FOREIGN

International

FOOD AND AGRICULTURE ORGANIZATION

FISHERY STATISTICS TRAINING CENTER HELD IN DENMARK:

Twenty government officials from 14 countries and territories attended the International Training Center in Fishery Statistics, organized by the Food and Agriculture Organization (FAO), Rome, Italy, and held in Copenhagen, Denmark, at the invitation of the Danish Government. The following countries attended the Center: Ethiopia, Ghana, Greece, Iran, Lebanon, Liberia, Morocco, Nigeria, Pakistan, Turkey, British overseas territories (Malta, N. and S. Rhodesia, Uganda), and Yugoslavia.

The Training Center was particularly designed for those who are immediately responsible for the collection and collation of primary fishery statistics. Holding the Center in Copenhagen was especially advantageous because Denmark has a highly developed fishing industry and the Government Statistical Services are very well organized and efficient, thus providing excellent facilities for study.

During the five-week course, the participants attended lectures and demonstrations on organization, methods, practical application, and evaluation of fishery statistics.

Seminars were an important feature of the Center at which individual participants introduced and discussed reports on the present organization of fishery statistics in their own country, with special reference to improvements which could be effected in the light of information gathered at the Center.

After two weeks in Copenhagen, the participants moved to Hutshels, a fishing port in North Jutland, where they took part in the collection of statistical data and also got an insight into fishing methods, landings, gear, etc.

Denmark is particularly well suited for field work of this nature because the fishing industry is based on a large number of small, owner-operated craft, using a wide variety of fishing gear, based on widely scattered fishing ports of all sizes. The rapidly-developing fisheries in the participating countries are facing problems of statistical design and management similar to those faced, and successfully solved, in Denmark for the last 40 years.

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FISHERIES SURVEYS TRAINING CENTER HELD IN TANGANYIKA:

A Training Center on Fisheries Surveys for the countries in the African region, organized by the Food and Agriculture Organization (FAO), was held at Tanga, Tanganyika, from November 9-December 18, 1959.

The Center was directed by the Fisheries Officer of Tanganyika and a professor from the University of Washington in Seattle, U. S. A., acted as Associate Director. A number of FAO officers participated in both the theoretical and practical work of the Center. These included a fisheries biologist from the headquarters staff, a marketing expert on assignment in Ghana, an expert on assignment as fisheries biologist in Uganda, and a member

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of the Japanese Ministry of Agriculture and Forestry who lectured at the Indian Fisheries Statistics Training Center held earlier this year in Bombay.

The Training Center was concerned with the objectives, methods, and uses of surveys in all phases of fish production, processing, and distribution.

Apart from the lectures, the participants at the Center made field trips which were used to illustrate the instruction given in the classroom. In addition, the special problems of the fisheries in the African region were discussed in seminars.

Participants at the Training Center came from all parts of Africa and included not only students from independent African countries, but also from territories and dependencies.

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SARDINE MEETING CALLS FOR INTERNATIONAL COOPERATION IN RESEARCH:

Nine general recommendations to promote rapid international exchange of information and data obtained from research and other work on sardine problems were made in the final report of the World Scientific Meeting on the Biology of Sardines and Related Species, which was held in Rome, Italy, from September 14-21, 1959.

The meeting, convened by the Food and Agriculture Organization (FAO) at its Rome headquarters, was attended by more than 50 experts from 26 countries. Some 60 scientific papers were presented.

The objectives of the meeting were to appraise the status of knowledge on the biology of sardines, assess present methods of research and indicate the lines along which national and international action might be developed to improve research programs.

The nine general recommendations of the meeting call for FAO leadership in promoting international cooperation in dealing with sardine problems. Specifically the scientists asked FAO to publish an annotated bibliography on sardine research, a directory of sardine research institutions, and strengthen the work of producing synopses on species of sardines and other fishes of economic value.

The meeting also called on FAO to convene "follow-up meetings on the biology of sardines" and on other species "for which major fisheries exist," promote standardization of routine methods used in research programs, encourage exchange visits between scientists and focus attention on the need to improve specialized research on sardines.

A section of the report dealing with "Perspectives in Sardine Research" focuses attention on a number of special problems and indicates the lines of approach that should be adopted. These include more extensive and intensive use of modern techniques and a more comprehensive approach to the various aspects of the sardine problems.

The commercial importance of sardines and the continuing fluctuations in sardine stocks, resulting in severe economic losses for fishermen, attracted world attention to the meeting. There were participants from most of the countries concerned with sardine fisheries and observers from non-government and commercial organizations. At the conclusion of the meeting the participants took the unusual action of passing a resolution to thank FAO for convening and running the meeting which had been, the resolution stated, "a universal success."

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

SIXTH ANNUAL MEETING HELD IN SEATTLE:

Fisheries administrators and experts from Canada, Japan, and the United States met in Seattle, Wash., in October for intensive discussion of fisheries problems in the North Pacific Ocean. The sixth annual meeting of the International North Pacific Fisheries Commission was opened by the Chairman of the Commission on October 19.

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The Commission, established by treaty between the member Governments, conducts research and makes recommendations on fishery conservation problems on stocks of fish of joint interest throughout the high-seas areas of the North Pacific Ocean.

At the meeting the Commission received reports from many scientists on the latest results of a large-scale research program which is studying the distribution, abundance, and movements of salmon from the Asian and North American continents on the high seas. In addition, the Commission studied the conditions of utilization and conservation of North American salmon, herring, and halibut stocks to determine whether or not Japan, and in some cases, Canada, should continue to refrain from fishing such stocks. Abstention from fishing is effective in the eastern portion of the North Pacific and in the eastern Bering Sea. In the case of salmon on the high seas, Japan abstains from fishing east of a line along the meridian of 175° west longitude, which passes near Atka Island in the Aleutians, about 2,000 miles west of Seattle. This line, which is temporary or provisional in nature, is the subject of much research designed to determine whether another line or lines would more equitably divide the Asian and North American salmon stocks.

A preliminary scientific session, begun on October 12, was held at the Commission's headquarters on the Campus of the University of British Columbia, Vancouver. This session brought together 15 scientists from the three countries for intensive study of the stocks of fish under abstention.

Each member country was represented on the Commission by four members. In addition to Edward W. Allen, Seattle attorney, who is Chairman of the Commission, the United States Commissioners included Milton E. Brooding of the California Packing Corporation, San Francisco; John H. Clawson, Anchorage, Alaska; and Arnie J. Suomela, Commissioner of Fisheries, U. S. Fish and Wildlife Service, Washington, D. C.

The Japanese Commissioners (all from Tokyo) were: Iwao Fujita, Vice-Chairman of the Japan Fisheries Association; Haruki Mori, Director of the American Affairs Bureau, Foreign Ministry; Kenjiro Nishimura, Director of the Fisheries Agency of Japan; and Koichiro Kobayashi, Vice-President of the Nichiro Fishing Company.

The Canadian Commissioners were George R. Clark, Deputy Minister of Fisheries, Ottawa; John M. Buchanan, President of British Columbia Packers Limited, Vancouver; James C. Cameron, Pender Harbour; and Roger T. Hager, President of the Canadian Fishing Company, Vancouver.

The Commissioners were accompanied by a number of experts and advisors, bringing the total number of participants to approximately 100. General arrangements for the meeting were made by the Commission's Secretariat.

INTERNATIONAL PACIFIC HALIBUT COMMISSION

DART TAG USED BY COMMISSION FOR FIRST TIME TO TAG HALIBUT:

This year for the first time the International Pacific Halibut Commission used the dart tag to tag halibut in the North Pacific. Tagging is used extensively by the Commission to determine when and where halibut can be fished to obtain full utilization of the North Pacific halibut stocks. The accuracy of results and consequently the usefulness of the tagging experiments depends upon the degree to which recovered tags are returned to the Commission.

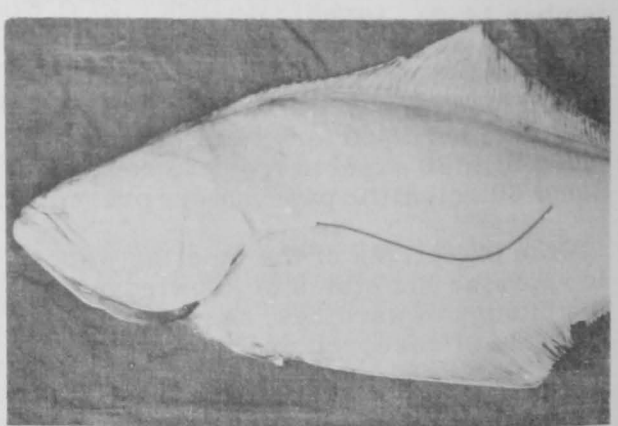

Fig. 1 - A dart tag in position on a North Pacific halibut.

No vessels were chartered during the summer and fall of 1958 for the express purpose of tagging halibut. However, the University of Washington

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research vessel Commando was chartered for a period of 57 days during May and June 1958, and 222 halibut were tagged in the vicinity of Marmot Bay between Afognak and Kodiak Islands. A number of the tagged halibut were held in floating live boxes temporarily to observe the effects of tagging upon the fish. These observations indicated that the tagging process did not result in any significant mortalities immediately after tagging.

Strap tags are sometimes overlooked on the dark side of the fish because halibut are usually handled white side up. This loss reduces the practical value of the tagging experiments. The number of tags lost in this manner can be estimated by marking some of the fish with a second tag. For this reason some of the fish tagged in the Bering Sea in the spring of 1959 have a new type of tag (the dart tag[1/]) attached in the vicinity of the pectoral fin on the white side of the fish in addition to the strap tag. This tag consists of an orange vinyl plastic tube, approximately one-eighth inch in diameter and 12 inches in length and is held in place by means of a solid nylon plastic barb imbedded in the meat of the fish. The letters IPHC and a number are stamped on each tag.

To obtain a reliable measure of the efficiency of this tag, it was necessary to tag three groups of fish simultaneously. One group with only the new tag or "dart tag," a second group with only a strap tag (placed on the gill cover on the dark side), and a third group with both tags. Therefore, when a tagged fish is recaptured, it should be examined for both tags. If two tags are found, they should be

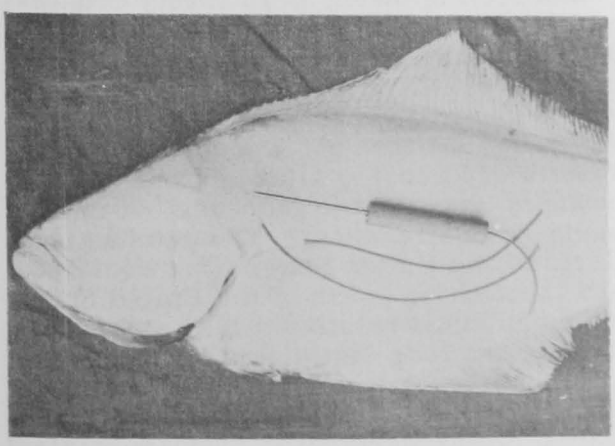

Fig. 2 - A fully-exposed dart tag lying beside one that has already been applied, and also a tag inserted into the hollow needle by which the tags are inserted in the halibut. The barbs on the tag do not show up well against the white background.

turned in together as this is the Commission's only means of correctly evaluating tag loss.

The fish migrating furthest in 1958 was caught by the M/V Capella I while fishing off Cape Scott. This fish was released in the Bering Sea off Akun Head in 1956 and had migrated approximately 1,550 miles in two years.

Two other fish tagged in the Bering Sea on the "Polaris Spot" also made long migrations of approximately 1,400 miles each. Both were recaptured in Dixon Entrance, one by the M/V Frisco and the other by the M/V Dovre B.

A new Commission record for length of time out following tagging was set when the M/V Oona R. recovered a fish released on December 21, 1939. This halibut was six years old when tagged and weighed approximately ten pounds. At recovery, $18\frac{1}{2}$ years later, it had grown to approximately 65 pounds. During its period of freedom this halibut made a net migration of only about 60 miles, having been tagged off Cape St. James and being recovered in the vicinity of Cape Mark.

The greatest number of tags turned in during 1958 were received from the M/V Soupfin with 34. Closely behind with 33 recoveries was the M/V Kaare.

1/Although new for halibut tagging, the "dart tag" is being used for tagging many other fish.

UNITED STATES-JAPANESE TUNA CONFERENCE

PLENARY SESSIONS AND COMMITTEE MEETINGS HELD OCTOBER 1-11:

Japan and the United States held a meeting, which opened in Tokyo on September 30, for the exchange of views and information between the two countries on the tuna industry and its problems.

The Japanese Government announced September 28 that government officials and private fishing representatives of the two countries would meet for 13 days, with the meeting expected to end October 12, according to Japan Times of September 30.

The Japanese were represented by 11 Government officials and 13 private representatives, including a representative of the Foreign Office, the Director of the Fishery Agency, and the Vice-Chairman of the Japan Fishery Association.

The United States group comprised 10 Government and some 10 private representatives headed by the Deputy Assistant Secretary of State for Economic Affairs.

Discussions at the talks centered on:

1. Research on biological, ecological, and oceanographical aspects of tuna and

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studies concerning distribution of resources.

2. The current tuna catch situation and catch methods.

3. Utilization of tuna and processing techniques.

4. Past trends in production, consumption, and price of tuna and its products in Japan and the United States.

October 1-5 was devoted to discussion in plenary sessions of all agenda items giving each country two full days. The chairmanship alternated between the two delegations. After October 5, the working sessions were divided into two committees--one committee handled agenda items 1 and 2 and the second committee items 3 and 4. Simultaneous committee meetings were held through October 9. October 9-11 the meeting's final report was prepared.

At the final session held on October 12, 1959, the United States-Japanese Tuna Conference issued the following press release:

At the final Plenary Session of the Tuna Conference, the delegations of Japan and the United States reviewed and approved the work of the two Committees established at the opening session of the conference. These Committees reported the results of their consideration of the four items on the agenda of the conference: (1) Biological, ecological, and oceanographic study of tuna and the distribution of tuna resources; (2) Present conditions of harvesting and fishing methods of tuna; (3) Present conditions of utilization of tuna and technology of its processing; and (4) Past movements of the tuna market with respect to production, consumption, and price in each domestic tuna market.

In Committee One research on biology, ecology, and oceanography, and harvesting conditions with respect to tuna were reviewed. Information concerning research activity was freely exchanged and indicated that the broad objectives of such research were similar in the two countries.

With respect to research, the fields of inquiry discussed included methods and scope of the documentation and examination of fishing activity and of basic biological and oceanographic research.

It was noted that statistical information plus scientific information on the fisheries is essential to the measurement of the condition of the stocks, and both countries recognized the importance of this matter.

The Committee's deliberations indicated that extensive studies are being made of the ocean circulation of the Pacific and the relationship of the environment to the variations in distribution and migrations of tuna. These studies and research on life history were reviewed. No information presented indicated that there is overfishing of any tuna stocks.

Information on catch, catch trends and fleet composition, together with the factors affecting these, were freely considered. The Committee noted that the Japanese catches, fleets, and areas of operation have expanded in recent years. The number of vessels was stabilized in Japan in 1955 through a governmental system of licensing although tonnage and capacity continued to increase. It is now being gradually halted. The catches and fleets of the United States have declined, and the fishing areas of the United States have remained relatively the same. The increase in long-line fishing in Japan and the very recent tendency to place more emphasis on purse-seine fishing in the United States were noted. Government regulations and activities affecting these fields were compared.

It was learned that Japan has a comprehensive communications system reporting on current fishing conditions in which the Government participates, whereas the United States has not.

In Committee Two pertinent material concerning problems of utilization

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common to the tuna industries of both countries was presented. There was a very informative discussion of such problems as green tuna, the biochemistry of tuna, quality standards, grading of tuna, the status of cholesterol research, the use of antibiotics in tuna preservation, and the use of tuna in pet foods. Information was presented pertaining to these subjects and views were freely exchanged. There were suggestions made by both sides concerning further exchange of information on these subjects.

In view of the importance of the tuna resource to each country, the world catch and its possible effect on future supplies of tuna were discussed. The total catch of tuna by all countries is steadily increasing, as is the world consumption.

Large segments of the tuna fishing industry of the United States have been beset with increasingly serious problems during recent years. Periods of distress during which the United States tuna fishing industry faced its most difficult problems were noted and the possible causes of these difficulties were discussed by the delegates of both countries.

The two delegations agreed that the conference had been very helpful to the tuna industries of both countries by providing an opportunity for the exchange of information and views on these subjects.

The two delegations noted that coordination of activities on specific research projects would contribute to the success of the research work being carried on by their respective governments.

The two delegations agreed to recommend to their respective governments (1) that supplementary data on scientific and technical matters of interest to both countries should be exchanged on a continuing basis through the usual channels; and (2) that, in cases where meetings for scientific research on tuna are held in either country, the scientists of other nations should be invited to take part in so far as possible.

UNITED STATES AND RUSSIA EXCHANGE SCIENTIFIC FISHERY KNOWLEDGE

Five American fishery experts returned home in late September following an extensive inspection of Russian salmon fisheries, and five Russian fish experts arrived in the United States to observe American salmon activities. The trips were arranged for an exchange of scientific and practical fishery information.

Fig. 1 - Assistant Secretary of the Interior for Fish and Wildlife Service, Ross L. Leffler, welcomes Russian fisheries experts at the beginning of their visit to the United States.

The Americans departed from Washington on August 20, 1959, with the Kamchatka Peninsula in Siberia as their destination. They arrived there, via Moscow, several days later and returned home, also via Moscow, on September 22. They spent one day in the Russian capital on their way to their Siberian destination, and four days on their way home.

The Russians arrived in Washington on September 24 and departed by plane for the Pacific Northwest and Alaska on September 26, returning to Washington about October 21. Their itinerary included inspection of salmon hatchery operations and the work of fish nutrition and fish disease laboratories in the Northwest. They saw the operations of can companies, canneries, fish

Fig. 2 - Russian fisheries experts, accompanied by the head of the Alaskan Department of Fish and Game and the U. S. Bureau of Fisheries Regional Director for Alaska, visit Governor Egan of Alaska in his office

International (Contd.):

freezing and cold-storage facilities. They also inspected several Government laboratories.

The United States mission to the Russian salmon areas had a double purpose--to give United States specialists an opportunity to learn of Russian fishery operations first hand, and to secure fish and fish blood samples of known Russian origin for a long-range international salmon study which has been in progress for about three years.

Members of the United States group reported success in both aims, stressing that their hosts were especially cooperative.

The North Pacific salmon study is a three-nation project--Japan, Canada, and the United States. One purpose of this study was to secure data upon which Nations of Asia and North America may base salmon management plans. A specific problem is to determine the place and the extent of intermingling of the American and Asian races of salmon during the time the salmon are at sea. This in turn necessitates the development of a system of differentiating American from Asian fish. Research has indicated that probably the most reliable way to differentiate between the two races is by blood type.

At the U. S. Bureau of Commercial Fisheries Biological laboratory at Seattle, Wash., considerable work has been with salmon and blood samples from Japan, Canada, and the United States salmon areas. No salmon unquestionably of Russian origin were available for study until this exchange visit when the Russians--although their salmon fishing season in most areas was closed--let the United States visitors "catch their own" out of streams on the Kamchatka Peninsula.

Places visited by the United States mission included:

Khabarovsk, the big industrial center in Siberia some 225 miles from the Sea of Japan;

Okhotsk, fishery center, on the northern rim of the Sea of Okhotsk;

The October Fishery Combine's canning, salting, and freezing operations at the mouth of the Bystraya River in the southern portion of Kamchatka;

Canneries, salteries, and freezing plants at Ozernaya, also on the southwest coast of that peninsula;

The biological station on the Kurilian Lakes, several miles inland from the coast, and one of the great red salmon producing areas of the U.S.S.R.;

Fishery facilities at Nevelsk on the southern portion of Sakhalin Island, north of Japan;

And finally the free port of Nakhodka, near Vladivostok, where cold-storage and other facilities for the transshipping of ocean-borne goods to the Trans-Siberian Railway were observed.

At these places important phases of the salmon fishing industry were inspected and discussed--hatchery work, biological research, technological problems, gear research, and fish processing operations. Besides the "on the spot" discussions, there were meetings at what might be called area or regional levels plus four days in Moscow with the fishery research unit of the scientific committees which are in charge of research conducted in the Soviet Union.

Transportation across Siberia was by jet--10 hours on the return trip. Transportation across the Sea of Okhotsk to Kamchatka, then to Sakhalin Island, and on to the mainland was by a Russian refrigerated carrier vessel which was described as efficient and with comfortable quarters. There were train transportation and truck travel for short distances. On the trip to the Kurilian Lakes part of the journey was by horseback.

The United States group that made the trip to Russia included: Charles Butler, Saltonstall-Kennedy Coordinator, U. S. Bureau of Commercial Fisheries, who headed the delegation; Clinton Atkinson, Laboratory Director, Bureau of Commercial Fisheries Biological Laboratory, Seattle, Wash.; Clarence F. Pautzke, Assistant Director, Washington State Department of Fisheries; Winston C. Arnold, General Manager, Alaska Salmon Industry, Inc.; William R. Barlow, Interpreter, Office of the Secretary of the Interior.

The Russians who are in this country are: Andre Sergeevich Guidukov of Moscow, Director, Section on Fish Industry, State Planning Commission, R.S.F.S.R.; Aleksander Ivanovich Isaev, Moscow, Deputy Chief of Construction and Hatchery Operations; Vasali Nikiforovich Kalenov, Deputy Director of the Kamchatka Economic Council; Aleksander Nikovaevich Salinikov, trawler captain engaged in salmon operations; Igor Ivanovich Kurenkov, Deputy Director of the Kamchatka Fishery Research Institute.

Australia

ALL-WELDED ALUMINUM ALLOY SPINY LOBSTER PROCESSING VESSEL:

A recent addition to the Western Australian fishing fleet is the 62-foot aluminium alloy spiny lobster processing vessel Lady of Fatima.

The spiny lobster fishery in Western Australia has reached a stage where it is necessary for the larger boats to travel long distances to get good catches, and therefore to be capable of stowing large amounts of fuel. Also, it is desirable that the boats be able to process a relatively large amount of fish in order to avoid the loss of time in trips to Fremantle to unload, possibly 240 miles both ways. This particularly applies when the weather is good and good catches are being made; then a boat needs a big freezer to store the catch.

With these problems in mind, it was decided to build a new processing boat of aluminium alloy.

First the room available in a metal hull is greater than in a similar wooden hull, and by using a double bottom for fuel and fresh-water stowage, and built-in wing tanks for additional fuel, further space is saved and structural weight is reduced.

Second, by using aluminium alloy instead of steel, about half the structural weight is saved, and this is very impor-

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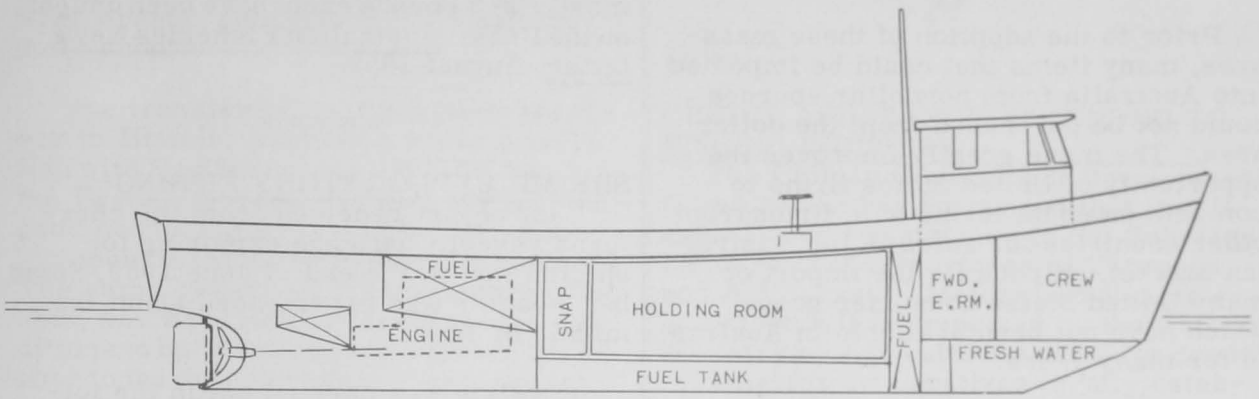
tant when the speed required is high and a big payload is necessary. In this case 9 tons weight was saved by the use of aluminium.

lings of the hull are rather generous, but no real difficulty was experienced in cold working the alloy. Also, hull distortion due to welding stresses was a lot less than expected.



General arrangement of Australian all-welded aluminium alloy spiny lobster processing vessel.

Third, the maintenance of an aluminium hull should be much less than for an equivalent wooden or steel boat, particularly a steel boat with its rust problem.

The boat's dimensions are: length over-all, 62 feet; beam, 17 feet; mean draught, 4 feet 9 inches.

A speed of 10.5 knots was required, and to achieve this an 8-cylinder turbocharged Diesel, delivering 230 bhp. at 1,350 r.p.m., was selected. On trials, a speed of 10.75 knots was recorded, and over 10 knots is maintained in service.

Fuel capacity is 2,600 Imperial gallons. On average working conditions, consumption is about 6 to 8 gallons an hour, which gives the vessel a range of around 3,000 miles.

The freezer is of large capacity for the size of the vessel, being 21 feet long by the full beam and depth of the boat. The plant is capable of quick freezing 60 x 25-pound cases of spiny lobster in six hours, and the refrigerated hold has a capacity of 1,500 cases of tails or 33,000 pounds of finfish.

The craft is of all-welded construction, and all welding was done manually. The frames are extruded alloy angles and were bent cold to shape. The scant-

All fuel tanks, water tank, etc., are alloy, built as part of the hull, and the deckhouse, which contains the wheelhouse, galley, and mess, and a berth for the wheel relief, is all welded alloy. There are four berths below decks. The forward peak tank holds 400 gallons of fresh water and an additional 100 gallons can be carried in one of the after ballast tanks

The anchor winch and pot-hauling winch are hydraulically-operated, with the hydraulic pump driven by the compressor engine.

Her sea behavior is much less lively than one would expect in a light buoyant hull. She maintains a very high speed in rough water. The fuel consumption is very good considered against the high operating speed. (Australian Fisheries Newsletter of June 1959.)

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MOST RESTRICTIONS ON IMPORTS FROM DOLLAR AREA REMOVED:

The Government of Australia has informed the United States Government that effective August 1, 1959, import quotas were enlarged and most discriminatory restrictions on imports from dollar sources were eliminated. This step should be of particular benefit to the United States, Canada, and other countries in the dollar area. In effect,

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this measure opens the Australian market to dollar goods, on a nondiscriminatory basis for virtually all products except motor vehicles and timber.

Prior to the adoption of these measures, many items that could be imported into Australia from nondollar sources could not be purchased from the dollar area. The move greatly improves the opportunity of United States firms to compete on equal terms with firms from other countries for sales in the Australian market. It permits the import of many United States consumer goods which have not been available in Australia for many years.

This substantial liberalization of trade was facilitated by recent measures establishing currency convertibility and reflects the improved state of the Australian economy. The Government of Australia has announced that it intends to proceed with orderly removal of the remaining discriminatory restrictions.

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SPINY LOBSTER EXPLORATORY FISHING:

During the first two weeks of a spiny lobster exploratory fishing survey of southern waters in Western Australia, only eight spiny lobsters were taken. One was a female which would have spawned in 4-6 weeks. The lobsters were obtained in two areas about 20 miles apart. They varied in weight from 3 lbs. 4 oz. to 6 lbs. 9 oz. each. The survey is being conducted with the chartered vessel Bluefin, based in Albany.

The survey commenced on June 8, 1959. In the third and fourth weeks (to July 4), the Bluefin set pots in the neighborhood of Breaker Island, Peak Head, West Cape Howe, Knapp Head, Ratcliffe Bay, Wilson's Head, Edward's Point, and Stanley Island. No lobsters were taken.

The Bluefin has been working 90 pots. They are set about 100 yards apart, so that with a line of 50 pots a fairly large area of reef can be tested. It takes about two minutes for a pot to be set and about three minutes for a pot in 35 fathoms to be pulled. Salmon and shark heads, and cattle hocks are used as bait.

While traveling to the pots, two troll lines are usually put out. Bluefin tuna, mostly 2-3 pounds each, have been caught on the lines. Australian Fisheries Newsletter, August 1959.

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SHRIMP EXPLORATORY FISHING:

Last report received from the chartered vessel Challenge exploring for shrimp was to the end of June 1959. Some bad weather was experienced about the middle of June.

Trawling was carried out in the following areas: Port Hacking-Botany Bay, where there was a show of king prawns in 100 fathoms but no shrimp were taken in deeper water--Narrabeen, Broken Bay, Tuggerah, Terrigal.

Shrimp were taken in small quantity in 50-70 fathoms. Five deep-sea red shrimp were taken in about 140 fathoms. During the last week of June, in the Broken Bay area, red shrimp were taken in 85-150 fathoms. What was believed to be a new species of red shrimp was taken at 142 fathoms. Australian Fisheries Newsletter, August 1959.

Belgium

FISHING INDUSTRY FACES A CRISIS:

The crisis in the Belgium fishing industry, which has been developing for several years, recently received another severe blow when two large modern deep-sea trawlers were transferred to Great Britain. The loss of these two vessels precipitated talk in Belgium fishing circles of a blockade of the Port of Ostend. If the blockade is carried out, it would dramatize the fishing industry's plight and be its most aggressive step for obtaining Government assistance and the imposition of import restrictions.

According to reports in Belgium fisheries periodicals, the industry is faced

Belgium (Contd.):

with bankruptcy. A recent investigation of the financial condition of fisheries firms revealed that the majority of the firms could not avoid bankruptcy if there were drastic demands for payment by their suppliers.

The transfer of the two large trawlers to Britain, where the vessels will fish with English crews and land fish for the British market, means the loss of good producing units and further unemployment in the West Flanders Province. The same owners of the transferred vessels, which recently obtained special conditions to build two supertrawlers, have abandoned the project because of the distressed condition of the fishing industry.

Spokesmen for the fishing industry believe that it is time to save the industry, not with conferences and talks, but with facts and a well-planned fisheries policy. (United States Consulate in Antwerp, September 16, 1959.)

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SHRIMP FISHING INDUSTRY CONCERNED OVER PRICES:

According to a spokesman for the Belgium fishing industry there is a deep concern in the Belgium shrimp fishery over near-term prospects, because of the prospect of large fall catches. It was expected that increased landings would have a drastic effect on prices, unless something was done by the Government to protect this fishery, which has been affected by a serious crisis since 1956.

The spokesman suggested different solutions, among which was the establishment of a Government purchase program for shrimp, a minimum price set-up, and the application of a tax on the import licenses for shrimp from West Germany and The Netherlands, which compete with the Belgium shrimp fishermen.

He felt that appropriate measures taken by the Government could restore some of the vitality which characterized the Belgium shrimp fishery during its boom period 1948-1955, whereas lack of interest would lead to a certain collapse. (United States Consulate in Antwerp, September 4, 1959.)

Chile

CREDIT ASSISTANCE EXTENDED TO FISHING INDUSTRY:

The Chilean Government Development Organization has announced that it will extend credit assistance to the fisheries industry of the Provinces of Tarapaca and Antofagasta. Motors and fishing equipment will be imported by the Chilean Ministry of Agriculture and sold on credit to fisheries cooperatives legally established in these two provinces. Such purchases will be financed under the 5 billion pesos (about US$4.7 million) fund established by the Law of Rehabilitation of the Departments of Iquique and Pisagua. The Government hopes to extend its plan for credit assistance to fisheries industries in other areas of the Republic.

The Development Organization provided a US$500,000 allocation in its 1959 budget for use in facilitating the purchase of fishing boats. Authorizations have been made against this allocation, the United States Embassy in Santiago reported in an October 1959 dispatch.

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EXPORTS OF FISHERY PRODUCTS, 1955-1958:

Chilean exports of fishery products in 1958 set a new record--approximately 26.0 million pounds, valued at about US$2.0 million. This was about 3.2 million pounds (14 percent) more than the previous peak year of 1955 during which exports amounted to 22.8 million pounds, valued at US$1.2 million. The record 1958 exports were more than twice those exported during 1957 and also 1956.

During 1958, Chile increased its exports of frozen langostinos considerably and for the first time exported canned langostinos. The greatest increase in exports, however, was in fish meal. Exports of frozen tuna, which reached a

Chile (Contd.):

Chilean Exports of Fishery Products, 1955-58

Product	1958		1957		1956		1955	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
Fresh or Frozen:	1,000 Lbs.	US$ 1,000	1,000 Lbs.	US$ 1,000	1,000 Lbs.	US$ 1,000	1,000 Lbs.	US$ 1,000
Tuna	87.0	8.9	773.4	58.9	821.3	58.8	1,158.5	83.8
Bonito	-	-	13.2	0.7	1,195.0	29.3	-	-
Eel	10.8	1.4	17.3	2.4	37.5	6.8	37.0	5.1
Swordfish	-	-	-	-	5.2	1.1	-	-
Langostinos	1,094.3	625.3	841.8	536.7	219.7	133.0	0.6	0.1
Shrimp	61.8	21.2	33.4	19.7	-	-	-	-
Spiny lobster	-	-	5.8	4.4	59.9	37.5	6.6	4.3
Other fish & shellfish	41.4	2.2	409.5	20.5	565.9	37.7	1,611.0	90.2
Canned:								
Fish	195.0	35.9	625.0	125.5	1,035.7	148.8	764.6	134.9
Langostinos	371.1	208.2	-	-	-	-	-	-
Crab	11.7	4.2	21.3	9.9	7.9	3.9	0.2	0.1
Other shellfish	50.7	18.9	283.9	175.2	111.3	40.7	107.1	40.6
Fish meal	24,108.1	1,072.4	9,933.8	453.9	9,802.6	335.3	19,079.2	872.0
Total	26,031.9	$1,998.6	12,958.4	$1,407.8	12,862.0	$832.9	22,764.8	$1,231.1

Note: Values for 1958 converted at rate of 980 pesos equal US$1.
Values for 1957 converted at rate of 690 pesos equal US$1
Values for 1956 converted at rate of 547 pesos equal US$1.
Values for 1955 converted at rate of 300 pesos equal US$1.

peak of 1.2 million pounds in 1955, declined in 1956 and 1957, and then fell sharply to only 87,000 pounds in 1958. (Boletin Informativo, No. 65, January 1959.)

Cuba

CLOSED SEASON FOR SNOOK AND CROAKER ENDED:

The National Fisheries Institute of the Cuban Maritime Development Agency terminated the closed season on the capture of snook (robalo) and Atlantic croaker (corvina) effective August 25, 1959. The closed season on these species originally commenced on May 5, 1959.

The Resolution embodying the above measure was published in the Official Gazette No. 154 of August 19, 1959.

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FISHERMEN AND PACKERS FIX SPINY LOBSTER EX-VESSEL PRICES:

A June 8, 1959, agreement between Cuban fishermen and packers fixed the ex-vessel prices at all ports: for a 60-pound box of whole and a 20-pound box of spiny lobster tails US$11.50. The agreement was extended for 45 days on September 14, 1959, by a Cuban Government Resolution published in Official Gazette No. 172.

The base price of $11.50 is subject to deductions for shipping costs and for losses in weight from port to plant. The amount of these deductions will be determined by a three-man packing-plant committee made up of a representative of the fishermen, one for the packer, and a third representing the Government Maritime Development Agency.

A rumor persists that the Cuban Government plans to construct a fish and shellfish receiving plant on the shores of the Almendares River. Fishermen will be able to deliver their catches to the plant at prices established by the Government. The Government will then sell directly to the processors and eliminate the middleman. In this way the Cuban Government hopes to protect the fisherman from price fluctuations, according to a September 25, 1959, dispatch from the United States Embassy in Havana.

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SPINY LOBSTER POTS PROHIBITED ON THE NORTH COAST:

The National Fisheries Institute of the Cuban Maritime Development Agency published a resolution in the Official Gazette No. 172 of September 14, 1959,

Cuba (Contd.):

prohibiting the use of lobster pots. The restriction covers all the lobster fishing grounds including inlets, bays, harbors, keys, etc., on the northern coast of Cuba, between Key Bahia de Cadiz and Key Frances.

Egypt

SHRIMP IS PRINCIPAL PROCESSED FISHERY PRODUCT:

Egypt's principal processed fishery product is shrimp. Two large and two small factories located in Alexandria produce frozen raw and cooked shrimp. The entire amount of shrimp produced is exported to Italy, United States, Switzerland, and Greece.

Processed shrimp production in 1958 totaled about 350 metric tons, valued at E£118,000 (US$338,896).

Although it is thought that Egypt's shrimp industry has a great potential, there has been little progress made.

With reference to other fisheries, during 1958 there was no production of sardines in Egypt, since the only factory that processes that species remained inactive throughout the year. In the latter part of 1958, negotiations were under way with the Japanese for installation of a large sardine canning factory.

Egypt produces small quantities of dried and salted fish for domestic consumption. (Industrias Pesqueras, July 1, 1959, Vigo, Spain.)

El Salvador

FISHERY TRENDS, OCTOBER 1959:

Exploitation of El Salvador's Pacific Coast marine fisheries, which began only recently on a commercial scale, is still a matter of great interest to businessmen interested in profitable diversification. Licenses have been granted for several additional shrimp vessels, and the United States continues to provide the major market for the shrimp catch. Reliable figures on shrimp exports are not maintained, the best available being United States import statistics. According to these statistics, El Salvador exported 1,130,000 pounds (value US$660,060) of shrimp in 1958 and 1,112,000 pounds valued at US$649,000 in the first eight months of 1959.

Under present practices most of the catch consists of fish, which are thrown overboard by the crews, while only the shrimp are retained. Recently a Salvadoran group proposed that American investors might be interested in a fish meal and fish fertilizer project, which would use the discarded fish as a raw material. Fish flour could provide a valuable supplement to local diets, which are strikingly low in protein.

The Food and Agricultural Organization (FAO) for some time has been considering establishing a regional Fishery Research Institute for Central America, and this plan was discussed at the recent meeting of Central American Economic Ministers in San Jose, Costa Rica. Due to the lack of fisheries organizations in the various countries, however, it appears likely that such an institute will not be possible for some time, with more attention probably needed to build local skills in each country first. (United States Embassy dispatch from San Salvador dated October 15, 1959.)

French West Africa

TUNA FISHERY, 1958/59:

Landings of tuna at Dakar, French West Africa, for the season which opened on December 1, 1958, and ended on March 31, 1959, amounted to 6,957 metric tons. About 4,500 tons of the seasonal tuna landings were processed by the five local tuna canneries and the balance was frozen and shipped to France.

The catch was considered satisfactory in view of the decision of the French Merchant Marine Agency of November 7,

French West Africa (Contd.):

1958, which called for a minimum catch of 6,000 tons by the French mainland tuna clippers, two thirds of the catch to be processed in Dakar and the remainder sent to France.

A total of 23 vessels participated in this season's activities. Twenty came from French fishing ports: 9 from Concarneau, 4 from Sables d'Olonnes, 3 from Ethel, 2 from Bayonne, 1 from Croix, and 1 from La Rochelle. The other three were Senegalese vessels.

Despite the smaller catch, the season proved much more profitable than that of last year, during which 95 vessels landed only 9,500 tons.

Tuna fishing out of Dakar has been aided by the cold-storage facilities of the port which has 30,000 square meters of refrigeration space and also space for the dressing of the tuna before freezing, according to an August 31, 1959, dispatch from the United States Consulate in Dakar.

German Democratic Repubic

FISHING INDUSTRY PROVIDES ONLY 25 PERCENT OF NEEDS:

Despite its large fishing fleet, East Germany's fishing industry can only provide 25 percent of the fishery products needed to supply the demand. This is blamed on technical inadequacies of the fishing fleet and the long voyages that have to be made by vessels to reach the fishing grounds. As a result, the demand for fishery products cannot be satisfied domestically and East Germany can only use half of its actual processing potential for fishery products.

East Germany has petitioned for the use of the Russian port of Murmansk as a base for fishery operations. Russia has not heeded the petition.

Plans have been made for the construction of several factoryship-trawlers which can stay at sea for periods of two months, but these vessels will not be in service before 1965. (Allgemeine Fischwirtschaftszeitung, a West German fishery periodical.)

German Federal Republic

EXPLORATORY FISHING FOR 1959/60 PLANNED:

The West German Federal Government has appropriated DM475,000 (US$114,000) to finance exploratory fishing by otter trawlers.

According to the Federation of the German Deep-Sea Fisheries in Bremerhaven, this amount will cover the expense of seven exploration trips. Commercial fishing trawlers will be used. The search for new fishing grounds will be combined with commercial fishing. Trawler operators will be guaranteed gross daily proceeds of up to DM5,000 (about US$1,200), to be offset by receipts from the sale of the fish caught during the trip.

Three trips were made during the fall of 1959 to Northeast Atlantic waters, off the coasts of Newfoundland, North Labrador, and South and Southwest Greenland. Two trips to Southwest Greenland waters will be made in the spring of 1960.

The West German exploratory fishing program also included two trips into the North Sea during the 1959 fall herring season to test mid-water trawling.

In all instances, the trawlers will carry scientists of the West German Federal Fisheries Research Institute.

The results of the searches will be relayed immediately to trawler operators to ensure maximum practical results of the program, the United States Consul at Bremen reported on October 6, 1959.

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German Federal Republic (Contd.):

FISHERY LANDINGS, 1958:

During 1958 the West German fishing fleets landed 651,179 metric tons (close to 1,435 million pounds) of fish and shellfish. About 46.8 percent of the total landings came from the North Sea area, about 18.2 percent from the grounds off Iceland, and the balance from widely-scattered fishing grounds between Bear Island and the Barents Sea, off the northern tip of Norway, to waters off Laboradador. The landings from the newly discovered fishing banks off the coast of Laboradador and Newfoundland accounted for about 3.3 percent of the total 1958 landings.

West German Fishery Landings, 1958, by Principal Species and Fishing Grounds

Fishing Ground	Herring	Cod	Haddock	Coalfish (Pollock)	Ocean Perch	Shrimp and Crabs	Other Species	Total
				(Metric Tons)				
North Sea	185,124	3,475	2,734	8,944	4	28,372	75,905	304,558
British Channel	8,990	14	3	12	-	-	757	9,776
West British waters	14,267	261	194	356	-	-	1,363	16,441
Baltic Sea	18,926	11,819	-	3	-	-	9,291	40,039
Kattegat	69	187	4	4	-	98	323	685
Iceland	-	27,597	4,753	17,960	52,076	-	15,827	118,213
Norwegian Coast	28	11,077	4,899	17,630	7,908	-	2,774	44,316
Barents Sea	-	563	63	127	534	-	83	1,370
Bear Island	-	1,722	78	154	4,481	-	373	6,808
Greenland	-	20,047	68	104	15,718	-	1,700	37,637
Faroe Islands	-	529	10	2,477	2,676	-	1,432	7,124
Newfoundland	-	291	212	602	73	-	144	1,321
Labrador	-	513	-	8	19,086	-	417	20,024
Other fishing grounds	12,846	6,280	668	4,550	12,980	-	5,542	42,866
Total	240,250	84,375	13,686	52,931	115,536	28,470	115,931	651,179

In 1958, for the first time, West German trawlers caught significant catches of herring off the east coast of Ireland--close to 6 percent of the 1958 herring landings came from that area. West German landings of herring from the traditional herring fishing grounds in the North Sea and English Channel dropped from 93 percent in 1957 to 81 percent in 1958. Lower landings of ocean perch from the Norwegian, Bear Island, and Greenland fishing grounds were offset by increased catches made on the Icelandic and Labrador grounds. Another shift in 1958 was increased cod landings made in the Iceland and Greenland areas instead of in the Baltic, Bear Island, and Barents Sea.

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FOURTH STERN-TYPE TRAWLER PLACED IN SERVICE:

On September 24, 1959, a Bremerhaven shipyard delivered a new stern trawler to a fishing company located in the same city. This is the second ship of this type of trawler built by this company and the fourth ship of its kind now operating in West Germany. The first stern trawler Heinrich Meins was placed into service in May 1956. Its Voith-Schneider propellers caused considerable trouble, and were finally replaced by conventional propellers.

The new trawler is reported to be an improved version of the Heinrich Meins. The ship is powered by a 1,650 hp. Diesel driving conventional propellers. Its cruising speed is stated to be 15 knots. The measurements of the trawler are as follows: over-all length 67.25 meters (220.6 feet); length between perpendiculars 57.60 meters (188.9 feet); moulded breadth 9.60 meters (31.5 feet); moulded depth up to main deck 7.15 meters (23.5 feet); and moulded depth up to second deck 4.90 meters (16.1 feet). The fish-hold capacity is 280 metric tons. In addition, the ship has a separate refrigerated hold of 64 cubic meters to store frozen fish. It is equipped with fish processing and freezing equipment. (United States Consul in Bremen, September 30, 1959.)

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GEAR EXPERT DEMONSTRATES IMPROVED MIDWATER TRAWLING:

Promising catches of herring and sprat have been made by West German fishing vessels with a new type of one-boat midwater trawl gear, consisting of a high-opening nylon net, hydrofoil otter boards, and an echo-sounder oscillator attached

German Federal Republic (Contd.):

to the headline of the net for continuous trawl depth indication and fish detection.

This method has been perfected by a gear technologist on the staff of the Fisheries Division of the Food and Agriculture Organization (FAO), Rome. It is based on experimental work carried out by the technologist when a member of a Hamburg, West German, research institute.

The technologist states: "I was loaned by FAO to the West German Institute in December 1958 to carry out midwater trawling experiments with a typical German North Sea cutter. These boats are about 24 meters (78.7 feet) over-all, powered with 150 hp. engines. When trawling in midwater the cutters usually work in pairs, two boats towing one net between them. In Germany there is also a rather primitive one-boat method using conventional otter boards which are kept at the desired depth by attaching them to big surface floats. In our experiments we concentrated on improving the one-boat trawl.

"The main problem in midwater trawling has been to tow the net at the proper depth to catch the fish, and control the net so that it can be quickly raised or lowered as desired. As you know, the shorter the warps and the higher the towing speed, the higher the net will travel through the water. But this general rule applies only to a small degree to the one-boat trawl where the depth of the net has to be adjusted by changing the length of the warps connecting the otter boards with the surface. Furthermore, accurate adjustment of the net to the actual depth of the fish requires continuous indication of the depth of the net, so that the proper action can be taken in time."

The basic idea of his method is not new. It consists of attaching an oscillator (transducer) to the net and connecting it by cable to the echo-sounding unit installed on board.

An echo-sounder oscillator attached to the bosom part of the headline to sound downwards indicates not only the depth of the net, but also the position of the footrope and the fish in the net-opening and below the net, as well as the sea bottom.

"This enables the fishermen to know the depth of the net, check if the gear is operating properly, and to see if the fish in the path of the net are really caught," said the technologist. "With some experience, he should be able to estimate the rate of catch and so determine the right time for hauling. These very obvious advantages make it much easier to accept the slight trouble of handling an extra cable."

The experimental net had an opening height of 8 to 10 meters (27 to 33 feet) and, to improve its maneuverability, hydrofoil otter boards, designed in Hamburg, were used. These provide a good sheer at a considerably lower drag as compared with the conventional boards. The warp is attached above the center of the board which gives an inward tilt, the lift varying with the towing speed. This increases considerably the influence of speed variations on the depth of the net, and enables the skipper to regulate the the depth through engine control.

This new gear combination enables the skipper to practice "aimed" fishing in what has hitherto been mostly a blind operation.

The skipper of the cutter chartered for the experiments was soon able to handle the gear and, since the experiments, has successfully fished with it on a commercial scale. He has often caught the same amount, or even more, than have the pair-trawl boats fishing nearby.

German deep-sea trawler companies are very interested in midwater trawling for herring, particularly as an additional method for craft of 400 to 500 BRT and 600 to 800 hp., which are not suitable for fishing on the distant grounds off Greenland, Newfoundland, and Labrador.

"Considering the promising results of the cutter experiment," the technologist stated, " it was advisable to test this type of gear with a medium-size deep-sea trawler, too. The experiments were carried out with a steam trawler

German Federal Republic (Contd.):

of 4,000 BRT and 600 hp. in the northern North Sea during February 1959. A very big and light nylon trawl was made which worked with an opening height of 12 to 14 meters (39.4-45.9 feet). We used basically the same echo-sounder oscillator arrangement but with an automatic electric winch essential for handling the 400-fathom cable needed for fishing at about 110 fathoms."

The method proved to be applicable for these bigger craft and valuable experience was gained for future improvements. Catches of up to $3\frac{1}{2}$ tons of herring per haul were made which were considered fairly good in view of the limited size and density of the schools present.

An interesting innovation was tested during these trials, that of an oscillator on the trawl headline transmitting concurrently up to the surface and down to the bottom. This gives the skipper much better information on the actual trawl depth. Irregularities of the bottom profile may be mistaken for net movements and vice versa, but the indication of the trawl's distance from the surface eliminates this difficulty completely.

The result of these experiments, financed by the German Ministry of Agriculture on request of the German fishing industry, is a big step forward in improving the technique of commercial midwater trawling.

It is likely that this method of "aimed" trawling may lead to exploiting pelagic fish resources which have not been, or only to a limited extent, fished so far. (Canadian Trade News, July 1959.)

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IMPORTS AND EXPORTS OF MARINE OILS, 1958 AND JANUARY-JUNE 1959:

Imports: During 1958 West Germany imported 78,820 metric tons of whale oils, valued at US$16.7 million (DM69,855,000), and 64,334 tons of fish oils, valued at US$12.1 million (DM50,633,000). Whale oil imports in 1958 increased over the preceding year, but fish oil imports were lower. The shift of the West German edible fats and oils industry to higher-quality oils for use in the manufacture of margarine continued in 1958. The chief suppliers of whale oils to the West German market were the leading whaling countries with about 35.9 percent of the 1958 imports supplied

West Germany's Imports and Exports of Marine Oils, 1958 and Jan.-June 1959

Country of Origin	Whale Oils				Fish Oils			
	1958		Jan.-June 1959		1958		Jan.-June 1959	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000
Imports:								
Angola	-	-	-	-	6,992	1,211	3,097	458
Argentina	692	136	-	-	38	7	-	-
Australia	3,611	738	353	73	-	-	-	-
Chile	941	195	-	-	74	11	-	-
Denmark	244	41	-	-	2,344	410	1,594	274
Great Britain	3,328	651	1,572	295	508	94	584	108
Iceland	3,394	697	490	93	7,527	1,466	251	47
Japan	24,437	5,220	24,547	5,061	-	-	3,790	710
Netherlands	3,744	774	1,795	275	2,786	488	714	116
Norway	28,287	6,039	26,969	5,489	7,643	1,657	2,433	428
Panama	7,920	1,756	-	-	-	-	-	-
Peru	937	162	836	127	912	159	3,829	544
Portugal	644	132	-	-	1,887	304	1,137	154
Union of South Africa	17	4	-	-	9,241	1,632	1,198	202
United States	624	130	871	162	21,294	4,103	9,927	1,761
Other	-	-	9	2	1/ 3,088	1/ 545	2/ 1,682	2/ 295
Total	78,820	16,675	57,442	11,577	64,334	12,087	30,236	5,097
Exports:								
All countries	268	76	492	16	3/ 14,715	2,839	7,094	1,241

1/ Includes 1,645 tons valued at US$320,000 from Canada.
2/ Includes 1,123 tons valued at US$209,000 from Canada in Jan.-June 1959.
3/ Shipped principally to Sweden (7,005 tons), Denmark (3,948), Netherlands (1,611), Norway (1,870), and the balance to a number of other countries.
Note: Values converted at rate of 4.189 Deutschmarks = US$1 for 1958 and 4.180 Deutschmarks = US$1 for Jan.-June 1959.

German Federal Republic (Contd.):

by Norway and about 31.0 percent by Japan (see table on previous page). The United States was the largest supplier of fish oils to Germany--about one-third or 21,294 tons out of the total imports of 64,334 tons in 1958 came from the United States.

In the first six months of 1959 imports of fish oils from the United States remained at about a third of the total imports of 30,236 tons, but imports from Peru and Japan were up sharply.

Exports: Exports of whale oils by West Germany were negligible and amounted to only 268 tons in 1958. However, in 1958 about 22.9 percent, or 14,715 tons, of fish oils were exported. These exports were chiefly to nearby countries in Western Europe.

Prices: Average cost per metric ton of whale oil in 1958 was close to $211.56 as compared with an average of $201.54 for imports made during the first six months of 1959. Fish oil price average for 1958 was about $187.88 a ton, or about $19.31 a ton higher than average prices for the first six months of this year.

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PRODUCTION METHODS FOR FISH FLOUR DEVELOPED:

A firm in Bremerhaven, West Germany, has developed methods and equipment for the manufacture of fish flour for human consumption in collaboration with the Food and Agriculture Organization. The project was planned to develop protein supplements for addition to diets of the populations in countries lacking sufficient animal protein.

The German firm claims that its product contains 65-70 percent animal protein, B vitamins (including B_{12}), calcium, and phosphorus. The moisture content of the fish flour is stated to be 2-3 percent. The fish flour can be completely and permanently deodorized or may be produced with a fish flavor. Because of its low fat content amounting to only 0.2-0.3 percent, fish flour packed in a vacuum may be stored for at least one year without deterioration of its quality. It is claimed that a total of 49 nourishment tests conducted in 14 tropical or semi-tropical countries have yielded positive results.

At the present time, the Bremerhaven firm is negotiating with foreign interests for the sale of a combined fish flour and fish meal plant. (United States Consulate dispatch from Bremen, dated October 6, 1959.)

Iceland

FISHERIES TRENDS, SEPTEMBER 1959:

The larger part of the Icelandic trawler fleet, which began fishing off Newfoundland two months early this year, found ocean perch operations rather poor in September. An Icelandic trawler which has been conducting fisheries research in the area since August has still failed to locate new ocean perch grounds.

Some new markets for frozen ocean perch fillets have been opened up in the United States and in West Germany, but Russia has still failed to purchase an additional 6,000 metric tons of these fillets, as proposed by the Icelanders.

While German trawlers are engaged in the North Sea herring fishery, four Icelandic trawlers have begun supplying West German ports with iced fish from Greenland-Iceland waters, the United States Embassy in Reykjavik reported on September 25, 1959.

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HERRING FISHERY AND WHALING TRENDS, SEPTEMBER 1959:

The Icelandic south and southwest coast drift-net herring season was off to a slow start as the herring schools failed to appear. Pessimism is already being expressed regarding ability to fill large orders for salted herring now under contract and negotiation with the Soviet Bloc. It is a foregone conclusion that no significant amount of salted herring will be sold this year in the United States.

Iceland (Contd.):

An unusually poor whaling season closed on September 28, 1959, with a total of 371 whales landed as compared with 508 in 1958, and 517 in the very good year of 1957, the United States Embassy in Reykjavik reported on October 9, 1959.

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MARKET FOR SOUTH COAST HERRING IN SOVIET BLOC IMPROVED:

With Iceland's south coast herring season under way in September, the Icelandic Herring Production Board expressed optimism regarding negotiations for sales to the Soviet Bloc of 90,000 barrels of salted herring. This approximates the entire amount of the catch salted for export in 1958 and is 10,000 barrels greater than advance Bloc contracts in 1958. Russia has indicated readiness to buy 20,000 barrels in addition to the 40,000 barrels of south coast herring already contracted for; the Poles have expressed some interest in buying 20,000 barrels, and the East Germans, 10,000 barrels.

If these sales materialize, Soviet Bloc salted herring purchases (including 80,000 barrels from the north coast by the U.S.S.R.) will amount to 170,000 barrels valued at about Ikr. 57 million (US$3.5 million).

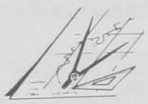
India

RUSSIAN FISHERY BIOLOGIST TO SURVEY BAY OF BENGAL:

A member of Soviet Russia's Research Institute of Marine Fisheries and Oceanography has arrived in India on an assignment as marine fishery biologist on behalf of the Food and Agriculture Organization (FAO), Rome, Italy.

In an interview at FAO Headquarters before leaving for India, the Russian biologist stated: "My principal work will be to advise the Indian Government on exploratory fishing in the Bay of Bengal and to assist in carrying out a survey of demersal stocks in the Bay and in adjacent waters."

His work will be in addition to, and will supplement, the work carried out by a number of FAO fisheries experts in India during the past few years.



Iran

FISHERIES TRENDS, SEPTEMBER 1959:

The joint Iranian-United States shrimp fishing company has 10 shrimp vessels operating in the Bandar Abbas area, and the local agent reported that the catch is very large. The shrimp are frozen and packed for shipment to the United States on board one of the larger vessels and transferred to ocean-going cargo vessels at Bandar Abbas; thus, there are no adequate statistics on the catch. The shrimp vessels are provisioned from Khorramshahr by a small chartered coastal freighter. The mothership scheduled to arrive from Houston, Texas, had not appeared as of the end of September.

A joint Japanese-Iranian company was set up about four years ago, first with private Iranian capital and then with the Plan Organization. The Japanese did not work well with the Iranians and withdrew their boats about a year and a half ago. Since that time the company, wholly-owned by the Plan Organization, has continued limited operations, buying fish from local boats in Abadan and renting freezer space in Customs. Now, if funds can be obtained from the Plan Organization, more intensive operations may be resumed. In view of the demands made upon the Plan Organization from its other projects, it is questionable that much money will be available for the fisheries, the United States Consulate in Khorramshahr reported on October 1, 1959.

Japan

CANNED TUNA-IN-BRINE EXPORTS TO UNITED STATES, JANUARY-MAY 1959:

During the first five months of 1959, Japan exported 124,690 standard cases (48 7-oz. cans per case) of canned white meat tuna-in-brine and 75,040 standard cases of canned light meat tuna-in-brine to the United States. Prices per standard case for white meat tuna-in-brine at the canners' level averaged about US$9.55 and for light meat tuna-in-brine about US$7.17 per case.

Japanese Canned in Brine Tuna Exports to United States, January-May 1959

Type	Actual Cases	Standard Cases 1/	Canners' Value (US$)
White meat in brine	119,275	124,690	1,190,891
Light meat in brine	71,799	75,040	537,822

1/ 48 7-oz. cans.

Note: These data may differ from published United States import data since United States data do not seem to accurately classify white meat and light meat.

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PLANS FOR 1959/60 WHALING SEASON:

The Japanese whaling industry has announced its intention to send out the same six fleets as last year and to limit its catch to the 1958/59 level or 5,037 blue-whale units. According to reports reaching Japan, Norway plans to take 5,900 units, the Netherlands 1,200, the United Kingdom 15/80 (about 2,812 blue-whale units) of the total planned catch, and the Soviet Union 20 percent of the total. It is estimated that these plans may result in a total catch of about 18,000 blue-whale units or 3,000 more than the Whaling Commission's 1958/59 quota limit, which many biologists considered was already too high for proper conservation of the whale populations. The Japanese Government will wait for the reaction of the European whalers to the Japanese industry's plan before giving its official sanction, and some slight optimism still seems to be felt that when the industries of the five whaling nations realize the full implications for the future of this excessive whale catch, they may reexamine the possibilities of a reasonable compromise on apportionment of the catch.

The question is beginning to arise in the Japanese industry as to whether the six Japanese fleets will continue to compete freely with each other under their national quota in a miniature version of the former "Whaling Olympics" or whether a system of catch allocations will be set up within the Japanese industry. A decision on this potentially stormy question will likely be left until just before the whaling season, the United States Embassy in Tokyo reported on September 17.

Since the withdrawal of the Netherlands and Norway from the International Whaling Convention in July of 1959, there has been much speculation as to how the catch of whales might be regulated in the 1959/60 Antarctic whaling season. In the past the fleets of the five Antarctic whaling powers--Japan, the United Kingdom, Norway, the Netherlands, and Russia--have competed freely for their share of the 15,000 blue-whale-unit catch limit set by the International Whaling Commission. A growing dissatisfaction with this system on the part of the European whalers led to a number of meetings since last winter at which the whaling industries tried to work out a formula for apportioning the permissible catch among the five nations. When these efforts failed, Norway and the Netherlands withdrew from the Convention, and the catch limitation imposed in the past by the Whaling Commission became essentially a dead-letter.

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RESIN-LIKE SUBSTANCE FROM FISH OILS DEVELOPED:

Experiments conducted in Japan have shown that chlorination of fish oil results in the formation of a resin-like substance which seems to be a promising main ingredient of coatings such as varnish. Fish oil, which is previously treated with alkali to remove free fatty acids, is dissolved in CCl_4 (carbon tetrachloride) and chlorine gas is bubbled through it. The resulting product is a white, odorless powder, soluble in most organic solvents except in lower alcohols and ligroin. The product is stable and a solution in toluene is transparent, slightly yellow and forms a glossy, waterproof film. The film is durable and not corrosive to iron, copper, and aluminum

Japan (Contd.):

(Bulletin of the Japanese Society of Scientific Fisheries, vol. 24, no. 1, 1958).

Korea

FISHERIES TRENDS, AUGUST 1959:

The Central Fisheries Experiment Station in Korea has received initial contacts from two seafood companies in the United States requesting sample shipments of Korean frozen fish products.

One Korean company has completed its frozen fishery products processing facility at Pohang. The facility was inspected and approved under the new frozen fishery products inspection regulation of Korea. In addition, processors in the Pohang-Kampo area were preparing frozen shrimp for export against a $30,000 order from the United States.

The commercial shrimp vessel Pyung Namho, operating under the guidance of Experimental Station technicians, reported average catches of over one metric ton per day of whole mixed size shrimp. One day's catch totaled 70 boxes (probably about 22 pounds per box) of jumbo, 63 boxes medium, and 30 boxes small. This compares to 20 boxes formerly considered a good day's catch. This vessel is working on fishing grounds developed by Experimental Station vessels under the United States Operations Mission shrimp development program.

The two tuna long-line vessels also purchased under the 1957 boat procurement project completed their first trip and reported full loads of 55 tons each in 21 days. (United States Operations Mission, Korea, report of September 28, 1959.)

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REVIEW OF FISHING INDUSTRY, 1958:

The Korean fisheries industry supplies an estimated 85 percent of the animal protein consumed by the Korean people. It is also an important source of foreign exchange, providing about 20 percent of the total value of Korea's exports.

Despite improvements in the industry and increased production, the Korean fishing industry still faces great problems. Methods of fishing, vessels, and gear must be modernized. Available finances are limited. Marketing facilities and sanitary standards must be improved, especially for the export market. The Korean government is assisting and encouraging the industry, but the achievement of desired goals will be slow. (United States Embassy in Seoul, report dated September 10, 1959.)

Production of Marine Products: The source of Korean marine products are (1) coastal and offshore fisheries and (2) aquiculture. The former includes the production of fish, shellfish, seaweeds, and other aquatic animals and plants from coastal waters of the Republic of Korea. This is the mainstay of the Korean fisheries industry, providing annually about 95-98 percent of the total marine products landed in the country. Production from aquiculture refers to the culture of oysters, clams, and other shellfish and seaweeds.

Table 1 - Korea's Production of Marine Products, 1954-1958 1/

Year	Fish	Shellfish	Seaweed	Other Aquatic Products	Total
	(Metric Tons)				
1958	291,191	15,884	28,759	59,359	395,193
1957	279,768	12,187	34,798	76,405	403,158
1956	257,518	9,778	24,424	49,197	340,917
1955	190,424	6,799	20,019	41,992	259,234
1954	188,941	10,455	17,253	32,887	249,536

1/Exclusive of aquiculture and agar-agar production, and tuna landings in American Samoa.

Total landings of marine products in 1958 were 403,412 metric tons, approximately 1.5 percent less than the previous year but still substantially above the annual production of any other year since 1950. Of this year's production, 395,193 tons, or almost 98 percent, came from coastal and offshore fisheries, the rest (8,219 tons) from aquiculture.

The marine products from coastal and offshore waters in 1958 totaled 395,193 tons, a decrease of 2 percent from 1957. Compared with 1957 production by class of product, production of fish increased 4 percent and of shellfish 30 percent, while production of seaweed and other aquatic plants and animals decreased by 17.4 percent and 22.3 percent, respectively.

Of the coastal and offshore fisheries landings in 1958, fish constituted 73.7 percent with 291,191 tons; shellfish 4.0 percent with 15,884 tons; seaweeds 7.3 percent with 28,759 tons; and other aquatic plants and animals 15 percent with 59,359 tons.

The value of the total landings of various products in 1958 was estimated at about Hw50.3 billion (US$60.6 million at the official exchange rate of Hw500 equals US$1).

Total value of the 1958 production of coastal and offshore fisheries is calculated at Hw28.7 billion (US$57.4 million at the official exchange rate of Hw500 equal $1). This amount was 10.8 percent greater than the 1957 value and included Hw 24 billion ($48.0 million) for fish, Hw1.1 billion ($2.2 million) for shellfish, Hw0.9 billion ($1.8 million) for

Korea (Contd.):

seaweed and Hw2.7 billion ($5.4 million) for other aquatic animals and plants.

The most important species of fish by volume caught in 1958 were saury-pike, horse mackerel or bluefin tuna, Alaska pollock, anchovy, yellow croaker, and hairtail. As compared to 1957, the

Table 2 - Korean Production of Coastal and Offshore Fisheries by Important Species

Product	1958	1957	1956
	(Metric Tons)		
Fish:			
Flounder (flatfish)	9,450	6,166	6,279
Mackerel	5,793	12,788	13,931
Saury-pike	20,651	22,872	14,734
Horse mackerel (bluefin tuna)	48,361	13,138	10,490
Alaska pollock	39,336	43,438	30,954
Anchovy	37,834	34,679	29,056
Yellow croaker (corvenia)	24,585	34,838	33,045
Hair-tail	30,555	38,611	48,220
Bastard halibut	2,720	2,598	2,428
Sand launce	4,399	7,336	2,839
Shark	7,926	7,160	8,821
Other fish	59,580	56,144	56,721
Total	291,191	279,768	257,518
Shellfish:			
Short-necked clam	2,279	1,260	1,119
Sea mussel	3,162	1,897	1,125
Oyster	2,083	1,565	1,548
Stiegele mussel	1,714	1,602	366
Spiny whelk	1,074	1,517	855
Abalone	1,617	842	573
Head clam	498	457	1,003
Heart clam	1,456	846	168
Other shellfish	2,001	2,201	3,021
Total	15,884	12,187	9,778
Other Aquatic Animals and Plants:			
Cuttlefish	33,519	39,455	21,755
Shrimp	16,296	25,672	17,588
Whale	1,233	2,587	2,226
Prawn shrimp	637	808	760
Crab	1,493	1,243	832
Octopus	2,152	1,109	1,650
All others	4,029	5,531	4,387
Total	59,359	76,405	49,198
Grand Total	395,193	403,158	340,917

decreased catch of particular species was attributed to unfavorable currents and/or temperatures, while the tremendous increase in horse mackerel production was due to the discovery of a new fish resource in the vicinity of Mooksan Island. The decrease in production from coastal and offshore fisheries of seaweeds and other aquatic plants and animals is attributed to adverse currents and temperatures, and price developments in domestic markets for certain species.

In addition to the products of coastal and offshore fisheries, Korea raises such products as oysters, clams, abalone, and other shellfish and seaweeds. Shellfish are raised by sowing seeds in definite culture grounds, and seaweeds by placing brush or netting for collection of spores in coastal waters.

During 1958 Korea obtained 8,219 tons of marine products from aquiculture. This amount was 34 percent greater than in 1957. The outstanding fea-

Table 3 - Korean Production from Aquiculture by Important Species

Commodity	1958	1957	1956
	(Metric Tons)		
Laver	737	640	1,059
Oyster	6,215	4,400	3,453
Short-necked clam	168	124	584
Abalone	20	1	-
Cockles	645	500	340
Others	434	460	218
Total	8,219	6,125	5,654

ture of aquiculture production in 1958 was the 41 percent increase in the oyster yield, the production of which the Government is trying to encourage. Methods of encouragement include financial loans and allocations of materials to build new culture grounds. In 1958 the Office of Marine Affairs built 1.9 million pyung (1,552 acres--1,224 pyung equals 1 acre) of new culture grounds with 280 million hwan ($560,000) from the National Treasury Subsidy Fund and 1.3 million pyung (1,062 acres) with 182 million hwan ($364,000) from the 8th Reconstruction National Bond Fund, or a total of 3.2 million pyung (2,614 acres) with 462 million hwan ($924,000).

Not included in the data above are an estimated 280 metric tons of tuna caught in 1958 by the Koreans in deep-sea fishing in the vicinity of American Samoa. The catch, valued at roughly $70,000 was sold to the United States firm operating the cannery on that island. The Office of Marine Affairs does not include the results of the deep-sea fishing operation, which began in 1957, in its statistics on the Korean fishing industry.

Utilization of Marine Products Within the Country: No detailed or accurate information is available on the utilization of marine products within Korea. The Office of Marine Affairs states that of the total catch of 403,000 tons in 1957, 11,000 tons were exported and 392,000 tons consumed domestically in the form of fresh or processed products. Of the 8,800 tons of canned products, 95 percent was consumed by the Korean military forces; 4.8 percent was sold on domestic markets; and the balance of about 0.2 percent was exported. Statistics show that there was a limited production of fertilizer from fish, probably less than 100 tons. Some locally-produced shell is used in the manufacture of cheaper inlaid lacquer products, but for specialty and export items a finer shell is imported.

Marine Products Processing Industry: A total of 65,270 tons of processed fishery items was produced by Korea in 1958, including 62,851 tons of food products and 2,419 tons of nonfood items.

In 1958 Korea had 38 marine products canneries licensed by the Office of Marine Affairs. The total capacity of these plants is estimated at 35 million cases or about 52,000 metric tons. Most of the plants are said to be equipped with modern facilities. The daily capacities of the individual plants vary from a minimum of 300 cases to a maximum of 1,350 cases for an 8-hour day. During 1958 two model plants were erected with about $325,000 of FY 1954 UNKRA funds. The capacity of each plant was estimated at 75,000 tons for an 8-hour day, 20 days a month, 6 months a year.

Production of canned marine products in 1958 amounted to 593,277 cases (8,855 tons). Of this

Korea (Contd.):

Table 4 - Korean Fishery Products Cured and/or Processed

Commodity	1958	1957	1956
	(Metric Tons)		
Food			
Canned	8,855	8,487	8,810
Sun-dried	12,512	12,322	8,434
Salted and dried fish	2,068	2,867	2,426
Products fermented in brine	14,619	19,233	16,622
Salted fish	12,326	14,246	13,591
Boiled & dried	9,063	8,867	8,412
Edible seaweed	3,408	5,088	4,616
All others	-	30	25
Total	62,851	71,140	62,936
Nonfood			
Fish oil	353	237	624
Seaweed	1,976	2,642	2,053
Others	90	8	59
Total	2,419	2,887	2,736

total 92 percent consisted of three items: horse mackerel or bluefin tuna, saury or mackerel-pike, and fish balls.

Agar-agar Production: South Korea has 45 natural agar-agar plants of which only 25 operated during 1958 with a total production of 250 metric tons. Three synthetic agar-agar plants, financed with $635,000 of 1955 ICA funds, produced a total of 109 tons. Agar-agar is not included in the processed products totals issued by the Office of Marine Affairs.

Production of Frozen Fish Products: Korea has 67 ice-freezing and cold-storage plants with the following daily capacities: ice making 1,557 metric tons; freezing 275 tons; cold-storage 8,415 tons; and ice storage 23,652 tons. Although the Office of Marine Affairs lists production of frozen marine products as 10,327 tons of fish and 90 tons of shrimp, only about 33 percent of this amount was quick-frozen, the remainder being merely stored in ice or cold-storage plants. The quick-frozen products were produced in 27 plants with a combined capacity of 275 tons per day. The Office of Marine Affairs does not include frozen products in its statistics on processed products.

Production of Fish Oil: Korea's 42 fish-oil plants are all quite small, having a combined annual capacity of only 700 tons. These plants produced 353 tons of fish oils in 1958.

Foreign Trade in Marine Products: Exports of marine products from Korea during 1958 totaled 11,048 tons, 12.3 percent greater than in 1957. These products were valued at US$3,670,374, 6.8 percent more than 1957 fishery export sales and 22 percent of the total value of all exports from Korea in 1958. The disproportionate increase in quantity compared to the lesser increase in value of exports was attributed to a drop in foreign market prices for Korean marine products, as also happened in 1957.

Japan was the largest importer of Korean fishery products taking 7,789 tons worth $2.3 million, followed by Hong Kong with 2,891 tons worth $1 million. These two markets combined purchased 97 percent by volume and 91 percent by value of Korea's fishery exports. The United States was the third largest buyer with 301 tons worth $285,000 followed by Singapore--35 tons worth $28,000 and the Republic of China--28 tons worth $8,500. England, Australia, West Germany, Italy, and the Ryukyus, in that order, were markets for insignificant amounts of Korean marine exports.

International Problems: Korea's differences with Japan over the "Rhee or Peace Line" remain unsettled. This line, established by presidential proclamation on January 18, 1952, closes off waters ranging from 10 to 200 miles off the Korean coast. Purportedly it is designed for : (1) fishery conservation; (2) protection of Korea's security; (3) protection of mineral resources of the contin-

Table 5 - Korean Quantity and Value of Fishery Exports by Commodity[1/]

Commodity	1958		1957		1956	
	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000
Frozen & fresh fish	2,576	713	3,311	693	3,103	554
Frozen shrimp	59	73	20	20	-	-
Dried shrimp	9	12	318	90	13	17
Dried anchovy	-	-	48	22	-	-
Dried cuttlefish	4,433	1,427	2,943	1,229	307	110
Dried oyster	12	11	40	41	40	33
Other dried fish	39	38	110	100	176	142
Salted and boiled fish	-	-	5	3	-	-
Laver[2/]	8	41	21	91	150	601
Agar-agar	266	634	227	586	336	820
Fish-liver oils	369	147	119	67	27	30
Inedible seaweeds	2,995	424	2,484	378	1,980	482
All others	280	148	189	114	162	111
Total	11,048	$3,670	9,837	$3,435	6,298	$2,899

1/Figures may not add up to total because of roundings.
2/The figures shown above for laver exports in 1957 are 189 tons and $810,000 less than were shown in report of that year. This amount of laver was shipped to Japan and originally included in the 1957 export statistics. However, the laver was not released from Japanese customs warehouses and payment effected until 1959. Therefore the 1957 export figures were reduced by that amount. Presumably this tonnage and value will be shown in export statistics for 1959.

Korea (Contd.):

ental shelf. Korea continues to seize Japanese fishing vessels and crews found within this line.

As in previous years, a number of Korean fishermen and their vessels were seized in 1958 by Communist gunboats operating out of harbors in North Korea. It is believed that most of these fishermen were released after some subjection to Communist propaganda.

As a result of the controversy over the repatriation to north Korea of Korean residents in Japan, the Republic of Korea suspended trade relations with Japan effective June 15, 1959. Since approximately 64 percent of Korea's exports of marine products in 1958 went to Japan, this move was particularly distressing to the fishing industry. Following the trade suspension there was speculation about the establishment of a three-way trade arrangement--between Japan and Korea through the Ryukyus--but there have been no developments along this line.

In the latter part of July the Fresh Fish Exporters Association requested the Korean Ministry of Commerce and Industry to allow the exportation of fresh fish to Japan, pointing out that the export to areas other than Japan was "impossible" and that certain fishermen were being hard hit by the suspension. According to the Association, unfilled contracts for $1 million worth of Korean fresh fish had already been signed with the Japanese.

Government Policy and Program for Fisheries Industry: The fishery industry of Korea is of traditional importance as the nation's chief source of animal protein and an important source of foreign exchange earnings. The industry has been hampered however by the destruction suffered in World War II and, particularly, in the Korean War; antiquated equipment and outdated, inefficient fishing techniques; lack of financing and credit systems for operations and investment; undeveloped marketing, processing and distribution systems for fisheries products; excessive taxes, charges, and other costs; and, a lack of technical staff.

Since 1953 progress in the development of the industry has been encouraging. This progress has been made possible largely by the aid provided by the United Nations and the United States in support of the Korean program for rehabilitation and expansion of the fishing industry. This aid has taken the form of boat construction, conversion, and repair; the introduction and demonstration of improved gear and fishing techniques; the construction of better marketing facilities; training in sanitation and the handling and freezing of products; the training of fishermen and technicians; the exploration of fishing resources; and, the establishment of a revolving loan fund for financing seasonal operations of the local guilds and individual fishermen. As a result of these activities, production from Korean coastal and offshore fisheries rose from an annual average yield of 293,000 tons for 1945-54 to 341,000 tons in 1956 and 403,158 tons in 1957. Discounting the slight drop in 1958 from the previous year, there has been a steady increase in production since 1953.

Faced with the increasing food demands of a growing population and the desire to increase exports of marine products, the Government has established a policy aimed at protecting fishing resources, increased production at lower costs, and expansion of foreign markets. Resources are to be guarded by means of better management and strict control over fishing operations in territorial waters. Further exploratory work is to be carried out to locate fish resources. The design and construction of fishing vessels are to be modernized and the use of improved gear encouraged. Available financial assistance will be increased and loan procedures simplified. Exports are to be encouraged by the establishment of quality standards backed by inspection and enforcement procedures. The advice and assistance of the U. S. Operations Mission is being utilized in the achievement of these goals.

The Government continues to assist in the expansion of production from aquiculture and is assisting in the development of inland fishery resources.

While progress toward the established goals is being made, the rate of advance is restricted by limited financial means.

Liberia

FISHERIES TRENDS, OCTOBER 1959:

A Liberian fishing company now operates six fishing vessels, and is in process of expanding operations to Sierra Leone and Nigeria. It is understood that a branch office is being opened in Freetown, Sierra Leone, and that two of the six vessels will contribute to supplying fish to that outlet. Operations of another firm in which the company has an interest are also reported to be progressing in Nigeria.

Interest in the fish pond program, sponsored by the U. S. International Cooperation Administration and the Liberian Department of Agriculture and Commerce, which is designed to make freshwater fish available to supplement the Liberian natives' protein-deficient diet, is slowly increasing. Requests for assistance in construction of fish ponds are being received in larger numbers, and several new fish ponds are currently under construction (United States Embassy in Liberia, October 9, 1959).

Martinique

IMPORTS OF FISHERY PRODUCTS UNDER LICENSE INCLUDED IN 1959 DOLLAR CREDITS:

In 1959, import allotment figures for dollar and sterling credits were increased from US$3,640,000 (both dollar and sterling) available in 1958 to US$5,125,408. For 1959, the dollar and sterling allotments were lumped into one sum, which can be used to buy either from dollar or sterling zones. Included in the listings of licensed importations is 58 million francs (US$118,400) for fresh, salted, or canned fish. (United States Consulate dispatch from Martinique dated October 19, 1959.)

Mexico

CANNED FISH PACK, 1958:

The 25 Mexican canneries, reported to have operated entirely or in part on fishery products in 1958, packed an estimated 686,000 cases, or about 255,000 cases more than during 1957. The greatest increase was in the pack of California sardines which jumped from an estimated 155,000 to 334,000 cases. Canned shrimp, tuna, and mullet also showed significant increases. The total pack was estimated to have a value of 112,700,000 pesos (US$9,016,000). Canned sardines, shrimp, abalone, and tuna and tunalike fish comprised about 93 percent of the value of the canned fishery products.

Table 1 - Mexico's Canned Fishery Products Pack, 1957-58

Product	Quantity		Value
	1958	1957	1958
	. . . (Cases) . . .		US$
Sardines (15-oz. 48 cans/cs.)	334,000	155,000	1,000 3,504
Abalone (16-oz. 48 cans/cs.)	106,000	105,000	2,072
Shrimp (about 11.1-oz. 48 cans/cs.)	96,000	60,000	1,904
Tuna & tunalike fish (7-oz. 48 cans/cs.)	2/80,000	12,500	904
Mullet (about 11.1-oz. 48 cans/cs.)	30,000	10,000	216
Mackerel (16-oz. 48 cans/cs.)	25,000	70,000	208
Miscellaneous 1/	15,000	18,000	208
Total cases	686,000	430,500	9,016

1/ Includes miscellaneous fish and shellfish, turtle meat, and specialty items.
2/ Includes an estimated 30,000 cases of yellowtail.

During part of the year Mexican canned sardines were exported to the United States. The canned abalone market, mostly export, remained soft which discouraged any expansion in that fishery. There was a slight reduction in the number of operating plants owing to purchase and consolidation.

Normally, with the exception of abalone, canned fishery products are for local consumption. In 1958 as in 1957, however, some sardines were canned for export to the United States. (It is understood that this was done on a barter arrangement in part payment for fishing vessels secured by a cannery in Mexico from one in the United States.)

Of the 25 canneries that were reported to have processed sea food during 1958 more than half (13) were located in Baja California. Sinaloa ranked next with 5 and Veracruz followed with 2. The remainder were scattered about the Republic, along the coast, and on the central plateau. Nineteen of the canneries were on the West Coast, 3 on the East Coast, and 3 in the center of the country. Some were dedicated exclusively to fishery products while others, principally those in the highlands, worked only part-time on sea foods.

The more important species canned in Mexico are: California sardines (Sardinops caerulea), Pacific mackerel (Pneumatophorus diego), jack mackerel (Trachurus symmetricus), yellowfin tuna (Neothunnus macropterus), skipjack tuna (Katsuwonus pelamis), yellowtail (Seriola dorsalis), mullet (several species of Mugil), Spanish mackerel (several species of Scomberomorus), abalone (3 species of Haliotis), and shrimp (4 species of Penaeus).

The 1958 California sardine pack ranked first in quantity and in value. It was more than double the quantity canned in 1957. Fish were more readily available in 1958 and the plants obtained better fishing equipment. January was a good month but then fish became scarce until July. About two-thirds of the pack was made during the last half of the year. The type of pack depends primarily on the packer's estimate of demand. In

Mexico (Contd.):

1958 about 72 percent of the pack was one-pound ovals in tomato sauce. This was a considerable increase over the 1957 pack. Likewise, there was an increase in the percentage of one-pound natural pack, but the 6-ounce natural cylindrical can declined appreciably.

Foreign Trade: Imports of all fishery products by Mexico during 1958 were valued at about $588,000 with European sardines accounting for about 70 percent of the value of imports. The United States share of the fishery imports was less than 5 percent and amounted to only about $27,000.

Exports of canned fishery products were valued at about $1,887,000. Practically all, 99.9 percent by value, of the 1958 exports were shipped to the United States. Abalone accounted for about 92 percent of the value of Mexican canned fishery products exports. (United States Embassy dispatch from Mexico dated October 10, 1959.)

Note: Values converted at rate of 12.50 pesos = US$1.

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CUBAN FISHING VESSELS BARRED FROM PORT OF ISLA MUJERES:

The Commander of the Isla Mujeres, Quintana Roo Naval Base and former Chief of Staff of the Mexican Navy, has announced that Cuban fishing vessels will no longer be permitted free use of that port. Only vessels entering under protest resulting from bad weather, damage to the vessels, or illness of the crew will be allowed entry.

For many years Cuban fishing boats have entered Isla Mujeres for shelter and for supplies. These boats fish principally for groupers and snappers which they discharge in Cuba. Some are fitted with extensive live-wells while others follow the conventional pattern of preserving the fish in ice (United States Embassy in Mexico City, October 6, 1959.)

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ENSENADA AREA FISHERY TRENDS, SEPTEMBER 1959:

The abalone landings in the Ensenada, Mexico, area through August this year have been normal but, according to the Fisheries Inspector's Office, the tuna catch was 30 percent below normal, not because of lack of fish, but because of the poor market. The prices offered for tuna in the United States have dropped drastically. The only firm in Ensenada, reported to be engaged in tuna canning as an industry, has had to cut the pay of its fishermen.

The spiny lobster season opened on October 1 and continues until March 15, 1960. The Regional Federation of Fishing Cooperatives, consisting of 10 fishing cooperatives in Ensenada, now will sell spiny lobsters through the bank to a United States firm for 50 cents a pound in contrast to the previous 45.5 cents a pound which it has received for the last 5 years from another firm. The money paid by the purchaser will go to the bank to pay off a debt of approximately 9 million pesos (about US$720,000) which the cooperatives owe for a loan made in the past for purchase of equipment.

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EXPORT DUTY ON FISH MEAL LOWERED:

Effective October 23, 1959, the Mexican export duty on fish meal will be one-third less than previously. The new export duty will amount to about US$8.16 per gross metric ton, which is about US$4.08 under the previous rate. The change in rate was effected by decreasing the ad valorem from 30 percent to 20 percent. The official price, upon which the ad valorem is calculated, remains the same at 0.50 pesos per gross kilogram (about US$40 per metric ton).

Most of Mexico's fish meal production comes from the Peninsula of Baja California. The 1958 production of fish meal was about 2,735 metric tons of which less than ten percent (216 tons) was exported--all to the United States. It is not expected that the new duty will increase appreciably the exports of fish meal because Mexico is deficient in this commodity. Imports of fish meal in 1958 a-

Mexico (Contd.):

mounted to 3,621 metric tons, states a United States Embassy dispatch (October 20, 1959) from Mexico.

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SHRIMP FISHERY TRENDS, SEPTEMBER 1959:

The Mexican northwest Pacific Coast shrimp season opened on September 16 after two months' closure. The Guaymas fleet set sail on this date, but the Mazatlan vessels, owing to small size of shrimp and cooperative disputes, did not begin fishing until some 10 to 12 days later. The Guaymas landings were very good with many vessels reporting 4-6 tons of shrimp tails per trip. Landings flooded the Guaymas freezers and surplus fresh shrimp were trucked to Mazatlan for processing. First reports from Mazatlan indicated good catches there also. Bay fishing, however, was reported as spotty. This suggests the possibility of a decline in catches later on. Normally, bay catches should be running high at this time of year.

In the Gulf of Mexico, near Tampico, two Texas shrimp vessels were seized late in September by Mexican patrol boats. Vessels and crews were released upon posting cash bonds of 20,000 pesos in one instance and 25,000 pesos in the other (about US$1,600 and 2,000 respectively). The catch and fishing gear were condemned. These two seizures and one in late August are the first in about three years.

The Carmen-Campeche September catches in the Gulf of Mexico were about the same as August with Carmen landings averaging slightly under one ton of headless shrimp per trip and Campeche landings about 1,500 pounds per trip. The September landings in both Carmen and Campeche showed an increase in the proportion of brown shrimp over August. Pink shrimp still remained the dominating species in both ports. Shrimp sizes increased somewhat during the month. About 75 percent of the Campeche and 50 percent of the Carmen landings ran 26 to 30 count per pound or under. The sizes tended to increase as September progressed, according to an October 2, 1959, dispatch from the United States Embassy in Mexico City.

Netherlands

INCREASE IN WHALE PRODUCTION PLANNED:

The Dutch whaling fleet, owned by the Netherlands Whaling Company of Amsterdam, is expected to try for a record catch during the coming season. The fleet departed for Antarctic whaling grounds on November 1, 1959. Since the company is no longer bound by the rules established by the 1946 International Whaling Convention, from which Holland together with Norway withdrew on June 30, 1959, it has reportedly fixed its own limit at 1,200 blue-whale units. This means a production target of approximately 24,000 metric tons of whale oil for 1959 as compared with 18,800 tons produced from the 1958 catch of 969 units. In order to supply fuel oil and transport the whale oil, two tankers were added to the fleet, which consists of the 26,830-ton whaling ship Willem Barendsz and 13 catchers. The fleet, which expects to start operations in the Antarctic in mid-December, will operate 107 days instead of 69 days as in previous seasons. In contrast to previous seasons, no specific effort will be made to catch sperm whales.

The Willem Barendsz carries a new freezing plant which will enable it to fulfill its contract with a United Kingdom firm to furnish 1,500 tons of frozen whale meat a year.

For several years the Dutch biologists have argued that the supply of blue whales in the Antarctic is larger than generally supposed, and the Dutch have argued for an increased limit. The Netherlands has demanded a quota of 8 percent of the total catch, but other countries have insisted on a quota of 4.6 percent for the Dutch.

According to the Dutch, six Japanese whaling fleets will join Antarctic whaling operations in November, with a target of 5,040 blue-whale units. Britain will send three whaling fleets which are expected

Netherlands (Contd.):

to catch 2,500 blue-whale units. Norway (with 8 fleets) had demanded a 33-percent share of the 15,000 units, or 5,000 units, and it has announced its intention of increasing that catch by some 800 units. The Dutch expect Soviet Russia to abide by its original share of 3,000 units. The Russian whaling fleet, headed by the new 36,000-ton mothership Sovetskaya Ukraine, left Odessa in mid October, according to a Russian news bulletin.

One difficulty has arisen in connection with the signing-on of the crew for the Willem Barendsz. During a meeting on October 21 at the Center for Seamen of the Merchant Marine and the Fishing Fleet, the Center's chairman advised personnel of the whaling fleet not to sign their contracts with the Netherlands Whaling Company pending approval of the contracts by the Netherlands Government Board of Mediators. In April of this year the Center had agreed to a request received from the Company to negotiate for changes in the labor agreements with the company's workers, if the Netherlands were allotted less than 1,200 blue-whale units by the International Whaling Convention. The Center has believed that there is no reason to alter the labor conditions now that the Netherlands has withdrawn from the Convention and has fixed its catch limit at 1,200 units. The chairman stated that notwithstanding this fact the Company now wants to reduce the earnings of its personnel by about ten percent. As a result of these negotiations it may be possible that the Willem Barendsz may be delayed in sailing from Amsterdam.

The Willem Barendsz has many provisions for the comfort, safety, and welfare of the 500-man crew during the long six months Antarctic voyage. The ship has a modern 12-bed hospital and operating room. The wife of the ship's doctor, who accompanies her husband, conducts regular church services and performs other chaplain duties. Current entertainment films are available for frequent showings and a well-stocked library supplies adequate reading material to suit the taste of the men. Living quarters of the ship are attractively decorated featuring paintings and photos reminiscent of Holland. (The United States Embassy in The Hague, October 20, 1959, and United States Consul in Amsterdam, October 23, 1959.)

New Zealand

RESTRICTIONS REMOVED ON SOME IMPORTS FROM THE UNITED STATES:

For the first time in the postwar period, most discriminatory restrictions on imports from dollar sources have been removed, opening the New Zealand market in 1960 to dollar goods on an equal basis for all products except motor vehicles and timber. United States firms will now be able to compete on more equal terms with other suppliers.

New Zealand's exports to the United States have about doubled in the last two years and resulted in a substantial surplus in New Zealand's balance of payments with the United States. The current liberalization of trade with the dollar area will probably result in an expansion of imports from the United States. Among the items granted increases in quotas are canned and preserved fish, according to a United States Embassy dispatch (October 9, 1959) from Wellington.

Nigeria

SURVEY OF TUNA STOCKS BY UNITED STATES COMPANY PROPOSED:

The West African program of the Rockefeller Brothers Fund includes a plan to arrange for a detailed survey of the tuna stocks in the Atlantic Ocean off the Nigerian coast by a United States tuna cannery company. Such a survey would necessarily include a study of the availability of bait nearer the shore. According to reports, the United States company has already agreed with the Ghanaian Government to conduct a survey off Ghana. Extension of the area to be surveyed to Nigeria would be relatively

Nigeria (Contd.):

inexpensive. (United States Consul in Lagos, September 1959.)

Norway

FISHERIES TRENDS, SEPTEMBER 1959:

A total of 1,013,000 metric tons of fish was landed in the period from January 1 to September 19, 1959, as compared with 969,000 and 1,395,000 metric tons during the same periods of 1958 and 1957, respectively. The fish-processing industry, particularly filleting and freezing companies, became increasingly concerned over the small quantity of fresh fish supplies in relation to production capacity. According to a Government source, the industry is considering the acquisition of additional fishing vessels and equipment. Norway's participation in the Iceland herring fishery is growing, and the industry is being encouraged by the Government to fish for more herring in the North Sea.

The long-standing dispute over "ex-vessel" prices of fish between Norges Raafisklag, the fishermen's marketing organization in North Norway, and Norsk Frossenfisk A/L, the principal purchaser of fresh fish for filleting and freezing, has been settled--at least for the time being. Norges Raafisklag agreed to comply with the directives of the Government on prices of fish for filleting and freezing and also honored the terms of the agreement it had with Norsk Frossenfisk A/L concerning the price of fish delivered during the summer months. (United States Embassy report from Oslo dated October 20, 1959.)

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QUOTA FOR 1959/60 WHALING SEASON ESTABLISHED:

According to press reports from Sandefjord, the headquarters of Norway's whaling industry, the whaling quota for the 1959/60 Antarctic whaling season will be 5,800 blue-whale units, which is equivalent to the 1958/59 season's catch. The Government has not yet formally established the quota, but it is believed that the quota will undoubtedly be set at that figure.

The whaling industry has reportedly reached an agreement under which eight expeditions will participate in the 1959/60 Antarctic season, or one less than last year. The six large expeditions will be allocated a quota of 705 blue-whale units each, and the two smaller expeditions, 585 units each. An unallocated balance of 400 blue-whale units will be distributed during the course of the season. The large expeditions will operate with a maximum of nine catchers and the smaller expeditions with eight catchers. The Norwegian whaling fleet was due to depart for the Antarctic during the latter part of October and the early part of November.

Pakistan

MAIN FEATURES OF THE NEW FISH HARBOR COMPLETED:

The main features of the new fish harbor at Karachi, Pakistan, were completed by the end of September 1959. With the completion of the jetty and the fish market it was possible to hold a formal inauguration on October 2. Full utilization of the new facilities will not be possible, however, until (1) dredging operations are completed to permit use of the dock at low tide; and (2) the Karachi Fishermen's Cooperative Society, which has been entrusted with the operation of the harbor, obtains the necessary auctioneers, accountants, and other administrative personnel.

Peru

EXPORTS AND IMPORTS OF MARINE-ANIMAL OILS, 1957 AND 1958:

Peru's foreign trade in marine-animal oils is largely confined to exports of oils derived from the whaling and the fishery for sardine-like fishes for reduction into fish meal and oil.

Peru (Contd.):

In 1957 close to 8,828 metric tons of marine oils were exported to western Europe and the United States. The United States was Peru's best customer for sperm oil--about 2,742 tons or 61.8 percent out of the total exports of 4,435 tons in 1957.

Table 1 - Peru's Exports of Marine-Animal Oils by Country of Destination 1957 and Total 1958

Commodity and Country of Destination	1957	1958 1/
	(Metric Tons)	
Whale oil, refined:		
United States	55.5	-
Total	55.5	-
Sperm oil:		
United States	2,741.9	-
Germany	1,050.0	-
Netherlands	643.5	-
Total	4,435.4	7,352.2
Fish oil:		
Netherlands	2,245.6	-
Germany	1,165.0	-
Norway	586.0	-
Italy	200.8	-
Sweden	112.1	-
Belgium	28.0	-
Total	4,337.5	1,643.3

1/Estimates; breakdown by country of destination unavailable.

Imports of marine oils by Peru in both 1957 and 1958 were nearly all cod-liver oil from Norway. Small quantities of refined whale oil, fish oil, and cod-liver oil were imported from the United States in 1957.

Table 2 - Peru's Imports of Marine-Animal Oils by Country of Origin 1957 and Total 1958

Commodity and Country of Origin	1957	1958 1/
	(Metric Tons)	
Whale oil, refined:		
United States	4.1	-
Total	4.1	5.6
Cod-liver oil:		
United States	1.8	-
Norway	135.4	-
Other	1.7	2/
Total	138.9	86.9
Fish oil:		
United States	2.3	-
Total	2.3	-

1/Estimates; breakdown by country of destination unavailable.
2/Includes 9.0 tons of fish-liver oil.

Duties assessed by Peru on imports of marine oils are divided into specific duties per gross kilo, ad-valorem duties on c.i.f. value, and percentage charges over ocean freight.

Peru's production of sperm oil in 1957 recovered slightly and totaled 4,491 tons, about 5 percent more than in 1956.

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EXPORTS OF MARINE PRODUCTS, JANUARY-JUNE 1959:

Exports of principal marine products by Peru, January-June 1959, amounted to 153,975 metric tons (valued at US$20.2 million). Exports for the first six months of this year amounted to 95.2 percent of the 1958 annual total of about 161,658 tons. Fish meal exports continued to expand, with the January-June 1959 exports of 123,580 tons exceeding the 12-months 1958 total (105,777 tons) by 16.8 percent.

Peruvian Exports of Principal Marine Products, January-June 1959

Marine Products	2nd. Quarter 1959			First Half 1959		
	Qty.	Value 1/		Qty	Value 2/	
	Metric Tons	Million Soles	US$ 1,000	Metric Tons	Million Soles	US$ 1,000
Fish meal	72,522	234.0	8,439	123,580	390.7	14,524
Fish, frozen, canned, etc.	11,430	66.8	2,409	17,208	116.4	4,327
Fish oil	5,625	13.5	487	6,926	16.9	628
Sperm oil	282	0.9	32	4,031	13.6	506
Whale meal	827	2.3	83	1,825	5.4	201
Fertilizer (Guano)	-	-	-	405	1.0	37
Total	90,686	317.5	11,450	153,975	544.0	20,223

1/F.o.b. values converted at rate of 27.73 soles equal US$1 for 2nd quarter of 1959.
2/F.o.b. values converted at rate of 26.99 soles equal US$1 for first half of 1959.

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FISHERIES PRODUCTION EXPANDS RAPIDLY:

The rapid development of Peru's fisheries resources was brought to world attention in September when at the First

Table 3 - Peruvian Duties on Imported Marine Oils in Effect 1958

Tariff No.	Item No.	Commodity	Specific Duty		Ad-Valorem (Percentage c.i.f. Value)	Percent Over Ocean Freight Charges
			Soles per Gross Kg.	US¢ Per Kg.		
96	365	Whale oil, refined	0.60	2.19	15.667	2
96	366	Whale oil, unrefined	0.375	1.37	15.667	2
96	367	Cod-liver oil	free	-	13.667	2
96	368	Fish-liver oils	"	-	13.667	2
96	369	Fish oil	2.25	8.21	13.667	2

Peru (Contd.):

International Oceanography Congress held in New York City it was announced that Peru had jumped from 26th to 5th place among fish-producing countries of the world in the short period of three years. The poor Norwegian herring catches in 1957 and 1958 were a factor in this expansion because Peru, with its abundance of marine life, was in a position to fill the shortages thus created. Great strides continue to be made in the Peruvian industry. Exports of principal fish and fish products were valued at US$20.7 million in 1958 and in the first half of 1959 were valued at just about the same amount ($20.1 million).

Peruvian Exports of Principal Fish and Fish Products, January-June 1958-59

Product	January-June	
	1959	1958
	(Metric Tons)	
Canned bonito	7,727	5,849
Fish meal	123,580	49,803
Frozen tuna	7,210	3,674
Frozen skipjack	1,643	983
Sperm oil	4,031	4,275
Fish oil	6,926	1,050

The principal product exported in both quantity and value in 1958 and the first half of 1959 was fish meal, which made up 80 percent of the volume and 72 percent of the value in the latter period.

The expanding fishing industry has prompted at least three port cities to consider it a possible source of revenue through taxation. Peruvian Senate support is forecast for a S/10 to S/20 (about 36 and 71 U. S. cents) per ton tax on fish meal processed in Callao for export. A 6-percent tax on fish meal and fish oil processed in Chimbote and Casma (9 percent for plants not processing fish oil) is proposed by a bill presented in the Chamber of Deputies.

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RESTRICTIONS ON FISH MEAL PLANT EXPANSION MODIFIED:

The Government of Peru has issued a decree (October 9, 1959) abolishing its general restriction on the establishment of additional fish meal plants. It was concluded that the large catches of fish for existing plants had not reduced the supply of fish in the waters off the Peruvian coast. The new decree provides for the establishment of certain closed seasons by the Ministry of Agriculture and designates three major zones where no additional plants may be established nor expansion of existing plants permitted.

Portugal

CANNED FISH EXPORTS, JANUARY-JUNE 1959:

Portugal's exports of canned fish during January-June 1959, amounted to 32,626 metric tons (1,798,000 cases), valued at US$16.5 million as compared with 26,959 tons, valued at US$14.6 million for the same period in 1958. Sardines in olive oil exported during the first six months of 1959 amounted to 23,821 tons, valued at US$11.6 million.

Portuguese Canned Fish Exports, January-June 1959

Species	Jan.-June 1959	
	Metric Tons	US$ 1,000
Sardines in olive oil	23,821	11,582
Sardine & sardine-like fish in brine	998	200
Tuna & tunalike fish in olive oil	1,183	836
Anchovy fillets	3,296	2,301
Mackerel in olive oil	2,032	1,004
Other fish	1,296	625
Total	32,626	16,548

During January-June 1959, the leading canned fish buyer was Germany with 7,457 tons (valued at US$3.7 million), followed by Italy with 4,132 tons (valued at US$2.2 million), Great Britain with 2,963 tons (valued at US$1.4 million), United States with 2,857 tons (valued at US$2.0 million), and Belgium-Luxembourg with 2,305 tons (valued at US$1.1 million). Exports to the United States included 1,426 tons of anchovies, 104 tons of tuna, 1,242 tons of sardines, and 28 tons of mackerel. (Conservas de Peixe, August 1959.)

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CANNED FISH PACK, JANUARY-JUNE 1959:

The total pack of canned fish for January-June 1959 amounted to 12,325 metric

Portugal (Contd.):

tons as compared with 12,619 tons for the same period in 1958. Canned sardines in oil (5,200 tons) accounted for

Portuguese Canned Fish Pack, January-June 1959		
Product	Net Weight	Cases
	Metric Tons	1,000
In Olive Oil:		
Sardines	5,200	273
Sardinelike fish	468	24
Anchovy fillets	3,257	325
Tuna	2,691	96
Mackerel	185	7
Other species	524	27
Total	12,325	752
Note: Values unavailable.		

42.2 percent of the January-June 1959 total pack, down by 23.7 percent from the pack of 6,818 tons for the same period of 1958, the August 1959 Conservas de Peixe reports.

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FISHERIES TRENDS, JANUARY-JUNE 1959:

Sardine Fishing: During January-June 1959, the Portuguese fishing fleet landed 17,087 metric tons of sardines (valued at US$1,695,582 ex-vessel or about $99.23 a ton).

June 1959 landings of sardines totaled 6,279 tons valued at US$617,948. Canneries purchased 34.5 percent or 2,164 tons of the sardines (valued at US$222,609 ex-vessel or about $102.87 a ton) during June 1959. A total of 4,114 tons was purchased for the fresh fish market, and 1 ton was salted.

Other Fishing: The January-June 1959 landings of fish other than sardines were principally 12,476 tons of chinchards (value US$788,069) and 1,076 tons of anchovies (value US$104,835). (Conservas de Peixe, August 1959.)

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EXPORTS OF CANNED SARDINES TO ALL DESTINATIONS AND TO WEST GERMANY, 1954-58:

Portugal's exports of all packs of canned sardines (exclusive of sardine-like fish) to West Germany in 1958 amounted to 11,783 metric tons, or 23.9 percent out of a total of 49,229 tons exported to all destinations.

Table 1 - Portuguese Exports of Canned Sardines1/ to All Destinations and to West Germany, 1954-58				
Years	Total Exports		West Germany	
	Quantity	Value	Quantity	Value
	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000
1958	49,299	25,480	11,782	6,242
1957	40,027	23,493	7,939	4,674
1956	47,167	27,234	8,827	5,079
1955	51,502	25,209	12,564	6,150
1954	42,411	21,613	9,491	4,843
1/Includes all sardine packs but not sardinelike fish such as anchovies.				
Source: Commercio Externo, 1954-58.				

West Germany in 1954-1958 increased its imports of boneless and skinless sardines, and is taking a larger share of whole sardines in olive oil. On the other hand, imports of sardines in sauces other than olive oil decreased during those years. (United States Consulate in Oberto, July 17, 1959.)

Table 2 - Portuguese Exports of Canned Sardines by Type of Pack to All Destinations and to West Germany, 1954-58				
Years	Total Exports		West Germany	
	Quantity	Value	Quantity	Value
	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000
Skinless and boneless:				
1958	5,035	3,859	1,890	1,430
1957	4,245	3,464	1,104	877
1956	4,091	2,612	968	619
1955	4,281	2,084	706	346
1954	3,332	1,699	629	319
Whole sardines in olive oil:				
1958	33,603	16,398	8,734	4,245
1957	24,894	13,919	5,123	2,864
1956	31,591	18,098	5,677	3,213
1955	33,678	16,506	9,355	4,580
1954	27,805	14,163	5,869	2,997
Whole sardines in sauces (other than olive oil):				
1958	10,662	5,223	1,158	567
1957	10,887	6,109	1,712	933
1956	11,484	6,524	2,183	1,246
1955	13,543	6,618	2,503	1,224
1954	11,275	5,751	2,993	1,527
Note: Values converted at rate of 28.75 contos = US$1.				
Source: Commercio Externo, 1954-58.				

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COD-FISHING FLEET HAS POOR SEASON:

The 48 Portuguese cod line-fishing vessels turned to the Newfoundland Banks fishing areas (late in September) after spending some days in port due to hurricane warnings. The fleet at that time was short of a full catch by about 17,000

Portugal (Contd.):

metric tons of fish and reflected the general shortage of cod on the Newfoundland and Greenland banks. The poor catch was of great concern to the Cod Fishing Shipowners Guild in view of the relatively poor catch in 1958.

Late in October the cod-fishing fleet continued to find fishing poor and bad weather aggravated the situation. The Guild announced that due to the poor weather conditions the fleet expected to return to Portugal. Very few of the vessels reported satisfactory catches.

Due to the poor catch this season, and the anticipated short supply of salt cod in future months, some instances of sales above the legal maximum prices were reported, state United States Embassy dispatches from Lisbon dated October 8 and 22, 1959.

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EMBARGO ON EXPORT OF ALGAE (SEAWEED) LIFTED FOR SINGLE SHIPMENT:

A late summer shipment of 100 metric tons of gelidium (algae used for manufacture of agar-agar) to Japan was permitted by the Portuguese export licensing agency in spite of an embargo on the export of this product.

The Portuguese exporter had justified application for an export license on the grounds that he had that quantity of gelidium immediately available for export and that the Japanese customer was willing to make purchases of similar quantities every year. The Under-Secretary of State for Commerce accordingly ruled (1) that this particular shipment be authorized on an exceptional basis and (2) that a study be undertaken to determine the supplies of gelidium and/or agar-bearing seaweed in Continental Portugal.

Studies have already been completed on supplies of agar-bearing seaweed available in Madeira, Azores, and Cape Verde Islands, but the results have not yet been announced. However, it is understood that results were favorable in Madeira and the Azores and unfavorable in Cape Verde Islands. This may mean some exports of agar-bearing seaweed from Madeira and the Azores may ultimately be permitted.

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FUNDS PROVIDED BY GOVERNMENT FOR FINANCING FISHING INDUSTRY PROJECTS:

A Government decree of importance to the fishing industry was published September 21, 1959. Decree-Law No. 42,518 extends the validity of the "Fund for the Renovation and Re-Equipment of the Fishing Industry" and authorizes that Fund to borrow up to 300 million escudos (US$10.5 million) for the financing of projects for the industry included in the Second Six-Year Development Plan.

Neither decree specifies what projects are to be undertaken. However, the Government contribution to the financing of plans for the fishing industry (75 percent of the funds needed) was estimated at 550 million escudos (US$19.25 million), hence the major portion of the Government financing for the fisheries under the Second Plan is provided for by this decree. (United States Embassy dispatch from Lisbon, dated October 1, 1959.)

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PROPOSED BARTER DEAL WITH GREECE INCLUDES FISHING VESSELS:

Two directors of a Portuguese tobacco company have visited Greece for preliminary discussions with Greek authorities with a view to signing a barter agreement. The proposed deal, which has not yet been concluded, would involve the exchange of 5,000 tons of Greek tobacco, worth approximately US$7 million, against delivery to Greece of four fishing vessels to be constructed in a Lisbon shipyard. The proposed vessels are to be equipped with installations for the production of oil and fish meal, according to a September 17, 1959, dispatch from the United States Embassy in Lisbon.

Sweden

EXPORTS OF FISHERY PRODUCTS TO EAST GERMANY STOPPED:

Exports of Swedish west and south coast fishery products to East Germany by the Swedish organizations in Goteborg and Karlskrona have ceased because of Sweden's failure to bring in fodder products, brown coal, and grain from East Germany.

Sweden (Contd.):

Exports to and imports from East Germany are specified in the global compensation arrangement for 1959 governing all trade between Sweden and East Germany.

The halt in exports has resulted in difficulties for the two fishing organizations which have been forced to store large quantities of herring. It is estimated that about 4,500 metric tons of herring at present are stored in freezing plants in southern and western Sweden.

About three-quarters of the quantity of herring contracted by East Germany is still not delivered and no mackerel has been exported, in spite of the fact that it was provided for in the contract.

Export shipments to East Germany have stopped at a time when Swedish herring fishing is of considerable volume. The West Coast Fishermen's Central Organization in order to reduce the landings of herring has further limited the quantity of herring that may be landed by each fisherman from 50 boxes per man per trip to 50 boxes per man per week.

The new limitations do not apply on landings in foreign ports and it is therefore hoped that the larger boats will prefer to land their fish in foreign ports.

It is hoped that the fish trade with East Germany will commence again shortly, and in that case Sweden should be able to deliver the total quantity stored at one time. (United States Embassy dispatch from Goteborg, dated October 6, 1959.)

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ONE SMALL CANNER STOPS PACKING FISH:

On about October 17, 1959, a small Swedish fish-canning plant located on the Swedish coastal island of Bohus-Malmon was expected to cease the production of canned fish products prepared from sprat, mackerel, and North Sea herring. The closure was caused mainly by the shortage of sprat, the most important raw material of the plant. The irregularity in the supply of other types of fish also played a part in the decision to close the plant.

Under the conditions, the manufacturer claimed that it was impossible to operate the plant satisfactorily at full production capacity.

Turkey

LANDINGS OF AQUATIC PRODUCTS, 1958:

The landings of fish, shellfish, and other aquatic products in Turkey amounted to about 175.8 million pounds. Principal

Turkey's Landings of Aquatic Products, 1958	
Products	1,000 Lbs.
Salt-water:	
Anchovy	20,776
Sardines	6,713
Flatfish	6,510
Bonito	46,075
Mackerel	4,462
Horse mackerel (bluefin tuna)	10,754
Tuna	920
Sharks and rays	1,287
Unclassified salt-water	29,845
Total salt-water	127,342
Fresh-water:	
Unclassified	34,220
Shellfish:	
Lobster	650
Mollusks	137
Total shellfish	787
Other:	
Dolphin	13,228
Sponges	213
Total	175,790

products were: bonito, 46.1 million pounds; anchovies, 20.8 million pounds; freshwater varieties, 34.2 million pounds; and dolphin, 13.2 million pounds.

Uganda

FRENCH EXPERT TO SURVEY POND FISHERIES:

The Director of the Le Paraclet Hydrobiological Station of the Ministry of Agriculture, France, arrived in Uganda in mid-1959 to advise the Government on increasing the production and expanding the use of fish ponds.

He has taken up the assigment on behalf of the Food and Agriculture Organization (FAO), Rome, Italy, in response to a request by the Government of Uganda.

"Pond fisheries provide one of the most effective ways of increasing animal

Uganda (Contd.):

protein in the human diet," the expert stated in an interview at FAO headquarters before leaving for Uganda. "A well-managed pond can yield about two to three tons of fish per hectare (2,471 acres) per year and, as you know, fish is a rich natural source of protein. It has about the same protein content as fresh meat.

"There are already about 2,000 fish-ponds in Uganda, ranging in size up to 10 hectares and I hope my work will assist in increasing the productivity of these ponds and lead to the building of more ponds in villages."

The French pond fisheries expert will advise and assist the Government in "determining some of the basic factors affecting the biology of fish ponds and thereby their production of fish." He will also assist in other ways in the development of fish culture in Uganda. Part of his work will be to study methods of fertilization, the role that bottom deposits have in fish production, the sequence of plankton production, and pond management. Much of the French expert's work in Uganda will be based on the experimental fish farm which the Government has established near Kampala.

Union of South Africa

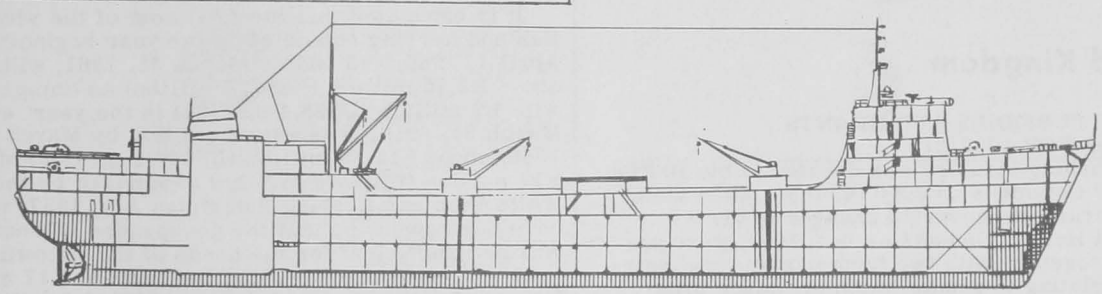
EDIBLE FISH FLOUR PRODUCED ON COMMERCIAL SCALE:

A plant at Dido Valley, Simonstown, Union of South Africa, is producing neutral fish flour for human consumption on an adequate commercial scale. The plant was developed by the South African Fishing Industry Research Institute in cooperation with the fish meal industry. The plant is able to produce more than a ton of edible fish flour a day from pilchard and maasbanker (jack mackerel) meal. Nearly 1,000 tons had been supplied by July 1959 for the enrichment of bread in the western area of the Cape. (The South African Shipping News and Fishing Industry Review, July 1959.)

U.S.S.R.

NEW TYPE FLOATING CANNERY AND MOTHERSHIP FOR HERRING FLEET:

A new type 15,000-ton mothership for Soviet trawlers engaged in herring fishing serves as a combined floating canning plant, supply ship, and repair base. It is said to have a daily production capacity of 400 metric tons of finished and semi-finished products. The hull is all welded and reinforced for ice conditions. A helicopter is used for locating herring shoals. A cinema, library, and reading room are provided for the crew. (United States Consulate dispatch from Goteborg, September 4, 1959.)



New type Soviet floating cannery and mothership for herring fleet--476 feet long; speed 14.5 knots.

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PLANS TO INCREASE FLEET OF LARGER FISHING VESSELS FIVEFOLD:

The twin-screw factoryship Sovietskaja Sachalin (9,300 gross tons) was launched in Gdansk, Poland, according to Dansk Fiskeritidende (September 17, 1959), a Danish fishery trade periodical. A sistership, Sovietskaja Litwa, was built and launched earlier in Poland for the Soviet Government.

At the same time the shipyard has delivered a third sistership, Sievierodvinsk, to the Soviets. Each vessel is 508 feet long, 66 feet in breadth, and has a depth of 27 feet. A steam engine of

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

5,000 hp. gives the vessel a speed of 13 knots.

In this connection, the Russian telegraph bureau, Tass, states that the Soviet Union, within the framework of the current five-year plan, expects to quintuple its fishing fleet of larger vessels. By 1963 there will be built a number of factory trawlers, 279 feet in length, 3,500 gross tons, with an action radius of 60 to 80 days. The freezing capacity of the trawlers will be 30 metric tons of ocean fish each 24 hours.

United Kingdom

FISHING SUBSIDIES AND GRANTS REVISED FOR 1960/61:

The fishing industry was debated in the British House of Commons on July 14, 1959, when statutory instruments covering changes in the White Fish and Herring Industries Act, 1957, were approved, together with two further statutory instruments relating to grants which are made towards the construction of new vessels.

For the second year in succession the Government reduced the subsidy for steam trawlers payable by the White Fish Authority. The cut varies according to the size of the vessel from 5s. to 30s. (about US$0.70-US$4.20) per day. This represents an average reduction of about seven percent in the present subsidies. The Government claimed that at the existing rate of subsidy owners are finding it possible to keep a number of old coal-burning vessels running rather longer than is desirable. This is against the long-term interests of the fishing industry. The cut has been moderated by the fact that certain operating costs have risen and because it is considered dangerous to make too sharp a reduction in coal-burning trawlers at some ports which depend heavily on such vessels for their trade and where employment may be above the average.

At present there are at Grimsby five oil-fired steam vessels built since 1952. They have been built with the aid of grants and loans from the White Fish Authority. The Government announced last year that it intends such vessels to be treated for subsidy purposes in the same way as Diesel vessels of the same size, which receive no subsidy. Last year, the subsidy on the Grimsby vessels was reduced by half with the intention of eliminating it entirely this year. However, because such vessels have been less profitable in the year ended March 31, 1959, than hitherto, instead of eliminating the subsidy immediately the Government will reduce it by half next year.

The Government reduced from £6 10s. per day to £5 per day (US$18.20 to US$14.00) the subsidy for seine-net vessels over 70 feet in length, which normally make voyages of not more than seven days' duration. These vessels are all Scottish. The purpose of reducing the rate is to bring it into line with the rate which applies to motor trawlers of the same size and thus remove the anomaly of having different rates for similar vessels which compete with each other. With the introduction of new types of gear, these vessels of between 70-80 feet are engaging to an increasing extent in both trawling and seining. They can change from one method to the other very easily.

No changes are being made in the herring subsidy, which was instituted in 1957 to arrest the tendency for boats to switch from herring fishing to fishing for white fish. Last year, the profits and earnings in that section of the industry showed some improvement which the Government hopes will result in more boats participating in such fishing.

It is estimated that the total cost of the white fish and herring subsidies in the year beginning April 1, 1960, and ending March 31, 1961, will be about £2.75 million (US$7.7 million) as compared with £3 million (US$8.4 million) in the year ending March 31, 1960. It is estimated that by March 31, 1960, about £15.75 million (US$44.1 million) of the £17 million (US$47.6 million) authorized by the White Fish and Herring Industries Act, 1957, will have been spent, so that the unexpended balance will be insufficient for the needs of the following year. The Act provides that the limit of £17 million may be raised to £19 million (US$53.2 million) with the approval of the House of Commons. This £2 million additional will not cover the industry's needs much beyond the end of the 1960/61 subsidy year, but the Government intends to introduce legislation in the next Parliamentary Session (normally commencing in November) to provide additional funds.

In the light of the Report of the Committee of Inquiry which is looking in detail into the whole question of the future of the fishing industry, the Government will decide whether financial assistance should be extended to the industry beyond the periods authorized by the 1957 Act.

Two further Statutory Instruments approved on July 14, 1959, relate to grants which are made towards the construction of new vessels. They increase the maximum grant which may be paid from £30,000 to £37,500 (US$84,000-$105,000) in the case of white fish vessels, and from £15,000 to £17,500 (US$47,000-$49,000) in the case of herring vessels. These increases are intended to coincide with the increases in building costs which have taken place since the ceilings were fixed in 1956 and to ensure that the same degree of assistance is given as when the grants were first introduced in 1953 (about 25 percent). (United States Embassy in London dispatch July 17, 1959.)

Uruguay

FISH MEAL PLANT DONATED BY UNITED NATIONS:

Uruguay's Servicio Oceanografico y de Pesca (Oceanographic and Fishery Service), a Government agency which has control of the fishing industry monopoly, received a donation of a fish meal plant from the United Nations. The fish meal plant will be installed at a cost of about US$46,000 and the technical know-how will be supplied by the Uruguayans.

Fish waste will be converted into fish meal to be added to feed for chickens and hogs. (Industrias Pesqueras, July 1, 1959, Vigo, Spain.)

Yugoslavia

JAPANESE TUNA VESSEL LANDS TRIP:

The Japanese tuna long-liner Banshu Maru landed 1,250 metric tons of tuna at the Yugoslav port of Rijeka on October 9, 1959.

Following the discharge of the trip, the vessel was due to take out a group of Yugoslav fishermen on trips along the Adriatic coast for the purpose of demonstrating Japanese methods of tuna fishing.

The demonstration trips were made under an agreement with Japanese shipbuilders, who have contracted to build several tuna fishing vessels for Yugoslavia.

BUOYS MARK TRANSATLANTIC TELEPHONE CABLES

A bright, yellow, and red buoy may be seen bobbing in the Atlantic Ocean off the coast of North America and Europe this year and next. It marks an important "obstruction" to ships and fishermen. For in the vicinity of one of those buoys and stretching all the way to the mainland will be a newly-laid telephone cable which may weigh as much as 25 tons per nautical mile. The American Telephone and Telegraph Company, with other companies and governmental agencies, is now engaged in the construction of telephone cable systems between United States and Europe and Puerto Rico.

In addition to the brightly painted areas on its top, the buoy has several other features which help ship captains to spot it. A brightly-colored flag is mounted about eight feet above the buoy that helps to locate it in the daytime, navigational lights make it visible at night, and a reflector provides a means of detection by ships equipped with radar.

Trawlers operating near those buoys might snag buoy moorings, or hook the cable. Buoys used to anchor submarine cable are constructed of high grade boiler steel. They weigh $1\frac{1}{2}$ tons and can support six tons of moorings.