
## International

FISHING FAIR AND NAUTICAL EXPOSITION TO BE HELD IN ITALY, JUNE 25 TO JULY 10, 1960:

The XX International Fishing Fair and the VI International Nautical Exposition will be held concurrently at Ancona, Italy, June 25 to July 10, 1960, according to an announcement by the Italian Government.

FOOD AND AGRICULTURE ORGANIZATION

EXPERT GROUP URGES GREATER STUDY OF RADIATION IN FOOD, AGRICULTURE, AND FISHERIES:

An expert committee on radioactive materials has recommended that the Food and Agriculture Organization and its member governments, when determining "the radioactivity burden of man," place greater emphasis on the importance of agriculture, fisheries, and food.

The Expert Committee on Radioactive Materials in Food and Agriculture, organized by FAO, met in Rome November 30-December 11, 1959, with scientists present from Canada, the German Federal Republic, Japan, the Netherlands, Sweden, the United Kingdom, and the United States.

The group was established to enable FAO to provide its member nations with expert opinion on the present state of knowledge of the movement and behavior of radioactive materials in food chains (uptake of radioactive isotopes from soil to plant to animals to human diet), and on survey and research programs needed to extend that knowledge.

The FAO Committee's report, now being completed, will be made available to the United Nations Scientific Committee on the Effects of Atomic Radiation, which was scheduled to meet in January 1960.

The Chief of FAO's Atomic Energy Branch and technical secretary of the Committee, said in an interview following the meeting:

"The applications of atomic energy are unavoidably associated with the release of varying quantities of radioactive materials into the environment, which may present a potential problem since they may be taken up from soils and waters by crops and livestock, and thus enter food.

"The scientific principles underlying agriculture, fisheries, and food production and utilization are, therefore, of particular significance for a proper understanding of the way in which radioactive substances behave in food and agricultural materials. Such understanding is essential if man is to learn to live safely in the presence of the general and local rises in environmental radioactivity that may occur in this atomic age."

Among recommendations put forward by the Committee are the following:

(1) Research on metabolism of radioactive materials should be encouraged as a prelude to means of reducing potential hazard;

(2) Research on decontamination of food products should include all dietary items that are relatively important carriers of radioactive materials, in order that scientists may be prepared to cope adequately with situations that might arise in the future;

(3) Governments should provide for representation by agricultural authorities on national radioactivity committees or should establish advisory committees to

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ensure collaboration among atomic energy, public health, medical and food, agricultural, and fisheries authorities in programs of research and control in radiation protection;

(4) FAO should place increased emphasis on advising member governments in their responsibilities for research on and control of environmental radiation;

(5) The Director-General of FAO should periodically convene expert committees and technical meetings and symposia on the subject.

INTERNATIONAL JOINT COMMISSION
(UNITED STATES AND CANADA)

## PROPOSED PASSAMAQUODDY TIDAL POWER PROJECT EFFECT ON FISHERIES SLIGHT:

The International Joint Commission (Canada and the United States) concluded a 3-day meeting with members of its International Passamaquoddy Engineering and Fisheries Boards. At the meeting held in Boston on January 13-15, 1960, the Commission was briefed by members of the boards concerning the possibilities for development of tidal power in Passamaquoddy and Cobscook Bays in Maine and New Brunswick.

The reports of the boards, which have previously been made available for examination by interested parties, indicate that an international tidal power project using the waters of Passamaquoddy and Cobscook Bays on the east coast of Canada and the United States is feasible from an engineering standpoint. There are questions, however, as to the economic feasibility of the project due to differences in interest rates in the two countries and other factors. The project would have to be combined with an auxiliary power source in order to obtain effective utilization of the tidal power. The boards also concluded that the construction, maintenance, and operation of the tidal power project, which would include fish passage facilities, would not have any significant adverse effects on the fisheries of the region.

The sessions were chiefly concerned with an analysis of the basic surveys and studies on which the board's findings were based. Also considered were the economic and financial aspects of the project reported upon by the boards.

Other factors requiring further consideration by the Commission include: the impact of the proposed project on the economies of the area; the significance of recreational benefits which may result from construction of the project; and evaluation of possible benefits peculiar to this unique project.

In order that the Commission may have the benefit of the views of all who are interested in this unique project, it has been decided that public hearings will be held in Maine and New Brunswick, Canada. An announcement will be made later of the time and place of such hearings.

INTERNATIONAL PACIFIC
SALMON FISHERIES COMMISSION

## SALMON FISHING REGULATIONS FOR 1960 IN CONVENTION WATERS:

The tentative suggestions for regulatory control of the United States and Canadian 1960 sockeye or red salmon fishery in Convention waters in British Columbia and the State of Washington as submitted to the fishing industry on December 11, 1959, were discussed and reconsidered in view of suggestions submitted by the Advisory Committee at a meeting held by the Commission on January 19, 1960. Action taken by the Commission in modifying the original proposals is detailed as follows:

1. An analysis of the originally proposed closure in Juan de Fuca Strait scheduled for the period August 7 to 28 revealed that the limitation of fishing to three days weekly prior to August 7 actually made the effective starting date of the projected closure August 4 instead of August 7. In view of possible interference by the originally suggested closure period with an allowable full participation in the Chilko run, two days of fishing were added to the week commencing August 7.

2. Decision on the daily opening and closing hours for purse seines and gill nets in Canadian Area 20 was delayed by request pending possible agreement between the two types of fishermen operating in the area.

3. In the event of an emergency closure of Canadian District I for the conservation of sockeye during the period September 9 to 30, approval was given to the use of spring salmon nets under government regulation.

4. Approval was given to a proposal that a complete closure of United States Convention waters lying easterly of the Angeles Point-William Head line from August 14 to 28 followed by a relinquishment of regulatory control on the latter date be substituted for the original suggestion of a two-day fishing week for the period August 14 to September 18.

Recommendations Approved for Regulatory Control of Sockeye and Pink Salmon Fishing in Convention Waters for 1960

UNITED STATES CONVENTION WATERS:

All United States Convention Waters:

Closed June 20 to July 18 - except for spring salmon nets in waters easterly of the William Head-Angeles Point line under regulation by the State of Washington but having a mesh of not less than $8\frac{1}{2}$ inches.

West of William Head-Angeles Point Line:

July 18 to August 7 - purse seines open daily 4:00 a.m. to 8:00 p.m. Monday through Wednesday. Gill nets open daily 6:00 p.m. to 8:00 a.m. Monday afternoon to Thursday morning.

August 7 to August 14 - purse seines open daily 4:00 a.m. to 8:00 p.m. Monday and Tuesday only. Gill nets open daily 6:00 p.m. to 8:00 a.m. Monday afternoon to Wednesday morning.

August 14 to August 28 - closed.

East of William Head-Angeles Point Line:

July 18 to August 14 - purse seines and reef nets open daily 4:00 a.m. to 8:00 p.m. Monday through Thursday. Gill nets open daily 6:00 p.m. to 8:00 a.m. Monday afternoon to Friday morning.

August 14 to August 28 - closed.

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CANADIAN CONVENTION WATERS:

West of William Head-Angeles Point Line:

June 20 to July 17 - closed.

July 17 to August 7 - purse seines open daily 12 hours* Monday through Wednesday. Gill nets open daily 12 hours* Sunday afternoon to Wednesday morning.

* Establishing of daily opening and closing hours delayed pending agreement between fishermen.

August 7 to August 14 - purse seines open daily 12 hours* Monday and Tuesday only. Gill nets open daily 12 hours* Sunday afternoon to Tuesday morning.

*Establishing of daily opening and closing hours delayed pending agreement between fishermen.

August 14 to August 28 - closed.

East of William Head-Angeles Point Line:

June 27 to August 14 - open 7:00 a.m. Monday to 7:00 a.m. Thursday.

August 14 to October 2 - open 7:00 a.m. Wednesday provided that in the case of emergency closures of District No. I during the period September 9 to 30, as required for the conservation of sockeye, fishing for spring salmon may be permitted under regulations by the Department of Fisheries with nets having a mesh of not less than 9 inches for linen nets and $9\frac{1}{2}$ inches for nylon nets.

Note: All times mentioned are Pacific Standard Time.

TRADE AGREEMENTS

## UNITED KINGDOM-TUNISIA AGREEMENT INCLUDES FISHERY PRODUCTS:

A trade agreement between the Tunisian Republic and the United Kingdom (signed at Tunis on November 16, 1959), valid for a year effective November 1, 1959, replaces the former "arrangement" between the two countries. The agreement provides for the exchange of some fishery products between the two nations and includes the following: Tunisian fishery products that may be imported into the United Kingdom without restrictions are fresh fish, dried octopus, shellfish (particularly shrimp and lobster), snails (probably land snails), canned fish, washed sponges, and cuttlefish bone. Tunisian fishery products that may be imported into the United Kingdom Overseas Territories are canned fish (particularly sardines). British fishery products that may be imported into Tunisia from the United Kingdom under quota are only salted, smoked, and frozen fish valued at £1,000 (US$2,800).

It is not known whether the new agreement will result in increased trade between the two countries. (United States Embassy report from Tunis, November 17, 1959.)

# Angola

## FISHING INDUSTRY SUFFERS FROM LOWER LANDINGS AND EXPORTS:

While Angola's fisheries exports continued to decline from 1958, fish landings were more encouraging. Comparing half-yearly data for 1959 with that of 1958, the sardine catch was up almost 50 percent from 10,309 metric tons worth 5,388 contos (US$187,000) ex-vessel in 1958 to 19,226 metric tons worth 7,777 contos ($271,000) in 1959. The increase was felt in both the Lobito/Benguela and the Mocamedes/Porto Alexandre areas. However, the catch of carapau (Selar crunenophthalmus Bloch), another important source of fish meal and oil, was down 12 percent to 39,114 tons and the value declined 39 percent to 16,814 contos ($585,000). A 14-percent increase in the catch of carapau at Mocamedes/Porto Alexandre was offset by a decline of almost 50 percent at Lobito/Benguela. Over-all fish landings declined from 108,051 tons in January-June 1958 to 101,544 tons in January-June 1959 and the value from 67,355 contos ($2,343,000) to 56,830 contos ($1,977,000). This decline was felt at all the major fishing centers.

Exports of the principal fishery products (fish meal, dried fish, canned fish, and fish oil) during the first ten months of 1959 were down by 28.7 percent in quantity and 15.7 percent in value as compared with the same period of 1958. Fish meal (the most important fishery export) exports (40,960 metric tons) declined by about 30.3 percent in January-October 1959 from the 58,736 tons exported during January-October 1958.

The problems of the fishing industry were brought up once again before the Angolan Legislative Council which held its semiannual session in October 1959. Taking note of this debate, the Minister of Overseas in Lisbon suggested the creation of a special fund to assist the industry. On a short-term basis he suggested that Angolan officials consider

Angola (Contd.):

Table 1 - Angolan Exports of Fishery Products, January-October 1958-59

| Product | January-October 1959 | | | January-October 1958 | | |
|---|---|---|---|---|---|---|
| | Quantity | Value | | Quantity | Value | |
| | Metric Tons | 1,000 Escudos | US$ 1,000 | Metric Tons | 1,000 Escudos | US$ 1,000 |
| Fish meal | 40,960 | 168,832 | 5,872 | 58,736 | 195,059 | 6,785 |
| Dried fish | 10,924 | 59,499 | 2,070 | 13,333 | 71,603 | 2,491 |
| Canned fish | 1,069 | 16,679 | 580 | 1,108 | 17,239 | 600 |
| Fish oil | 3,194 | 13,381 | 465 | 5,592 | 22,704 | 790 |
| Total | 56,147 | 258,391 | 8,987 | 78,769 | 306,605 | 10,666 |

the usefulness of the following emergency measures: (1) suspension of all export duties covering fish products; (2) creation of an additional income tax for all taxpayers; and (3) increasing the gasoline tax. Suspension of the export tax would ease the financial pressure on the firms, many of which are threatened with bankruptcy; and a tax would finance necessary credits to hard-pressed companies.

An extraordinary meeting of the Legislative Council on November 19, 1959, convoked solely to discuss the fishing problem, endorsed the first recommendation, strongly opposed the second, and called for further discussion of the third. The matter has been referred to Lisbon again for consideration by the Minister of Overseas.

One local newspaper has reported that the Ministry has taken action, but there has been no official confirmation of this, and the report may be wishful thinking. This source stated that the approved measures included: (1) establishment of a credit system financed and administered by the government on the basis of issuing bonds repayable in 18 years; (2) debts owed by the industry to the fishing guilds would be changed into loans repayable in 10 annual installments; (3) an Institute of Fishing of Angola would be established and the fishing guilds would be abolished, and (4) the guilds or the institute would no longer act as the seller of fish products as has been the practice.

As of October 1959, the only action taken from the recommendations of the various meetings has been the decision of the Angolan Government to waive payment of the income tax for 1959 by the fisheries industries.

The proposal to establish a credit system or credit institution has been strongly endorsed by the fishing industry for some time. Indeed, all the suggestions of the Minister of Overseas have been among those considered over the past two years. The important point for the industry was that the government was at last suggesting forms of specific assistance that it would give rather than continuing discussions in generalities.

Portuguese authorities wisely see that the problems of the fish industry are both short- and long-term. The immediate problems relate to the easing of the financial crisis facing the fishing companies. While all agree on the need for credit, financing this credit is quite another matter, since taxes are fairly heavy in Angola and the whole economy is in the throes of a recession with no signs of an upturn in the near future. The economy is in a poor position to support the fisheries industry for a long period just at a time when the coffee industry is also going to require some kind of public assistance. Thus, the strong rejection of the suggestion of an additional income tax to be borne by all represented sound reasoning. A gasoline tax increase, which may be approved, would be less damaging to the economy. The long-term bond issuance proposal mentioned by the press would be even more suitable to present conditions.

The long-term problem was only noted in recent discussions, the main emphasis being on the immediate financial crisis. Part of the program to get at the heart of the matter in the long run is to be a full study of the operation of the industry, the technical reasons behind the decline of the fish catch, and technical assistance. (United States Consulate in Luanda, December 12, 1959.)

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Angola (Contd.):

FUND ESTABLISHED TO SUPPORT THE FISHING INDUSTRY:

The Fundo de Apoio a Pesca (Fund to Support the Fishing Industry) was created by Legislative Decree No. 3,028 of December 23, 1959. The Fund is intended to provide short-term credits to Angolan fishing industry firms and the fishing guilds. It is to be supervised by an Administrative Commission composed of a president and no more than four delegates appointed by the Government General.

The Fund is to have its own annual budget together with a subsidy from the government budget, the amount of which is to be determined each year. The budget is to be financed by a gasoline tax of 20 centavos (US$0.007) per liter effective February 15, 1960, which is expected to produce 14,000 contos (US$490,000) each year. It is not known if this is to be the only source of funds for the Fund's annual budget since the size of that budget has not yet been announced. The subsidy for 1960 is to be 3,000 contos ($105,000) (United States Consulate report from Luanda, January 18, 1960.)

## Australia

SURVEY SEEKS NEW SHRIMP FISHING GROUNDS:

An intensive survey for new shrimp grounds off Australia's east coast was initiated early in November 1959 by the trawler Challenge, under the supervision of the Fisheries Division of the Department of Primary Industry. The survey is financed from the Fisheries Development Trust Account and was scheduled for 28 weeks.

Exploratory shrimp fishing was started at Moreton Island, off Queensland's south coast, and extended as far south as Lakes Entrance in Victoria. The investigators hope to find new areas for fishing king and tiger shrimp and the new species located in deep water off Broken Bay, New South Wales, during a previous survey.

"This is a continuation of survey work already undertaken in past seasons on our potential shrimp fisheries by the officers of the Fisheries Division. It is a project which has already led to the discovery of the now widely-known Tin Can Bay shrimp grounds off Queensland's south coast and to the finding of king shrimp off Lakes Entrance where bad weather prevented the completion of survey work in March 1959. This further work should determine whether they exist in commercial quantities in this area," an official stated.

The survey will have as its main objective the search for shrimp grounds beyond a depth of 30 fathoms. The survey will extend beyond the continental shelf to depths of 150-160 fathoms.

"The Challenge may yet secure a place in Eastern Australian shrimp history because during the most recent survey undertaken by the vessel a large species of shrimp, believed to be previously unkown in Australian waters, was found in 150 fathoms off Broken Bay. If the shrimp proves to be a new species it is likely to be named after the Challenge," the official added.

The main aims of the survey are to determine whether commercial quantities of shrimp exist in the area surveyed, to define suitable areas in relation to types of sea bed, and to test and develop new types of shrimp fishing gear, especially for fishing the deeper beds.

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SCALLOP CATCH UP IN TASMANIA:

With slightly fewer vessels operating than in 1958, Tasmanian scallop production in the 1959 season (May-July) increased by 74,000 pounds to 907,832 pounds (meats only). In the D'Entrecasteaux area of Tasmania 574,732 pounds were landed, 14,003 pounds in Norfolk Bay area, and 319,097 pounds in the East Coast area. Fishing was concentrated in the Channel Area, mainly Great Taylor's Bay, during May and then moved to the East Coast in June and July.

Some 80 boats operated in the Channel at the commencement of the season and 9 on the East Coast, but towards the close of the season there were some 40 vessels operating on the East Coast.

Very good catches in comparatively deep water were made possible by operating the Baird type of sledge dredge. This dredge caused considerable controversy by its use in the Channel in the early part of the season, and following strong protests it was banned from the Channel by law.

The area bounded by Gordon Jetty, Huon, and Woody Islands, Alonnah Jetty, and the northern point of Sheepwash Bay was closed against dredging owing to a preponderance of small young scallops. Owing to the intensive dredging in the Channel in recent years, it was thought that production in the area would decline for some years, but this would be offset to a large extent by the exploitation of the new beds on the East Coast where prospects were most encouraging.

Norfolk Bay Area proved very disappointing and was not expected to return good catches for several years. (Australian Fisheries Newsletter, November 1959.)

## Brazil

### FISH PROCESSING PLANT COMPLETED:

On November 16, 1959, a new fish processing plant located at Maracana, Brazil (near mouth of the Amazon River), was completed. It was originally scheduled for completion in June 1959. The plant has modern machinery and equipment, including freezers with a capacity of 132,000 pounds of fish. It has a fish canning capacity of 100,000 cans a day and is expected to employ 300 workers. The plant is equipped with a powerhouse, ice-making machinery, and space for canning and printing labels. In addition, the new plant has space and equipment for processing Newfoundland cod. The total investment was Cr$87 million (about US$458,000) of which Cr$60 million (about US$316,000) was financed with Government aid. (United States Consulate report from Belem, December 4, 1959.)

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### SHRIMP FISHING INDUSTRY:

Although Brazil, with a coastline of about 3,500 nautical miles, has fishing grounds suitable for shrimp fishing, especially along the coast between Rio de Janeiro and Rio Grande do Sul, it has no organized shrimp industry. There are no boats under the Brazilian flag built and equipped specifically for shrimp fishing. Shrimp fishing is carried on in any type of vessel and, more frequently than not, with inadequate equipment. Lack of adequate cold-storage facilities, even in such major fishing centers as the cities of Rio de Janeiro and Santos, make it necessary for much of the shrimp catch to be sold unfrozen either in the retail fish outlets or in the open-air markets. Shrimp exports from Brazil are negligible.

Landings: The landings of shrimp in Brazil in 1958 amounted to 18,557 metric tons valued at Cr$434.5 million (US$2.2 million) ex-vessel, as compared with 20,667 tons valued at Cr$315.4 million (US$1.6 million) in 1957, and 17,305 tons valued at Cr$285.1 million (US$1.4 million) in 1956.

Vessels: There are no modern vessels fishing specifically for shrimp in Brazil. However, the Brazilian Ministry of Agriculture is considering the purchase of a shrimp vessel in collaboration with the Oceanic Institute of the University of Sao Paulo. In addition, a private firm being organized in Rio de Janeiro hopes to purchase three small shrimp vessels and begin operations before July 1, 1961.

Ex-Vessel Price: As most shrimp caught in Brazilian waters is consumed on the domestic market and because of inadequate refrigeration facilities, the price per kilo varies from day to day. Excess shrimp is dried and salted for retail in grocery stores. The ex-vessel prices may vary from Cr$50 per kilo (about 11.4 U.S. cents a pound) for the smaller and less desirable varieties to Cr$200 per kilo (about 45.5 cents a pound) for large whites. It is believed that companies purchasing large and medium white shrimp ex-vessel for export pay about Cr$150 per kilo (about 34.1 cents a pound).

Exports: Export prices for frozen shrimp in December 1959 were about Cr$200 per kilo (about 45.5 cents a pound) for large and medium whites; however, prices often vary considerably due to the instability of the cruzeiro. Because of the inflationary period through which Brazil is passing, it may be expected that the cruzeiro value of shrimp will continue to increase. Exports of fresh and frozen shrimp in 1958 totaled 14,400 pounds and during the first six months of 1959 amounted to 12,300 pounds. Canned shrimp exports in 1958 amounted to 92,300 pounds and only 6,100 pounds during January-June 1959. With modern boats and facilities for processing and freezing, it is probable that Brazil could increase its exports of shrimp sharply.

Table 1 - Brazil's Exports of Processed Shrimp, 1957-58 and January-June 1959

| Country of Destination | January-June 1959 | | | 1958 1/ | 1957 1/ |
|---|---|---|---|---|---|
| | Qty. | Value | | Qty. | Qty. |
| | 1,000 Lbs. | 1,000 Cr$ | US$ | 1,000 Lbs. | 1,000 Lbs. |
| Fresh or frozen: | | | | | |
| United States | 1.3 | 103 | 516 | 14.4 | - |
| British W. Indies | 5.4 | 501 | 2,511 | - | - |
| Dutch W. Indies | 3.9 | 351 | 1,759 | - | - |
| Cuba | 0.4 | 35 | 175 | - | - |
| Malaya & Singapore | 0.9 | 91 | 456 | - | - |
| Mozambique | 0.4 | 25 | 125 | - | - |
| Total | 12.3 | 1,106 | 5,542 | 14.4 | - |
| Canned shrimp: | | | | | |
| Canada | - | - | - | 90.0 | 37.0 |
| Union of South Africa | - | - | - | 2.3 | - |
| Dutch W. Indies | 3.8 | 330 | 1,654 | - | - |
| Belgium | 1.8 | 177 | 887 | - | - |
| Labanon | 0.5 | 44 | 221 | - | - |
| Total | 6.1 | 551 | 2,762 | 92.3 | 37.0 |

1/Values for 1957 and 1958 omitted due to uncertainty as to exchange rate.
Note: Values converted at Cr$199.50 = US$1.

Current Export Controls or Taxes: Shrimp may be freely exported from Brazil, provided that the exporter obtains an export license from the Foreign Trade Department (CACEX) of the Bank of Brazil and a Sanitary Certificate ("Certificado de Sanidade"), certifying to the good condition of the shrimp, from the Ministry of Agriculture. Although there is no Federal export tax on shrimp, some states levy export taxes (e.g., Santa Catarina has a 5 percent tax) on shrimp exports.

## Burma

### SHRIMP INDUSTRY:

According to estimates by the Burma Department of Fisheries (no official statistics are available), annual shrimp landings total 1,000-1,500 metric tons valued at about US$35,000-$45,000.

The Burma Defense Services Institute has a joint venture agreement with a Singapore firm to provide 14 trawlers to fish the Limpi Island area (about 80 miles off Mergue Coast). The Singapore firm receives 35 percent of the catch.

No shrimp are exported and there are no present plans to expand the shrimp fishery. (United States Embassy report from Rangoon, December 17, 1959.)

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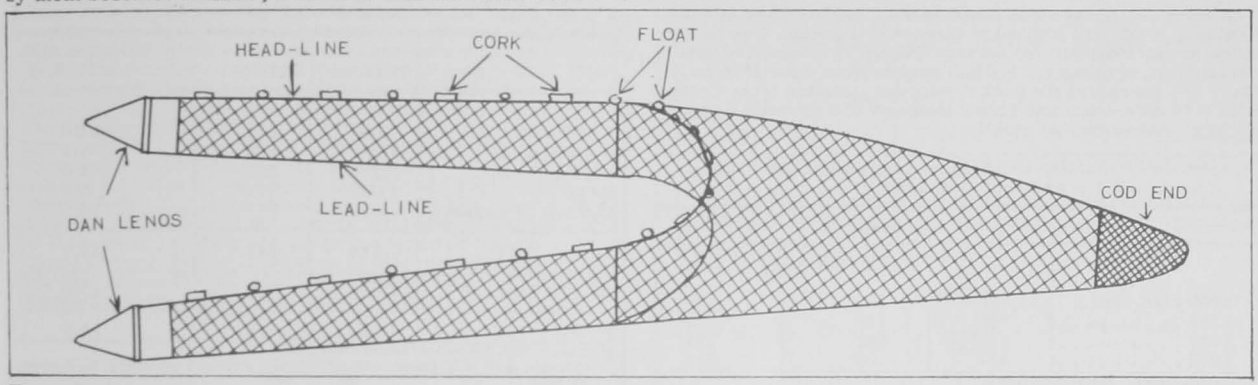
## Canada

### DANISH SEINE FISHERY FOR FLOUNDERS SUCCESSFUL:

Starting in the spring of 1959 on the west of Cape Breton Island, Nova Scotia, Danish seine-net fishing operations have paid off far beyond expections, it is reported in the Canadian Department of Fisheries journal Trade News of December 1959. Six boats have already been fitted (September 1959) with the gear, and two more are to join them.

The seining operation is relatively simple. It consists of surrounding a large area of sea bed with two very long ropes--each is almost a mile in length--and a net, in such a way that when the ropes are pulled in and the area enclosed by them becomes smaller, fish on or near the bottom are driven into the center where they are collected by the moving net. It can be operated only on grounds that are smooth and free of strong current and obstacles.




The net used in Danish seining. Set out with wings stretched wide apart, the net catches fish in a manner similar to that of the otter trawl as it is drawn along the bottom.

It was in 1951 that the Newfoundland Government first conducted investigations to determine if that method of fishing could be employed in Newfoundland waters. A Danish seine fishing ground for gray sole was discovered on the province's south coast, and commercial exploitation began in 1952.

In 1953-1954 fishery scientists, using the Newfoundland exploration vessel Matthew II, continued the research off Newfoundland and in Gulf of St. Lawrence waters west of Cape Breton. Results in the latter case were excellent. Near the shore of Cape Breton is a deep channel, the western side of which slopes gradually toward the Magdalen Islands. In the area was found a large expanse of sea bottom suitable for Danish seining. Experimental sets made in depths up to 40 fathoms produced excellent catches varying from 4,000-9,000 pounds of gray sole and sea dab.

It was this technological investigation that sparked Nova Scotia's interest in the seining technique. Potentiality of that type of fishing in Nova Scotia waters was immediately evident to the Industrial Development Service of the Department of Fisheries and also the Fisheries Division of the Nova Scotia Department of Trade and Industry.

One of the first steps was the acquisition of Danish seining equipment, and the first unit was put into operation out of Queensport, Nova Scotia. The provincial department hired an Icelandic fisherman to instruct fishermen in the use of the gear.

In cooperation with the Federal Department's Industrial Development Service, the provincial fishery agency successfully prosecuted the initial project. The two agencies combined to produce a suitable winch for hauling the gear. Constructed originally with two automobile rear-axle units, the winch is now being manufactured near Pictou. The original design has been modified and it is now a highly efficient piece of machinery.

One of the pioneers of Danish seining in Cheticamp is the master of the Lady of Fatima. He fitted his boat during the winter and on May 1 he was off to the fishing grounds. From that date until June 13, 1959, he had landed close to 200,000 pounds of flounders.

Soon the pioneer fishermen's colleagues had their boats equipped with Danish seines. By the middle of June, six Cheticamp boats were on the grounds. Right from the beginning the operations paid off. Catches have been running as high as 50,000 pounds in five days. Some boats have had daily catches as high as 25,000 pounds. At 3-1/2 cents a pound, 25,000 pounds of flounders is a profitable operation for a boat under 60 feet in length with a crew of four men.

The Cheticamp fishermen have voluntarily adopted a 5-1/4 inch mesh which enables small fish to escape. This mesh size adopted by the Cheticamp seiners is larger than the 4-1/2 mesh adopted by the 12-member countries of the International Commission for Northwest Atlantic Fisheries.

On top of that the catch is carefully culled aboard so that unmarketable fish can be thrown back into the sea to be fished another day.

Since seining was started in this area the vessels have been averaging between C$650 and C$700 a trip. Average landings have been in the vicinity of 20,000 pounds. One vessel in 10 trips landed 192,967 pounds of flounders, for a total fare of C$6,690. In seven trips another vessel landed more than 128,000 pounds to bring the skipper and crew nearly C$4,400.

## Colombia

### TUNA LANDINGS IN BARRANQUILLA:

Fresh tuna landed by the Japanese tuna long-liner Seiun Maru helped reduce retail food costs in Barranquilla, Colombia, during December 1959. The vessel delivered over 200 metric tons of tuna to its shoreside affiliate, for distribution throughout the city at the authorized price of two pesos (about 26 U. S. cents) a pound.

The Seiun Maru was due to return to Japan for overhauling, but will be replaced by another vessel from Japan. (U. S. Consulate report from Barranquilla, December 30, 1959.)

## Costa Rica

### SHRIMP INDUSTRY:

Landings: Shrimp landings in Costa Rica increased sharply beginning about June 1958 and totaled about 1.5 million pounds for the 12 months ending May 1959. The sharp increase in the landings in 1958 and continuing into 1959 was due to an increase in the shrimp fishing fleet from 17 vessels active prior to June 1958 to 28 Diesel-powered vessels active as of November 1959. In August 1959 a peak total of 33 vessels was engaged in shrimp fishing. About 10 vessels are 55 to 60 feet in length and the remainder 25 to 40 feet. About 20 shrimp trawlers (varying from 45 to 60 feet in length) are reported under construction in Puntarenas. But it is probable that many of them may not be completed because of lower catches and prices.

All the shrimp catch is taken in the Pacific Ocean and the fishing grounds are limited to three small areas. Due to the small areas available for shrimp fishing, it is believed that the landings of about 1.5 million pounds from June 1958 to May 1959 represent the peak production possible from Costa Rica's Pacific coast and future landings will probably level off to a total somewhat smaller.

Table 1 - Shrimp Landings in Costa Rica, 1956-58 and Jan.-Oct. 1959

| Period | Large 1/ | Small 2/ | Total |
|---|---|---|---|
| | (1,000 Lbs.) | | |
| 1959 (Jan.-Oct.) | 1,002 | 168 | 1,170 |
| 1958 | 790 | 140 | 930 |
| 1957 | 191 | 180 | 371 |
| 1956 | 424 | 95 | 519 |

1/Headless shrimp. 2/Heads-on shrimp

Shrimp landed in Costa Rica are not classified as to species in official records. Observers estimate that about 99 percent of the catches consist of Penaeus occidentalis and P. stylirostris with about two-thirds of the landings consisting of P. occidentalis. The remaining 1 percent of the landings consists of P. vannamei, P. californiensis, and P. brevirostris. The small brown shrimp which are consumed locally are principally Xiphopeneus riveti.

Landings of large headless shrimp for the first 10 months of 1959 amounted to 1 million pounds, or about 26.7 percent more than the 790,000 pounds landed in 1958. The landings in 1958 were over three times the 191,000 pounds of large shrimp landed in 1957 and about 86.6 percent higher than the landings made in 1956.

Table 2 - Costa Rica's Shrimp Landings by Months, 1958-59

| Month | No. Vessels Fishing | 1959 | | 1958 | |
|---|---|---|---|---|---|
| | | Large 1/ | Small 2/ | Large 1/ | Small 2/ |
| | | (1,000 Lbs.) | | | |
| January | 24 | 143 | 10 | 11 | 3/ |
| February | 26 | 145 | 13 | 14 | 1 |
| March | 28 | 158 | 17 | 26 | 1 |
| April | 29 | 131 | 38 | 45 | 10 |
| May | 31 | 114 | 30 | 22 | 10 |
| June | 32 | 83 | 7 | 81 | 4 |
| July | 33 | 90 | 9 | 85 | 6 |
| August | 33 | 52 | 12 | 82 | 18 |
| September | 28 | 38 | 17 | 80 | 17 |
| October | 28 | 48 | 15 | 73 | 26 |
| November | - | - | - | 127 | 20 |
| December | - | - | - | 144 | 27 |
| Total | 292 | 1,002 | 168 | 790 | 140 |

1/Headless shrimp. 2/Heads-on shrimp. 3/Less than 500 lbs.

Ex-Vessel Prices: At the vessel level shrimp is sold in only two categories--large headless shrimp and heads-on small or "brown" shrimp. These two types are not broken down any finer at the vessel level.

Ex-vessel prices on November 16, 1959, for large headless shrimp were three colones (47 U.S. cents) a pound for headless large shrimp and one colon (16 cents) a pound for small shrimp with heads on. (The free rate for the colon is 6.63 to one U.S. dollar, but due to export controls the rate on exported shrimp averages 6.27 colones to one dollar.) In August 1959 the price of large shrimp was reduced from 3.50 to 3.00 colones (59 to 47 cents) a pound. No reduction was made in the price of small shrimp.

Production Costs: The cost of catching shrimp in Costa Rica as of November 1959 (based on average monthly landings of 5,000 pounds of headless shrimp per vessel per month, but catches were averaging less in the fall of 1959) amounted to about 33 U.S. cents a pound. Per vessel the gross profit was about US$750. The cost of depreciation and insurance has been omitted from the calculations because finfish caught and landed by the shrimp vessels is believed to be valuable enough to take care of those costs.

Table 3 - Estimated Monthly Costs for Catching Shrimp in Costa Rica with a Modern 60-Foot Trawler 1/ Averaging 5,000 Pounds of Large Headless Shrimp a Month, November 1959

| | Colones | US$ | Cost per Lb. in U. S. ¢ |
|---|---|---|---|
| Crew share 2/ | 4,050 | 646 | 12.9 |
| Fuel and oil | 2,000 | 319 | 6.4 |
| Ice | 1,260 | 201 | 4.0 |
| Gear | 2,000 | 319 | 6.4 |
| Upkeep of vessel | 1,000 | 159 | 3.2 |
| Total | 10,310 | 1,644 | 32.9 |
| Sale of shrimp | 15,000 | 2,392 | 47.9 |
| Profit | 4,690 | 748 | 15.0 |

1/Valued at 250,000 colones (about US$40,000).
2/Percentage share of 27 percent with an ex-vessel price of 3 colones (47 U. S. cents) was used.
Note: Values converted at rate of 6.27 colones = US$1.

The crews consist of 4 or 5 men who furnish their own food. Crews are paid on a percentage basis of the catch. This percentage varies between 25 and 33 percent in accordance with the quality of the boat. The better boats pay the smaller percentage.

Fuel and oil in table 3 is figured on the basis of 2,000 gallons of Diesel at 99 centavos (16 cents) a gallon and allowing 1 centavo (0.16 cents) for oil costs for each gallon of Diesel oil used.

Ice in table 3 was on basis of 140 blocks of ice at 9 colones ($1.44) per block.

In table 3 under gear are included nets, boards, cables etc. This includes one new net a month which seems somewhat high, but perhaps with double-rig this may be true.

Processing Costs: The cost of a pound of frozen headless shrimp landed in Miami, Fla., in November 1959 was about 68.4 cents a pound and breaks down as follows: 47 U.S. cents was paid to the vessels; 5 cents for dock charges, grading, and packing; 3.5 cents for cartons, cases, and strapping; 2.5 cents for glazing, freezing, and storage; 1.0 cent for transportation from Puntarenas to San Jose; 2.5 cents for loss in exchange control (35 percent of export dollars are converted at 5.60 colones and 65 percent at the free rate of 6.63 colones to US$1); 1.4 cents for export tax of 2 percent (normal export price is 70 cents a pound); and 5.5 cents a pound (net weight) for air freight to Miami. To New Orleans the freight amounts to 7.7 cents.

Table 4 - Costa Rica's Exports of Frozen Headless Shrimp, 1956-58 and January-June 1959, from Costa Rican Records

| Country of Destination | Jan.-June 1959 | | 1958 | | 1957 | | 1956 | |
|---|---|---|---|---|---|---|---|---|
| | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 |
| United States | 476 | 230 | 427 | 255 | 217 | 92 | 484 | 213 |
| Other | 30 | 19 | 12 | 12 | 13 | 6 | 8 | 3 |
| Total | 506 | 249 | 439 | 267 | 230 | 98 | 492 | 216 |

Costa Rica (Contd.):

Table 5 - Exports of Frozen Shrimp from Costa Rica to United States, 1956-58 and January-June 1959 from U.S. Customs Records

| | Jan.-June 1959 | | 1958 | | 1957 | | 1956 | |
|---|---|---|---|---|---|---|---|---|
| | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 |
| United States .... | 853 | - | 717 | 435 | 227 | 99 | 421 | 205 |

Shrimp Exports: Shrimp exports from Costa Rica are principally to the United States. Official Costa Rican statistical records of exports to the United States in some years vary considerably from United States Customs records. Official Costa Rican exports of frozen headless shrimp to the United States for January-June 1959 show 506,000 pounds (U.S. Customs records for same period, 853,000 pounds). The value of shrimp f.o.b. Costa Rica (based on Costa Rican statistics for January-June 1959) was 48.2 U.S. cents a pound as compared with 59.7 cents for the 1958 exports. However, the f.o.b. value of 48.2 cents a pound for January-June 1959 was 5.9 and 4.3 cents a pound above the 1956 and 1957 values, respectively. The large shrimp are exported as white shrimp. Probably 90 percent of the exports and landings are shrimp of the size 20 headless shrimp to the pound or larger. There are practically no exports of 30-count headless shrimp, except in the peeled and deveined category. (United States Embassy report from Mexico, November 27, 1959.)

## Cuba

SHRIMP FISHERY TRENDS, DECEMBER 1959:

During 1958 Cuban shrimp landings were about 2.7 million pounds (heads-off) and exports (almost all to the United States) amounted to 390,000 pounds (headless). Following the change in the Cuban Government, the shrimp industry since November 1959 has been gradually absorbed by the National Institute of Agrarian Reform, which apparently will convert it into a cooperative enterprise operated by the shrimp fishermen.

The shrimp fishing fleet in 1959 was estimated to consist of 25-30 vessels. All are Diesel-powered and average about 45 feet in length over-all. The present fleet is believed to be adequate to exploit the shrimp fishing grounds known at present. No construction of new shrimp fishing vessels is under way and future plans under the Agrarian Reform plan are unknown.

Prior to the present unsettled condition of the shrimp fishing industry, the fishermen were paid 23 U. S. cents a pound for heads-off shrimp. Very small shrimp brought 10 cents a pound to the fishermen. Costs of sorting, packing, freezing, storing, and other handling amounted to about 15 U. S. cents a pound.

There are no export controls or taxes applicable to the export of Cuban shrimp. The new Cuban Government is anxious to encourage industries with export possibilities in order to lessen its dependence on the sugar crop. The future of private enterprise in the shrimp and other segments of the fishing industry is uncertain. The largest shrimp-producing firm had its vessels and shore facilities taken over in November 1959 and the remaining vessels and facilities were absorbed in December. It remains to be seen what impact these measures will have on shrimp landings, prices, quality, and exports. (United States Embassy report from Havana, December 1, 1959.)

## Denmark

FISHERIES IN THE EUROPEAN FREE TRADE AREA:

An analysis of the trade problems confronting Danish fisheries as a result of Denmark's membership in the European Free Trade Area (United Kingdom, Switzerland, Portugal, Austria, Norway, Sweden, and Denmark) is contained in an article ("The Market Plans") in the 1960 edition of the Fisheries Yearbook published by the Danish Ministry of Fisheries. The article discusses: (1) negotiations toward the EFTA; (2) position of fish within the EFTA; (3) present treatment of fish imports by members of the EFTA; and (4) Danish fish exports to EEC and EFTA nations.

After the negotiations within the Organization of European Economic Cooperation (OEEC) for a broad free trade area came to a stop, those OEEC nations remaining outside the European Economic Community (EEC) or Common Market feared that their exports to the EEC would be adversely affected. This was especially true for the industrial nations, and thus it was England and Sweden who took the initiative in forming the EFTA.

Originally, Denmark feared that the establishment of two market areas would

Denmark (Contd.):

lead to a trade war between them. Then Denmark would be dangerously situated with one of its two principal customers (England and Germany) belonging to each area. In the later negotiations toward the EFTA, Denmark managed to have it firmly established that the EFTA would first and foremost strive for renewed negotiations with the EEC for a closer connection with it.

During the negotiations toward the EFTA Denmark supported the Norwegian proposal that frozen and canned fish preserves, fish meal and fish and whale oil be treated as industrial products, and that a special agreement be negotiated concerning fresh fish and other fish products. Denmark also emphasized the Danish and Faroese interest in the removal of the United Kingdom duty on fresh fish.

A meeting of ministers was necessary to iron out several of the important differences over fish with the result that the following products will be treated as industrial goods within the EFTA: (1) canned and half-frozen fish, crabs and shellfish; (2) frozen fish fillets; (3) frozen, peeled, deep sea shrimp (prawn); (4) fats and oils from fish and sea animals; (5) fish flour; (6) fish solubles; and (7) meal from algae, seaweed, etc., for use as animal fodder.

With regard to frozen fillets the negotiations were extremely difficult. Denmark and Norway placed great importance on obtaining free entry to the British market. In 1958 Danish and Norwegian exports of frozen fillets to the United Kingdom were only 3,500 metric tons and 1,000 tons, respectively, but there is no doubt that the future will bring a great increase in the consumption of fillets. After the greatest reluctance from the British side an arrangement was finally agreed upon that the British customs duties and import taxes would be abolished on the condition that imports from Denmark, Norway, and Sweden would be increased gradually and not exceed 24,000 tons a year by January 1, 1970. If imports exceed 24,000 tons before that time, the United Kingdom, unless a special agreement concerning trade is reached by the Council of the EFTA, can withdraw the tariff concession in order to reduce imports to this amount. Great Britain has also reserved the right to reopen the question of a tariff on frozen fillets if the conditions of competition should be fundamentally altered (and by this was meant a broadening of fishing rights in territorial waters). Denmark and Norway have not been able to acknowledge this condition insofar as there may be a broadening in agreement with internationally-recognized rules.

With respect to the fish and fish products which are not to be treated as industrial goods under the treaty, which include fresh, salted, or smoked fish, and frozen fish other than fillets, it is provided in the treaty that the purpose shall be to provide for an increase in trade in these products so that there will come about a reasonable degree of reciprocity for those nations whose economy to a great extent is dependent upon the export of these fish products. Before January 1, 1961, the Council of the EFTA is to undertake an investigation of the various conditions governing trade in these products, naturally with the purpose of increasing free trade. The Council is also empowered to transfer individual fish products to that group which is treated as industrial products.

Naturally these results are not wholly what Denmark would have wished, but it is important to note that the Council of the EFTA will, in the course of the coming year, investigate the question of the inclusion of fresh fish. It is necessary that the Danish fisheries industry make its position on this question clear, because the tariff concessions which can be obtained within the EFTA if fresh fish is eventually accepted as an industrial product are largely confined to the existing United Kingdom duty of 10 percent. Quantitative restrictions against the import of fresh fish exist, practically speaking, only in Sweden and Denmark. One must remember that if fresh fish is treated as an industrial product, then the other rules of the treaty will also apply to fresh fish, namely, the right of free establishment of business.

The Faroes and Greenland for the time being will remain outside the EFTA, but can join merely by an announcement from the Danish Government.

To assess the significance of the provisions of the EFTA treaty concerning fisheries one must first be fully acquainted with the present treatment of fish by the

Denmark (Contd.):

members of the EFTA. As mentioned above, quantitative restrictions play only a small part but customs duties vary considerably from nation to nation.

In the United Kingdom there is an ad-valorem tariff which averages about 10 percent on fresh and canned fish. For lobster and shrimp the duty is 30 percent. On fish flour the duty is usually 10 percent, but herring flour is customs free.

In Norway there is generally no tariff on fresh, frozen, or salted fish, but on canned fish there are varying duties, generally at about the same level as in Denmark.

In Sweden fresh fish is largely customs free but on canned fish there are considerably higher duties than in Denmark. Sweden also has a special import tax on fillets of cod, whiting, and haddock, etc., of 45 Swedish ore per kilo. In Switzerland there are duties on all fish products and the incidence varies from 0.50 Swiss francs per 100 kilos to 120 Swiss francs. On the products which have special interest for Denmark such as fresh, iced, and frozen fish and fillets, the duty is 0.50 Swiss francs; on trout it is 15 Swiss francs per 100 kilos. On canned fish the duty varies from 2 to 120 Swiss francs. By negotiations with Switzerland, however, it has been agreed that the prevailing customs duties on all types of fish products except trout will be liquidated according to the rules for industrial goods under the EFTA.

In Austria there is no duty on fresh, iced, or frozen fish. There is a 20-percent duty on smoked eel and salmon. There is a 15-percent duty on fish canned in oil. On other canned fish products the duty varies considerably averaging about 540 shillings per 100 kilos.

The duties in Portugal have scarcely so much interest but it can be mentioned that they are about 2 Danish kroner per kilo on canned fish. The duty on cod is minimal. (U. S. Embassy report from Copenhagen, December 29, 1959.)

* * * * *

## FISHERY PRODUCTS INCLUDED IN TRADE AGREEMENT WITH EAST GERMANY:

Following negotiations held in Copenhagen and East Berlin, a new unofficial trade agreement for the calendar year 1960 was concluded on November 13, 1959, between four Danish Trade Associations and the East German Chamber of Foreign Commerce. Similar trade agreements have been made since 1956. Fishery products make up about 21.7 percent (US$3.3 million) of the total Danish exports to East Germany of about US$15.4 million under the agreement. No fishery products exports by East Germany are included in the agreement. (U. S. Embassy dispatch from Copenhagen December 22, 1959.)

Table 1 - Danish Proposed[1/] and Actual Exports of Fishery Products to East Germany, 1956-1960

| Fishery Products | 1960 | 1959 | | 1958 | | 1957 | | 1956 | |
|---|---|---|---|---|---|---|---|---|---|
| | Proposed | Proposed | Jan.-Oct. Actual | Proposed | Actual | Proposed | Actual | Proposed | Actual |
| | | | | (US$1,000[2/]) | | | | | |
| Fresh and Frozen | 2,174 | 2,174 | - | 1,348 | - | 1,304 | - | 1,304 | - |
| Canned | 580 | 580 | - | 580 | - | 725 | - | 725 | - |
| Fresh, Frozen, and Canned | - | - | 1,797 | - | 2,536 | - | 623 | - | 1,261 |
| Fish Meal | 580 | 290 | 261 | 188 | 159 | 43 | - | 43 | 14 |
| Total | 3,334 | 3,044 | 2,058 | 2,116 | 2,695 | 2,072 | 623 | 2,072 | 1,275 |

1/Agreement became effective on July 20, 1956, and was extended through 1957-60 annually.
2/Danish kroner converted to U. S. dollars at rate of 6.9 kroner = US$1.

* * * * *

## FISHING INDUSTRY HAS RECORD YEAR IN 1959:

Preliminary statistics on Denmark's fishing industry for 1959 indicate a record year for total landings, exports, and investments. However, the Danish per capita consumption of fishery products remained unchanged from 1958 at about 27.6 pounds.

In 1959, landings amounted to about 1,453 million pounds, valued at 365 million kroner (US$53 million) as compared with 1,312 million pounds, valued at 335

Denmark (Contd.):

million kroner ($48.5 million) in 1958. The landings consisted of 1,389 million pounds of fish and crustaceans, 48.5 million pounds of mussels, and 15.4 million pounds of pond trout, increases of 125.7, 13.2, and 2.2 million pounds, respectively, over 1958.

Most of the increase was in landings of species used for reduction. The fish meal and oil plants purchased 904 million pounds as compared with 838 million pounds in 1958. These plants produced 156.5 million pounds of fish meal (145.5 million pounds in 1958), 41.9 million pounds of fish oil (37.5 million pounds in 1958), and 50.7 million pounds of fish solubles (33.1 million pounds in 1958). The fish filleting firms processed 127.9 million pounds in 1959, an increase of 10 percent over the preceding year.

Exports in 1959 increased to 562.2 million pounds from 489.3 million pounds in 1958. The exports in 1959 were valued at 419 million kroner ($60.8 million), an increase of $5.8 million from 1958. Export markets for fishery products were generally firm, except the fish meal and solubles, which suffered from increased competition in world markets. Exports of frozen pond trout, especially to the United States, reportedly found a better market in 1959.

Investments in the fishing industry were at an all time high due primarily to the program for replacing part of the fleet with steel cutters. The total value of the Danish fishing fleet in 1959 was 288 million kroner ($41.8 million), up 22 percent from 1958.

During 1959, registrations of new vessels amounted to 100 and included 33 steel cutters. The steel cutters as of the end of 1959 made up 6 percent of the fishing fleets. A total of 376 million kroner ($54.5 million) was invested in vessels and equipment in 1959. (United States Embassy report from Copenhagen, January 5, 1960.)

Note: Values converted at rate of 6.912 kroner = US$1 in 1958 and 6.893 kroner = US$1 in 1959.

## Ecuador

JAPANESE FISHERIES RESEARCH VESSEL STUDYING MARINE RESOURCES:

The Japanese fisheries research vessel Umitaki Maru arrived in Guayaquil, Ecuador, on December 15, 1959. The vessel carries a complement of 20 officers, 45 cadets, and 26 seamen from the Fisheries University of Tokyo. The group is studying marine resources and oceanography and has proceeded from Tokyo, Honolulu, and the Galapagos Islands. The vessel reportedly will go on to Chimbote, Callao, and again visit the Galapagos prior to returning to Tokyo.

Several officials and scientists of the expedition came to Quito and paid courtesy visits to the President, the Minister of Development, and other government officials. The group is reported in the press as having expressed to the Minister of Development their views with respect to territorial waters, including those corresponding to the Galapagos Islands, as they are interested in the resources in that area. (U. S. Embassy report from Quito, December 18, 1959.)

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Large Danish beach-landing fishing craft which are both launched and hauled ashore with the help of large electrical winches. In Denmark many fishing craft are landed direct onto beaches.

Ecuador (Contd.):

SHRIMP INDUSTRY:

Landings: Detailed statistics on the landings of shrimp in Ecuador are unavailable and estimates are based on the weight of the finished product. According to estimates by the Banco Central, Ecuador's shrimp landings (heads on, heads off, and peeled and deveined shrimp) in 1958 amounted to 2,721 metric tons, valued at about US$4.1 million (at official rate of exchange of 15 sucres to US$1). This compared with 2,137 tons valued at $3.0 million in 1957 and 2,342 tons valued at $2.5 million in 1956. It was estimated that landings for 1959 were about 25 percent higher than in 1958.

Species Composition of the Catch: There are no accurate records of species composition. It is estimated that the landings of large shrimp are made up of about 5 percent Penaeus vannamei and the balance of 95 percent consists of P. occidentalis and P. stylirostris. During 1959 occasional catches were made of pink shrimp (P. brevirostris) off Manta and in the Gulf of Guayaquil.

Shrimp Fishing Vessels: Estimates from semiofficial sources of the number of vessels active in the shrimp fishery were 180 in 1959, 127 in 1958, 60 in 1957, and 27 in 1956. Industry sources estimated that on December 1, 1959, the vessels engaged in shrimp fishing totaled 120 to 130 instead of 180. The shrimp vessels range from 40 to 60 feet in length with Diesel engines rated between 90 and 200 hp. Most of shrimp fishing vessels have brine tanks for preserving the catch. There is one floating freezership which does not fish. In addition to the vessels flying the Ecuadoran flag, there were 27 foreign flag vessels operating out of Ecuador in 1956, 29 in 1957, but only 3 in 1958 and none in 1959.

The shipbuilding program has come to a stop due, it is believed, to the drop in shrimp prices in the United States market. A few of the vessels, now in various stages of construction, will be finished, but unless market conditions improve it is likely that the shrimp fleet will decrease in numbers.

Production Costs: For shrimp (headless) counting under 10 to the pound packed in 5-pound cartons, the cost f.o.b. Ecuador late in 1959 was estimated to range from 64 to 67 U. S. cents a pound. This cost is based on an ex-vessel price of 51.5 cents a pound; a cost of 8 U. S. cents a pound for grading, freezing, packing material, and loading; 2 U. S. cents a pound loss due to exchange control; and 4.5 U. S. cents a pound for export duties and port charges. Costs from the Ecuadoran port to New York City for ocean freight, insurance, unloading at port of entry, and storage charges amounted to about 6 to 7 U. S. cents a pound. Most of the shrimp is sold on consignment, and the export price would be the New York wholesale selling price less commission, storage, transportation, and unloading costs in the United States, and less ocean freight and insurance.

Ex-Vessel Prices: Prices (pack-out basis) being paid to the vessels for headless shrimp in December 1959 were as follows: white shrimp under 10 count: whites, 51.5 U. S. cents; pinks, 45.7 cents; 11-15 count: whites, 45.7 cents; pinks, 40 cents; 16 to 20 count: whites, 40 cents; pinks, 34.3 cents; 21 to 25 count: whites, 34.3 cents; pinks, 28.6 cents; 26 to 30 count: whites, 28.6 cents; pinks, 22.8 cents; 31 count and over: whites 22.8 cents; pinks, 17.1 cents. (All values based on free rate of exchange of 17.5 sucres to US$1). Also, peeled "zebras" bring 22.8 cents a pound and peeled "titi" and "pomada" bring 17.1 cents a pound ex-vessel--the peeling is done ashore and not on the vessel.

Duties, Taxes, and Port Fees: The following duties, taxes, and port fees were in effect the latter part of 1959: export duty, 0.40 sucres per net kilogram (about 1 U. S. cent a pound); $\frac{1}{2}$ percent ad valorem for port improvement; $\frac{1}{4}$ percent ad valorem for port improvement; 1 percent on freight charges; 1 percent ad valorem on exports through Guayaquil and El Oro Province; 10 sucres per ton port fee; 1 sucre per ton statistics fee; and 0.05 sucre for each 300 pounds of shrimp for inspection and stamps. These charges total about 4.5 U. S. cents a pound. Exchange controls consist of export permits from the Central Bank, and to obtain them US$300 in currency per metric ton of shrimp exported must be sold to the

Ecuador (Contd.):

the Central Bank at the official rate of 15.00 sucres per US$1. Dollars earned in excess of the $300 may be sold at the free rate which fluctuates between 17.00-18.00 sucres per US$1. This amounts to an exchange control tax of 1.6 to 2.3 U. S. cents a pound.

Exports: Practically all exports of frozen headless and peeled and deveined shrimp are made to the United States. Exports increased from 1956 to 1959, due primarily to increased exports of smalled peeled and deveined shrimp ("titi" and "tigres"). According to estimates, these small peeled and deveined shrimp made up about 40 percent of the total exports in 1958 and 1959.

Table 1 - Ecuador's Shrimp Exports to United States 1956-58 and January-June 1959

| Quantity | | | | Value 1/ | | | |
|---|---|---|---|---|---|---|---|
| 1959 Jan.-June | 1958 | 1957 | 1956 | 1959 Jan.-June | 1958 | 1957 | 1956 |
| (Metric Tons) | | | | (US$1,000) | | | |
| 1,242 | 2,221 | 1,858 | 1,393 | 659 | 1,465 | 758 | 234 |

1/ Values converted at official rate of exchange 15 sucres = US$1) for first US$300 of value per metric ton and at the free rate of exchange (about 17.5 sucres = US$1) for value in excess of $300 a ton.
Note: Nearly all shrimp exports are to United States; a very insignificant amount was shipped to Bolivia in 1958.

Forecast: It appears probable that Ecuador's potential production of white shrimp tails is between 3 million and 5 million pounds a year. Apparently two areas have been located where pink shrimp can be caught, but only occasional catches have been made. It is suspected though, if prices were suitable, that a fairly large amount of pink shrimp could be landed in Ecuador. (U. S. Embassy report from Mexico City, December 10, 1959.)

## Egypt

SHRIMP INDUSTRY TRENDS, NOVEMBER 1959:

The only shrimp packing and freezing plant in Port Said, Egypt, was set up in November 1957. The plant, with a capacity of 20 metric tons monthly, is equipped with American refrigerating machinery. Another freezing room is under construction and is expected to increase the plant's capacity to 40 tons a month. The authorized capital of the firm is ŁE6,300 (about US$17,600).

The shrimp freezing plant is located just outside of Port Said near the railroad yards and backing on the Interior Basin. According to reports, the plant, although small, is clean and modern. About 200 employees (mostly women) sort, pack, and freeze the shrimp which are caught in Mediterranean waters near Port Said.

Practically all the frozen packaged shrimp are exported to the United States, except for small quantities exported to Italy, Switzerland, and France. No vessels are owned by the processing and freezing firm, but several vessels fish for the firm on a contract basis. (United States Consulate at Port Said, November 24, 1959.)

## El Salvador

SHRIMP INDUSTRY EXPANDS:

Official statistical records maintained by El Salvador on the landings of shrimp are incomplete. The best estimates on the expansion of El Salvador's shrimp fishing industry can be obtained from United States Customs records. According to these records, shrimp exports from El Salvador to the United States began to increase in 1957 when 66,260 pounds were exported. In 1958 shrimp exports to the United States jumped to 1,130,000 pounds and during the first 11 months of 1959 totaled 1,546,000 pounds. Observers estimate that the total landings of headless shrimp in El Salvador in 1959 were about 2 million pounds with about 10-12 percent of the landings consumed locally or exported to countries other than the United States. The same sources estimate El Salvador's shrimp stocks (whites) to be between 3 and 6 million pounds (headless).

There are two plants (located in San Salvador and Triunfo) that freeze shrimp for export and a third plant is under construction at La Union. In July 1959, the

El Salvador (Contd.):

Government of El Salvador increased the limit on shrimp fishing vessels from 17 to 50 vessels. As of early November 1959, about 30 shrimp trawlers (all Diesel-powered) were operating out of El Salvador. Seven of the vessels were about 35 feet in length and the balance between 45 and 65 feet in length. Shrimp vessels arriving late in 1959 were modern United States-built trawlers fitted with double trawling rigs. Other vessels in the fleet are used vessels from countries other than the United States.

No information is available on ex-vessel prices for shrimp (all vessels are company owned). However, one new company is reported to be planning on paying about 30 U. S. cents under the United States selling price. On that basis, it was reported that the company would make a net profit of 1-2 U. S. cents a pound. Catches by the more modern vessels in late 1959 were averaging 3,000-5,000 pounds per seven-day trip. With the fleet increasing, it is expected that cost per pound will increase as the catch per vessel declines.

It is estimated that about 90 percent of the shrimp landings are made up of two species--Penaeus stylirostris and Penaeus occidentalis, with P. stylirostris the more abundant. The remaining 10 percent consists of a number of shrimp species. Most of the boats do not bring in shrimp that run over 25 count heads on.

The shrimp industry and the Government of El Salvador have committed themselves to a definite expansion of shrimp exports to the United States during 1960. (United States Embassy report from Mexico City, November 27, 1959.)

## France

TUNA FREEZERSHIP TO OPERATE OFF FRENCH WEST AFRICA:

A fishing company of Saint Jean de Luz, France, has chartered the 10,480-ton Liberty ship Caen from the French Government for a five-year period, the November 5, 1959, issue of the Danish fishery trade periodical Dansk Fiskeritidende reports. The vessel, due to begin operation in the 1960 winter tuna fishing season, will serve as a freezership for tuna caught off French West Africa. The frozen tuna will be transported to France in the same ship.

The annual rental for the tuna freezership will be 3.5 million francs (about US$7,150) with an option for purchase.

## German Federal Republic

ANOTHER NEW FACTORYSHIP STERN-FISHING TRAWLER COMPLETED:

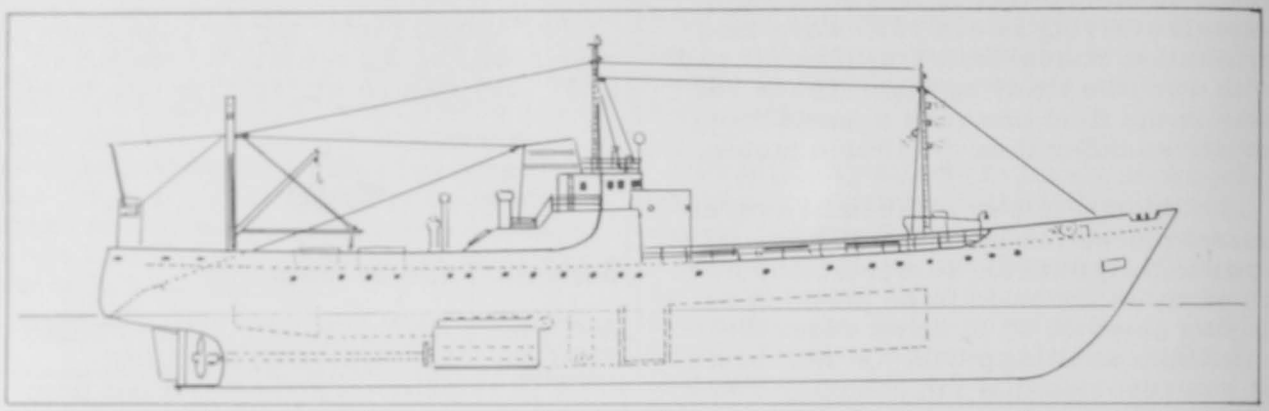
A Bremerhaven shipyard has completed the new factoryship stern trawler Carl Wiederkehr for a Bremerhaven fishery cooperative. The stern trawler Heinrich Meins was built at this yard in 1956/57 for the same owners, and it is noteworthy that considerable differences exist in the design of the new ship, as compared with its predecessor. The Voith-Schneider propulsion has been abandoned, the wheelhouse and superstructure has been moved aft to about midships, and the two 750 hp. Diesels have been replaced by one of 1,650 hp. driving a controllable pitch propeller. The over-all length of the new trawler is some 4 feet greater.

The leading particulars of the new vessel are as follows: length over-all, 220 feet 7 inches; length between perpendiculars, 189 feet; breadth moulded, 31 feet 6 inches; depth to upper deck, 23 feet 6 inches; tonnage, gross registered, 719.46; fresh fish-hold capacity, 16,529 cubic feet; deep-freeze capacity, 2,260 cubic feet; fuel oil, 30 tons; and fish meal, 55 tons.

The ship has two decks and a stern slipway, the lower deck being a freeboard deck, and it is to German Lloyd Class + 100 A 4 (E). The hull structure is built of ship's steel and welded throughout, being subdivided into 6 compartments by 5 water-tight bulkheads. The

German Federal Republic (Contd.):

superstructure consists of a small shelter for the fore hatchway and air-heating system and the main control bridge and deckhouse amidships. This houses the winch compartment, hatchways, and drying room on the upper deck, with the captain's cabin and wireless cabin above.



The Carl Wiederkehr, the second factoryship stern-fishing trawler completed in West Germany--220 feet 7 inches length over-all.

The bridge itself, including the chartroom, is so arranged to give a particularly good view astern which is especially important on stern-catching vessels.

Since the ship is built with the engine half aft, the trawl winch had to be positioned forward of the funnel within the bridge structure in order to provide the required length of deck aft, and this arrangement gives good protection to the winch against wind and weather from ahead. The top of the funnel also acts as an elevated hauling point from which the cod end and heavy trawl gear is hauled on deck, and it has been suitably designed and reinforced for this purpose.

The living accommodation is designed for 8 officers and engineers and 21 crew, engineroom, and galley personnel, and with reserves provides for a maximum of 31 persons. Officers have individual cabins, and members of the crew cabins for 2, 3, and 4 persons with associated messes and toilet facilities. The galley, with an electric oven and separate artificial ventilation, is built amidships beside the engine ventilation shaft together with provision rooms.

The catch is hauled on board via a stern slipway, and the cod end is emptied just forward of the slipway, through a compressed air-operated hatch. On either side of this hatch are two pillars connected by a cross-member, and supporting a derrick, and this is used to lift the net so that the cod end can be emptied below, before the gear is set again. Below the fish hatch are the fish gutting and sorting pounds, between which runs a conveyor belt, which first of all conveys the fish to an automatic drum-washing machine and then to a position beside the fish-room hatches in the bows, where it is automatically taken from the belt at 6 different points, and selectively passed into the various fish-room bays. On the fish-washing machine and conveyor belts use is made of "Nirosta" at all points which come into contact with the fish.

The fresh-fish room is subdivided into 12 pounds by detachable wooden transverse bulkheads, and it is insulated with glass fibre, except for the floor and a skirting one meter high where cork has been used. The fish-room floor is covered with wooden decking, and the ceiling is made of wood.

Beside the fresh-fish room, there is a small deep-freeze providing storage at -20° C. (about -18.4° F.) and intended for prime fish. The cooling system is thermostatically controlled and incorporates a center-freezing tunnel designed to accelerate cooling of the incoming fish. This room also has cork insulation on the floor and skirting, and a plant keeps the insulation permanently dehydrated.

Astern, and above the slipway, there is a gallows from which are suspended

German Federal Republic (Contd.):

the specially-designed roller-bearing gallows blocks, which can be traversed across the ship. The trawl winch has two drums holding 1,200 fathoms of trawl warp and two small drums used for hauling up the cod end in conjunction with the lifting tackles attached to the funnel.

There is also a light mast on the bridge, and another on the foredeck shelter, and these carry the radar aerial, the regulation lights, and a stay for unloading. In addition there is a small derrick on the after gallows and two 1-ton derricks on the gantry for handling trawl boards and other gear. Both anchor windlass and discharging winch are electric.

A comprehensive range of navigational and radio equipment is installed, as follows: magnetic projector compass, gyroscopic compass, automatic helmsman and D/F repeater; 1 echo-meter, 2 echo-sounders, 1 scale expander, radar; 1 long-distance short-wave transmitter, 350 watts, 1 medium and high-frequency transmitter, 1 medium-wave transmitter, 80 watts; 2 communication receivers; 1 Loran set; 1 V.H.F. sea-going radio with 28 channels, 1 radio receiver, and 1 intercommunication system.

The main engine is a Diesel developing a maximum of 1,650 hp. at 250 r.p.m. On the main shaft is a generator which can also function as a motor (300 hp.) enabling the 240 kw. developed by the Diesel winch-generator set to act as additional power on the propeller. Its chief function is as a shaft-driven generator, being normally used for powering the trawl winch motor, so that the winch Diesel is only for reserve use. A further 100-kw. shaft generator for the ship's mains is connected to the flywheel of the main engine by a vee belt. There is in addition, a 100-kw. Diesel generator and compressor set for ship's mains when in harbor. An oil-fired auxiliary boiler and an exhaust-gas boiler on the main engine supply the steam required for fish-meal and fish-oil plants and for heating.

The ship has a 3-bladed adjustable pitch propeller.

The electrical system operates at 220 volts d.c. with 380-volt 50-cycle 3-phase a.c. mains, fed via rotary converters and supplying those motors which are most liable to be endangered by damp, namely those in the fish-meal plant and the conveyor-belt plant, and the traverse motors on the gallows. In harbor, the rotary converters can also take a 3-phase feed from the shore and transform it into direct current. (World Fishing, December 1959.)

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STERN TRAWLERS OFFER ADVANTAGES:

A staff member of the Norwegian Directorate of Fisheries recently returned to Norway from a trip on the German stern trawler Karl Kempf, according to a report in Fiskaren (December 8, 1959), a Norwegian fishery trade periodical. He stated there was much to be said in favor of stern trawlers.

The vessel fished near Labrador and south of Newfoundland. It caught 190 metric tons of fish (mainly ocean perch) in 6½ effective fishing days. Working conditions were good on the grounds and the trip was profitable even though there were no large schools of fish.

The stern trawler is safer for the crew, can fish in bad weather, and fish are taken more quickly in that one extra drag can be made daily. Work on gear on the top deck and work on the fish on the lower deck are accomplished more rapidly and with greater freedom.

Complete operating data were obtained for the 67 drags made during the trip. Fishing occurred in 190 to 200 fathoms with 500 fathoms of wire. The average time required to haul in the trawl, to empty it, and to get it back on the bottom was only 34½ minutes.

A comparable trip will be made on a side trawler after which complete information on both types of operations will be published.

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FISHING INDUSTRY TREND IS TO LARGE TRAWLERS:

The largest West German trawlers soon will be 1,000-ton vessels, according to

German Federal Republic (Contd.):

Dansk Fiskeritidende (December 4, 1959), a Danish fishery trade periodical. Five such craft have been ordered by a group of West German fishery companies from a shipyard in Bremerhaven.

Each vessel will be 233 feet long, 34 feet in breadth, and have a fish hold with a capacity of 19,600 cubic feet. In addition, there will be an extra freezing room holding 75 metric tons of frozen fish.

For motive power the vessels will use the so-called "father and son" double motor installation with a main motor of 1,800 hp. and a smaller motor of 400 hp. The latter can drive the winch and propel the trawler alone when not coupled to the 1,800-hp. motor.

The first of the five trawlers will be ready in mid-1960. The whole series will be completed by 1961.

Vessel plans are not yet known, except that they will not be stern trawlers and will have a speed of 15 knots.

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HEAT-TREATING PROCESS FOR BACTERIA-CONTAMINATED FISH MEAL DEVELOPED:

New equipment for the sterilization of fish meal and related products infected by salmonella bacteria has been developed by two Hamburg, West Germany, firms. The new process was developed in response to the need for more effective sterilization of fish meal destined for import into West Germany. Under uniform state legislation, of which a Hamburg ordinance of February 14, 1958, forms a part, feedstuffs of animal origin may be imported into Germany only if (a) each shipment is accompanied by an official certificate (in the German language) of the country of origin to the effect that the feedstuff in question has been subjected to heat treatment or equivalent process for the killing of salmonella bacteria and (b) the feedstuff is found by health authorities at the port of entry to be free from such infestation.

The steam sterilization plant, for which German patents are pending, is designed for a continuous output of 50-300 tons per 24 hours. The meal to be disinfected is delivered to one room of the plant, from whence it is transported by conveyor belt to the hermetically-sealed sterilization chamber. From here it is passed to a packaging room in which the processed meal is put into pneumatically-sealed paper bags, in accordance with German import requirements. The possibility of reinfestation of the meal is minimized by the fact that the packaging room is completely separated from the sterilization room.

The designers of the new process state that a 150-ton capacity plant erected south of Amsterdam in the Netherlands is working satisfactorily. The cost of a plant of this size, not including boiler, is about US$125,000. An official of the Hamburg Hygienic Institute states that, although one test has revealed no salmonella bacteria in meal which was put through the new process, 2 or 3 additional tests will be required before a final judgment can be made as to its effectiveness. (U. S. Consulate report from Hamburg November 23, 1959.)

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NEW MANEUVERABLE TRAWL TESTED SUCCESSFULLY:

Trawl fishing is facing a new revolution, according to a report in Fiskaren (December 16, 1959), a Norwegian fishery trade periodical. The West German motor trawler Rendsburg during a trial trip to the Irish Sea and the English Channel tested a pelagic trawl which, like the floating trawl, can be set in any desired position in the sea. While other trawlers caught modest quantities, the Rendsburg brought in full cod ends each of the 12 days the experiment lasted.

The experimental trip was a link in the West German ocean fishery's State-supported program for seeking new fishing grounds for its fleet of 200 large trawlers. The Rendsburg fished with various new pelagic, synthetic fiber trawls developed in cooperation with the Fishery Research Institute in Hamburg.

German Federal Republic (Contd.):

Each trawl is directed by a sounding device which has an echograph on the trawl's headrope. This makes it possible for the skipper on the bridge to check the depth of the trawl, the height of the opening, and also the fish which enter the net.

The tests showed that the advanced sounding device met all the demands placed on it. The skipper also succeeded in catching herring schools, which were in the upper layers of the sea. In the same manner, pollock, mackerel, brisling, and hake, sharks, and whiting were taken in the trawl. The new method is expected to be of importance to all pelagic fishing, including both herring and other school fish which cannot now be reached by the ordinary bottom trawl or the still uncontrollable pure floating trawl.

## Greece

STERN-FISHING FACTORYSHIP TRAWLER ORDERED FROM BELGIUM:

A newly-formed Greek fishing company has ordered a stern-trawling factoryship from an Ostend, Belgium, shipyard. The new vessel of 2,000 gross tons will be 246 feet in length and draw about 19 feet. The Diesel electric drive will be powered by 2,500-hp. motors of British or Dutch manufacture. The freezing machinery and equipment of British manufacture will be able to freeze 30 metric tons of fish per 24 hours. The frozen fish storage capacity will be 600 metric tons. (Aleia, a Greek fishery trade publication, of November 1959.)

## Hong Kong

FISHERIES TRENDS, JULY-SEPTEMBER 1959:

The fishermen of Hong Kong during the third quarter of 1959 were generally rewarded with good catches, which were about 30 percent higher than during the third quarter of 1958. The marketing of fresh marine fish exceeded 3,600 tons in each of the three months. Long-line fishermen did not do as well as other types of fishermen, however, because of the strong currents they encountered on the fishing grounds.

The relaxation in August 1959 by the Chinese Communists of their restrictions on fishermen operating in the Pearl River estuary induced hundreds of fishing junks based in the Colony to venture out once again into these fishing grounds. A smaller portion of their catch needed to be surrendered, and they could purchase their necessities in Pearl River ports without as many formalities as before. Many of these junks had fled to Hong Kong originally to escape the strict Chinese Communist requirements for fishermen operating in the Pearl River.

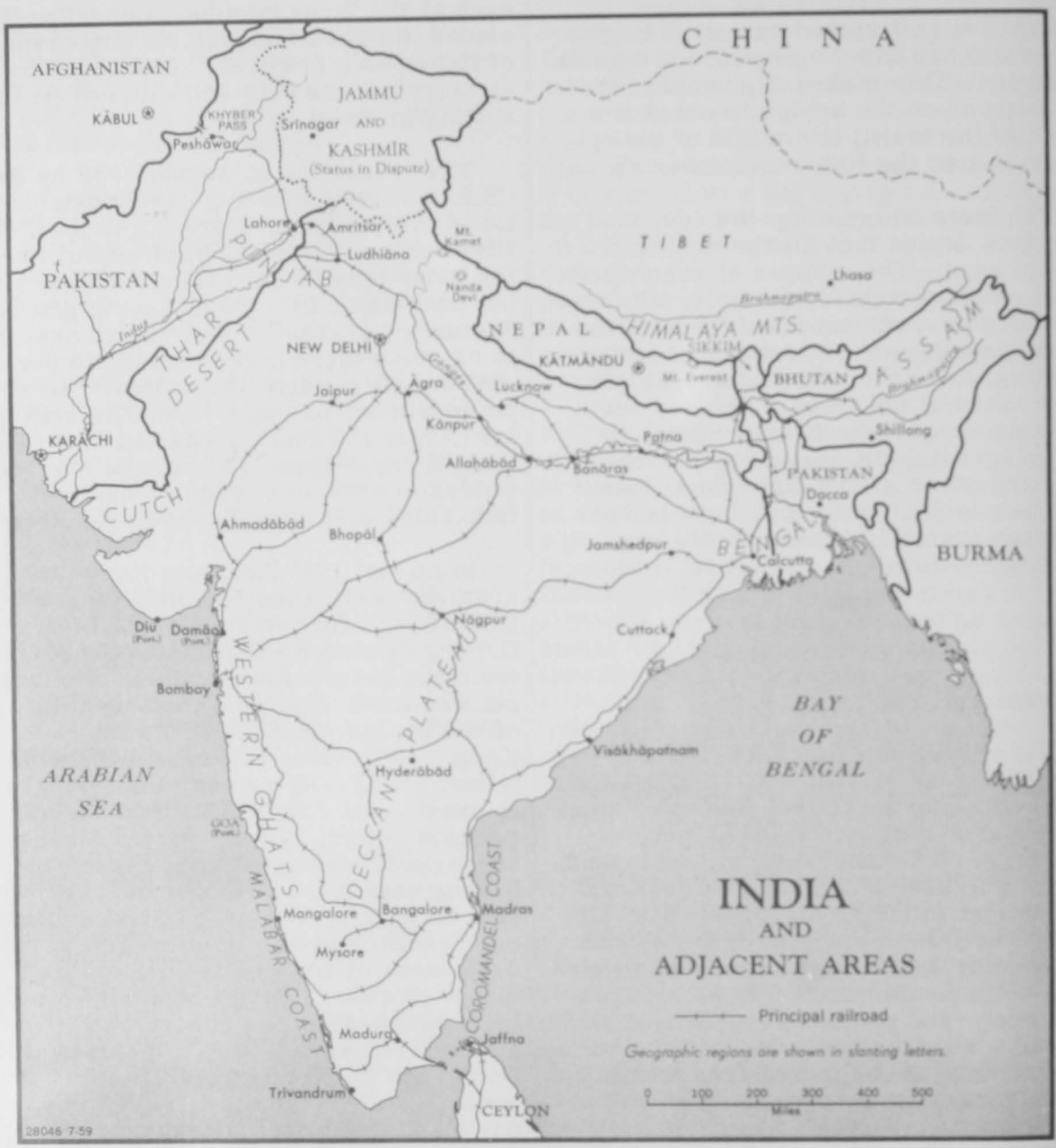
In August 1959 the Hong Kong Government earmarked HK$700,000 (about US$122,500) for the acquisition of the fishery research vessel Cape St. Mary from the British Government. The vessel was made available for only the cost of sailing it from British Guiana to Hong Kong. The vessel will cost HK$300,000 (about US$52,500) a year to operate, but is expected to locate additional fishing grounds outside Colony waters that could be worked by Hong Kong's mechanized fishing vessels, which totaled 2,420 vessels on July 1, 1959. The smaller fishery research vessel Alister Hardy, now being used by the Fisheries Research Unit of the Hong Kong University, would be turned over to the government's Department of Agriculture, Fisheries, and Forestry for closer exploration of the inshore waters, where most of the Colony's sail-powered fishermen work. (United States Consulate dispatch from Hong Kong dated January 13, 1960.)

## India

GOVERNMENT DELEGATION TO SEEK JAPANESE AID IN DEVELOPMENT OF DEEP-SEA FISHERIES:

A three-member Government of India delegation was expected to visit Japan in February 1960 to explore the possibilities

India (Contd.)




of obtaining Japanese aid in the development of India's deep-sea fisheries. It is believed that India's desire to seek Japanese aid in development of Indian fisheries is due to the fact that (1) Japan is active in exploiting the fisheries of the Indian Ocean and (2) deep-sea fisheries present the best opportunity for an increase in India's landings of fish. At present India's fishery production is largely from coastal and inland waters, the United States Embassy in New Delhi reported on January 12, 1960.

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## RUSSIAN FRESH-WATER FISHING EXPERT TO AID FISHERIES:

A Russian expert on fresh-water fishing was scheduled to arrive in India in December 1959 to begin a 14-months assignment as a Food and Agriculture Organization (FAO) fishing-gear technologist.

The fourth Russian fisheries expert to serve in India under FAO's technical-assistance program, he will work in

India (Contd.):

cooperation with the Indian government and FAO to improve the Indian freshwater fisheries.

The Russian expert, who worked as a scientist with the Research Institute of Marine Fishery and Oceanography in Moscow until his FAO assignment, is an expert on light fishing and electrical fishing.

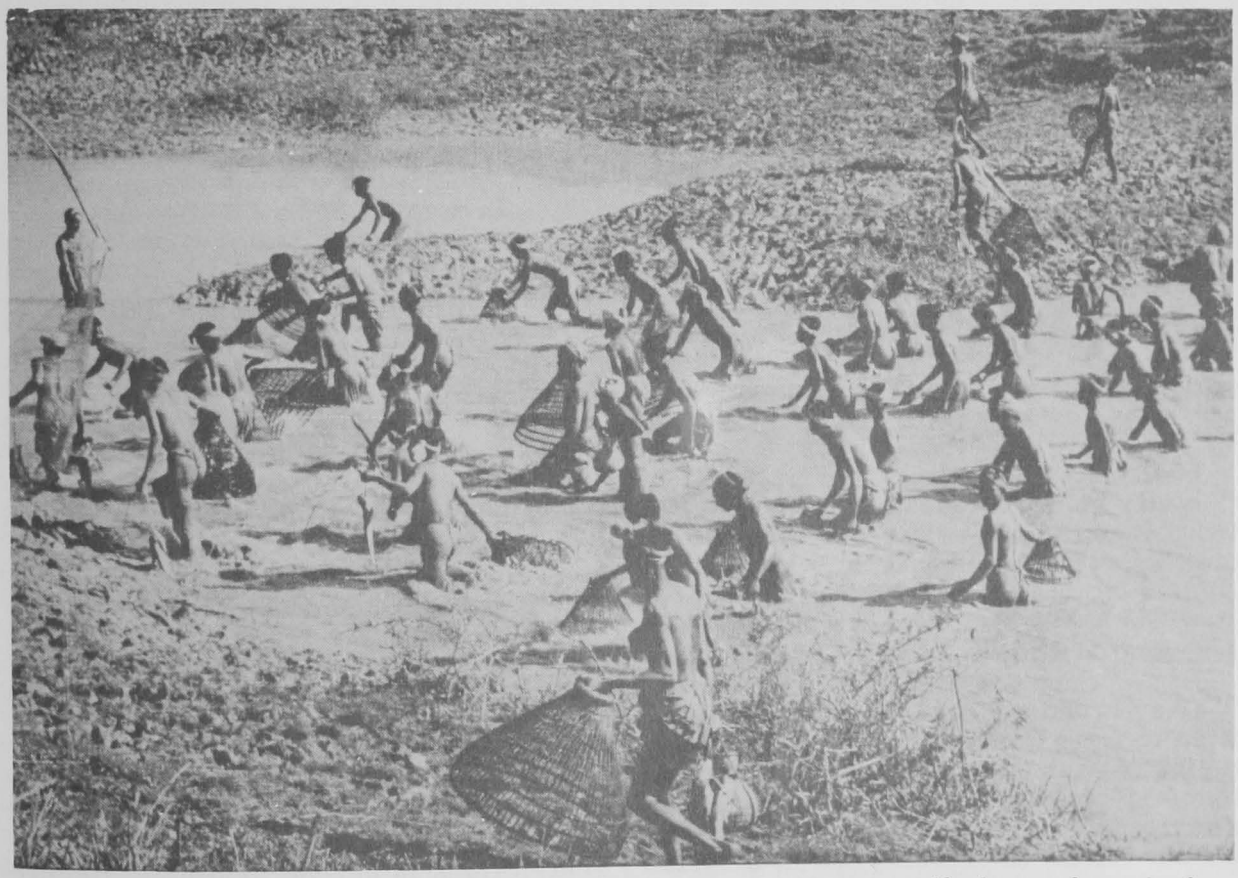
Electric lights are being used commercially with different methods by Russia in the Caspian, Black, and Okhotsk Seas, the Russian expert stated in an interview. Russians are catching 200,000 metric tons of sprat a year in the Caspian Sea by this method alone, he said.

Under this method, a fleet of 150 to 200 fishing vessels lower lamps to different depths in the sea. Fish are attracted by the lights and then are suctioned up into the awaiting boats by suction pumps.

He also stated that lights had been used in the Black Sea with irregular results. This phenomenon of why a method successful in the Caspian Sea is not successful in the Black Sea is under study by Russian scientists, he said. Fishing in the Okhotsk Sea with lights was also on a semi-experimental, semi-commercial level.

The Russian predicted that the light fishing method will eventually take over a big part in the Soviet fishing industry, and will be extended to the open ocean.

The Russian expert said he hopes to give the Indians instruction in fishing with light if local conditions permit.

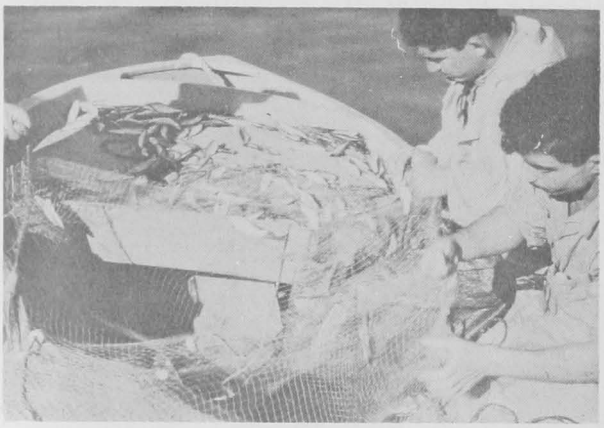


Province of Assam, India. On the plains of Assam subject to flooding each year numerous bheels or ponds remain after the flood waters have receded. These bheels are often well-stocked with fish and dozens of villagers will carry out a systematic drive from one end of the bheel to another forcing the fish into a restricted space and then trapping them with inverted bamboo baskets.

## Israel

MODERN VESSELS FOR FISHING FLEET:

Three large, modern vessels will be added to Israel's fishing fleet in 1960, according to the October 23, 1959, issue of the Jerusalem Post as reported in Fiskets Gang, a Norwegian fishery trade periodical. It is expected they will increase Israel's fish supply by thousands of tons annually. At present, about 23,000 metric tons are consumed in Israel of which 13,000 tons are taken in local waters and the balance imported.



Ein Gev, small harbor on sea of Galilee. Fishermen emptying their nets. Israel in recent years launched large vessels to harvest the resources of the Atlantic.

The first of the three vessels will be specially constructed for fishing in the Red Sea and the Persian Gulf and will join the small fleet of fishing craft which operate from a harbor well up in the Red Sea. The vessel will be able to freeze and store 100 tons of fish.

The second vessel will operate in the Atlantic Ocean and will join vessels fishing for a joint Israeli-Japanese tuna fishing company. This vessel will have freezing and storage space for 300 tons of fish. Tuna which reached the Israeli market from that company's first catch were received favorably by consumers. At present tuna and other ocean fish are reaching the market in limited quantities because the product is being held back in cold-storage warehouses to prevent a price decline. In this connection, poultry producers have exerted certain pressures on the Government since they contend that a flood of tuna on the market would adversely affect poultry prices.

The third vessel will operate off the coast of West Africa. This vessel also will have freezing equipment and, in addition, an installation for the manufacture of fish meal and dried fish.

Israel hopes that much of the increased catch will be exported to various Mediterranean countries, especially Italy and Yogoslavia. The local market is unable to absorb significantly more fish without a drastic cut in the imports of fish from the several Scandinavian countries. When such a reduction occurred a short time ago, it affected the exports from Israel to those countries. Scandinavian countires exchange their fish for Israel's oranges and citrus products, etc. Israel's Government has, furthermore, recently decided to increase imports of fish from Scandinavian countries.

## Italy

IMPORT RESTRICTIONS LIFTED ON FRESH OR FROZEN FISH AND CRUSTACEANS FROM DOLLAR AREA:

Effective January 15, 1960, some 200 additional commodities may be imported freely into Italy from the dollar area. Included among the products freed from quota restrictions were fresh and frozen fish and crustaceans. As a result, Italian consumers may be able to buy United States goods whose importation has been curtailed for many years.

This action by the Italian Government will place United States exporters of competitive products on an equal basis in the Italian market with exporters of other countries. The complete list of products freed from quantitative import restrictions is not yet available. Removal of these limitations represents a further step by Italy in the direction of eliminating discriminatory and other quantitative import restrictions.

## Jamaica

MANY FISHING CRAFT MECHANIZED THROUGH GOVERNMENT LOAN SCHEME:

The very effective mechanization of fishing boats promoted by the Fisheries Department of the Government of Jamaica, under which upwards of 500 outboard engines have been installed in fishing canoes, is stressed in a report issued by the Food and Agriculture Organization of the United Nations (FAO), Rome, Italy.

The report, which has been prepared by the Chief of the Fishing Boat Section, Fisheries Division, FAO, points out that the mechanization of Jamaican fishing craft has been made possible by the Jamaican Government Loan Scheme.

"The Fisheries Department of the Jamaican Government has imported outboard engines and made them available to local fishermen on very easy terms," the Chief of FAO's Fishing Boat Section stated at an interview held at the FAO Rome headquarters after his return from the West Indies. "The fisherman has only to make a first payment of 10 percent on the price of the engine and then has 18 months in which to pay the balance. Furthermore, he is able to buy ready-mixed gasoline free of duty, but an extra shilling (14 U. S. cents) per gallon is charged while the fisherman is paying for the engine."

The FAO expert has made a number of recommendations for the further development of fisheries in Jamaica, based on his observation of fishing craft, gear, equipment, methods and so on, during his visit to the island at the invitation of the Government. These recommendations include proposals for the design and construction of experimental types of fishing boats which, equipped with inboard engines, living quarters, and ice holds for storing fish, would be able to operate at more distant fishing grounds, staying at sea for several days; the introduction of new fishing methods; employing an engineer to investigate the possibilities for developing fishing ports and improving beach landing facilities for fishermen; and employing a gear technologist to test out new fishing methods.

"For instance, little is known at present of the bottom conditions on the distant banks and in the deep waters and I think it would be a good idea to equip some of the vessels regularly plying these waters with echo-sounders, so that observations of the bottom conditions and of the presence of fish could be reported to the Fisheries Department," the FAO expert declared.

"There is a need to consider such local conditions and to experiment with various fishing methods before a suitable new type of fishing boat could reasonably be introduced," he continued. "We have, therefore, recommended that two 35-foot prototype boats should be built to test out new fishing methods and to determine whether they are of the right design from the point of view of operation, economy of running, and so on. We have also proposed that these boats could be used, along with other craft, by a master fisherman-gear technologist to carry out experimental fishing. We are now designing the boats at the request of the Jamaican Government, and have suggested that they should be built in Jamaica, preferably with the advice and assistance of a naval architect from FAO.

"If the prototype boats turn out to be an economic proposition and point the way to bigger fish landings in Jamaica," added the FAO expert, "then they may well provide an example which could be followed by the authorities in other islands in the Caribbean."

Another proposal made is that, with the introduction of larger craft and new fishing methods, a number of young intelligent fishermen should be trained to handle the boats and carry out fishing with new types of gear and equipment. The expert concerned with the training of such fishermen would, at a later date, organize training centers to spread knowledge and technological "know-how."

In the course of his report, the FAO expert commented that the designs and shapes of the present popular fishing craft, such as the dug-out canoes, are extremely good.

Jamaica (Contd.):

"They have a sharp bow and flat run and a shape which conforms with modern ideas of hull design," he pointed out. "When they are equipped with outboard motors, the canoes sail at high speed because of their good shape. A speed of 10 knots is not uncommon. Such high speed is necessary because there is no ice-storage in the small craft.

"Unfortunately it is expensive to run craft at such high speeds because it means high consumption of gasoline," he added. "I have not said this in the report but I hope that somebody one day will develop an outboard running on kerosene or Diesel oil which would cut down running expenses."

Apart from the introduction of new boats and new fishing gear, equipment, and techniques, the FAO expert has suggested that an increased catch could be made by the use of more pots per fisherman. As he points out, power-hauling of pots in deep water might increase the number of pots operated per man. There are also possibilities of extending the life of pots by using metal frames, nylon lines, and plastic floats, if tests should prove this an economic proposition.

At present, there are estimated to be some 6,500 fishermen using 2,900 craft in Jamaica. It is believed that these fishermen land something over 7,000 tons of fish annually. This falls far short of local demand for fish and some 14,000 tons of salted cod and other processed fish are imported each year, so that there is a considerable market open to the local fishermen if they can increase their catch.

## Japan

ATLANTIC TUNA EXPORTS TOP 50,000 TONS:

The Japanese Export Tuna Freezers' Association has recently issued data on actual and planned direct exports of fresh and frozen (mostly frozen) tuna from the Atlantic for the present export year (April 1959 through March 1960)--a total of 182 trips with 50,763 metric tons of tuna.

Japanese Direct Exports of Fresh and Frozen Atlantic Tuna

| Destination | Number of Trips | Quantity Landed |
|---|---|---|
| United States (transshipments): | | Short Tons |
| California | 24 | 8,288 |
| Oregon | 3 | 489 |
| East Coast | 16 | 3,624 |
| Ponce, Puerto Rico | 5 | 1,251 |
| Undetermined | 2 | 1,100 |
| Total shipped to U. S. | 50 | 1/14,752 |
| Direct landings in: | | Metric Tons |
| Italy | 39 | 11,070 |
| Yugoslavia | 39 | 12,545 |
| France | 20 | 6,341 |
| Europe, undetermined | 6 | 2,526 |
| Africa | 23 | 4,199 |
| South America and other | 5 | 691 |
| Total other than U. S. | 132 | 37,372 |

1/Metric equivalent about 13,391 tons.

Initial plans for this export year called for 120 trips for transshipment to the United States, but the plan has been cut-back to 50 trips. (Suisan Tsushin, December 24, 1959.)

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EXPLORATORY TUNA FISHING IN CARIBBEAN SEA:

In December 1959, information on exploratory tuna fishing operations by the Japanese Fisheries Agency's research vessel Shoyo Maru (600 tons) in the Caribbean Sea was released.

The vessel fished six times in six days and obtained average catches of 3 tons a day. Catches comprised yellowfin, albacore, big-eyed, and species of swordfish. The ship used 200 baskets of long line for each setting.

After completing exploratory fishing operations, the vessel was expected to visit Ponce, Puerto Rico, then proceed to Samoa, via the Panama Canal. After exploring fishing grounds between New Zealand and Australia, the vessel was scheduled to return to Japan in March 1960. (Fisheries Economic News, December 24, 1959.)

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Japan (Contd.):

FROZEN TUNA EXPORTS, 1959:

The Ministry of International Trade and Industry has revealed Japan's 1959 frozen tuna exports (including transshipments to the United States from an intermediate port and direct landings in foreign countries) amounted to about 152,000 metric tons.

Exports by country of destination were: American Samoa 12,000 tons, New Hebrides 3,000 tons, Italy 12,000 tons, France and Dakar 10,000 tons, Yugoslavia 10,000 tons, Argentina 500 tons, the United States 100,000 tons (albacore 30,000 tons and yellowfin 70,000 tons), and other countries 4,500 tons.

Exports of yellowfin tuna were heavy in 1959 as compared with the previous year. Also exports to Yugoslavia were considerably greater.

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EXPORT QUOTA FOR FROZEN ALBACORE MAY NOT BE MET:

The Japan Frozen Food Exporters' Association has opened the frozen albacore tuna export quota for the period January-March 1960, and the quota for the export year is to be 30,000 tons, as originally planned. In opposition to the common-sense opinion that the 30,000-ton goal cannot possibly be attained because of the poor summer albacore catch, the opinion is heard in some quarters that the quota can be filled by a heavy production of long-line albacore frozen aboard the fishing vessels, without dependence on pole-and-line albacore tuna catches.

According to this way of thinking, the number of tuna long-liners, which was 140 in 1958, rose to 190 in 1959, and there has been about a 30 percent increase in the number of boats fishing the Indian Ocean albacore grounds. Catch rates have also risen, and it is held that exports of 15,000 tons are possible in the period from December 1959 to March 1960, as compared with 11,200 tons in the same period last year. Actual exports up to December 1959 were about 13,000 tons, and if transshipments from the Atlantic and exports of loins made from the winter albacore catch are taken into the calculation, it is claimed that the 30,000-ton quota can definitely be filled. If this is so, then the evaluation of the albacore pole-and-line fishery that has prevailed hitherto will change markedly, and with the desire for increased production of canned albacore, it is conceivable that the near future may see a rational division of the catch, with bait-boat fish being taken by the canners and with long-line fish going to the freezers.

Many persons, however, estimate that frozen albacore exports for the export year will end up at about 25,000 tons, figuring that the 30,000-ton quota cannot be filled with long-line frozen fish (including mothership fish) unless monthly landings for the next three months average 4,000-5,000 tons, while it is generally estimated that they will be at most about 60 percent of that.

In any case, it is a fact that the relative importance of shipboard-frozen fish in frozen albacore exports has increased greatly since 1958, and if the poor summer albacore fishing continues another year, there is no room for doubt that long-line frozen albacore will come to occupy a predominant position. (Nikkan Suisan Tsushin, December 21, 1959.)

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FROZEN ALBACORE TUNA EXPORT QUOTA FOR JANUARY-MARCH 1960 ESTABLISHED:

As a result of discussions at a meeting of the Steering Committee of the Japanese Export Frozen Tuna Fisheries Association, 6,000 short tons was established as the quota for frozen albacore tuna for the period January-March 1960.

Shipments of frozen albacore increased since December 1, 1959, and as of December 15 amounted to some 2,800 tons. At and around the end of each year, landings become heavy. A number of tuna vessels were expected to be back from the Indian and Atlantic Oceans with a total of about 5,000-6,000 tons by the end of 1959, and it is natural to expect that exports too will increase. For exports to the United States, prices are quoted

Japan (Contd.):

as $310-320 per short ton f.o.b. (Fisheries Economic News, December 23, 1959.)

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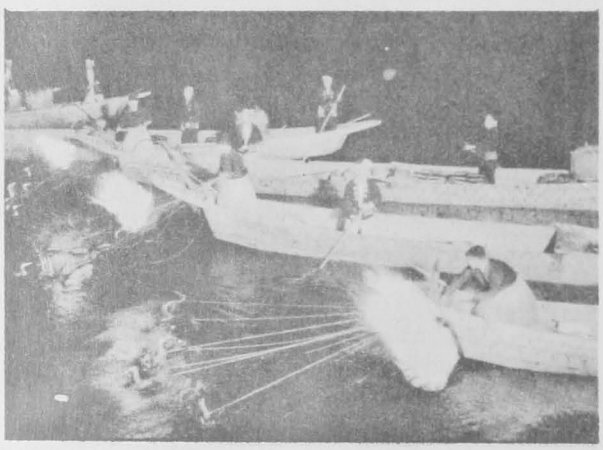
PROSPECTS FOR WINTER ALBACORE TUNA FISHERY POOR:

Northeastern Japan canners were helped financially in 1959 with the skipjack tuna season, but lost money on summer albacore tuna and saury. During the late fall of 1959, they were pinning their hopes on the winter albacore fishery, but judging from the catches up to December, good catches cannot be expected, and it is predicted that high prices will prevail because of a scarcity of fish. Two vessels from Kesennuma were fishing in early December, along with 3 or 4 Mie Prefecture vessels, but the grounds off Chosi and the more southerly grounds were showing signs of poor fishing, and it is expected that the tuna canners will suffer from high prices due to a scarcity of raw material.



Cormorant fishing on the River Nagara

Each year the winter albacore season extends from late November to March, but in 1959 the Mie Prefecture fleet was late in going fishing, as were the Yaizu, Shimizu, Izu, and Miyagi fleets, and it looked as if it would be the middle of December before all would be active. At the end of November, a 140-gross-ton vessel and a 169-gross-ton vessel from Kesennuma sailed to find albacore, and depending on their results, 3 or 4 more vessels were due to sail. As of December 15, 35 vessels from Mie Prefecture, 20 vessels from Shizuoka Prefecture, and 15 vessels from Miyagi Prefecture were expected to be live-bait fishing for albacore. The fishing grounds 700 to 800 miles east of Choshi, which produce winter albacore in normal years, were not yielding the expected catches, and fish were also scarce in the Midway area, on which the larger vessels had been placing their hopes.

In the face of these pessimistic indications, the canners appear to have nearly given up their hope of making up for the poor summer albacore catch by means of the winter fishery. At the port of Kesennuma this year, the price of summer albacore was US$328 to $354 per short ton, and the canners, whose break-even point is said to be $275 a ton, lost $76 per ton on their raw material cost. Adding the cost of labor, packing, and storage, raw fish bought at $313 a short ton meant a loss of $1.95 to $2.25 a case, it is said.

According to reports reaching Japanese canning circles, the U. S. albacore fishery took about 30 percent more fish in 1959 as compared with 1958 and American fishermen reduced their price. This situation in the United States has been reflected in a weakening of demand from the American market. In any case, export albacore canning cannot help losing money on both the summer and winter albacore fisheries. Furthermore, because of the three years of poor albacore catches in succession, vessel owners are changing their ideas about albacore pole-and-line fishing, and it looks as if the winter albacore fishery, as an off-season employment for skipjack vessels, may be at a turning point. (Nippon Suisan Shimbun, December 9, 1959.)

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WINTER ALBACORE TUNA FISHERY TRENDS, DECEMBER 1959:

Because mackerel-pike fishing continued good at a remunerative price in December 1959, the shifting of Japanese fishing vessels to winter albacore fishing was delayed. Also, vessels from Shizuoka Prefecture, with the exception of a few, which ordinarily play an important part in the winter albacore fish-

Japan (Contd.):

ery were preparing to sail for the more stabilized yellowfin fishing areas in the South Pacific. Albacore fishing vessels actively fishing in the 1959/60 winter were expected to be less than the number that fished a year ago.

A large California canner was reported actively buying frozen albacore in December 1959. The Japanese export market has maintained a strong tone and climbed to $310 from $290 a short ton f.o.b.

Some of Japanese tuna vessels were returning from the Indian Ocean in December with a fairly good quantity of albacore tuna. The mentioned packer is reported to have purchased about half of those landings--2,500-3,000 short tons. (Excerpts from several news stories in Japanese Press.)

As of mid-December a total of 20 tuna vessels were fishing albacore tuna near Madagascar in the Indian Ocean--10 from Misaki and Tokyo, 5 each from Shizuoka and Mie Prefectures. The average daily catch by each vessel was 4-5 metric tons. The size of the fish caught was getting larger. These vessels were expected to be back in Japanese ports in February.

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WINTER ALBACORE TUNA PROSPECTS IMPROVE BUT PRICES STILL HIGH:

Although it was reported that this winter's Japanese live-bait albacore tuna fishing around 27° N., east of 160° E. was very poor, considerable hope was held for the long-line fishing around 30° N. It was expected that landings from that area would increase after mid-January.

The trends for this season are: (1) the bait-boat albacore which usually start landing around December 20 did not show up at all, and although about 20 boats from Mie and Shizuoka Prefectures were on the grounds, there was no report of their catching fish; (2) on the other hand, the albacore long-lining south of the Kii Peninsula, which usually begins to produce catches in January, began producing landings in the last 10 days of November 1959, and through December an average of 20 tons a day was landed at Katsuura and Yaizu.

The boats from northeastern Japan, which do the greater part of the winter bait fishing, were slow in shifting from saury fishing, and were not expected to be in full operation until the end of December 1959. Boats from Kagoshima, Tosa, and Wakayama, which usually enter the albacore long-line fishery after the latter part of January, were reported to have stopped yellowfin tuna fishing on southern grounds and to be planning to enter the albacore fishery earlier this year. According to the Tokai University Fisheries Laboratory, prospects are poor for the albacore bait-boat fishing off northeastern Japan.

The fish landed by long-liners in December 1959 were large--40 to 55 pounds each--and their quality was good, so that they were suitable for Japanese canners. The ex-vessel price was 125 to 135 yen per kilogram (US$316 to $339 per short ton). With the export price at US$310 to $320 f.o.b. Japan, the freezers could not buy fish at prevailing ex-vessel prices.

Because the Japanese canners were disappointed in the skipjack tuna catch off northeastern Japan in the autumn of 1959, they were looking to the winter albacore fishery to supply them with raw material after they finished tangerine packing. It was reported that they were already stocking up on long-line albacore and frozen clipper fish, so informed sources believe that the albacore ex-vessel price will hold up even if the winter long-line fishery has good catches. (Suisan Tsushin, December 23, 1959.)

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TUNA FISHERY TRENDS, 1959:

The Japanese 1959 summer albacore tuna season (which was also very poor in 1958) ended with an unprecedentedly low catch, causing considerable concern to Japanese tuna fishery interests. This fishery, which is carried on from April to July, would in ordinary years produce landings of about 40,000 metric tons at

Japan (Contd.):

its most important base of Yaizu, but in 1958 only half that amount was landed, and in the summer of 1959 only about 10,000 tons were landed. Because of the poor fishing prospects, ex-vessel prices rose steeply the latter half of the season and reached 160 yen a kilogram (US$405 a short ton).

In spite of the high prices, most of the combination bait-boat long-liners made little money. Most of the vessels gave up albacore fishing early and switched to the skipjack tuna fishery. The unreliability of albacore fishing resulted in a decline in the number of vessels operating in that fishery. This meant there was insufficient scouting of the offshore grounds and the schools were not located.

A large number of tuna long-liners moved to the Atlantic grounds. In recent years all fishing grounds of the Indian Ocean and the Pacific have been thoroughly exploited, catch rates are trending steadily downward, and operating costs are steadily rising. The vessels operating in the Atlantic engage in direct exporting and their operating costs are reduced. Late in 1959 a number of vessels from Shimizu and Yaizu went to the Atlantic.

In 1959 there was a tremendous growth of the fish-sausage market in Japan. Since tuna is used in that product, it has added another level of demand for tuna and has contributed importantly to the stabilization of the tuna fishery. It is hoped that similar new uses for skipjack tuna can be found in order to stabilize the price of that fish, which has fluctuated considerably because it is used largely for the traditional dried skipjack products. (Suisan Keizai, December 27, 1959.)

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PROPORTION OF ALBACORE IN ATLANTIC TUNA CATCHES CLIMBS SHARPLY:

Japanese Atlantic tuna fishing operations have from the beginning produced mainly yellowfin tuna, but the latter part of 1959 a sharp increase in the proportion of albacore in the landings has attracted attention. One vessel with a catch of 200 tons in December had 90 percent albacore, and another which landed 350 tons had 70 percent albacore. (Suisan Tsushin, December 28, 1959.)

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RESEARCH VESSEL TO EXPLORE TUNA RESOURCES OFF WEST AFRICA:

The Japanese Fisheries Agency's research vessel Shoyo Maru (604 tons gross) this year will explore the tuna resources off the Dakar and Gold Coast areas of West Africa. The vessel has finished her explorations in the Caribbean sea and was expected to return to Japan in March 1960, exploring tuna resources in the South Pacific and around Australia en route. Upon her return, she was expected to go into drydock for overhaul and will begin her next long cruise in August 1960.

The budget for the Shoyo Maru's operations off West Africa has already been determined, and will finance 87 days of explorations. She will survey an area off the Gold Coast between 10° N. and 10° S., 5° E. to 30° W. and other West African areas at 15° N. to 25° N., 20° W. to 40° W. In each of these areas 25 longline stations will be fished.

In addition to exploring the fishing grounds, the Shoyo Maru will determine market conditions and advertising possibilities for consumption of tuna products in France, Italy, Yugoslavia, and Egypt. Her schedule calls for departing Tokyo August 1, proceeding via Colombo to Capetown (September 11), to the Gold Coast area and Dakar (October 20), to other West African areas, and thence to Marseilles (November 11), Venice, Rijeka, Port Said, Suez, Singapore, and back to Tokyo (January 19, 1961). (Suisan Keizai, December 27, 1959.)

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TUNA VESSELS FISHING IN CAROLINE-MARSHALL ISLANDS AREA:

About 45 small Japanese vessels were fishing for tuna in the South Pacific around the Caroline and Marshall Islands in mid-December 1959, according to an

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announcement by the Fisheries Research Institute, Tokai University. Catches were made up of small or medium size yellowfin tuna. The actual fishing area was around Palau. A belt of water with temperatures of 28.7°-29.2° C. (83.7°-84.6° F.) was formed around Truk and Ponape and fishing became more intense there. Also along the east coast of Australia in the Coral Sea, good fishing was reported with yellowfin, big-eyed, and white marlin mixed in catches. Likewise, yellowfin and big-eyed fishing east of 125° west longitude, south of 5° south latitude was noticeably improving at that time. (Fisheries Economic News, December 12, 1959.)

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RULES FOR LICENSING CANNED TUNA EXPORTS TO THE U. S.

The Japanese Ministry of International Trade and Industry announced these rules for licensing canned tuna exports to the United States during January-November 30, 1960.

(1) Canned tuna exported to the United States is limited to tuna in brine, tuna spreads, and animal foods.

(2) The quantity to be licensed for export will be in proportion to actual records of canned tuna (in brine, in oil) exported to the United States, January 1, 1950-December 31, 1955.

(3) The quantity will be converted to the equivalent of tuna No. 2 cans (7 oz., 4 doz. to case). Can sizes other than No. 2 will be converted as follows: Tuna No. 1 cans, 2 doz. to case=0.94; tuna No. 3 cans, 4 doz. to a case=0.48; tuna 2 kilo (4.4-lb.) cans, half dozen to case=1.16.

Destinations: 50 states of the United States, District of Columbia, Puerto Rico, Virgin Islands, Panama Canal Zone, Guam, American Samoa, Wake, Midway, Canton Island, and Enderbury Island. (Fisheries Economic News, December 7, 1959.)

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TUNA INDUSTRY PLANNING SKIPJACK FISHING OFF BRITISH NORTH BORNEO:

A large Japanese company has revealed a plan to establish a tuna-fishing base on Shamil Island, about 60 miles east of Tawao in British North Borneo. This project is said to have originated from the mission of Japanese fisheries, mining, paper, and oil men to North Borneo in May 1959. The Japanese company has, since May, been in touch with the local authorities in North Borneo, who are said to be actively favoring the project. Officials of the company's export and canning departments were expected to go to North Borneo to conduct final negotiations.

As reported in Tokyo, the plan calls for establishing a cannery capable of producing 500 cases of canned tuna a day together with cold-storage facilities. Five 40-ton live-bait tuna vessels are to be sent to the base initially, and a production of 8,000 to 10,000 metric tons of skipjack tuna a year is envisioned. The business will be carried on by a Japanese corporation, the product will be almost entirely exported to the United Kingdom and the United States, and the local Government will derive benefit from the operation through export duties.

Waters off Shamil Island are known to the Japanese tuna industry as rich year-round skipjack grounds from experience before World War II, when there was a small Japanese tuna fishing base there. (United States Embassy, Tokyo, December 11, 1959.)

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FISHERY LANDINGS HIGHER FOR FIRST HALF OF 1959:

Tne Japanese Ministry of Agriculture and Forestry in its January-June 1959 report showed total landings for Japan-based fisheries of 2,120,000 metric tons, a 3-percent increase over the corresponding period of 1958 and the highest of the past seven years. Major species showing important increases were mackerel scad (46 percent), Alaska pollock (23 percent), skipjack tuna (54 percent), bluefin tuna (100 percent), and common squid, which hit a new high of 44,144 tons, about 1.8 times the January-June 1958 landings. On the other hand, there was a decline in production of sardines (13 percent), anchovy (22 percent), Atka mackerel (40 percent), and sand launce (34 percent). Albacore landings were 25,276 tons or 26 percent below the first six months of 1958 poor landings, because of the failure of the summer live-bait fishery. The skipjack tuna catch of 85,450 tons represented a further increase over

Japan (Contd.):

the January-June 1958 unusually large landings of that species and set a new record. Japan-based landings of yellowfin tuna were down 3 percent to 41,496 tons, the second year of decline after five years of steady increase, reflecting the shift of many large tuna boats to the Atlantic, where they land or transship their catches in or to foreign ports.

Despite the poor early summer albacore catch, the live-bait tuna fishery's over-all catch for January-June 1959 of 97,285 tons was up 11 percent as compared with the same period of 1958. Total landings from the tuna long-line fishery were 155,670 tons, 12 percent above January-June 1958 and more than double the 1953 production. The spring herring fishery in Hokkaido, which has been declining rapidly in recent years, was an almost total failure, and herring production for the period was only 15,268 tons. As a consequence, dried herring roe, a traditional Japanese New Year's dish, was selling at the unheard of price of 590 yen (about US$1.40) per 100 grams (about 0.22 lbs.).

There was not much general change in fish prices during the first half of 1959. The over-all average price for all species in the wholesale markets of the six largest cities was up about 4 percent to 11 U. S. cents a pound, while the corresponding average price in the markets of 83 producing areas was down about 3 percent to 6 U. S. cents a pound. Prices for herring, anchovy, and saury rose; sardine and round herring held steady; and mackerel scad and mackerel were lower than in 1958. Among the tuna species, skipjack at 6.5 U. S. cents a pound ($130 a short ton) was down 22 percent, bluefin at 26.6 U. S. cents a pound ($532 a short ton) was up 11 percent, albacore at 13.7 U. S. cents a pound ($270 a short ton) was up 14 percent and yellowfin at 11.7 U. S. cents a pound ($234 a short ton) was 11 percent higher than in 1958. Fresh and salted salmon prices were up by 22-36 percent, shrimp was up 8 percent, oysters were up 14 percent, and gelidium seaweeds, the raw material for agar-agar, were 42 percent higher than during the first six months of 1958.

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## STERN TRAWLERS PLANNED FOR FISHING OFF AFRICA AND AUSTRALIA:

The Shimonoseki Branch of a large Japanese fishing company has announced that as part of its 1960 operating plans it will build two 1,500-ton stern trawlers and will enter upon the development of new fishing grounds off Africa and Australia. Two other large fishing companies have also been announcing various plans for the construction of large trawlers for fishing in new distant areas. This is the result of crowding on the grounds of the East China Sea and restrictions in the North Pacific salmon fishery. Since the company building the two large stern trawlers has been heavily engaged in North Pacific salmon fishery, restrictions in that fishery have had an adverse effect on its operations.

The company is expected to ask the Japanese Fisheries Agency for permits to build these two stern trawlers early this year. Construction will cost about 600 million yen (US$1,680,000); the trawlers will be started in March, launched in May, and completed in June. (Suisan Keizai, December 27, 1959.)

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## NEW FISH-MEAL FACTORY-SHIP FOR BERING SEA:

The fish-meal factoryship Soyo Maru (10,900 tons gross), which a Japanese fishing company has under construction at Sasebo, Japan, was scheduled to be launched on January 15 and completed by mid-March. With the construction of this ship, there will be four fish-meal factoryships operating in the Bering Sea in 1960--Kinyo Maru, Renshin Maru, Soyo Maru, and Gyokuei Maru. (Suisan Tsushin, December 26, 1959.)

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## FACTORYSHIP DUE TO BEGIN EXPERIMENTAL OPERATIONS FOR PACIFIC HERRING IN APRIL:

A Japanese factoryship herring fishery will be started in April 1960 in the North Pacific. The industry is laying plans to carry out a Bering Sea-Bristol Bay experimental herring fishing operation on a small scale when the fish meal factoryships begin fishing in April. The plan is to send out 2 or 3 herring fishing boats with the four fish-meal fleets scheduled for operation in 1960 and carry on herring fishing in addition to the usual fishery for bottom species for reduction into fish meal.

The Japanese have not fished for the Bristol Bay herring in the 14 years since the war and the fishery is at present an unknown quantity. Therefore, although it is known that herring occur there, nothing is known of their abundance. For this reason, the companies will carry on experimental operations in connection with the fish-meal fleets, rather than organize special herring fleets, and depending on the results of the experimental fishing, this fishery may take a place as the third northern Pacific fishery. (Suisan Keizai, December 18, 1959.)

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## FROZEN CUTTLEFISH EXPORTS TO ITALY:

Five firms in Hokkaido, Japan, are reported to have succeeded in concluding

Japan (Contd.):

an agreement to export 500 metric tons of frozen cuttlefish worth about US$83,333 to Italy. The first shipment was expected to be made early in 1960. Frozen cuttlefish will be used for bait in Italy. (Fisheries Economic News, December 17, 1960.)

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## SHRIMP INDUSTRY:

**Japan has produced in recent years from 47,000 to 55,000 metric tons of shrimp annually, of which about 5 percent has been exported. The shrimp landings comprise many species and represent for the most part incidental catches from a variety of fisheries. There does not seem to be any possibility of a great increase in production and export of shrimp from the domestic fisheries.**

Shrimp Fishery: Although more than a dozen species of shrimp are caught by Japanese fishermen, the only distinction made in the statistics of the Ministry of Agriculture and Forestry is between the "kuruma" shrimp, Penaeus japonicus, and "other shrimp." Shrimp is an important incidental catch in a variety of Japanese trawl fisheries, but there is no fishery of any importance primarily devoted to catching shrimp. Shrimp landings are reported from all of the coastal Prefectures of Japan and are recorded in the catches of 16 different types of fishing gear, all of which also take other kinds of fish. For example, the East China Sea trawl fishery is an important producer of large shrimp, the "taisho-ebi" (Penaeus orientalis), but even during the peak winter season only 30-40 percent of its catch is shrimp.

Table 1 - Japanese Shrimp Landings and Value, 1956-58 and First Eight Months of 1958-59

| Year | "Kuruma" Shrimp | | Other Shrimp | |
|---|---|---|---|---|
| | Metric Tons | US$ 1,000 | Metric Tons | US$ 1,000 |
| Jan.-Aug. 1959 | 1,516 | 1/ | 38,696 | 1/ |
| Jan.-Aug. 1958 | 1,492 | 1/ | 30,343 | 1/ |
| 1958 | 2,784 | 5,502 | 52,679 | 21,526 |
| 1957 | 2,051 | 3,820 | 45,427 | 19,699 |
| 1956 | 2,306 | 4,281 | 47,917 | 18,381 |

1/Value unavailable.

Shrimp are produced by a variety of trawl fisheries, employing vessels of many types and sizes, from less than 5 tons to over 100 tons gross. The number of powered vessels in the classes that can be regarded as potential shrimp producers is more than 36,000. Nearly half of the Japanese shrimp catch is, however, taken by vessels of the category called "small powered trawlers etc." There are approximately 11,500 vessels in this category in the Inland Sea region, which accounts for about 40 percent of Japan's total shrimp catch. Nearly all of these vessels are smaller than 5 tons gross, and about 8,000 of them are under 3 tons.

Recent Japanese statistics show no trend of marked increase or decrease in the numbers of vessels in any of these categories of trawlers which catch shrimp in Japan, nor are there any organized plans for constructing or decommissioning important numbers of such vessels.

Prices: According to a Japanese Fisheries Agency source, it costs about 8,000 yen (US$22.40) per ton to freeze shrimp. Refrigerated storage charges run around 9.8 yen (2.7 U.S. cents) per 10 kilograms (22 lbs.) for 15 days at -10°C., (14°F.) and 30 percent more at -20°C. (-4°F.). This is said to be an average charge, but cold storage charges vary greatly depending on demand.

A large number of species and sizes are landed and several species are regularly marketed both alive and dead, with the live shrimp commanding a premium price. As with other fish and shellfish landed in Japan, sales are by bid and the prices vary considerably from day to day and also between various lots offered on the same day.

The average price of large "kuruma" shrimp in the Tokyo market in July 1959 was 62 U.S. cents a pound (headless). January 1960 wholesale prices at the Osaka market for this species were about 350-600 yen per kilogram (44-75 U. S. cents a pound), but the Tokyo price is running about 95 U.S. cents a pound for headless shrimp. According to monthly average price data for the past two years, the price of this shrimp in mid-winter is generally about two or three times the mid-summer price.

January 1960 prices for the "kuma-ebi" (Penaeus monodon), another large species of shrimp, at Tokyo and Osaka wholesale markets were approximately the same as for the "kuruma." Other wholesale prices were 70 to 90 U. S. cents a pound for the "shiba-ebi" (Metapenaeus joyneri), 23 to 38 U.S. cents a pound for white shrimp (Pasiphaea sirado), and 8 to 16 U.S. cents a pound for red shrimp (Penaeopsis akayebi).

Catches in the East China Sea and Yellow Sea 1959/60 winter fishery for "taisho-ebi" are so far only about 10 percent of the 1958/59 winter's catch, and the ex-vessel price was averaging 68 U.S. cents a pound. At this price level, it is said that all of the shrimp is sold on the domestic market, and these shrimp cannot be profitably exported until the price drops to about 50 U.S. cents a pound (headless), according to trade sources.

In 1958 the average prices for the year in the markets of the producing areas were 91 U.S. cents for "kuruma" shrimp and 19 U.S. cents a pound for other kinds of shrimp. Corresponding prices for the wholesale markets of the six largest cities were 95 U.S. cents and 47 U.S. cents a pound.

On December 8, 1959, the first deliveries of the season of "taisho-ebi" to the Tokyo central market sold at 83 U.S. cents a pound for large (6 to the pound) and 51 U.S. cents for small (11 to the pound) shrimp.

Shrimp Exports: According to the Japan Frozen Food Exporters' Association, average export prices in October 1959 were US$1,440 a short ton for "taisho-ebi", US$1,300 for "prawns," US$1,298 for "shrimp," and US$1,116 for cooked and peeled shrimp. These prices are very close to the respective averages for these categories for the period April to October 1959, and prices have reportedly not changed greatly since October 1959. According to the Ministry of International Trade and Industry, the over-all average frozen shrimp export price for the period from January-October 1959 was US$1,393 a short ton, as compared with US$1,251 for the same period of 1958.

Table 2 - Japanese Exports 1/ of Frozen Shrimp by Country of Destination, 1956-58

| Country of Destination | 1958 | | 1957 | | 1956 | |
|---|---|---|---|---|---|---|
| | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 |
| United States . . | 2,660 | 1,679 | 2,492 | 1,551 | 2,336 | 1,381 |
| Hawaii . . . . . | 22 | 19 | 34 | 27 | 28 | 18 |
| Ryukyus . . . . . | 48 | 42 | 36 | 31 | 36 | 18 |
| Hong Kong . . . | - | - | 2 | 2/ | 10 | 2 |
| Canada . . . . . | 14 | 4 | 44 | 24 | 2 | 2/ |
| United Kingdom | 608 | 378 | - | - | - | - |
| Australia. . . . . | 108 | 61 | - | - | - | - |
| Other . . . . . | 24 | 21 | 22 | 13 | - | - |
| Total . . . | 3,484 | 2,204 | 2,630 | 1,646 | 2,412 | 1,419 |

1/Total exports for Jan.-Oct. 1959 amounted to 6,438,000 lbs., valued at US$4,458,560.
2/Value less than $500.

Japanese exports of dried shrimp have declined in recent years, canned shrimp exports show no particular trend, but exports of frozen shrimp, after rising gradually from 1956 to 1958, appear to have increased considerably in 1959. This may reflect the good catch of "taisho-ebi" in the East China and Yellow Seas in the winter of 1958/59, and if this is the

Japan (Contd.):

Table 3 - Japanese Exports 1/ of Dried Shrimp by Country of Destination, 1956-58

| Country of Destination | 1958 | | 1957 | | 1956 | |
|---|---|---|---|---|---|---|
| | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 |
| United States . . | 78 | 47 | 78 | 51 | 88 | 55 |
| Hawaii . . . . . | 157 | 98 | 113 | 77 | 132 | 80 |
| Ryukyus . . . . . | 4 | 1 | 5 | 1 | 16 | 5 |
| Hong Kong . . . | 44 | 11 | 82 | 18 | 100 | 31 |
| Taiwan. . . . . | 571 | 164 | 614 | 185 | 639 | 187 |
| Other . . . . . | 55 | 33 | 23 | 10 | 36 | 18 |
| Total . . . | 909 | 354 | 915 | 342 | 1,011 | 376 |

1/Total exports for Jan.-Oct. 1959 amounted to 716,000 lbs., valued at US$272,370.

case, exports may decline again if the poor catches of the early part of the 1959/60 season continue. At any rate, it appears that despite the strong domestic demand for shrimp in Japan, there is a considerable quantity available for export when market conditions are favorable.

Summary: Shrimp production from Japan-based fisheries has increased in recent years, but the increase has not been spectacular. There are probably no important shrimp resources in areas accessible to Japanese-based vessels that are not already under intensive exploitation, and therefore no great increase in the landings is anticipated. The most likely way in which the large Japanese trawling fleet could contribute to an important increase in the world's supply of shrimp would be for some of the Japanese fishing industry's plans for foreign-based operations--in such areas as the Mexican west coast, the Bay of Bengal, or Venezuela--to materialize.

An interesting plan for the large-scale culture of the large shrimp (Penaeus japonicus) in abandoned salt beds of the Inland Sea is scheduled to be put into operation in 1960, under the technical direction of the former research chief of the Japanese Fisheries Agency. It is claimed that an economically feasible method has been perfected for raising "kuruma" shrimp from the egg to marketable size, and the promoters reportedly plan on attaining an annual production of 3,000 tons at the end of three years and of 10,000 tons after the project has been under way for five years. A large part of this production is intended for export. (United States Embassy report from Tokyo dated January 11, 1960.)

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## FISH-CULTURE COMPANY TO RAISE SHRIMP:

A Japanese fish-culture company, jointly financed by two large Japanese fishing companies, is expected to begin operations in April 1960 to raise "kurumaebi" (a species of shrimp), with a former Fisheries Agency director as its president. The company expects to produce about 240 metric tons in about half a year from a brood stock of about 24 tons of shrimp. The shrimp are for domestic consumption and for export to the United States. (Suisan Tsushin, December 15, 1959.)

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## SHRIMP FISHING VESSELS SOLD TO MEXICO:

Two Japanese shrimp fishing vessels, the No. 8 Hajime Maru (110 tons gross) and the No. 16 Myojin Maru (160 tons gross) departed Japan for Mexico in mid-November 1959. They sailed from Hawaii on December 23 and were scheduled to reach Acapulco in mid-January for delivery to a Mexican firm under the supervision of a Japanese trading firm. A Japanese fishing firm was asked by two Japanese trading companies to procure the two vessels and sail them to Mexico.

The initial arrangement was a sales contract for the two shrimp vessels, and the terms of the contract would be fulfilled with delivery of the vessels in Mexico. However, the Japanese fishing company that sailed the vessels has been asked by a Japanese businessman and the Bank of Tokyo to take this opportunity to enter into an operating agreement with Mexicans, and about January 10 the Director of the Japanese fishing company was expected to go to Mexico. Depending on the results of his investigations, the Japanese fishing company is said to be inclined to undertake the operating agreement (Suisan Tsushin, December 24, 1959).

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## PET FOODS MADE OF FISH EXPORTED TO UNITED STATES:

Japanese exports of pet foods (made mostly with tuna) to the United States were up sharply in 1959. As of November 30, 1959, exports amounted to more than 400,000 cases, far in excess of the 200,000 cases shipped in 1958.

The price towards the end of the year was about $5.00 a case f.o.b. Japan. Exporters in Japan indicate that sales contracts will double again in 1960. (Fisheries Economic News, December 19, 1959.)

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## TRAWLERS FISHING IN NEW AREAS:

Because of difficulties and restrictions on trawling west of 130° east longitude, the Japanese trawler industry is seeking new trawling areas.

Japan (Contd.):

Trawling west of 130° is a fishery centered around the East China Sea west of 135° east longitude, but it is under an unstabilized operational condition, affected by relations with Red China. The catch by large trawlers is steadily declining in the area, i.e., the catch of 17,600 tons in 1958 was 2 percent less than the previous year and 45 percent less than in 1953.

Under the circumstances, one of the large Japanese fishing companies withdrew its large trawlers from the South China Sea and west of 130° east longitude and sent them to operate along the northwest coast of Australia (two vessels of the 500-ton class) and west coast of Africa (one vessel of the 1,000-ton class). Some of the catch caught off Africa is being landed in Greece. This same company plans to build a trawler of the 2,000-ton class in 1960 at a cost of about US$1,388,889 and operate it in the Atlantic.

Another Japanese company sent large trawlers of 500 tons to 1,000 tons to Argentina, Australia, New Zealand, and Africa. This company is operating joint undertakings mostly with local interests, and in 1960 it intends to build more trawlers of the 1,000-ton class.

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U.S.S.R. MAY PROPOSE ENLARGEMENT OF NORTHEAST PACIFIC SALMON TREATY AREA:

In December 1959 the Japanese Government informed the Soviet authorities that Japan hopes to open the fourth annual meeting of the Japan-Soviet Fisheries Commission on February 2, 1960, and at the same time presented the Japanese section's proposed agenda. The U.S.S.R. has unofficially expressed an intention during the negotiations to take up the questions of enlargement of the treaty area in the northeast Pacific and illegal operations by Japanese fishing vessels. This intention on the part of the U.S.S.R. has not been confirmed.

An informed Japanese source had the following to say about this report: "In the first and second years' negotiations, arguments on conservation and on the sharing of the harvest were developed within the framework of 100,000-metric-ton and 80,000-ton quotas, but at the third annual conference in 1959, Prime Minister Kishi, speaking for the Japanese side, proposed to accept an 80,000-ton quota in 1960 in return for a 90,000-ton quota in 1959, and thus the Japanese side itself destroyed the former basis of negotiations. This produced conditions under which it would be natural to consider that the boundaries of the treaty area might be changed, and there will be nothing strange about the U.S.S.R.'s making such a proposal. From the point of view of conservation of the resource, the present treaty line is nonsense. However, when it comes to talking about the division of the harvest, more importance should be attached to the decision of the Soviet authorities to close all salmon fishing in Kamchatka." (Suisan Tsushin, December 28, 1959.)

## Mexico

EXPORT DUTIES ON PACIFIC COAST SHRIMP AND SPINY LOBSTERS REVISED:

Effective January 1, 1960 (Diario Oficial, December 31, 1959), Mexico lowered export duties on fresh shrimp and on frozen shrimp originating from the Pacific (with the exception of Salina Cruz, Oaxaca, and Santa Rosalia, Baja California, which follow the rates for the Gulf of Mexico) and increased export duties on spiny lobsters. The new rates were effected by changes in the official prices from 1,700 pesos to 1,223 pesos per 100 net kilograms (about 61.8-44.4 U. S. cents a pound) for shrimp and from 12.20 pesos to 13.50 pesos per gross kilogram (about 44.3 to 49.0 U. S. cents a pound for spiny lobsters. The new rates in terms of United States cents are as follows:

| Item | New Rate | Old Rate | Difference |
|---|---|---|---|
| | (U. S. Cents a Pound) | | |
| Shrimp, fresh or iced, net weight | 11.337 | 15.754 | -4.417 |
| Shrimp, frozen, net weight | 2.131 | 2.926 | -0.795 |
| Lobster, spiny, fresh, iced or frozen, gross weight | 3.611 | 3.274 | +0.337 |

Practically all of Mexico's shrimp exports (about all frozen) are exported

Mexico (Contd.):

to the United States. It is estimated that about 67 million pounds of frozen shrimp were exported to the U. S. during 1959. The present decrease was granted at the request of the West Coast industry which had been complaining of losses due to the decline in the United States market.

Spiny lobster exports, which normally run around 2 million pounds a year, are also practically all to the United States. Most of the lobsters come from Baja California and the majority are exported cooked whole in ice.

Note: See Commercial Fisheries Review, November 1958, p. 81.

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WEST COAST SHRIMP INDUSTRY ASKS FOR GOVERNMENT AID:

Contrary to the somewhat optimistic outlook made earlier in 1959 for Mexico's west coast shrimp fishery, the industry almost reached the point of financial stagnation at the end of 1959 due primarily to (1) an approximate 35-percent decrease in prices in the United States market and (2) an increase in the proportion of small size shrimp in the catches. Late in 1959 some small shrimp-producing firms in northern Sinaloa ports were forced to tie up their boats and larger operators in Guaymas and Mazatlan who claimed to be losing from 2,000-3,000 pesos (US$160-240) a metric ton were reported ready to tie up their fleets if Federal Government assistance was not forthcoming soon.

Shrimp processors, the fishing fleet owners, and others directly interested in the industry held urgent meetings in November 1959 in an effort to determine ways and means to continue shrimp fishing operations in the northern Gulf of California. They were in general agreement that assistance would have to come from the Federal Government in the form of (1) a temporary cancellation or reduction of the ad valorem export tax on shrimp; (2) a reduction in the price of Diesel fuel which was increased sharply this year; (3) relief from contracts with fishermen's cooperatives requiring that an established sum be paid for shrimp catches; and/or (4) a direct subsidy. Petitions to the Federal Government were made for such assistance and there was some indication that serious consideration was being given to them in Mexico City.

The Mexican shrimp industry seemed to realize that it could help itself, however, by agreeing to limit its catches to larger-size shrimp as it became apparent that the change in the closed season in 1959 had not been helpful in producing increased numbers and larger sizes of shrimp. (U. S. Consulate report from Nogales, December 31, 1959.)

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WEST COAST SPINY LOBSTER CATCH DOWN FROM 1958/59 SEASON:

The spiny lobster fishery (season from October 1 to March 15), located in Mexico's State of Baja California, got off to a slow start this season and expectations are that the 1959/60 catch will be considerably below that of 1958/59. As of mid-January 1960, the catch was estimated to be down 20 percent. The reasons for the low catch are: (1) storms and general bad weather; (2) the fact that there was a delay in obtaining permits from the proper governmental authorities; (3) an alleged delay in receipt by the fishery cooperatives of credit from the Banco de Fomento--an allegation, however, which the bank says is not accurate; and (4) alleged lack of interest on the part of the fishermen because of their large debt to the bank. They are said to be reluctant to go out because they feel they have nothing to gain.

The Regional Federation of Fishing Cooperatives (Federacion Regional de Cooperativias Pesqueras) who do almost all the lobster fishing have an indebtedness of some 9 million pesos (US$721,000) to the Banco Nacional de Fomento which is to be gradually paid off by deductions from receipts from the sale of lobsters. In addition, each year at the beginning of the season the cooperatives must borrow further sums for equipment and supplies. This year the bank reports that 80 percent of the sums borrowed have been amortized. (United States Consulate dispatch from Tijuana, dated December 24, 1959.)

## Morocco

FISHERY TRENDS,
FOURTH QUARTER 1959:

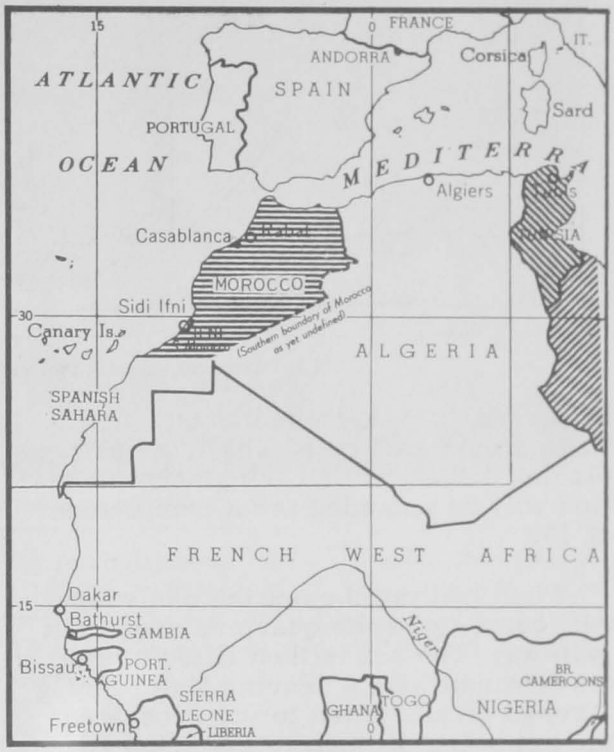
At the beginning of the fourth quarter of 1959, Operation Fish (the Moroccan Ministry of Health campaign to increase domestic fish consumption) was extended from Rabat to Casablanca. The drive started with much publicity on October 10, 1959, with speeches and public appearances of officials, roving loudspeakers, and great quantities of fish at ten cents a kilo (4.5 cents a pound). The initial momentum was reduced somewhat a few days later when the supply of fish ran out. However, by the end of November, Casablanca was taking deliveries of ten tons a day. Increased domestic sales should do something to solve the dilemma of the fishing industry whereby the export of fresh fish is strictly limited because the canners fear that the fish will be canned overseas and thereby reduce their own sales, and on the other hand, not enough markets can be found for either Moroccan canned or fresh fish.

The industry was also helped by the October devaluation of the Moroccan franc. The 650,000 unsold cases of sardines reported in the third quarter of 1959 are said to have been sold along with all of the catch of this season. While devaluation has eased sales, the long-run effects cannot yet be clearly seen.

While canned sardines remain the basic element in the Moroccan fishing industry, signs are increasing that more diversification is taking place. Fish byproduct plants are taking up to 70 percent of the catch in Agadir. It has been announced that edible fish meal has been put on sale in all the pharmacies in the country. More mackerel is being canned and sold on the local market, and plans are being made to increase foreign sales.

The total fish catch in 1959 was not spectacular. Storms drove the fish away from Agadir and Essaouira into regions farther north such as Safi, where the fishing was good until late in 1959. Although quantity was good, quality was not up to previous canning standards.

Another tuna net (madrague) has been installed, this one in the Tangier region,




at Cap Negra. There are now ten fixed tuna nets operating off the Moroccan coast. (United States Embassy report from Rabat.)

## Netherlands

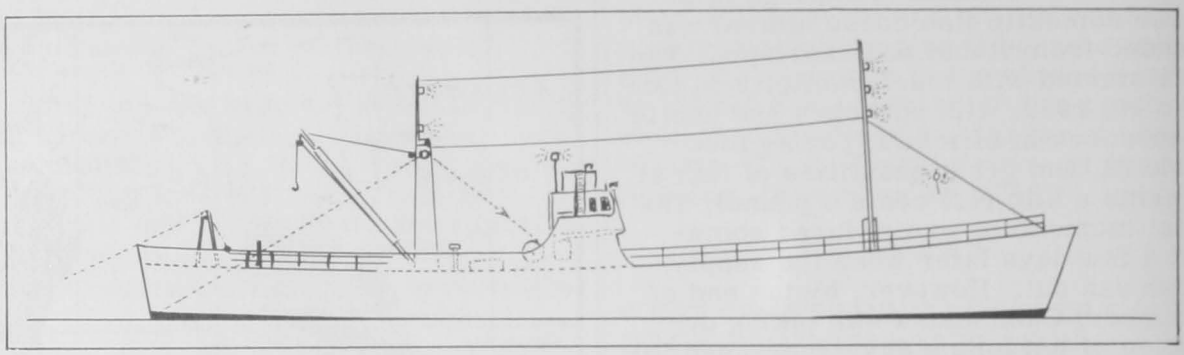
TWO STERN FISHING TRAWLERS ORDERED FROM SHIPYARD:

A Dutch shipyard at Landsmeer has received an order for the construction of two stern-fishing trawlers. The ships will have the following dimensions: length over-all, 163 feet 9 inches; length between perpendiculars, 143 feet 8 inches; breadth 27 feet 11 inches; depth to maindeck, 20 ft. 4 inches; and depth to tweendeck, 13 feet 6 inches.

The keel of the first vessel has been laid; this vessel is scheduled for launching early in 1960. It will be powered by

Netherlands (Contd.):

twin Diesel engines, each developing 500 hp. They will drive controllable-pitch propeller through a reduction gearbox. The hydraulically-driven trawl winch will be placed abaft the wheelhouse and the fishing gear will be hauled from gallows placed at the stern. Living accommodation will be provided for a complement of 15.



New Dutch stern-fishing trawler--163 feet long; Diesel powered.

When hauling the net the danlenos will come up to the quarters under the gallows. The net is then lifted by the trawl winch with a heaving line running through blocks fitted to the crosstrees, the net being brought to the upper deck via a ramp at the stern. A hatch in the upper deck is then opened, through which the fish reaches the working deck below.

Each of the two samson posts aft is fitted with a heavy derrick which enables the net to be lifted up still further, so that all the fish is emptied out. They also serve to position the net in readiness for shooting. Cleaning and sorting of the fish is carried out on the second deck, a conveyor belt being installed for the transport of the fish to the forward part of the vessel, where hatches give access to the fish hold. A processing plant will be installed on the tweendeck and there is enough room for the installation of a fish-meal plant.

The correct positioning of the gallows, the blocks, and further equipment for the rapid hauling and shooting of the net is still being studied. A scale model has been made with the aid of which the builders in cooperation with a number of trawler skippers can finalize the fishing procedure. Although it is known that certain difficulties encountered abroad have been solved after many experiments, the adoption of foreign systems is not always feasible as Netherlands trawlers generally use different types of nets, while in addition, the foreign systems and forms of stern are patented. (World Fishing, December 1959.)

## Norway

GOVERNMENT AID TO COD FISHERMEN FOR 1960 REDUCED:

Representatives of North Norway's cod fishermen's organizations and the Norwegian Ministry of Wages and Prices reached an agreement in December 1959 on the amount of Government aid to be extended to the cod fishermen of the area during 1960. Under the terms of the agreement, the Ministry will seek an appropriation of 10 million kroner (US$1.4 million) to support the prices received by the fishermen and an appropriation of 2 million kroner ($280,000) to finance certain marketing expenses of the marketing organizations. It was further agreed that the Government will subsidize 20 percent of the cost of the fishing tackle expenses and 10 percent of the cost of the bait. Finally, it was agreed that the Government would raise the guaranteed minimum wage from 75 kroner (US$10.50) to about 100-125 kroner ($14.00-17.50) per week, and that it will abolish the turn-over tax on the sale of fish and fish products. The cod fishermen are reportedly somewhat dissatisfied

Norway (Contd.):

Medium-size dual-purpose commercial fishing vessel at dock, Os, Norway.

with the amount of the aid, but it was approved by Norges Raafisklag.

In 1959 the Government supported cod prices with an appropriation of 34 million kroner (US$4.8 million). According to an official of the Ministry of Fisheries, the total value of Government aid to North Norway cod fishermen in 1960 (price supports plus subsidies, etc.) will be about 28 million kroner (US$3.9 million), the United States Embassy in Oslo reported on December 24, 1959.

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HERRING FISHERMEN RECEIVE MORE AID:

Representatives of the Norwegian herring fishing industry and officials of the Ministry of Prices and Wages have recently reached agreement on prices for the catch and the amount of Government aid during the 1960 herring fishing season. Because of the failure of the herring fisheries in 1958 and 1959, the fishermen are in a difficult financial position and consequently demanded more support than in previous years.

The following are the main points of the agreement: buyers will pay the same prices as in 1959, but the fishermen will be permitted to draw 20 million kroner (US$2.8 million) from the Price Fund for price supports--the fishermen had drawn 16 million kroner (about US$2.2 million) in 1959 and sought 35 million kroner (US$4.9 million) in 1960; the Government for the first time will subsidize part of the costs of repairs and equipment--the amount of the subsidy will be 20 percent; and the fisherman's minimum wage, which is guaranteed by the Government, will be increased from 75 to 100 kroner (US$10.50 to 14.00) a week. According to an official of the Ministry of Fisheries, the agreement met the demands of the fishermen by only little more than half. (U. S. Embassy report from Oslo, December 18, 1959.)

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REPORT TO PARLIAMENT OUTLINES VITAL NEEDS OF FISHERIES:

Recommendations for policies to guide the future development of Norwegian fisheries were the subject of a two-day debate in Parliament in December 1959. Speakers of all parties expressed general support for the Fisheries Committee's report on the comprehensive proposals drafted by the Brofoss Commission. The Fisheries Minister also received considerable backing for his views

Norway (Contd.):

which on several points differed from those of the Parliament's Fisheries Committee. In his statement to Parliament, the Fisheries Minister said a series of Government bills would be drafted to incorporate some of the proposals for short-range measures to help fishermen and the fishing industry.

The debate was opened by the Laborite chairman of the Fisheries Committee and manager of the report on the Brofoss Commission recommendations. The most important points in the committee report were as follows:

1. The target of the fisheries policy should be to assure fishermen an adequate annual income, preferably above the income level in other industries. The long-range objective should be to create a profitable fishing industry without state support. But during the transition period it would be necessary to provide suitable subsidies.

2. It is of the greatest importance for the fishing industry to obtain easier credits, lower operating expenditures, and more liberal tax arrangements.

3. In order to assure continuous supplies of raw materials for the frozen fillet industry, loans and condemnation subsidies are required to make the present fishing fleet more modern and efficient, without a general expansion.

4. To equalize the supply of raw material in poor fishing periods, the regular fishing fleet should be supplemented with specially-built ocean-going vessels, including trawlers.

5. In certain districts it is necessary to establish fishing firms which will use trawlers and other special vessels to procure raw materials in distant waters.

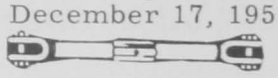
6. Parallel with these proposals for the fishing industry, concerted efforts should be made to develop other industries in the coastal districts of Norway.

In his statement to Parliament, the Fisheries Minister maintained that the traditional coastal and seasonal fisheries in coming years would offer little or no possibility for increasing the profitability or the production of the fishing industry. Future opportunities, he declared, lie in fisheries in distant ocean areas. But this will require larger vessels, including trawlers, and a start towards acquiring experience in this type of fishing.

He also said, scientific investigations indicate that the failure of Norway's coastal fisheries in recent seasons was principally caused by a reduction in the influx of fish. For that reason, he argued, modernizing the present fishing fleet could not be counted on to increase the coastal fish catch. The solution is to acquire a fleet of ocean-going fishing vessels, especially large trawlers.

The Fisheries Minister expressed great confidence in the future opportunities for Norway's postwar developed fish fillet industry, especially in view of the acceptance of frozen fish as tariff-free products within the "Outer Seven" free trade area. In this connection, the minister declared it should be feasible to double the combined output of Norway's fish-filleting plants from 25,000 to 50,000 metric tons a year. Such an expansion would in large measure solve the problem of seasonal unemployment in coastal districts. But if domestic vessels are unable to supply enough raw material for the filleting plants, he warned, it may become necessary to consider whether to permit foreign fishing vessels to deliver their catches in Norwegian ports.

Many speakers agreed that a gradual switch to trawlers and other large fishing vessels would be highly desirable. At the same time, however, modernization of the coastal fishing fleet should not be neglected. The Fisheries Committee asserted that the fish catch could be increased by rationalizing and modernizing the coastal fleet. It was emphasized that the Committee by no means was opposed to an expansion of deep-sea and year-around fisheries. The committee report gives a green light to the frozen fish industry to acquire larger vessels, including trawlers, if these prove to be more profitable. (News of Norway, December 17, 1959.)



# Panama

## SHRIMP INDUSTRY:

Panama's shrimp fishery (shrimp exports rank second in value of all Panamanian exports) has been undergoing some severe tests during 1958 and 1959. Like the United States, Mexico, and Ecuador she overbuilt her fleet during the 1956-58 boom. One of the particular inducements was the excellent run of pink shrimp early in 1957. The industry was expecting even a better run in 1958, but it failed to appear in that year and in 1959. The failure of the pink shrimp run in 1958 and 1959, coupled with the price break in the United States market, has caused considerable retrenchment in Panama. The fleet has been and is continuing to be reduced, and several of the freezing companies have combined or are combining their operations to reduce production costs. It is believed that most of the shrimp vessel owners currently are losing money.

Over half the 1958 exports were peeled and deveined "titi" (seabobs and another smaller species). Owing to price problems very little "titi" as of mid-November 1959 were being processed.

Panamanian boats in September 1959 encountered, off Punta Mala, pink shrimp in areas suitable for trawling in depths of 35-40 fathoms. Catches were good, 3,000 - 5,000 pounds of heads-off per 7-day trip, but prices have not been satisfactory. In the past the pink shrimp fishing season has been from December to March or April.

Landings: Panamanian landings include heads-off white shrimp and heads-on and heads-off pink, titi, and tiger shrimp. There is no precise breakdown according to the categories listed.

Table 1 - Panama's Landings and Value of Shrimp, 1956-58 and January-June 1959

| Year | Landings (All Species) | Value | Landings by Variety 1/ | | |
|---|---|---|---|---|---|
| | | | White | Pink | "Titi" and Tiger |
| | 1,000 Lbs. | US$ 1,000 | . . . . (1,000 Lbs.) . . . . | | |
| Jan.-June 1959 | 7,496 | 2,844 | 2/ | 500 | 2/ |
| 1958 | 10,071 | 4,936 | 3,600 | 500 | 6,000 |
| 1957 | 9,268 | 5,465 | 4,000 | 2,300 | 3,000 |
| 1956 | 6,645 | 2,503 | 4,100 | 800 | 1,700 |

1/Estimated. 2/Unavailable.

With the intense fishery that has been going on in Panama for the past several years it appears that the white shrimp potential, providing those years are representative, does not exceed about 4 million pounds a year.

The species breakdown of white shrimp landings runs approximately as follows: 80 percent Penaeus occidentalis; 15 percent P. stylirostris; and about 5 percent P. vannamei and P. californiensis.

Shrimp Fishing Fleet: As of mid-November 1959 there were reported to be 161 shrimp trawlers in Panama. This is a decline of about 50 boats from the peak number fishing in 1958. Industry sources claim that there are less than 150 boats actually fishing. It is expected that about 16 boats will soon depart for operations in Colombia and perhaps a few to Nicaragua. The Panamanian shrimp fishing fleet increased from 10 vessels in 1950 to a high of 205 vessels in 1958.

All vessels are Diesel-powered. About 25 vessels are between 40-50 feet. All of the newer vessels run 60 feet in length and it is estimated that there are more than 100 in that class. The remainder are between 50 and less than 60 feet in length.

During the latter part of 1959 there were no shrimp vessels being built in Panama. Panama has had two very lean years as far as shrimp vessel operations have been concerned and the shrimp fleet started to decline around mid-1958. If shrimp prices continued to hold at November 1959 levels, the number of vessels in the fleet was expected to decline still more.

Shrimp Processing Costs: Production costs for shrimp in Panama vary considerably depending upon the quantity handled and the efficiency of the plant. For white shrimp the costs are as follows: ex-vessel price 65 U.S. cents a pound. Unloading, carting, grading, packing, and freezing, 6-10 cents a pound; and for cartons, cases, and strapping, 2.5 cents a pound. Shipping costs from Panama City are about 3.65 cents a pound and from Cristobal about 3.25 cents a pound (gross weight). Total cost of frozen shrimp aboard ship at U. S. port is about 80 U. S. cents a pound.

Ex-Vessel Shrimp Prices: Ex-vessel prices for Panamanian headless white shrimp were 65 U. S. cents a pound. Practically all of the white shrimp fall in the three top sizes--20 and under count. The price for pink headless shrimp was 35 cents a pound up to mid-November, but dropped to 33 cents a pound at the end of November 1959. The ex-vessel price for headless "titi" shrimp was 10 U.S. cents a pound.

The above prices are paid according to the type of shrimp. No differential in price is made according to the size of the shrimp. Processors, however, are now trying to discourage the vessels from bringing in the smaller sizes of pink shrimp because the processors are losing money on counts over 35 shrimp to the pound.

Export Prices: The export prices as of November 20, 1959, f.o.b. Panama for five-pound packages (jumbled pack) were: white shrimp headless 80 U.S. cents a pound for shrimp under 20 count to the pound. Practically all of Panama's landings and exports of white shrimp are 20 count and under; pink shrimp, headless, 60 U.S. cents a pound for 16 to 20 count with a 5-cent drop for each smaller size group to 30 cents for 50 to 60 count; "titi," peeled and deveined, a flat 35 U.S. cents a pound.

The Government of Panama, on the advice of a FAO fishery research expert, has set up, staffed, and equipped a marine fishery research station where research on Panama's shrimp resources is being carried out. FAO expert catching shrimp samples in a mangrove swamp.

Table 2 - Panama's Frozen Shrimp Exports to United States, 1956-58 and January-June 1959

| Jan.-June 1959 1/ | | 1958 | | 1957 | | 1956 | |
|---|---|---|---|---|---|---|---|
| 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 | 1,000 Lbs. | US$ 1,000 |
| 5,029 | 2/ | 8,084 | 5,614 | 8,263 | 6,181 | 5,977 | 4,427 |

1/From United States import data, other figures are from Panama export data.
2/Not available.
Note: Export value f.o.b. Panama in U. S. cents per pound: 1958--69.44; 1957--74.84; 1956--74.14.

Exports: The Panamanian official export statistics approximate fairly closely the United States import data. Dur-

## Panama (Contd.):

ing 1958, Panama exported about 230,000 pounds more shrimp than originated in Panama. It is estimated that about 130,000 pounds of shrimp from Colombia and 100,000 pounds from Nicaragua were processed in and exported from Panama to the United States in 1958. (U. S. Embassy dispatch, dated November 30, 1959, from Mexico.)

# Peru

## EXPORTS OF MARINE PRODUCTS, JANUARY-SEPTEMBER 1959:

Exports of principal marine products by Peru in January-September 1959 amounted to 242,265 metric tons (valued at US$31.4 million). Fish meal exports (184,090 tons) for the first nine months of 1959 were up about 140.0 percent as compared with the same period of 1958 and 379.6 percent as compared with January-September 1957. Exports of marine products other than fish meal were also up sharply during January-September 1959.

Peruvian Exports of Principal Marine Products, January-September 1959

| Product | July-September 1959 | | | January-September 1959 | | |
|---|---|---|---|---|---|---|
| | Quantity | Value 1/ | | Quantity | Value 2/ | |
| | Metric Tons | Million Soles | US$ 1,000 | Metric Tons | Million Soles | US$ 1,000 |
| Fish meal | 60,510 | 193.2 | 6,834 | 184,090 | 583.9 | 21,341 |
| Fish (frozen, canned, etc.) | 13,275 | 81.4 | 2,879 | 30,483 | 197.8 | 7,230 |
| Fish oil | 6,888 | 19.4 | 686 | 13,814 | 36.3 | 1,327 |
| Sperm oil | 3,873 | 12.7 | 449 | 7,904 | 26.3 | 961 |
| Fertilizer (guano) | 3,044 | 7.2 | 225 | 3,449 | 8.2 | 300 |
| Whale meal | 700 | 2.4 | 85 | 2,525 | 7.8 | 285 |
| Total | 88,290 | 316.3 | 11,188 | 242,265 | 860.3 | 31,444 |

1/F.o.b. values converted at 28.27 soles equal US$1 for 3rd quarter of 1959.
2/F.o.b. values converted at 27.36 soles equal US$1 for the first nine months of 1959.

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## SHRIMP INDUSTRY:

Landings: The Peruvian fishery for salt-water shrimp is limited to a narrow strip about 30 miles long near Tumbes, off the northern tip of the country. A survey of the shrimp resources made in 1955 predicted that the area could produce from 600,000 to 900,000 pounds of heads-off shrimp annually. Fresh-water shrimp taken from lakes and streams are consumed entirely in Peru. In 1958 the estimated landings of heads-off salt-water shrimp amounted to about 509,000 pounds, or about 32.8 percent below the 758,000 pounds landed in 1957, but 31.2 percent higher than the 1956 landings of 388,000 pounds. Heads are removed on board the vessel.

Exports: Practically all of Peru's landings of heads-off under 20 count size shrimp are exported to the United States. Exports totaled 503,000 pounds in 1958, 736,000 pounds in 1957, and 359,000 pounds in 1956.

Exports of fishery products from Peru are subject to permit issued by the Bureau of Fish and Wildlife of the Ministry of Agriculture, and licensing by the Ministry of Finance and Commerce. In practice such authorizations are readily obtainable for most fishery products. Export taxes are as follows:

Law No. 10545, April 16, 1946 (amending Article 1 of Law 9506): 10 percent ad valorem tax on the difference between officially-fixed production cost per short ton of 907.184 kilograms, net weight, and the price in the United States (Pacific coast), less freight and insurance. (Average prices as reported by Peruvian consuls in the United States to the Peruvian Ministry of Finance and Commerce).

Law No. 9466, December 18, 1941: Additional 10 percent ad valorem tax on all export products, applicable when export price exceeds by 25 percent the officially-fixed production costs (payable on the excess). Calculation of production costs for tax assessment purposes: For the assessment of export taxes according to Laws Nos. 10545 and 9466, the following basic production costs are currently used:

| | Production cost per short ton of 907.184 kg., net weight (Soles) |
|---|---|
| Frozen shrimp ("Langostinos") - Supreme Resolution, Sept. 4, 1953 | Soles 9,300 (US$339.45) |

Law No. 7540, June 30, 1932 (Unemployment tax): 1 percent ad valorem tax on all exports from Peru.

Law No. 10811, March 3, 1947: 2.00 soles (7.3 U.S. cents) per metric ton gross weight. (Payable on exports from all Peruvian ports).

Supreme Decree of March 6, 1942 (As amended by Supreme Decree No. 71, July 22, 1955): All exports through the ports of Callao, Matarani, and Mollendo are subject to the payment of a port charge of US$1.60 per metric ton, weight or volume. Exports through other Peruvian ports pay a charge of US$0.30 per metric ton, weight or volume.

Law No. 11537, December 18, 1950: 2 percent tax on the cost of ocean freight, as shown in the bill of lading. Applicable on all exports.

Fishing Fleet: As of November 1959 there were only two companies with a fleet of 13 vessels engaged in the Peruvi-

Table 1 - Peru's Landings and Exports of Heads-Off Shrimp, 1956-1958

| Year | Landings | | | Exports | | | |
|---|---|---|---|---|---|---|---|
| | Quantity | Value | | Quantity | f.o.b. Value | | |
| | 1,000 Lbs. | Million Soles | US$1,000 | 1,000 Lbs. | Million Soles | US$1,000 | U.S.¢/lb. |
| 1958 | 509 | 4.8 | 196 | 503 | 4.5 | 184 | 80.7 |
| 1957 | 758 | 6.1 | 321 | 736 | 5.7 | 300 | 89.8 |
| 1956 | 388 | 2.4 | 126 | 359 | 2.2 | 116 | 71.2 |

Note: Values converted to US$ as follows: 1958, 24.49 soles equal US$1; 1956 and 1957, 19.0 soles equal US$1.

Peru (Contd.):

Table 2 - Peruvian Production Costs of Frozen Shrimp, November 1959

| Cost1/ | Soles/Metric Tons | US$/Metric Tons | US¢/lb. |
|---|---|---|---|
| Ex-vessel price | 21,000 | 766.51 | 34.8 |
| Packing | 1,000 | 71.18 | 3.2 |
| Labor for packing | 1,500 | 54.75 | 2.5 |
| Freezing & ice used on vessels | 1,300 | 47.45 | 2.2 |
| Export duties | 3,900 | 142.35 | 6.5 |
| Total | 29,650 | 1,082.24 | 49.2 |

1/Estimated for under 20-count size shrimp.
Note: Peruvian soles converted to US$ at rate of 27,397 soles to US$1.

an shrimp fishery--6 of the vessels are 40-42 feet and 7 are 36-38 feet in length. The shrimp vessels are all equipped with Diesel engines of 50-105 hp. The fleet of shrimp vessels was built in Peru and are all Peruvian-flag vessels. There are no plans at present for building any new shrimp vessels.

Production Costs: Costs of producing frozen heads-off shrimp for export in November 1959 were about 49.2 U.S. cents a pound in Peru. Dockside cost of the headless shrimp was 34.8 U.S. cents a pound, and other costs including containers, labor, freezing, export duties, and the ice supplied to the vessels, amounted to 14.4 U.S. cents a pound, or almost US$982 a short ton. Costs for ocean freight, warehousing, and handling costs at the U. S. port of entry, and broker's commission of about 7-1/2 percent amounted to 19.3 U.S. cents a pound.

## Philippines

USE OF FLOATING FISH CANNERIES AND VESSELS RECEIVED FROM JAPAN:

The Philippine Legislative Committee on Good Government has revealed that the two floating fish canneries received as part of Japanese reparations payments late in 1958 from Japan have never been used. The investigation by the Committee brought out that the floating fish canneries plus six fishing vessels had been awarded to an Iloilo farmers' cooperative marketing association and that the cooperative had no plans to use the equipment. The fish canneries and the six fishing vessels are valued at about US$2,250,000.

As a result of the investigations, the Reparations Commission Chairman has announced the withdrawal of the award of the vessels to the cooperative and that they would be awarded to concerns able to utilize them properly. He also announced that several Philippine firms were interested in removing the canning equipment from the two floating fish canneries for use in establishing canning plants ashore. The two large vessels would then be converted for use in the interisland trade

Four of the six fishing vessels have been completed by the Japanese and in December 1959 were anchored in Tokyo Harbor because the farmers' cooperative lacked the funds to bring them to Manila. (U. S. Embassy Report from Manila, December 18, 1959.)

* * * * *

NEW FISHERY RESEARCH VESSEL ACQUIRED FROM JAPAN:

Philippine officers and crew members were in Japan early in January 1960 to take delivery in February of the first fishery research vessel built in Japan (built under Japanese reparations payments) for the College of Fisheries of the University of the Philippines. The crew will take special training in the operation of the vessel and its laboratories.

A separate group of the University faculty members has been touring Japan and other countries to study the administration and curriculum of fishery colleges, fish processing laboratories and plants, and fishery market cooperatives. It is hoped that these endeavors will give new impetus to the Philippine deep-sea fishing industry.

The research vessel is the first of two being built in Japan for the Philippines. The other, which is expected to be delivered in the near future, will go to the Government's Bureau of Fisheries. (U. S. Embassy Report from Manila, January 8, 1960.)

## Portugal

CANNED FISH EXPORTS, JANUARY-SEPTEMBER 1959:

Portugal's exports of canned fish during January-September 1959, amounted to 51,804 metric tons (2,830,000 cases), valued at US$26.6 million, as compared with 43,410 tons, valued at US$23.1 million, for the same period in 1958. Sardines in olive oil exported during the first

Portugal (Contd.):

nine months of 1959 amounted to 37,662 tons, valued at US$18.2 million.

| Portuguese Canned Fish Exports, January-September 1959 | | |
|---|---|---|
| Species | Metric Tons | US$ 1,000 |
| Sardines in olive oil | 37,662 | 18,213 |
| Sardine & sardinelike fish in brine | 1,127 | 228 |
| Tuna & tunalike fish in olive oil | 3,199 | 2,241 |
| Anchovy fillets | 4,870 | 3,566 |
| Mackerel in olive oil | 2,909 | 1,443 |
| Other fish | 2,037 | 942 |
| Total | 51,804 | 26,633 |

During January-September 1959, the leading canned fish buyer was Germany with 11,429 tons (valued at US$5.7 million), followed by Italy with 7,497 tons (valued at US$4.3 million), United States with 5,158 tons (valued at US$3.5 million), Great Britain with 4,485 tons (valued at US$2.1 million), and France with 3,219 tons (valued at US$1.6 million). Exports to the United States included 1,996 tons of anchovies, 783 tons of tuna, 2,242 tons of sardines, and 37 tons of mackerel. (Conservas de Peixe, November 1959.)

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CANNED FISH PACK, JANUARY-SEPTEMBER 1959:

The total pack of canned fish for January-September 1959 amounted to 37,498 metric tons as compared with 35,632 tons

| Portuguese Canned Fish Pack, January-September 1959 | | |
|---|---|---|
| Product | Metric Tons1/ | 1,000 Cases |
| In Olive Oil: | | |
| Sardines | 26,932 | 1,417 |
| Sardinelike fish | 544 | 28 |
| Anchovy fillets | 4,343 | 434 |
| Tuna | 4,065 | 145 |
| Mackerel | 533 | 21 |
| Other species | 1,081 | 57 |
| Total | 37,498 | 2,102 |

1/Net weight.

for the same period in 1958. Canned sardines in oil (26,932 tons) accounted for 71.8 percent of the January-September 1959 total pack, up by 23.2 percent from the pack of 21,866 tons for the same period of 1958, the November 1959 Conservas de Peixe reports.

* * * * *

FISHERIES TRENDS, JANUARY-SEPTEMBER 1959:

Sardine Fishing: During January-September 1959, the Portuguese fishing fleet landed 69,765 metric tons of sardines (valued at US$6,994,224 ex-vessel or about $100 a ton).

September 1959 landings of sardines totaled 24,523 tons valued at US$2,158,504. Canneries purchased 59.3 percent, or 14,553 tons, of the sardines (valued at US$1,415,443 ex-vessel or about $97.26 a ton) during September 1959. A total of 9,572 tons was purchased for the fresh fish market, and 398 tons were salted.

Other Fishing: The January-September 1959 landings of fish other than sardines were principally 22,944 tons of chinchards (value US$1,514,817) and 3,032 tons of anchovies (value US$276,591). (Conservas de Peixe, November 1959.)

* * * * *

TUNA FISHERY LIMITED TO FEW TRAPS AND TWO MODERN CLIPPER-TYPE VESSELS:

The Portuguese landings of tuna are derived primarily from five coastal fish traps located along the Algarve coast and two modern 840-gross-ton clipper-type vessels which fish in the Atlantic and land wherever there is a market. Catches of tuna are landed at several ports, but primarily at Villa Real de Santo Antonio and Tavira. The traps (4 are near Tavira and 1 near Cape Santa Maria) are fished from May to August, or during the period when the bluefin tuna are migrating to and from the Mediterranean. The tuna clippers have been converted from Diesel-powered submarine chasers and fish the year-around. These two vessels often land catches in Italy and France.

The tuna landings are almost entirely canned in the Villa Real de Santo Antonio area. The canners purchase foreign-caught tuna when supplies from the Portuguese fishermen are not available. (U. S. Embassy Report from Lisbon, December 18, 1959.)

## South-West Africa

PILCHARD-MAASBANKER FISHERY TRENDS:

The busiest and most successful season in the ten-year history of the South-

South-West Africa (Contd.):

West Africa Walvis Bay pilchard fishing industry closed at the end of October 1959 with a record catch of 300,000 short tons.

The South-West Africa catch added to the record total of the South African fishery brings the total pelagic shoal fish catch for the Union and South-West Africa in 1959 to 642,000 short tons, 86,000 tons higher than the record catch of 1958.

According to reports from South-West Africa, 3 of the 6 processing factories reached their quotas and closed down early in October, 2 had closed down by the middle of the month, and the sixth was expected to reach its quota at the end of October.

The September catch was 49,703 tons of which 154 tons were maasbanker. This catch yielded 6,179,000 pounds of canned fish, 10,876 tons of fish meal, and 2,317 tons of fish-body oil. (The South African Shipping News and Fishing Industry Review, November 1959.)

## Spain

COD FISHING INDUSTRY:

For many years one of the staple foods of Spain has been salted and dried cod. Many examples can be seen in that country of stone troughs in which the Phoenicians salted fish.

The early history of the Spanish and Portuguese cod fisheries on the Newfoundland banks was very similar, and traces of their exploitation can still be seen in the place names of the Newfoundland coast. The Spanish gave up fishing in that area about three centuries ago; however, they did not stop eating salted cod, and started to import it from Norway, Iceland, the Faroes, Newfoundland, and Scotland.

After World War I attempts were made to re-establish Spain's position as a cod-fishing nation, and in 1927 a fishing company was established in San Sebastian. Operating with two trawlers to start with, this company obtained very good results, and later on, after the Spanish Civil War, two other companies were established.

It is important to differentiate between the cod-fishing activities started by these three companies and that done by the "parejas." Pair trawling was started on the Newfoundland grounds in 1939, with very poor results. But when these vessels recommenced operations in 1949 they did much better, and in the 1959 season 72 "pareja" vessels were due to fish in Newfoundland waters.

By August 1960 the San Sebastian firm will own 19 trawlers--14 Diesel vessels and five oil-burning steamships. Their sizes range from the 1,190 g.r.t. (gross registered tons) of the steam vessel Euskal Erria to the 1,350 g.r.t. of the motorship Tornado, and the total tonnage owned by the company amounts to approximately 24,000 g.r.t.

This company also manages two processing plants, one in Pasejes (Spanish Basque country) covering 230,000 square feet and complete with two wharves, driers, storage rooms, general stores, etc. The other plant is in El Ferrol, and covers some 170,000 sq. ft.

The second firm owns 4 trawlers and has two more ordered from Seville shipyards. The 4 in operation are all Diesel-powered, each of 975 g.r.t. This company also owns a plant in Chapela-Vigo, similar to those of the first company.

The third firm located in Corunna owns 12 trawlers, all Diesel-powered and ranging from 1,250 to 1,363 g.r.t. The total tonnage of this fleet is about 16,200 g.r.t., and the company owns one plant in Corunna. This is the largest and most modern of the Spanish cod plants.

Of the firms operating "pareja" vessels in the cod fisheries, one firm appears to be the most important. This firm is an industrial complex with two other associated companies and manages 120 fishing vessels.

The plant operated by the industrial complex covers an area of 323,000 sq. ft.

Spain (Contd.):

with an annual production of 12,000 metric tons of dried cod. The companies in the industrial complex also have interests in wholesale, freezing, fish meal, insurance, and other fishing activities.

There are several other firms operating "pareja" vessels in North American waters. These companies sell their catches to many small plants established in Corunna, Vigo, Gijon, and Pasajes.

In general, the trawlers make two trips each year. The first is from January or February to June, and the second from July or August to November or December. The "parejas" begin their trips in March or April, and make their last trip during September or October.

Some of the "pareja" vessels return to Spain as soon as their holds are filled with salt fish, while others transfer their catches to specially chartered cargo vessels and continue to fish.

In spite of the development of her own cod-fishing fleets, Spain continues to import dried and salted cod, 14,293 metric tons being imported from January to November 1958. The total consumption in Spain is thought to be about 70,000 metric tons annually, but for some reason the Spanish liking for this food has fallen noticeably since the end of the Spanish Civil War.

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TUNA FISHERY, 1958:

Two species of tuna make up the bulk of the Spanish tuna landings. The albacore tuna (Germo alalunga) is caught by vessels based in northern and northwestern Spanish ports. The main ports for this species are: Bermeo, Vigo, Aviles, Gijon, Zumaya, La Coruna, Santona, Ondarroa, Santander, Lequeitio, and Vivero. In 1958, the landings at the four leading ports amounted to 5,700 metric tons at Bermeo, 5,000 tons at Vigo, 4,600 tons at Aviles, and 3,000 tons at Gijon. Landings at each of the other ports exceeded 1,000 tons, but were less than 2,000 tons.

Bluefin tuna (Thunnus thynnus) is landed principally at ports located in the south of Spain. The ports with the largest catches in 1958 were: Barbate, San Fernando, Tarifa, and Ceuta. The landings amounted to 4,200 tons, 2,300 tons, 1,500 tons, and 1,000 tons, respectively. (United States Consulate, Vigo, report of December 17, 1959.)

## Surinam

OFFSHORE SHRIMP TRAWLING INCREASED IN 1959:

Shrimp trawling for large shrimp in Surinam's offshore waters began in October 1958. Prior to that date commercial shrimp fishing was confined largely to inshore waters for the small seabob. Offshore shrimp trawling was started with two trawlers. Four more vessels were added to the fleet in March 1959 and three more in August 1959. By 1960, the American-owned company, which has exclusive rights to Surinam shrimp exports, expects to have a fleet of 25 trawlers. Most of the trawlers are 65 feet in length and equipped with 150 hp. Diesel engines.

Landings made by the offshore shrimp vessels for the 12-months period ending October 1959 amounted to about 300,000 pounds of pink shrimp. Exports during that period were about 279,000 pounds (all to the United States except for a very small quantity to Curacao), valued at about US$210,000 at the primary receiver level in New York City. Prices to the vessels in November 1959 were 42 U. S. cents a pound for heads-off shrimp.

There are no export taxes on shrimp exports from Surinam. Although the American owned shrimp fishing and processing firm holds the exclusive right to export shrimp from Surinam, the Surinam Government retains the right to issue export licenses for shrimp, fish, and fish derivatives for up to 88,000 pounds a year, except that licenses for export of dried shrimp cannot exceed half this amount. (United States Consulate report from Paramaribo, November 18, 1959.)

## U.S.S.R.

EIGHT FISHERY CENTERS TO BE ESTABLISHED IN KURILE ISLANDS:

A Moscow broadcast is reported to have announced early in December 1959 that the Soviet Union has decided to establish eight fishery centers in the Kurile Islands in 1960. The centers will be established under the seven-year fishery plan. In addition to mackerel-pike fishing bases, processing and distributing plants will be constructed. Mackerel-pike fishing by the Soviet Union has been carried out for the past 2 or 3 years in the Pacific with motherships. It is thought that setting up of shore facilities will coordinate activities of vessels, motherships, and land facilities. (Fisheries Economic News, a Japanese periodical, December 4, 1959.)

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NEW FACTORYSHIP HEADS WHALING FLEET:

On October 10, 1959, the Slava whaling fleet left the Black Sea port of Odessa for its 14th season in the Antarctic. The Slava whaling fleet now consists of the old flagship Slava and 12 new high-speed Diesel-electric whalers.

The second and new fleet set sail a few days later. This is the Soviet Ukraine fleet, a fleet of 20 whalers with the new factoryship whaler Soviet Ukraine as flagship.

This new vessel was built in less than three years at the Nosenko Shipyard, Nikolayev, on the Black Sea, and is the world's biggest ship of its kind, having a displacement of 44,000 tons--15,000 tons more than the Slava.

The Soviet Ukraine is 716 feet over-all (218 meters), has a beam of 92 feet (28 meters), and "stands as tall as a 12- to 14-story building."

It is equipped with mechanized processing lines and scientific laboratories. Its skipper said of this ship:

"The Soviet Ukraine is on a level with the very latest in shipbuilding. More than a thousand designers and some 500 factories of the Moscow, Latvian, Kiev, Leningrad, Kharkov, Khabarovsk, Rostov, and other Economic Councils took part in designing and supplying equipment for it."

The Soviet Ukraine can freeze some 100 metric tons of whale meat and livers daily, and store 1,800 tons of frozen products in its cold storage section.

There are 265 well-appointed one- and two-berth cabins for the crew. (World Fishing, December 1959.)

* * * * *

NEW FLOATING FACTORYSHIP FOR CRAB AND FISH PROCESSING:

A floating crab and fish processing vessel is being built in Leningrad for future operation in the North Pacific Ocean. It is to be equipped with the most modern machinery and is the first vessel of that type to be built in the U.S.S.R.

It is a welded vessel with a gross tonnage of 14,000 tons. The length is over 524 feet, with a breadth of almost 66 feet. It will be Diesel-powered and manned by a crew of 130, plus 507 workers for the fish-processing operations.

All processing operations for crab and fish will be mechanized with new continuous cookers for crab, machines for packing crab in parchment paper, etc.

The vessel can remain at sea for two months during which time it can pack 25,000 cases of canned crab, 50,000 cases of canned fish and salmon, plus substantial amounts of canned fish roe and fish meal. The vessel also has possibilities for processing brisling and sardines. (Fiskets Gang, December 10, 1959; translation from Russian newspaper Vodnyi Transport, November 24, 1959.)

* * * * *

NEW HERRING FACTORYSHIP PLANNED:

The Russian newspaper Vodnyi Transport, November 28, 1959, carries a report and a photograph of the model of the first herring factoryship to be built in the U.S.S.R.

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

The new factoryship will be welded, with two decks, have a displacement of 15,000 tons, length of 145 meters (475.6 feet), and a breadth of 20 meters (65.6 feet). The main engine, of 6,250 hp., will give the vessel a speed of 14.5 knots.

The ship is designed for anchoring in depths up to 300 meters (164 fathoms). In addition, there will be fenders and similar equipment which will permit trawlers alongside the vessel to unload in a relatively high sea. The new herring factoryship will be completed in 1961. (Fiskets Gang, December 24, 1959.)

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NEW HERRING FISH MEAL AND OIL FACTORYSHIP:

The new floating herring oil factoryship Lamut, 4,982 gross tons, is being completed by a shipyard in Japan for Sudoimport, Moscow, according to Dansk Fiskeritidende (November 27, 1959), a Danish fishery trade periodical. The vessel is designed for a speed of 12.5 knots and a processing capacity of 120 metric tons of herring per day.

## United Kingdom

BAG-NET DEVELOPED FOR TRANSFERRING CATCHES AT SEA:

The trawler Northern Sea tied up at Grimsby, England, and ended an experiment which may revolutionize fishing developments in the British industry.

The trawler had taken part in the successful transfer of fish from one trawler to another in the open seas off Bear Island. The owning company has been exploring the possibilities of transfers for some time and has considered many suggestions. They decided that the best system was for fish to be floated off in special nets.

Shaped like huge "sausages," the nets were braided with a mesh smaller than fishing-net mesh. One end was tied up like a trawl's cod end, and the "sausage" was dropped down the fish hold hatch and the other end secured open. Gutted fish was dropped into the open end and when filled, the "sausage" held about a ton of fish. It was tied up at the top and lowered over the trawler's side, secured to a buoy. Several "sausages" were strung together by lines.

As soon as the "sausages" went over the side of the Grimsby trawler Northern Wave, a radio message was sent to the Northern Sea, then about three miles away. The "sausages" were only in the sea about 20 minutes before being sighted and within an hour the Northern Sea had the fish stowed away, and was on the way home.

The experiment opens up several possibilities. Trawlers owned by the same company could fish an area while another vessel acted merely as a carrier. Trawlers just starting fishing could transfer their first few hauls to another ship about to leave for home, as with the Northern Sea, and this method would enable ships to stay at sea several days longer without deterioration in catches.

It could also point the way to trawlers fishing in packs and delivering their catch to a mothership which could quick-freeze the fish. At the same time the mothership could refuel the trawlers with oil and ice when they decided to fill up their own fish holds and go home.

The picking up of catches of trawlers about to return home is the most immediately feasible idea and it may lead to owners forming an association among themselves to allow transfers to be made between all ships of one particular port.

The captain of the Northern Sea, commenting on the scheme when he arrived home, said; "We arranged everything over the radio the previous night and I was about three miles away from the Northern Wave when the 'sausages' were released. We had no difficulty in sighting or hoisting aboard. The weather was good but I can see no great difficulty in carrying out a transfer in winter. It may be a little more difficult but I think it can be done all right."

The transferred fish was landed only six days after being caught and was in good condition. Buyers noted how clean it was, probably because it had had a second washing in the sea during the transfer.

Samples were sent to the fisheries research laboratories at Hull for expert examination (Canadian Fishermen, December 1959.)

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EARNINGS OF INSHORE VESSELS, 1958:

The British White Fish Authority carries out annual surveys of the costs and earnings of inshore fishermen. Summaries of total costs and earnings derived from the 1958 survey were included in the Authority's Annual Report for 1958/59 published in July 1959. Since then, following further analysis of the returns, more detailed information has become available.

The results of 460 vessels were included in the 1958 sample--237 in Scotland, 223 in England and Wales; the total value of fish landed by these vessels represented slightly less than one-third of the total inshore catch. The vessels were drawn from every major inshore fishing district, and from no less than 139 different ports.

The size of vessel appears to determine, in general, the size of the net surplus and the level of crews' earnings. Small vessels of under 30 feet in length, which are more common in England and Wales than in Scotland, showed an average profit of £52 (US$145.60) for the year and an average crew wage of £371 (US$1,038.80). At the other end of the scale 60-69 foot vessels showed an average profit of £1,318 (US$3,690.40), and a crew wage of £716 (US$2,004.80). The

United Kingdom (Contd.):

average net profit per stone could not be computed for all vessels as the weight of fish landed could not always be given. For vessels where the information was given the average profit per stone was $9\frac{1}{4}$d. (10.8 U. S. cents), a little less than it was in 1957.

Operating costs continued to rise in 1958, but oil, the cost of which absorbed 6.2 percent of total earnings, and marine insurance, which absorbed 3 percent, were both a little lower than in 1957. Vessels and engine repairs at 5.3 percent of total earnings and gear upkeep and repairs at 10.2 percent were among the principal items showing increases.

The kind of fishing pursued is not uniform all around the coast and the different methods used result in different degrees of profitability. The table shows the average operating results for vessels in each area. The relatively prosperous fishing area of East and North-East Scotland illustrates the success of the seine-net vessel; whereas the results shown for Eastern England reflect the port sprat seasons which have become a feature of East Coast fishing during the last year or two.

Earnings of Inshore Vessels, 1958

| Country | Average Profit Per Vessel | | Average Crew Wage | |
|---|---|---|---|---|
| | £ | US$ | £ | US$ |
| Scotland: | | | | |
| North East | 1,091 | 3,055 | 692 | 1,938 |
| East | 775 | 2,170 | 598 | 1,674 |
| South | 989 | 2,769 | 689 | 1,929 |
| North West and Shetland | 613 | 1,716 | 540 | 1,512 |
| England & Wales: | | | | |
| North East | 460 | 1,288 | 628 | 1,758 |
| East | 84 | 235 | 389 | 1,089 |
| South East | 183 | 512 | 399 | 1,117 |
| South West | 189 | 529 | 375 | 1,050 |
| Wales | 135 | 378 | 429 | 1,201 |
| North West | 211 | 591 | 545 | 1,526 |

Subsidy forms an important part of vessel earnings and in 1958 averaged 7.7 percent of total earnings, or an average addition of over £1 (US$2.80) a week to crews' wages. Because of the greater incidence in England and Wales of fishing for shellfish, which is not subsidized, the averages for England and Wales and Scotland separately show considerable differences. (World Fishing, December 1959.)

Note: Also see Commercial Fisheries Review, January 1958 p. 101.

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FISHERMEN TRAINING AND LOAN PROGRAM FOR NORTHWEST SCOTLAND INITIATED:

Because the British Government does not believe that the fishing grounds in The Minch are as productive as they should be, and hence do not make as big a contribution to the economy of the Western Islands as they could, the Government is attempting to revive the fishing industry in the Outer Hebrides. The Minch is the strait between Northwest Scotland and the Outer Hebrides. To encourage young Scotsmen who live in the Outer Islands to become fishermen, a new training program has been drawn up. It will provide up to six months duty on an East Coast fishing boat working in The Minch area. If a man has already completed such a period of training or has had other experience, under the terms of the program he can continue with another six months of training on a special training fishing vessel of the Scottish Home Department. It is hoped that training can start on east coast vessels in The Minch by spring 1960. In conjunction with the plan to select and train fishermen, loans will be extended to persons interested in fishing to enable them to acquire new boats.

Loans for new boats from 40-70 feet in length can be obtained from the Scottish Home Department. The loans can be made up to 60 percent of the approved cost of the boat and a grant of at least 25 percent will be available, leaving only 15 percent of the cost to be raised by the new fishermen. The Macaulay Trust and the Highland Fund are prepared to assist suitable fishermen to raise even the 15 percent of their share. One of the conditions of the loans is that if a grant or loan is made, the applicant "undertakes by means of the proposed boat to diligently and vigorously prosecute fishing as working owners." (U. S. Consulate report from Glasgow, January 6, 1960.)

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RESTRICTIONS REMOVED ON FRESH AND FROZEN FISH IMPORTS FROM DOLLAR AREA:

Effective February 1, 1960, quantitative controls were removed by the United Kingdom on imports of fresh and frozen

United Kingdom (Contd.):

fish from the dollar area. This action opens the United Kingdom market to frozen halibut and other fresh and frozen fish from the United States.

Lifting of import restrictions on fresh and frozen fish removes the last vestige of import controls on fishery products imposed by the United Kingdom to conserve short dollar balances following the end of World War II. Limitations on canned salmon were eased in 1957 and completely lifted in 1958. Other canned fish were removed from import control on June 8, 1959. Fresh and frozen salmon were freed from control on November 9, 1959.

Imports of halibut by the United Kingdom from the United States have been restricted under the controls in effect following the end of World War II. The United States supplied up to 3 million pounds of frozen halibut to the United Kingdom in some prewar years. As a result of British efforts to conserve dollars in postwar years, imports of halibut from the United States have been completely restricted. The lifting of these limitations on trade will broaden the market for United States west coast halibut producers.

## Uruguay

NEW FISH MEAL PLANT IN OPERATION:

The Uruguayan Government-owned fishing company (Servicio Oceanografico y de Pesca) started operations in its new fish meal plant on January 13, 1960. The machinery for the new plant, which was donated by the United Nations, was imported from the United Kingdom, the United States Embassy in Montevideo reported on January 15, 1960.

## Yugoslavia

FROZEN TUNA IMPORTS FROM JAPAN:

Yugoslavia is said to have signed contracts for Japanese exporters for annual imports of about 7,000 metric tons of tuna from Japan. This year's deliveries are scheduled for October 1959-May 1960. Yugoslavia, in the past, has been importing frozen tuna from Turkey for the winter operations of its canneries. In 1959, however, no business talks were concluded with Turkey and tuna fishing was carried out in the Black Sea on a small scale by Turkey. Yugoslavia is reported importing about 9,000 tons of tuna a year and about half is re-exported to Italy.

As part of its expansion plans for tuna fishing in summer in the Adriactic Sea, fishermen in Yugoslavia are learning long-line tuna fishing techniques from Japanese expert fishermen (Suisan Tsushin, December 18, 1959.)

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