concluding an agreement before June 1, 1959, among the five nations which have taken part in the Conference.

The agreement would cease to have effect if any outside fleet should engage in Antarctic pelagic whaling under the Convention.



## Australia

DEEP-WATER SHRIMP  
RESOURCES SURVEY PLANNED:

Extension of the survey of Australia's shrimp resources to deeper waters off the coast of New South Wales and Victoria is being considered. Giant tiger shrimp have been reported in these waters.

It is expected that during the next stage of the survey conclusive tests of the American balloon trawl will be conducted. (Australian Fisheries Newsletter, November 1958.)

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## ECONOMIC FISHERIES SURVEY:

The Australian Fisheries Department is conducting an economic survey of the structure of the fishing industry, involving marketing research in all States, the Minister for Primary Industry announced recently.

## Australia (Contd.):

The financial prospect for Australian fisheries provided cause for concern, he said. While the fishing industry supplied about half the fish eaten in Australia, with exports worth £5.5 million (US\$12.3 million) a year, large numbers of fishermen claimed they could not operate at a profit.

On the other hand many housewives regard fresh fish as almost a luxury, and thousands of families in inland districts rarely eat salt-water fish.

"Many of our fishing grounds either have been fished out or are yielding relatively poor catches. . . We must try to find new grounds," the Minister stated.

"There is one branch of fishing that has hardly been tapped in Australia, though it could yield very substantial results. It is the netting of pelagic fish which are so much exploited in the northern hemisphere. In Australian waters they include tuna, sardines, jack mackerel, anchovies, and sprats.

"The demand in Australia for fish is growing with the rising population, many of whom are migrants from fish-eating countries. So there is a real potential for increased fish production, particularly of fresh fish.

"Despite the present crisis, our fisheries are an expanding industry. Australian fishermen have proved themselves people of considerable enterprise, and the Commonwealth Government aims to help them as much as possible," the Minister concluded.

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#### FISHERY PRODUCTS IMPORTS, 1957/58:

Australian imports of fish and fish products totaled 52,364,237 pounds, valued at £6,103,408 (US\$13.7 million), in fiscal year 1957/58 (July 1, 1957-June 30, 1958). This was a rise of 31.0 percent over the 1956/57 imports of 39,969,215 pounds and was only slightly below the record of 52,406,380 pounds in 1955/56.

During 1957/58, import restrictions were eased on certain fish items, namely fresh and frozen, smoked, dried, and salted fish. The increase in fish imports is due to importers taking advantage of such relaxations.

Table 1 - Australian Fresh and Frozen Fishery Products Imports, 1956/57-1957/58

Country of Origin	1957/58	1956/57
	. . . . (Pounds) . . . .	
New Zealand . . .	6,341,165	7,860,397
South Africa . . .	6,215,048	6,111,174
United Kingdom . . . . .	5,937,275	3,616,750
Denmark . . . . .	2,256,604	659,888
Hong Kong . . . . .	775,638	4,987
Norway . . . . .	557,661	140,120
Japan . . . . .	438,215	90
Netherlands . . .	268,334	124,505
China . . . . .	159,418	15
Germany . . . . .	104,691	11,204
Other . . . . .	108,897	1/270,031
Total . . . . .	23,162,946	18,799,161

1/ Includes 222,383 lbs. from Jamaica.

Imports of fresh and frozen fish accounted for 44.2 percent of total fishery imports--23.2 million pounds (valued at £2.2 million or almost US\$5 million), a rise of 23.2 percent over 1956/57.

Table 2 - Australian Canned Fishery Products Imports, 1956/57-1957/58

Country of Origin	1957/58	1956/57
	. . . . (Pounds) . . . .	
Japan . . . . .	6,382,784	5,531,211
United Kingdom . . . . .	4,183,653	4,783,476
Norway . . . . .	2,386,118	2,946,328
Canada . . . . .	1,841,905	1,459,190
Germany . . . . .	817,362	1,073,041
Portugal . . . . .	576,614	437,185
U.S.S.R. . . . .	440,471	7,244
Morocco . . . . .	106,357	96,405
Denmark . . . . .	83,056	46,978
Netherlands . . .	68,147	36,974
Other . . . . .	230,920	284,547
Total . . . . .	17,117,387	16,702,579

Although New Zealand was still the principal country of origin of frozen fish, receipts from that country fell markedly during the year. This was more than offset by increased arrivals from the

## Australia (Contd.):

visional agreement, pending a formal decision as to Australia's claim to control of the pearl shell beds beyond the three-mile limit, the Japanese have agreed to Australian control over all pearl-shell fishing off the Australian coast.

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NEW SOUTH WALES TUNA FISHING SEASON PROMISING:

Although quantities received early were fairly small, the tuna season on the South Coast of New South Wales was expected to be very good.

The Manager of the cannery at Eden said that from the outset of the tuna run in 1958 the fish had been much larger than at the same time in 1957. They had averaged about 25 pounds in weight, compared with 14 or 15 pounds early in 1957. Some fish of up to 35 and 40 pounds were being caught in 1958.

Another favorable factor was that more fishermen were engaged in catching tuna in 1958: from 20 to 25 boats were operating. The firm owning the Eden cannery had undertaken to receive 2,000 metric tons over a period, which would be a record quantity.

The tuna run began off Kiama about the first week in September 1958, and the fish were next caught out of the Coogee and Bondi areas of Sydney. Total catch to October 3, 1958, of 170 tons was greater than that to the same date in 1957 but well below the 280 tons to the same date in 1956. Small lots of tuna were coming from Bermagui waters and on October 2 two boats obtained about 11 tons 25 miles out of Moruya. (Australian Fisheries Newsletter, November 1958.)

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TASMANIAN SCALLOP FISHERY, 1958:

The estimated catch during Tasmanian's 1958 scallop fishing season of three months, May 1 to July 31, is in excess of 367 metric tons of meats. This represents a drop from the previous season

(429 tons), but important developments have given reason for optimism about the future.

The Senior Inspector of Fisheries for Tasmania states that the scallop fishery shows a pattern of fluctuation over the years, probably brought about by the seasonal effect of spawning and settling of spat.

An interesting sidelight on the season's operations is provided by the Senior Inspector's references to the use of an English-type dredge.

Table 1 - Australian Scallop (Meats) Landings, 1945-58

Year	Quantity Metric Tons	Year	Quantity Metric Tons
1958	367	1951	160
1957	429	1950	210
1956	516	1949	298
1955	511	1948	376
1954	373	1947	396
1953	332	1946	442
1952	145	1945	251

At the outset 65 boats were working in the Channel areas, where very good catches were made. The greater part of the catch from the older beds in the mid-channel consisted of scallops that had grown to size since the previous season's fishing.

In Great Taylor Bay, where heavy concentrations of young scallops were present during the preceding season, the shell was of better size, but roe not quite as advanced. This ground provided a large part of the total season's catch.

Toward the end of May 85 boats were engaged in all areas, with 70 operating in the Channel, 12 in Norfolk Bay, and 3 in Coles Bay on the East Coast.

As catches fell off, owing to the intensive fishing, several boats returned to spiny lobster fishing during June, and some moved to the East Coast scallop grounds and explored for new beds.

Norfolk Bay, which in 1956/57 maintained the greater part of the fleet, this year maintained about 10 boats only, with moderate scallop catches. The stocks worked over the past three years in this



Australia (Contd.):

United Kingdom, Denmark, Hong Kong, Japan, and Norway.

(4.4 million pounds) were the principal component items brought into the country and the chief suppliers were Japan, the United Kingdom, Norway, and Can-

Table 3 - Australian Fishery Products Imports, 1945/46-1957/58

Fiscal Year	Total	Fresh and Frozen	Canned	Smoked	Salted	Other <sup>1/</sup>
(Pounds)						
1957/58 . . .	52,364,237	23,162,946	17,117,387	9,697,573	2,238,544	147,787
1956/57 . . .	39,969,215	18,799,161	16,702,579	3,481,852	909,552	76,071
1955/56 . . .	52,406,380	19,256,593	23,194,577	7,742,506	2,054,976	157,728
1954/55 . . .	46,953,062	18,488,058	20,158,217	6,774,372	1,376,928	155,487
1953/54 . . .	38,260,271	15,764,369	15,446,003	5,632,556	1,265,152	152,191
1952/53 . . .	22,512,834	9,664,000	5,749,097	6,264,053	770,336	65,348
1951/52 . . .	47,323,608	16,906,065	22,587,357	6,298,345	1,334,032	197,809
1950/51 . . .	42,694,920	11,638,895	22,688,154	7,179,131	969,360	219,380
1949/50 . . .	33,143,315	6,624,777	17,445,621	7,898,633	960,624	213,660
1948/49 . . .	35,194,560	11,300,678	19,563,423	3,621,046	371,728	337,685
1947/48 . . .	33,482,201	8,182,761	20,572,917	2,922,068	358,624	1,445,831
1946/47 . . .	15,270,138	5,174,007	8,379,009	769,412	706,608	241,102
1945/46 . . .	9,052,876	2,606,001	5,955,086	44,830	434,448	12,511

<sup>1/</sup> From 1945/46 to 1948/49 includes oysters in shell and potted or concentrated (incl. extracts of, and caviar). From 1949/50 to 1957/58 only potted or concentrated products.

All States, except Tasmania, shared in this expansion of imports of fresh and frozen fish, but by far the greatest proportion went to New South Wales, Victoria, and Western Australia.

Canned fish imports increased 2.5 percent in 1957/58--from 16.7 million pounds, valued at £2.8 million (US\$6.3 million) in 1956/57 to 17.1 million pounds, valued at £3.1 million (almost US\$7.0 million). Salmon (6.8 million pounds), herring (4.6 million pounds) and sardines

ada. Canned fish imports at 17.1 million pounds were considerably less than in many postwar years.

Although both comparatively small items, smoked or dried and salted fish imports showed very large increases in volume and value in 1957/58. A marked rise in imports from South Africa largely accounted for the substantial rise in smoked and dried. (Australian Fisheries Newsletter, November 1958.)

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#### JAPANESE BANNED FROM TAKING PEARL SHELL OFF WESTERN AUSTRALIA:

The Australian Commonwealth Government announced in mid-November 1958 that Japanese pearl-shell fishermen had been banned from operations in the waters off Western Australia during the past season (ended about November 1). According to an official of the Commonwealth Fisheries Office, the ban's purpose was to conserve the Western Australian pearl shell grounds. A survey, started over a year ago, indicates that these grounds are becoming depleted.

The ban on the Japanese operations did not apply to the Australian pearl-shell fishermen. The Japanese were permitted to fish for pearl shell off the coasts of Queensland and the Northern Territory. The Government is expected to appraise the situation before the next season begins about May 1959.

The Australian State Governments control pearl-shell fishing within three miles of the coast, while the Commonwealth Government has control beyond that limit. The Japanese are not permitted to fish within the three-mile limit in any part of Australia. Under a pro-

### Australia (Contd.):

area have been practically all mature scallops, with very limited amounts of young scallops, and it was not expected that the high catch rate of 1956 could be maintained.

Fortunately, many signs of young scallops have now been observed on all Norfolk Bay beds, indicating a good spawning in 1957, but it could be from 4 to 5 years before this young stock grows to market size.

The mainstay of the scallop industry, the D'Entrecasteaux Channel, cannot be expected to maintain the heavy concentration of boats that has taken place in recent years, but the grounds are by no means depleted, as many millions of young scallops in various age groups are present on the greater part of the worked beds.

An important development, which is encouraging for future years, has taken place on the East Coast, where some good spots were located and worked, during the last month of the season.

For the first time, good catches of very large scallops were taken at Maria Island. These were the largest scallops landed for many years. In some cases scallop meats taken from this ground weighed up to 4 oz. per scallop, cleaned weight.

The Coles Bay grounds were extended and good catches were made in from 12 to 14 fathoms. The usual depth at which scallops are taken is from 7 to 10 fathoms.

The new English-type dredge used by some boats has a decided advantage in deeper water, and apparently on the more uneven bottoms on the coastal strips. It also allows faster towing than the normal dredge. (Australian Fisheries Newsletter, November 1958.)

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### TRAWLING COMPANY FORMED TO FISH IN GREAT AUSTRALIAN BIGHT:

The Federal Government has formed the Southern Trawling Company Ltd.,

with funds from the Fisheries Development Trust Fund, to commercially exploit the fishery resources of the Great Australian Bight. This Bight is a wide area off the south coast of Australia. It is the Government's belief that the venture will be a commercial success; if it is, private investors will be invited to buy out the Government's interest.

The new company will have a nominal capital of about US\$1,124,000, with \$337,000 for initial capital. An additional \$247,000 will be loaned the company to purchase a modern Diesel trawler.

The Australian Government's Fisheries Development Trust Fund is specifically for the financing of fisheries projects which would not otherwise be undertaken. If the present project is successful, the loan will be returned to the Trust to finance other new projects. The fund was originally formed from the proceeds from the sale of a Government-owned whaling station.



### Canada

#### BRITISH COLUMBIA FALL HERRING CATCH GOOD:

The British Columbia fall herring catch assumed record-breaking proportions. By November 1958 a total of 125,874 tons had been taken, an all-time record, compared with an average over the last four years of 52,400 tons. Even in 1955, when a record seasonal catch of 253,396 tons was taken, only 27,634 tons had been taken in that same period.

This remarkable run is attributed to good spawning and ocean conditions.

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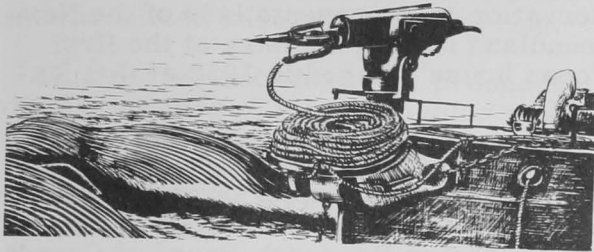
#### BRITISH COLUMBIA WHALE CATCH HIGHER FOR 1958 SEASON:

The landings of whales in British Columbia during the April 1-September 30, 1958, season increased to 774 whales as compared with 635 landed in 1957. The landings were made by six whale catchers operating out of Winter Harbour on the north end of Vancouver

## Canada (Contd.):

Island. The season was cut short by bad weather on September 18.

WHALE HARPOON GUN



Over 500 of the baleen-type plankton-feeding fin whales were captured. Other varieties included 114 bottom-feeding sperm whales and 8 blue whales. Other species found off the British Columbia Coast are sei and humpback whales.

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#### CAUSES OF FLUCTUATION IN STOCKS OF HADDOCK ON NORTH ATLANTIC BANKS:

Fluctuations in haddock stocks on North Atlantic banks could well lie with the variable ocean currents which sweep the haddock spawning areas. Eggs and larvae may thus be carried off into areas of great depth and perish in the millions. Although one female haddock may release from 100 thousand to two million eggs, the chances of growing to an adult stage are full of risks. This is the opinion of a St. John's (Newfoundland) Biological Station biologist speaking on the biology, distribution, and supply of haddock before representatives of the Newfoundland fishing industry at the first "open house" held in 1958 at that Station.

"Perhaps only one egg in 20 or 30 thousand or more may actually survive," the biologist said. "Many are eaten by predators at various stages of growth, many eggs may not be fertilized, and many more may drift off the grounds at the mercy of the ocean currents."

Fluctuations in the supplies of haddock on the St. Pierre and Grand Banks have for some years been accurately predicted by scientists at the St. John's Biological Station. At the present time the St. Pierre Bank is going through a period of low supply, but fishing continues to be

fairly good on the Grand Banks and there is evidence of a new "brood" coming along which could maintain the fishery at a satisfactory level. Both the St. Pierre and Grand Banks depend on new year-classes of fish to replenish the populations and when, for various reasons, spawning is unproductive, a decrease in the stock can be foreseen a few years ahead.

Haddock grow much more slowly on the Grand Banks than the races found on more southerly grounds, such as Georges Bank. For example, a 3-year-old haddock on Georges Bank averaged about two pounds, while one of the same age on the Grand Banks weighed about one-half pound. (Trade News, October 1958, Canadian Department of Fisheries.)

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#### ILLEGAL LOBSTER FISHING ATTACKED:

Reports by Canadian fisheries officers indicate an upswing in illegal lobster fishing on the Canadian Atlantic coast. The prosecutions and confiscations in 1958 as of September were almost level with the total for all of 1957. Prosecutions for violations of fisheries regulations--most of them involving illegal lobster fishing--came to 718. There were convictions in all but 12 cases. Fines levied in all convictions totalled more than C\$12,000.

For years the Department of Fisheries has been waging a campaign to encourage compliance with and enforce lobster laws.

In the Maritimes there are more than 17,000 lobster fishermen. With planes, patrol boats, and automobiles fisheries officers carry on practically a seven-day-week around-the-clock battle to protect the industry which in 1957 put more than C\$12,300,000 into the pockets of fishermen. Lobsters are by far the most valuable segment of the multimillion dollar fishing industry in the three Maritime Provinces of Canada.

There are no accurate figures on the number of illegal lobsters caught, but, judging from the thousands of illegally-caught lobsters liberated each year by fishery officers, the take by poachers is a substantial one.

Abetted by certain unscrupulous operators, poachers have built up a thriving black-market trade in poached and under-size lobsters. The bulk of the illegally-caught lobsters usually end up in cans. Dozens of outlaw makeshift canneries have been operated in isolated spots where poachers can their lobsters. However, some licensed canneries continue to contribute to the racket by handling illegal catches. What makes the lobster black market successful is the heavy demand from Halifax to Vancouver.

Since without the cooperation of cannery operators black-market lobster operations would not be profitable, fisheries officers keep close tabs on canneries.

The Department of Fisheries is using a two-bladed weapon in its war against poaching--law enforcement and education. By the latter, the Department hopes to convince all fishermen that conservation laws are to protect fishermen and the industry.

Officials of the Department feel that as fishermen become more aware of the need for conservation to protect their future, wholesale poaching will subside. Poachers comprise only a tiny minority of the mass of fishermen, and most le-



## Canada (Contd.):

gitimate fishermen are behind the Government's effort to ensure a healthy lobster industry that leaves millions of dollars in the Maritime Provinces every year. (Trade News, October 1958.)

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### NEWFOUNDLAND FISHERMEN AIDED BY FEDERAL GOVERNMENT:

Early in November 1958 the Canadian Minister of Fisheries announced that the Federal Government in cooperation with the Newfoundland Provincial Government would build 20 fishing stages in Newfoundland. The estimated cost of C\$500,000 will be borne by the Federal Government. This aid serves a two-fold purpose: (1) it provides winter work for fishermen in the communities where the 1958 fishery had suffered worst, and (2) it brings about a more efficient and economical fishery operation.

The plans call for the erection of a community stage consisting of a building and a wharf. Each stage is to be used by 10 or more groups of fishermen. The building will contain working space for each fishing group, and will enable them to produce and store fish under better conditions, thus raising the quality. It is thought this plan will also facilitate shipping since a community's production will be available at one point.

During a visit to St. John's, Newfoundland, the Minister of Fisheries indicated these stages would be built in the communities of Sandy Cove in the Straits of Belle Isle, Conche, Fluer de Lys, Coachman's Cove, Pacquet, Beaumont, Triton, and Leading Ticks, in Notre Dame Bay; Crow Head and Lower Jenkins Cove on Twillingate Island; Deep Bay and Island Harbor on Fogo Island; Musgrave Harbor, Lumsden, Cape Freels, and Summerville in Bonavista Bay; Bonaventure in Trinity Bay; Lower Island Cove in Conception Bay; Point Lance and Little Paradise in Placenta Bay. All these communities are situated on the northeast, and east coasts of Newfoundland, with the exception of two which are on the south coast. These communities were chosen over others because they serve a larger number of fishermen, the economy of the area justifies their need, and they have a better future. The Minister stated during his discussion with the Fish Trades Association and members of the Provincial Department of Fisheries that if these stages proved successful, others would be built. He also said other schemes to aid the Newfoundland fishery, which is reported to be in the worst state in 50 years, are under consideration.

During 1958 the Federal Government has provided several other types of aid for the Newfoundland fishery as follows:

In an effort to solve the ever-present perplexing bait distribution problem, the Federal Government in October introduced on a trial basis four mobile bait lockers. These electrically-operated lockers, costing about C\$6,500 each, have a capacity of 20,000 pounds and can be dismantled and moved to any area where the bait shortage is most acute. Two refrigerator trucks have also been provided to truck bait from freezing depots to holding units.

Also during 1958 the Federal Government purchased approximately one million pounds of bait from the United States, Nova Scotia, and a European country. While it has not been possible to learn the cost of the bait, it is being sold to fishermen at four cents a pound. This probably represents cost price.

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### RESEARCH SHOWS DECLINE IN OCEAN PERCH RESOURCES:

The fisheries research scientists of Eastern Canada are not too happy about the future of the ocean perch fishery in

North Atlantic areas where Newfoundland druggers, and others, now operate. This is due to the slow growth rate of this species and the poor survival rate of ocean perch larvae. A St. John's Biological Station biologist made this observation to representatives of the Newfoundland fishing industry at the first "open house" staged in 1958 at that Station.

However, the biologist expressed the hope that further exploratory fishing based on knowledge already gained by the Fisheries Research Board of Canada would locate new fishing areas that would enable the fishery to continue on a profitable basis.

Research on ocean perch has been extensive in Newfoundland since that species became of commercial significance there in 1946-47, with the advent of the dragger fleet. An extensive program of exploratory fishing was conducted and ocean perch were found in commercial quantities in three comparatively nearby areas: the eastern and southwestern slopes of the Grand Banks, the Gulf of St. Lawrence, and in Hermitage Bay. These have continued to be the main source of ocean perch for the Newfoundland industry. Promising results had also been obtained through exploratory fishing north of the Grand Banks, at Flemish Cap and off southern Labrador, but these findings had not yet been followed up by the Canadian commercial fishing fleet. At Flemish Cap large Russian factoryships are reported to be carrying out highly successful operations. (Trade News, October 1958, Canadian Department of Fisheries.)



## Chile

### REGULATIONS FOR FOREIGN VESSELS FISHING IN TERRITORIAL WATERS ISSUED:

In decree No. 946 of November 12, 1958, the Chilean Ministry of Agriculture set forth the procedure to be followed by the owners of foreign vessels desiring to fish in Chilean waters. It stipulates that permits will be issued for a

Chile (Contd.):

maximum period of 3 years and will not be renewable. Upon the expiration of a license, a foreign fishing vessel will have to depart from Chilean waters or be nationalized under the Chilean flag.

This decree sets forth the procedure whereby owners of foreign fishing vessels may apply for fishing permits, but the cost of the permit is not specified. It is believed that a regulation setting forth this detail and some explanations of procedure not included in the present decree will have to be published later.

The decree also specifies that fishing vessels of wood, to qualify for the issuances of fishing permits, must be no more than five years old, and no more than 10 years old if of other material.



Colombia

EXPANSION OF SHRIMP EXPORTS PLANNED:

A plan to develop the Colombian shrimp exporting industry to earn about US\$4 million annually was revealed in November 1958 by the Minister of Agriculture. The plan includes increased loans to the shrimp fishing companies, the construction of net-making plants, expansion of freezing facilities, and more effective policing of territorial waters to guard against illegal fishing. The Minister stated that technical advisors from the Food and Agriculture Organization will be sent to advise the Government on the plan.



Cuba

CONVENTION WITH THE UNITED STATES ON THE CONSERVATION OF SHRIMP RATIFIED:

Press reports indicate that the Cuban Senate on November 19, 1958, ratified the Convention signed on August 15, 1958, by the United States Ambassador and the Cuban Minister of State, for the conservation of shrimp in the Gulf of Mexico.

The Cuban Ministry of State confirmed the above information verbally and informed that the Ministry would be shortly ready to prepare the necessary instruments of ratification to be exchanged with the United States Government. The Convention will be considered by the United States Congress during the session which begins in January 1959.

Note: Also see Commercial Fisheries Review, October 1958, p. 44.



Egypt

MOTOR VESSELS ENGAGED IN FISHING:

The number of Egyptian fishing vessels equipped with power in 1958 totaled 486. Of these vessels, a large majority are sailing vessels equipped with auxiliary power, according to a November 3, 1958, dispatch from the United States Consulate in Alexandria.

Egyptian Motor Fishing Vessels by Type and Port		
	Sardine Vessels	Vessels other than Sardine
	.....(Number).....	
Alexandria . . .	-	66
Port Said . . .	54	61
Rosetta . . . .	65	-
Damietta . . .	210	-
Suez . . . . .	-	30
Total . . . .	329	157



Fiji Islands

DEVELOPMENT OF FISHING INDUSTRY PROPOSED:

Proposals for a fishing industry in the Fiji Islands are made in a report of a committee set up in 1957 by the Fiji Government following a survey carried out by a South Pacific Commission fisheries officer.

The report recommends that a fisheries officer be appointed to advise on and supervise the development of sea and inland fisheries.

Other suggestions include encouragement of long-line tuna fishing, the estab-

## Fiji Islands (Contd.):

lishment of a fish cannery, and the provision, with Government assistance, of refrigeration facilities for bulk storage of fish. (Pacific Islands Monthly, October 1958.)

Note: Also see Commercial Fisheries Review, June 1957, p. 41.



## France

### NEW-TYPE SMALL TRAWLER BUILT:

A new type of small trawler with a number of interesting features was completed recently in France. It is to fish in the Atlantic on trips of 2 to 3 weeks' duration.

Her principal dimensions are as follows: length between perpendiculars 76 feet 3 inches; length over-all 87 feet; breadth, moulded 21 feet 10 inches; depth, moulded 12 feet; and draught (light) 11 feet.

The hull is of 8-millimeter (5/16-inch) steel plate, electric-welded throughout; the deck is covered with 2.5-inch teak-iroko.



All accommodations are located aft--skipper's cabin, two officers' cabins, an 8-berth crew's quarters and galley with sink and oil-fired cooking range. There is also a wash-room and shower for the crew, to which water is pumped electrically, under pressure. All living quarters are heated by a by-pass from the engine cooling system, which also supplies a hot-water tank for washing purposes.

The fishhold, which has a capacity of 3,531 cubic feet, is insulated from the plating and engineroom by expanded polystyrene, the fish-hold deck being of cellular concrete and cork. It is lined throughout with a corrosion-resistant aluminum alloy, the shelves and stanchions being of the same material. Refrigerated air, at a temperature of 32-37.4° F. is circulated transversely across the fishhold and over the shelves. The refrigerator equipment is duplicated in case of failure, one compressor being driven from the main engine, the other by the auxiliary. The refrigerant is Freon 12. Forward of the fish room is space for net storage.

Main propulsion is provided by a supercharged 375 hp. Diesel engine at 500 r.p.m., and fresh-water cooled on a closed circuit. This drives the propeller through a reverse-reduction gearbox having two ahead speeds; 280 propeller r.p.m. for steaming, and 220 r.p.m. for trawling, thus enabling the engine to work at maximum efficiency necessary under both conditions. The gear box can be operated both from the engineroom and wheelhouse, and is interlocked with the engine throttle to prevent misuse. Starting is by compressed air, and both main and auxiliary engines can recharge the cylinders.

The main engine also drives the trawl winch via a belt, the winch having a capacity of about 800 fathoms of 0.71-inch diameter warp on each drum. An independent engine throttle control allows this to be driven when the propeller is stationary.

The auxiliary Diesel engine, which develops 17 brake horsepower at 15,000 r.p.m. also drives one of the two 3 kw. 24 v. generators, and two service pumps.

Provision is made for an alternative main engine installation of up to 450 brake horsepower and for an optional fish-hold arrangement without refrigeration, and with the light alloy replaced by plastic. (World Fishing, November 1958.)

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## SARDINE CANNING INDUSTRY, 1957:

Total landings of sardines in France (excluding territories) during 1957 amounted to about 14,513 metric tons. Of this total, Atlantic coast canneries used 6,100 tons and Mediterranean coast canneries used 7,100 tons.

The canneries produced about 330,000 cases of canned sardines of French origin in 1957. They also canned about 370,000 cases of imported sardines.

France's total production of canned sardines in 1957 amounted to about 700,000 cases. Adding 1,700,000 cases canned in 1956, we arrive at a total of 2,400,000 cases for 1956-57, or an average annual production of 1,200,000 cases. This quantity was ample for satisfying the demand for domestically-packed sardines. (Industria Conservera, Vigo, Spain, September 1958.)



## French West Africa

### TUNA FISHING AND CANNING INDUSTRY:

Dakar's ample refrigeration facilities have been a key factor in the success of the tuna industry in French West Africa. In 1957, more than 3,000 metric tons of tuna were frozen and shipped to the French mainland and 4,000 tons were stored at -18° F. for later shipment.

There are several tuna canning factories in Dakar. Some are subsidiaries of French canning firms and others are owned by local interests. These factories canned a total of 1,567 tons of tuna in 1957.



### French West Africa (Contd.):

Despite the danger of saturation of the French mainland's tuna market, Dakar's tuna fishing industry is being expanded. Backed by the enormous fishery potential of French West Africa, France seeks to become the leading provider of tuna to other members of the European Common Market. (*Industria Conservera*, Vigo, Spain, August 1958.)



### German Federal Republic

#### CANNED FISH PRODUCTION DECREASES IN 1957:

The value of canned fishery products manufactured in the German Federal Republic decreased from 321 million deutsche marks (US\$76.4 million) in 1956 to 304 million marks (\$72.3 million) in 1957. The two principal causes of the decline were fluctuations in the supply of fish and a shortage of manpower.

According to official statistics, the production of canned fish in 1957 amounted to only 37,000 metric tons as compared with 46,000 tons in 1956. Production of pickled fish also dropped from 61,000 tons in 1956 to 57,000 tons in 1957. Smoked fish production decreased from 28,000 to 25,000 tons.

The German fish canning industry has also suffered from foreign competition. In 1957, Germany imported 12,000 tons of canned sardines in oil and 4,900 tons of other canned fish--mostly Japanese tuna. (*Industria Conservera*, Vigo, Spain, September 1958.)

Note: Values converted at rate of 1 deutsche mark equals US\$0.238.

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#### FIVE FISH-PROCESSING TRAWLERS TO BE BUILT WITH AID OF SPECIAL FUND LOANS:

The West German Minister for Federal Economic Assets has announced that loans amounting to DM6 million (US\$1,432,000) will be provided from the European Recovery Program Special

Fund for construction of five trawlers equipped for fish-processing. The costs of each vessel will be about DM3.5-4.0 million (US\$835,000-955,000). The vessel owners will have to raise 20-25 percent of the costs and one-third will be covered from the Special Fund. The balance will be financed via open capital market. Funds from the Federal Budget will be used to subsidize interest payments charged on these loans, reports the United States Embassy at Bonn, November 21, 1958.



### Greenland

#### LOAN TO BUY FACTORYSHIP FOR SHRIMP CANNING REQUESTED:

A loan of 350,000 kroner (US\$50,673) to buy a factoryship to be used to catch and can shrimp in Greenland waters was requested recently by the Danish Minister for Greenland from the Danish Commission of Finance.

It is estimated that the loan could be repaid after only three fishing seasons provided the factoryship's case pack during each season amounts to at least 300,000 cases of shrimp. This is only half of the production capacity of the vessel since it is based on only a six-months fishing season.

Biological studies have shown that Greenland's shrimp resources are plentiful, which leads to the conclusion that the factoryship would operate successfully. (*Industria Conservera*, Vigo, Spain, September 1958.)



### Iceland

#### FISHERY TRENDS, JANUARY-SEPTEMBER 1958:

Iceland's fish catch and the production of processed fish January-September 1958 was much higher than in the same period of 1957. Contracts for salted herring from the main North Coast season have been filled, and although the fall season for drift-net herring has been poor, herring again appeared in late October. The trawlers were getting good catches of ocean perch. The United States market improved, and exports to Russia diminished, though partly offset by rising exports to the Russian satellites.

A major problem involved in the proclamation of a 12-mile limit was that of establishing regulations for Iceland's own fleet of 44 trawlers. When the limit was extended to

## Iceland (Contd.):

4 miles in 1952, the enclosed area (including the whole of Faxa Bay) was closed to Icelandic and foreign trawlers without discrimination. Throughout the past summer a committee of trawler and motorboat representatives were endeavoring to agree on the degree to which the Icelandic trawlers should be allowed to fish within the new 12-mile limit after the proclamation on September 1, 1958.

Despite the restrictions on Icelandic trawler fishing, the trawlers (now mostly owned by municipalities) in 1958 enjoyed a far better season than in 1957. Their costs have risen, both for gear (because of the 55-percent exchange surcharge) and for wages, which have gone up a total of 21 percent since May 1958, including contributions of 6 percent to an unemployment insurance fund. But this has been more than offset by the fact that they have now been placed on an equal footing, as regards price, with the motorboats; the Export Fund Act of May abolished the old discrimination and granted a flat 80-percent support level to motorboat and trawler fish alike.

This together with improved catches has resulted in a condition where some trawlers are actually making money, whereas in 1957 they lost money. And the trawler owners have a different attitude towards new vessels.

Labor for the trawlers will be a real problem in January 1959. The Faroese Seamen's Union called its members off the Icelandic vessels last spring, after the winter season, in protest against the 55-percent surcharge on foreign exchange in the Export Fund Act. While most of these foreign seamen return home anyway at the end of the cod season, a proportion has always remained to work and the Icelandic trawlers, by paying higher wages, have found that they could man their vessels with native crews. But they will be hard pressed for crews in January, when they normally lose men to the motorboats for the main cod season.

The motorboats themselves have been having a somewhat harder time. The 80-percent support level was calculated on the basis of a 5-percent wage increase, as specified in the law, and while the motorboat operators have not yet granted seamen the full equivalent of what the trawlers are now paying, wages are already well above what had been anticipated in May 1958 and will have to rise further before the winter fishing season. It is considered virtually certain that the 80-percent support level will have to be raised.

The Icelandic fish catch of all types of white fish combined for the first nine months of 1958 was up 21 percent over the same period in 1957. As for herring, the fact that the total tonnage of herring was 10.6 percent lower than last year for the same period was less significant than the fact that herring of salting grade was up by 88 percent, so that the value of the herring catch as a whole was definitely higher in 1958.

The main herring season, off the North Coast during the summer months of 1958, was definitely better than in 1957. The improvement in the volume of herring of salting grade more than offset the reduction in the total tonnage of all herring, which was only 77,842 metric tons through August 31, 1958, as compared to 100,138 tons at the same date in 1957. All advanced sale contracts for salted herring were filled.

The secondary herring season, carried on in the autumn with driftnets off the Southwest Coast, was again disappointing in 1958, and for a month from mid-September the herring virtually disappeared, after only 35,000 barrels had been caught to fill advance contracts of 85,000 barrels to the U.S.S.R., Poland, and East Germany. But towards the end of October the herring appeared again off the Reykjanes peninsula, and the Icelanders believed that there was a chance of filling the contracts.

The output of the freezing plants was higher in 1958. By October 15, production had reached 62,310 tons of white fish fillets (cod, haddock, ocean perch, and flounder) for all Icelandic plants, whereas only 55,649 tons had been produced during the whole of 1957.

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## NEW PROCESSING PLANTS PROPOSED TO GOVERNMENT:

Proposals have been submitted to Iceland's Althing to establish a canning factory in Akureyri and another for the canning of spiced herring in Siglufjordur, for the purpose of utilizing sardine-size herring.

There also has been discussion of a proposal by a freezing plant in Isafjordur to acquire a United States shrimp peeling machine to permit further development of the ample shrimp beds off the north-west coast of Iceland (U. S. Embassy in Reykjavik, November 21, 1958).



## Indonesia

### EXPERIMENTAL LONG-LINING FOR TUNA IN INDIAN OCEAN:

Experimental long-line fishing for tuna was tried by Indonesians in the Indian Ocean near Tapanuli, Northwest Sumatra, with the Bima, a motor vessel of 20 tons capacity. The catch in 3 trips totaled 23,500 pounds, valued at Rp. 32,251 (US\$1,100). It consisted of 256 tunas, sharks, and sailfish, (FAO Indo-Pacific Fisheries Council Current Affairs Bulletin, July 1958.)



## Iraq

### TERRITORIAL WATERS EXTENDED TO 12 MILES:

On November 16, 1958, the Government of Iraq issued a decree claiming sovereignty over Iraqi waters and sea bed of the Persian Gulf up to 12 nautical miles from the low-tide mark. The decree provides that conflicts with territorial waters of other states shall be settled by negotiation.



## Israel

### SARDINE FISHERMEN PROTEST NEW JAPANESE-ISRAELI TUNA FISHERY:

The landing of the first catch of 240 metric tons of tuna by the newly-estab-

## Israel (Contd.):

lished Japanese-Israeli fishing company at Kishon Port was preceded by demonstrations and threats from Israeli sardine fishermen, who believed the new fishery endangers the sale of sardines. The Government has imposed on tuna landings a levy of IL70 (US\$39) a metric ton, but the sardine fishermen gave way only after the company promised to sell not more than one-third of the catch to canneries, while the remainder would be marketed fresh.

The sardine fishermen, limited in the scope of their activities, are afraid of competition from the new group, which can fish in Atlantic waters. The local sardine fishing industry has enjoyed considerable encouragement from the Government, although the sardines are only fair quality (U. S. Embassy in Tel Aviv, November 14, 1958).



## Italy

## JAPANESE VESSELS LAND ATLANTIC-CAUGHT TUNA:

Some of the 15 Japanese long-line vessels engaged in fishing for tuna in the Atlantic have landed their catches in Italy. These vessels include some newly-constructed additions of 1,000 gross tons which have a large radius of operation.

The Japanese vessels began fishing during the first months of 1957. Their total catch of tuna in 1957 in the Atlantic amounted to about 10,000 metric tons. Some of the catch landed in Italy was packed by Italian canneries. (Industria Conservera, Vigo, Spain, August 1958.)



## Japan

## FIRST ATLANTIC TUNA LONG-LINER RETURNS TO HOME PORT:

The 700-ton tuna long-liner No. 30 Hoko Maru (completed early in November 1957) returned to Japan on Decem-

ber 4, 1958, from a maiden voyage to the Atlantic that lasted nearly 13 months. Considerable interest has been accorded the report of the Hoko Maru's captain, for although tuna fishing by Japanese boats in the Atlantic is no longer news, the vessel is said to have been the first to engage in what are now called, perhaps by analogy with billiards, "cushion landings" in Panama for export to the United States.

According to the captain the vessel's first two trips were made in the Gulf of Guinea. On each trip of about 36 days of long-line fishing, she took a full trip of 400 metric tons of tuna, which was delivered at Venice, Italy. The third trip was made off northeastern Brazil, and this is believed to be the trip that was landed at Cristobal, Panama. After fueling at Curacao, the Hoko Maru tried fishing in the Caribbean, but with poor results, and finished the trip off the Guianas, and in 38 days of fishing caught a full trip to bring back to Japan.

The Atlantic grounds, as presently known, extend in a narrow belt along the Equator from Africa to South America, and are not very extensive. When Japanese boats began fishing there in the spring of 1957, catches ran around 13 tons a day, but late in that year they were down to 7-9 tons, and at present they are only 5-7 tons. The average size of the yellowfin tuna, now 125-139 pounds, seems to be declining also, as the number of boats fishing the ground increases. Fishermen think that, at the present rate of exploitation, the ground may be good for 5 or 6 more years, after which its future looks dim. The catch is said to be 80 percent yellowfin, the rest being made up of big-eyed tuna, albacore, and bluefin; marlin are so scarce as to be no problem.

The captain was of the opinion that Cristobal is an ideal place for transshipment landings, because of its proximity to the fishing grounds and the fact that it is a customs-free zone. On the problem of vessel size, although there has recently been a trend away from very large tuna boats in Japan, the captain felt that 500 tons gross is about the minimum size practicable for such long cruises, with



Japan (Contd.):

500-700 tons perhaps the most economical size range for Atlantic operations.

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GOOD RICE CROP MAY ADVERSELY AFFECT TUNA EXPORTS TO ITALY:

Frozen tuna exporters fear that a side-effect of the fourth consecutive heavy Japanese rice crop will be a downward turn in what has been a growing tuna export trade with Italy. For fiscal year 1958 the export quota for frozen tuna to that country was 10,000 metric tons, of which 7,500 tons were bartered for Italian rice, the rest being paid for in cash. During Japanese fiscal year 1959 (April 1959-March 1960), payment for all tuna exports to Italy will have to be covered by barter arrangements, according to trade sources.

On November 25, 1958, the Japan Frozen Food Export Association is reported to have petitioned the Fisheries Agency and Ministry of Trade and Industry to use their good offices to assure the import of 20,000 tons of Italian rice in Japanese fiscal year 1959 and the allocation of 70 percent of the value of the rice for the barter of tuna (about 7,000 tons of tuna). The exporters believe that there are prospects of bartering an additional 5,000-6,000 tons of tuna for other goods, and they thus hope for a total export quota for Italy of 12,000-13,000 tons of frozen tuna in fiscal year 1959. The exporters also wanted the decision on export licenses for this trade to be made in December 1958 at the latest, since the bulk of the exports are made directly from tuna-fishing vessels operating in the Atlantic, and operational plans for these vessels must be made well in advance.

It is reported, however, that the Japanese Government is strongly inclined to cut fiscal year 1959 imports of Italian rice to one-third of the 30,000 tons for fiscal year 1958. The Food Agency, which controls such imports, gives as its reasons the large Japanese supply resulting from four years of bumper crops, declining sales of foreign rice in Japan, and the fact that imports of 30,000 tons

in 1958 did not bring about a corresponding stimulation of export trade to Italy.

Unless the Food Agency modifies its stand, tuna exporters expect that fiscal year 1959 exports of frozen tuna to Italy will be 9,000 tons at best. The annual demand for tuna in Italy is estimated at 25,000-30,000 tons, and of this total the Japanese believe that they could supply 20,000 tons, if they had no export licensing problems. They fear that if their quota is cut for fiscal year 1959, a larger share of the market will be taken over by competing suppliers in Spain, Portugal, and Norway.

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TUNA LOIN SALES, OCTOBER-NOVEMBER 1958:

The Japan Frozen Food Export Association announced that from October 1 to November 24, 1958, sales of frozen tuna loins to United States and Canadian canners had reached a total of 1,324 short tons. This product had been under a Japanese export embargo for about one year until its export was reopened in October, at which time a tentative export quota of 3,000 tons was set for the remainder of the Japanese fiscal year through March 1959.

The loins for which sales contracts have been made since the lifting of the embargo were almost evenly divided between albacore and yellowfin tuna. About 40 percent of the loins (487 tons) were sold in California, 727 tons to Pacific Northwest packers, and 110 tons to Canada. The Maryland packer, who previously was the only important buyer of frozen tuna discs, is reported to have placed no orders since the embargo ended. Prices per ton f.o.b. for loins are US\$850 for albacore, \$640 for yellowfin under 100 pounds, and \$620 for yellowfin over 100 pounds.



**Republic of Korea**

PROGRESS IN PACKING PROCESSED FISHERY PRODUCTS MADE:

Korean laws relating to processed fishery products have been reviewed by a

### Republic of Korea (Contd.):

United States advisor. He then assisted in the preparation of a series of regulations setting up minimum quality, sanitary, and export licensing requirements for fish-processing establishments and certain frozen fishery products. These are being proposed for promulgation as ministerial orders to improve quality of processed fishery products and to assure first-quality products for export.

Plans were also made for developing a short course to train fish canners in plant sanitation and equipment maintenance. Recommendations were made to broaden the service of the Central Fisheries Experimental Station and the Central Fisheries Inspection section.

Some 4,500 pounds of frozen shrimp were packed commercially under the United States 8th Army inspection regulations and the first contract was awarded by the Army for the purchase of local fishery products for military and United States civilian consumption in Korea.

Under supervision of a fishery advisor, six cases of frozen and canned fishery products were prepared at the Central Fisheries Experiment Station and shipped to Honolulu as samples for establishing an export business. The shipment consisted of octopus, cuttlefish, scup or porgy fillets, flat fish fillets, dressed horse mackerel, headless shrimp, and peeled and headless shrimp.



## Mexico

### EXPORT DUTY ON FROZEN SHRIMP INCREASED:

The export duty on frozen shrimp was increased 0.5 percent ad valorem by a new decree published in Mexico's Diario Oficial of November 22, 1958 (effective November 25, 1958). The decree applies to export tariff items 041.00.11 (frozen shrimp) originating in the Gulf of Mexico, Salina Cruz, Oaxaca, and Santa Rosalia, Baja California; and 041.00.12 (frozen shrimp) originating in other regions. It establishes a duty rate for both items

of 2.50 pesos per 100 kilos net weight (about 9.1 U. S. cents a 100 pounds), plus 4.5 percent ad valorem. The previous rate on both items was 2.50 pesos per 100 kilos plus 4 percent ad valorem.

On the basis of the official valuation of 1,700 pesos per 100 kilos (about 62 U. S. cents a pound), the effect of the new measure will be to increase the applicable duty from 70.50 pesos to 79.00 pesos per 100 kilos (from 2.6 to 2.9 U. S. cents a pound), an increase of 12 percent.

In 1957, frozen shrimp ranked sixth among Mexican exports, with a total value of 274.5 million pesos (about US\$22 million) exported in that year. This product ranks in about tenth place among Mexico's exports during 1958, the United States Embassy in Mexico City reported on November 25, 1958.

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### FISHING FLEET INCREASES IN SIZE AND NUMBER:

From March 1957 to June 1958, the Mexican shrimp fleet increased 40 percent from 790 to 1,107 vessels. On June 30, 1958, according to the Mexican Bureau of Fisheries and Allied Industries, the Pacific shrimp fishing fleet had 663 trawlers and 4 freezerships and the Gulf of Mexico fleet had 440 trawlers. The increase for the 15-month period was 185 boats (38 percent) in the Pacific and 132 (43 percent) in the Gulf of Mexico.

Some of the new vessels were purchased in the United States, but most were built in Mexico. The Pacific fleet has been augmented not only by imports and construction, but also by transfer of vessels from the Gulf--mostly to Salina Cruz, Oaxaca, where the fleet was reported to have more than 90 vessels as of December 1, 1958.

The boom in shrimp-trawler building has ceased; only replacements are now on order in Mexican shipyards. The decree published on March 31, 1958, which placed a high duty on imported motor-driven boats 35 meters (about 115 feet) and less, has effectively stopped imports. Probably



A typical Mexican shrimp trawler.

## Mexico (Contd.)

more important than the decree in this regard has been the biological potential of the shrimp populations. The purchasers of shrimp boats neglected to consider this potential and, as a consequence, although 1958 can be considered an average year for shrimp production for the Mexican fleet in the Gulf of Mexico, the catch per vessel has dropped. For this reason a number of vessels have been transferred to the Pacific Coast where there has been a better than normal year. Unless the populations of shrimp on the Pacific Coast continue producing above average it is likely that 1959 may see the Pacific fleet in trouble.

As of June 30, 1958, the Mexican Bureau of Fisheries had registered 7,762 fishing boats. This was over 3,500 more boats than had been registered by the same date in 1957. However, the number of boats registered on any particular date, other than at the end of the year, is not particularly significant since the registrations are seasonal and valid for one year. It is estimated that when registrations are completed for the year, the number of fishing craft will be about 9,000 as compared with 8,566 registered in 1957. Comparison of new construction by tonnage classes indicates a trend towards larger vessels. The number of vessels in the 10-50 net ton group registered between January 1-June 30, 1958, increased about 18 percent and vessels in the 50-100 net ton class increased by 19 percent.

About 80 percent of the Mexican fishing fleet consists of boats of 3 net registered tons or less. These are principally dugout canoes and skiffs, many of which are powered with outboard engines. They are used primarily in the taking of shrimp with cast nets, lobsters with traps, abalone with diving equipment, and subsistence fishing with cast nets and beach seines.

Boats between 3 and 10 tons, many of which are open launches, operate in the bays, lagoons and esteros, and along the beaches. This fleet, which generally uses beach or haul seines, provides most of the market fish caught in Mexico.

Most of the vessels 10 and 100 tons are shrimp trawlers using otter trawls. The double-rig trawl is becoming more and more popular in Mexico.

Vessels larger than 100 tons are used for catching tuna, sardines, and mackerel, and also for catching and freezing shrimp.



## Norway

### MORE FISHERY PRODUCTS FROZEN IN ALGINATE JELLY:

A number of Norwegian processors for several years have been freezing mackerel fillets in alginate jelly in order to increase their storage life. Later, herring and herring fillets were frozen by the same process. Freezing in alginate jelly has now also been adapted for processing whale meat for human consumption. Whale meat is frozen in blocks of 44 pounds, which are then cut in one-pound blocks. Each block is glazed in alginate jelly, wrapped in cellophane, and packed in consumer cartons. A Norwegian firm has established a large export market for whale meat preserved in alginate jelly.

Freezing in alginate jelly is claimed to protect products from dehydration and rancidity, and to preserve the natural freshness, flavor, and color of the products for an indefinite time.

In the bait-herring industry, the results obtained by the alginate freezing method are surprising. Two-year old bait herring frozen in alginate jelly has proved to be equal to newly-frozen and not stored bait herring. The method has also been adapted for the export of brook trout. Another Norwegian firm has exported dogfish glazed in alginate jelly.

A special alginate powder has been developed for making the jelly for freezing shrimp. The alginate jelly, it is claimed, protects the shrimp from drying and certain ingredients in the jelly weaken the effects of the enzyme that is the cause of the discoloration. The special jelly for shrimp is soluble in water, and is washed off when the shrimp are thawed.

The alginate freezing method has been adapted by an increasing number of plants in Norway, where it was developed, and the fish-processing companies of other European countries.

The new process is a block-freezing method and the liquid used is an aqueous thickened solution containing alginate, certain salts, and a dilute acid. The solution is so formulated that, after a certain time (which can be regulated), it becomes a firm jelly. The salts which are added give the jelly a freezing point between 4° and 5° C. (39-41° F.) The dispersal of the salt in the jelly remains constant during the freezing, and this prevents a concentration of salt on the surface of the frozen fish. By adjusting the concentration of acid it is possible to calculate the setting time of the jelly in advance. This is regulated so that a setting time between 10 and 20 minutes is obtained.

The principle of this method is that the fish or fillets are dipped in the solution and packed in rows in cartons. Since the solution is highly viscous, the packing material may be simple and cheap. As soon as the carton has been filled, more solution is added in order to seal all the spaces.

During the freezing, the jelly forms into a hard, icy composition which is practically impervious to air. When thawing it regains its jelly form at 4 to 5° C. While the fish is still frozen it can thus easily be taken out of the block and separated. The jelly between each fish acts as a separating medium; it does not bind the fish.

When treated as described, each fish is covered with a layer of jelly which, being practically impervious to air, protects against rancidity. Fish frozen in the jelly, in contrast to the usual frozen fish, retains its original shine to a high degree. The jelly does not easily dry up during storing. If drying should occur at a higher temperature, the jelly will form a film which again has a protective effect, although to a lesser extent.

In the first tests of the alginate jelly made in 1952, it was confirmed that the freezing time for herring in the jelly was reduced by up to 20-25 percent as compared with ordinary freezing methods.

It was stated by the test laboratory that after 5 and 6 months' storage untreated herring was just on the point of being unfit for human consumption, while the jelly-packed herring was almost fresh. The herring without alginate showed a tendency to discolor and had a distinctly rancid taste. The treated herring, on the other hand, were found to be of good quality. They were found to be completely satisfactory for bait purposes, having retained the essential shiny skin and showing no tendency to rancidity. (*Norwegian Fishing News*, Vol. V, No. 2.)



## Pakistan

### JAPANESE FISHING VESSELS TO SURVEY BAY OF BENGAL AND EAST PAKISTAN WATERS:

An official of Pakistan's Central Fisheries Department confirmed reports that a Japanese fishing vessel, under charter to the Japanese Government-sponsored Overseas Fishery Cooperative Organization, is scheduled to make a survey of



Pakistan (Contd.):

deep-sea fishing in the Bay of Bengal. The 196-ton Chosui Maru was due to arrive in Chittagong, East Pakistan, on November 28, 1958, where two Pakistani officials were to board the ship for a trip to Ceylon. Two Japanese fishing experts were scheduled to remain in East Pakistan to survey for shrimp resources with a trawler that accompanied the Chosui Maru.

Permission for a joint Pakistani-Japanese exploration of Pakistan fisheries had been sought in the past and been refused. Press reports indicated that with the help of the Japanese fishing experts, the undeveloped shrimp resources of East Pakistan could lead to increased export trade.



Peru

ANCHOVETA FISHING RESTRICTIONS EXTENDED:

The Peruvian Government announced that for reasons of conservation the previous 2-mile limit from the coast and various points within which anchoveta fishing is prohibited during daylight hours has been extended to 3 miles for the period December 1, 1958, to March 31, 1959. Additional regulations were issued to govern night fishing and fishing during the latter part of 1958. Anchoveta is a bait fish used in pole-and-line fishing for tuna. (United States Embassy, Lima, December 9, 1958.)



Portugal

CANNED FISH EXPORTS, JANUARY-SEPTEMBER 1958:

Portugal's exports of canned fish during January-September 1958 amounted to 43,410 metric tons (1,062,700 cases), valued at US\$23.1 million, as compared with 36,424 tons, valued at US\$22.2 million, for the same period in 1957. Sardines in olive oil exported during the first nine months of 1958 amounted to 29,609 tons, valued at US\$15.7 million.

During January-September 1958, the leading canned fish buyer was Italy with 8,064 tons (valued at US\$4.2 million), followed by Germany with 6,676 tons (valued

Species	January-September 1958	
	Metric Tons	US\$1,000
Sardines in olive oil . . . . .	29,609	15,667
Sardinelike fish in olive oil . .	4,466	3,030
Sardine & sardinelike fish in brine	765	169
Tuna & tunalike fish in olive oil .	1,551	1,232
Tuna & tunalike fish in brine . .	695	363
Mackerel in olive oil . . . . .	5,515	2,432
Other fish . . . . .	809	247
Total . . . . .	43,410	23,140

at US\$3.6 million), Great Britain with 4,803 tons (valued at US\$2.5 million), the United States with 4,157 tons (valued at US\$3.0 million), and Belgium-Luxembourg with 3,121 tons (valued at US\$1.6 million). Exports to the United States included 1,871 tons of anchovies (Conservas de Peixe, November 1958.)

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CANNED FISH PACK, JANUARY-JULY 1958:

The total pack of canned fish for January-July 1958 amounted to 17,849 metric tons as compared with 23,306 tons for the same period in 1957. Canned sardines in

Product	Weight Net		Canners' Value
	Metric Tons	US\$1,000	
<b>In Olive Oil:</b>			
Sardines . . . . .	9,164	5,116	
Sardinelike fish . . . . .	2,540	1,201	
Anchovy fillets . . . . .	1,981	1,692	
Tuna . . . . .	1,418	1,051	
Other species (incl. shellfish)	270	186	
<b>In Brine:</b>			
Sardinelike fish . . . . .	2,043	367	
Other species . . . . .	433	146	
Total . . . . .	17,849	9,759	

Note: Values converted at rate of 28.75 escudos equals US\$1.

oil (9,164 tons) accounted for 51.3 percent of the January-July 1958 total pack, higher by 21.9 percent than the pack of 7,519 tons for the same period of 1957, the November Conservas de Peixe reports.

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EXPANSION OF CANNED FISH EXPORTS TO THE UNITED STATES DISCUSSED:

The first of a series of conferences sponsored by the Lisbon Commercial As-

### Portugal (Contd.):

sociation for consideration of Portugal's export problems was devoted to canned fish exports. The principal speaker expressed concern with potential competition from Morocco following initiation of the European Common Market on January 1, 1959, and observed that Portugal should turn its attention to countries outside that market, specifically Poland, Czechoslovakia, Finland, Hungary, China, and the United States.

The speaker considered the United States to be the most promising single market for Portuguese canned fish. He noted that in 1957 the United States ranked fourth as a purchaser from Portugal, importing some 5,200 metric tons of canned fish. Of this amount, 2,670 metric tons or 140,000 cases were canned sardines, which, in view of the United States total consumption, suggested a potential for expansion of sardine exports.

The speaker recommended, and the conference agreed, that new packaging and aggressive advertising were essential for a deeper penetration of the United States market, especially in view of the foothold already gained by Norwegian competition. In order that foreign advertising campaigns might stress particular brand names, rather than promote Portuguese sardines generally, the speaker suggested that definite action be taken to reduce the present 1,150 brand names to manageable proportions.

The conference ended by recommending that a committee be appointed to study means of implementing the suggestions. (United States Embassy, Lisbon, December 11, 1958.)

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### FISHERIES TRENDS, SEPTEMBER 1958:

Sardine Fishing: During September 1958, the Portuguese fishing fleet landed 20,723 metric tons of sardines (valued at US\$1,757,565 ex-vessel or \$85 a ton). In September 1957, a total of 13,093 tons of sardines was landed (valued at US\$1,340,000).

Canneries purchased 62.5 percent or 12,956 tons of the sardines (valued at US\$1,199,513 ex-vessel or \$92.58 a ton) during September. Only 119 tons were salted, and the balance of 7,648 tons was purchased for the fresh fish market.

Matosinhos lead all other ports in September landings of sardines with 11,833 tons or 57.1 percent, followed by Setubal 3,510 tons (16.9 percent), and Lisbon 1,918 tons (9.3 percent).

Other Fishing: The September 1958 landings of fish other than sardines were principally 3,252 tons (value US\$173,704) of chinchards, 1,205 tons (value US\$79,339) of anchovies, 4,270 tons of mackerel (value US\$260,417), 249 tons of tuna (value US\$39,270), and 99 tons of bonito (value US\$14,330). (Conservas de Peixe, November 1958.)



### Somalia

#### TUNA FISHERY TRENDS:

Somalia reports good tuna fishing from her ports on the Gulf of Aden. Fishermen report seeing Japanese tuna long-liners fishing off the coast of Somalia in the Gulf of Aden and have heard unseen Japanese fishing boats talking over the radiotelephone. Three Japanese mother-ships were in Mombaso to refuel during the month. They were reported to have large catches aboard. The Japanese seem quite interested in the tuna industry in Somalia.

The plant manager of the fish cannery at Habo was in Italy during November to purchase new equipment. The cannery has been reopened after being closed for two years. Before leaving, the Habo cannery manager requested plans for a live-bait tank from personnel of the International Cooperation Administration. It is believed that live-bait tanks will contribute to increased tuna catches. The tuna cannery at Candala reported on October 26 that 1,400 cases (40 kilos or about 88 pounds to the case) of canned fish were ready for shipment.



## Spain

REFRIGERATION CONFERENCE  
HELD IN MADRID:

The Experimental Refrigeration Center (Centro Experimental del Frio) in Madrid, Spain, held its Third Annual Meeting during February 23-28, 1959, in Madrid. All interested individuals or firms from all nations were invited to participate. Research papers and other works were presented for discussion.

During the course of the meeting, work sessions were alternated with various social events and two forums on subjects of future interest. The main topics covered were: (1) Production and Distribution of Refrigeration; (2) Application of Refrigeration to Perishable Products; (3) Permanent Cold-Storage Installations; (4) Portable Installations; (5) Industrial and Other Uses of Refrigeration; and (6) Teaching and Information on Refrigeration.

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VIGO FISHERIES TRENDS, SEPTEMBER-OCTOBER 1958:

Fish Exchange: Landings of fish at the Vigo Fish Exchange for the month of September dropped to 5,443 metric tons, a decrease of 126 tons from the previous month, and 1,857 tons less than in September 1957. Landings were valued at US\$1,145,661 (at official rate of exchange, \$1.00=42 pesetas), or about 20 percent below August due to lower landings of high-priced albacore. Leading species on the exchange were sardines (1,058 tons); horse mackerel (1,025 tons); albacore tuna (563 tons); and small hake (450 tons).

The unusually early appearance of anchovies in October raised landings at the exchange to the highest total for the year, 9,159 tons (valued at US\$1,412,580), an increase of 1,127 tons and US\$313,000 over October 1957. Leading species sold over the exchange in October were 3,210 tons of anchovies (October 1957 total 9 tons) followed by horse mackerel (1,061 tons), sardines (2,204 tons), small hake (464 tons), and needlefish (312 tons). Albacore catches dropped to 95 tons, signaling the end of the season, after a high of 2,660 tons in July. The albacore catch to the end of October totaled 4,820 tons almost a third more than the 3,639 tons caught in 1957.

Fish Canning and Processing: During September and October 1958 canners bought 4,092 tons of fresh fish for processing, a slight drop from the 4,237 tons purchased in July and August 1958. As is normal in late fall and throughout the winter, the principal species processed were sardines and anchovies. Anchovies, because of their great abundance this year, are being sold fresh instead of pickled; later in the year when fish stocks diminish, canners will pack anchovies cured in brine.

New Labor Regulations: The new labor regulations affecting the fish canning and fish processing industry (Official Bulletin of October 31, 1958) went into effect with minor changes. There were salary increases based on ingrade raises of 10 percent for the first five years of service and 5 percent for each subsequent 5-year period. Other changes include a slight increase in yearly bonuses, an administrative definition of temporary and permanent workers, and a regrouping of personnel.

Salary costs to the industry are expected to increase only slightly since salary increases do not cover all personnel, and are charged against base pay which represents approximately one half of the labor cost.

Problems and Government Aid: The head of the National Fisheries Syndicate, stated in a speech in September, that the main problems facing the Spanish fishing industry are the high cost of gas and oil, the extreme shortage of electronic equipment for fish-finding and navigation, and the shortage of manila and sisal line. He implied that the government should subsidize fuel prices, and allow fishermen more foreign exchange for the import of electronic gear. In addition, he commented on plans now being executed to install refrigeration equipment aboard tuna boats fishing in Dakar waters to preserve catches for at least two days, or long enough to reach Spanish facilities in the Canary Islands.

The Marine Social Institute reports that they will extend their retirement benefits to a small number of coastal fishermen (e.g., shore personnel and shellfish fishermen) not covered by previous regulations.



## Union of South Africa

UNION OF SOUTH AFRICA AND  
SOUTH-WEST AFRICA PILCHARD-  
MAASBANKER INDUSTRY,  
AUGUST 1958:

In August 1958 the Union of South Africa Cape west coast catch was 26,706 metric tons pilchards, 800 tons maasbanker (jack mackerel), and 4 tons mackerel, according to the Union's Division of Fisheries. The month's total catch of 27,510 tons brought the total for the 1958 season to 298,854 tons (214,533 tons pilchards, 62,190 tons maasbanker, and 22,131 tons mackerel). The quota fish (pilchard-maasbanker) total for the season was 276,723 tons.

August 1958 landings compare with 7,612 tons pilchards and 749 tons maasbanker in August 1957, and 10,528 tons pilchards and 9,449 tons maasbanker in August 1956.

The August catch yielded 5,566 tons fish meal, 58,775 gallons fish oil, 792,653 pounds canned pilchards, and 275,828 pounds canned maasbanker.

Landings at Walvis Bay, South-West Africa, in August 1958 totaled 35,370 tons of pilchards, and the total catch for the season through August was 217,739 tons.

The Union's pilchard and maasbanker fishery ended in August, but in South-West Africa continued through October



Union of South Africa (Contd.):

1958 (South African Shipping News and Fishing Industry Review, October 1958).

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#### UNION AND SOUTH-WEST AFRICA FISH CATCH, 1958:

In the eight months of the 1958 season, the fishing boats of the Union of South Africa Cape west coast landed 214,533 metric tons pilchards, 62,190 tons maasbanker, and 22,131 tons mackerel. This fish was processed by 14 factories along some 200 miles of coast from Hout Bay to Thorn Bay.

The pilchard and maasbanker catch was (1) more than 26,000 tons above the normal quota, (2) 32,596 tons higher than the best catch since the quota was imposed in 1953, and (3) was second only to the record 1952 catch of 300,560 tons. The 22,131 tons of mackerel caught this year brought the pilchard-maasbanker-mackerel total to 298,854 tons--only 1,706 tons below the 1952 record.

In Walvis Bay, South-West Africa, the season was also one of good catches and the last of the six factories reached its quota and stopped operations in October 1958.

As Walvis Bay in 1952 processed 248,380 tons or about 2,000 tons less than the 1958 catch of just over 250,000 tons, the total pelagic shoal fish catch in 1958 must have just exceeded the 1952 total to establish a new record for the Union and South-West Africa.

This shoal fish catch may well push the total fish catch for the Union and South-West Africa to or even beyond the record 693,688 tons of 1952.

At the present rate of increase, the trawl fish catch (99,964 tons in 1957) in 1958 should reach and possibly exceed 100,000 tons for the first time. Thus shoal fish and trawl fish should alone bring the year's catch to 650,000 tons.

During the past 3 or 4 years snoek and other line-caught fish have averaged about 32,000 tons a year in the Union and

about 4,000 tons in South-West Africa and may, therefore, bring the total to about 686,000 tons.

The spiny lobster catch for 1958 may be well below the estimated total in 1957 of about 15,000 tons, but it should be sufficient to take the 1958 fish catch to between 690,000 and 695,000 tons.

In an outstanding season, the Cape west coast pilchard catch showed the largest increase. Until 1958, the highest pilchard catch was the 187,424 tons landed in 1952. The 1958 catch of 214,533 tons exceeded that catch by a remarkable 27,109 tons.

During the 1958 season, factories on the Cape west coast produced 56,016 tons of fish meal, 2,938,978 gallons of fish body oil, 7,193,888 pounds of canned pilchards, 13,678,540 pounds of canned maasbanker, and 4,541,075 pounds of canned mackerel.



U. S. S. R.

#### FISHERY RESEARCH BY SUBMARINE:

A converted Russian submarine was scheduled to make a trip in December 1958 to make a scientific investigation of fish and the depths of the sea. Pravda, a Russian newspaper, quoted the head of the Soviet Fish Research Institute as saying that the world's first "oceanographic submarine would be equipped with giant searchlights, television cameras and equipment for taking and testing samples of the sea-bottom."

This research is a follow-up of the work done by Russian biologists in connection with Russia's International Geophysical Year Program. Oceanographic surveys in many areas of the world's oceans, particularly in the southern hemisphere, will be made by surface vessels together with submarines.

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#### FISHING INDUSTRY EXPANDS:

Although there are conflicting figures on Russia's fishery landings, it is quite

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

evident that her fishing industry during the past decade has been expanding. Although the Food and Agriculture Organization reports Russia's fishery landings as 2,535,000 metric tons, other sources give the total for 1957 as 2,850,000 tons.

The latest available figure for canned fish production is for 1956--638 million cans.

At the present time there are 176 canneries and 206 refrigerating plants in the Soviet Union's fishing industry. These utilize 1,500 fish-pumping installations, 62 miles of conveyors, 500 mechanized lines for the processing of small fish, and 700 fish-dressing machines.

Russia's fishing industry now employs 9,000 engineers and 15,000 technicians. There are 5 higher educational institutes and 22 specialized secondary schools attached to the fishing industry, and between them they are training 22,490 specialists. Of this number, 7,000 are men and women already engaged in the industry who are taking evening or correspondence courses. (December 1958 World Fishing, British fishery periodical.)

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#### FREEZING INDUSTRY EXPANSION PLANNED:

In Soviet Russia over 400,000 metric tons of fish are frozen annually, according to an article which appeared in a recent issue of a Russian refrigeration periodical. Although food products other than fish are frozen, quick freezing has received widespread application only in the fishing industry, especially in recent years with the extensive freezing of fish aboard vessels.

Special stress is being laid in Russia on the necessity of developing the production of packaged quick-frozen products, particularly fruits, vegetables, and precooked foods. The objective of the freezing industry for 1959-1965 is to concentrate on intensive freezing methods with the use of air-blast tunnels and other quick-freezing equipment. It is

planned to increase the production of quick freezers to about 1,000 units annually by 1965; also increase the output of mechanically-refrigerated low-temperature railway cars, refrigerated trucks, low-temperature display and sales cases, as well as domestic refrigerators with freezing compartments.

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#### NORTH PACIFIC SALMON CATCH LOWER IN 1958:

Soviet Russia's North Pacific salmon catch in 1958 is believed to have dropped to less than 100,000 metric tons, far short of the 120,000-ton target, reports Nihon Keizai, Japan's leading economic daily newspaper.

"Under the circumstances, the Soviet Union will demand limiting Japan's catch next year to about 60,000 tons in the area covered by the Japan-Soviet agreement," reports the same newspaper. In 1958 the Japanese catch in the area was 110,000 metric tons.



#### United Kingdom

##### ADVANTAGES OF FREEZING FISH AT SEA STRESSED AT EXHIBITION:

The advantages of freezing fish at sea were stressed at the 1958 International Shipping and Commercial Fishing Exhibition at Kingston-upon-Hull, England. The two main problems that face the distant-water trawling industry are: supplying fresher fish and finding ways of reducing costs.

One of the most effective ways of reducing costs is to arrange for the trawler to spend a longer time on the fishing grounds. The limitations of the use of crushed ice as a preservative cut short the stay on the fishing grounds even though the hold is not full. A better method of preservation would allow the stay on grounds to be extended. With an improved method of preservation, the economic optimum speed of the trawler is lower, and the costs of machinery and fuel are very much less.

By using the latest machinery designs it is possible to reduce the space occupied by propulsion machinery and fuel and increase the space and capital available for processing plant and stowage of fish. In this way the voyage of a trawler of 185 to 190 feet can be extended by several days. The savings in costs, particularly in fuel and in the number of vessels required to land a given amount of fish in a year, are likely to be more than enough to cover the costs of freezing, storing, and thawing.

The capital cost for a freezing-fish-at-sea vessel is likely to be no higher than that of some recently-constructed motor trawlers. The Northern Wave freezing-fish-at-sea experiment in 1956 by the British demonstrated that whole headless sea-frozen cod were equal to very fresh iced fish and could be processed and handled in all the usual ways even after several months of storage. The fishermen had no difficulty in operating the plant at sea. The method was

## United Kingdom (Contd.):

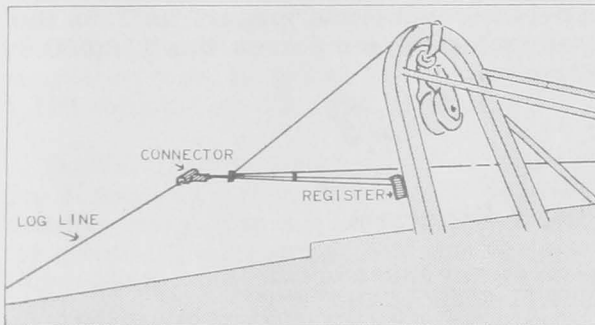
therefore proved in the technical sense, but economically speaking the advantages of extending the trip and of saving fuel could not be demonstrated because of the conditions of the experiment. In the economic analysis of the designs now put forward, the costs derived from the Northern Wave were used and it was assumed that thawed headless cod would sell at average prices equivalent to those of iced cod.

In trawlers of 185 and 190 feet it would still be necessary to stow a considerable proportion--up to two-thirds--of the fish at ice temperature, because there is still not sufficient space to freeze the whole of the catch. The frozen part of the catch would on the average represent the extension of stay on the fishing grounds as compared with the normal voyage, and the chilled fish would be equal to the normal catch. (Modern Refrigeration and Air Control, October 1958).

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### NEW TYPE LOG AND SPEED INDICATOR DEVELOPED FOR TRAWLERS:

A new type log and speed indicator has been designed and produced by a British firm primarily for the specialized conditions and demands of trawlers.



The instrument differs from the conventional log in that it is streamed from the ship's side, being boomed out 5 or 8 feet from the vessel, so that the rotator is in undisturbed water, level with the bridge, where it cannot foul propeller or gear during shooting or hauling the trawling gear. A small register, mounted on the inboard end of the boom (normally fitted to the gallows), transmits speed and distance readings with great accuracy to instruments located in the wheelhouse; a second distance reading is provided by a dial on the inboard end of the boom. The boom is fitted with a topping lift and forward guy, and is easily handled and streamed.

Two speed-range readings are provided, so that advantage can be taken of the instrument's sensitivity to record trawling speed on the 0-7 knot range,

since the 0-14 knot range is used for steaming. It is claimed that the new instrument will indicate when the gear settles on the bottom, when it lifts, and when it is snagged. The distance repeater registers in tenths of a mile up to 1,000 miles, and provision is made to feed speed readings to the latest type radar units. On recent trials aboard the trawler Ross Leopard, the error over 260 miles was 0.5 miles.

The instrument operates from 110 or 220 volts, d.c. or a.c., or from a 6-volt battery. It costs £158 (about US\$440), according to World Fishing, November 1958.



## Yugoslavia

### FISH CANNING INDUSTRY EXPANDS:

The Yugoslavian fish canning industry has progressed considerably during recent years. During 1957, landings of fish from Yugoslavian waters were as follows: 14,065 metric tons of small pelagic fish, 478 tons of tuna and bonito, and 3,921 tons of other species. These landings do not include trawler landings.

The most important species of small fish landed in Yugoslavia are sardines, anchovies, mackerel, and needlefish. Of the tunalike fish, tuna (Thunnus thynnus L.) is the most important, followed by bonito and albacore.

Of the total 1957 landings, 6,420 tons were canned, 2,910 tons salted, and 1,027 tons used in the manufacture of fish meal.

Yugoslavia has about 30 fish canneries. Most of their production is exported to Austria, United Kingdom, Germany, and the United States. (Industria Conservera, Vigo, Spain, August 1958.)

