



International

CUBA-UNITED STATES CONVENTION FOR CONSERVATION OF SHRIMP:

The United States and Cuba on September 4, 1959, exchanged instruments of ratification bringing into force the Convention for the conservation of shrimp which had been signed by representatives of the two countries on August 15, 1958. The United States President, acting upon the advice and consent of the Senate, ratified the Convention on the part of the United States on June 12, 1959.

The Convention has for its purpose scientific research and the adoption of conservation measures affecting shrimp harvested by fishermen of the two countries in the Gulf of Mexico off the coasts of Cuba and Florida. The region involved has been one of the important shrimp areas of the Gulf. During the past few years the percentage of small shrimp from these grounds has been increasing, suggesting the possibility that a substantial part of the yield is being taken before the shrimp have reached the larger, more commercially desirable sizes. Under the terms of the Convention the United States and Cuba will conduct studies to learn the facts and take necessary action to maintain this resource at the most productive level for the benefit of both countries.

This is the ninth international agreement by means of which the United States is now cooperating with neighboring countries in the conservation of fishery resources. All but one of these agreements, the Great Lakes Fishery Convention with Canada, affect high-seas fisheries. One, the Whaling Convention (15 nations), is worldwide in scope. The others encircle our country, starting with the Northwest Atlantic (12 nations), crossing the Continent to the fur seals

of the North Pacific (4 nations), the halibut of the North Pacific, and the salmon of the Fraser River in British Columbia (United States and Canada). A tripartite agreement between the United States, Canada, and Japan covers all fishery resources of common concern to these three nations in the North Pacific. The Tuna Convention with Costa Rica and Panama deals with the tunas of the eastern tropical Pacific.

The United States has now joined with Cuba in another of these international undertakings between friendly nations for the preservation of fishery resources of common concern, to the benefit of both.

FISH MEAL CONFERENCE HELD IN SPAIN

Fish meal is increasingly recognized throughout the world as the most valuable protein ingredient produced in substantial quantity and used as a supplement in animal feeds. Production throughout the world has very substantially increased in recent years, particularly from the new producing countries of South Africa, Portuguese Angola, Chile, and Peru. Demand exceeds supply so that the world's producers are continually trying by new techniques to produce every extra ton possible. Raw material on which the industry depends is both whole fish and the fish-processing waste.

Fish meal is principally used as a growth food for young animals. The great increase in the broiler industry owes much of its success to the use of fish meal. Most of the European manufacturing countries, other than Norway and Denmark, use all their home-produced meal in their own countries and import large quantities. Britain is the largest user of fish meal in Europe, while the United States is the largest user in the world.

Some years ago, the President of the French Fish Meal Manufacturers' Association suggested that in view of the growing importance of this industry, the rapid development of new techniques, and the greatly increased demand, it would be good to have a conference so that manufacturers could discuss their problems: subsequently a conference attended by the manufacturers from most European countries was held in Paris in 1952 and was the first of a series of very successful conferences.

Since the first conference, the British Association of Fish Meal Manufacturers has organized each conference and has been the host at two of them--1955 and 1956. Norway was the host the following year and last year's conference was held in Cape Town with South Africa as the host.

The scope of the conference is now widened to include not only European manufacturers, but producers overseas and those countries who have been represented at the

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conferences include Angola, Belgium, Canada, Denmark, Germany, Great Britain, Holland, Iceland, Morocco, Norway, Portugal, Spain, Sweden, and the United States. In October of 1959, the conference was held in Madrid at the invitation of the Spanish manufacturers.

At the request of the Spanish manufacturers, the British Association of Fish Meal Manufacturers made the arrangements for the Madrid conference and the large and interesting agenda showed that scientific and technical matters occupied a large part of the discussions.

The series of conferences has produced a high degree of cooperation amongst the countries concerned who discuss their problems in a friendly informal atmosphere. This has already led to considerable interchange of information. The next step in the evolution of this industry may be to produce a human food.

Already fish meal or fish flour is being used in some countries where the standard of human nutrition is low and the high biological quality of this food is proving its worth in improving the diet of the people of those countries.

EUROPEAN COMMON MARKET

FISHERY ASSOCIATIONS FORMED:

A large number of associations have already been formed within the framework of the European Economic Community. The gradual harmonization over a period of years of the economic and social policies of the Six will affect commerce and industry in each country, and the primary purpose of these groupings is to study the implications of these changes and make preparations to meet them. The activities of the associations range from round-table discussions held from time to time to the establishment of a formal set-up with a permanent secretariat. Among the many associations formed representing every type of industry or business are the following on or of interest to fisheries:

Animal Feeds:

Fédération Européenne des Fabricants
d'Aliments Composés pour Animaux

27 rue des Paroissiens
Brussels, Belgium

Edible Oils:

Association des Huileries du Marché
Commun
121 rue Royale
Brussels, Belgium.

Fish:

Association des Industries du Poisson
de la CEE
55 rue de la Loi
Brussels, Belgium.

Quite a number of associations on food distribution were also formed.

MARINE OILS

WORLD PRODUCTION AND EXPORTS
OF MARINE OILS EXPECTED
TO DROP IN 1959:

World production and exports of marine-animal oils (whale, sperm whale, fish-body, and fish-liver oils) will be less in 1959 than in 1958. (See table.)

Exports of marine oils in 1959 probably will fall short of last year's volume chiefly because of smaller production of whale and sperm oil. The 1958/59 Antarctic season was less successful than the previous season. Although more whales were killed, the yield of oil per unit was down sharply. Fish oil exports may approximate 1958 tonnage. European exports may decline mainly because Norway's spring herring catch was far below average although above the exceptionally low output in 1958. This decline may be offset by the increase in United States exports which now appears likely.

Estimated World Production, and Exports of Marine-Animal Oils, Forecast 1959,
Annual 1952-58, ^{1/} and Averages 1935-39 and 1950-54

Commodity	Forecast 1959	1958 ^{2/}	1957	1956	1955	1954	1953	1952	Average	
									1950-54	1935-39
.....(1,000 Short Tons).....										
Production:										
Whale	415	435	430	425	420	455	420	460	440	545
Sperm whale	115	125	110	120	100	75	55	85	80	30
Fish (including liver)	490	470	485	565	540	520	460	460	470	480
Total	1,020	1,030	1,025	1,110	1,060	1,050	935	1,005	990	1,055
Exports:										
Whale	415	435	430	425	420	455	420	460	439	545
Sperm whale	115	125	110	120	100	75	55	85	78	30
Fish (including liver)	200	200	190	200	205	215	195	134	177	135
Total	730	760	730	745	725	745	670	679	694	710

^{1/}Beginning with 1950 the years indicated are those in which the predominant share of a given oil was produced.

^{2/}Preliminary.

Note: Compiled from official and other sources. Revised from previous data issued.

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TRADE AGREEMENTS

ANGOLO-SOVIET AGREEMENT INCLUDES FISHERY PRODUCTS:

The five-year Anglo-Soviet Trade Agreement, signed on May 24, 1959, contains a provision for an increase each way in the exchange of consumer goods for the first year of the agreement. New quotas have now been established following negotiations between the Board of Trade and the Soviet trade delegation in London and made public August 28, 1959. The quotas are, of course, only targets, and their fulfillment depends upon the demand for the items in the two countries, and, to a lesser extent perhaps, upon the ability or desire to supply the items.

In the quotas for United Kingdom goods to be exported to the Soviet Union are included herring valued at £250,000 (US\$702,500) f.o.b. and white fish valued at £550,000 (\$1,545,500) f.o.b.

Quotas for Soviet goods to be exported to the United Kingdom include canned crabmeat valued at £1,000,000 (\$2,810,000) f.o.b., canned salmon valued at £500,000 (\$1,405,000) f.o.b., and caviar (including red caviar) valued at £85,000 (\$238,900) f.o.b. In addition licenses for £550,000 (\$1,545,500) c.i.f. of Soviet canned salmon will be issued by the United Kingdom under arrangements which have been made outside the consumer goods agreement. (United States Embassy, London, report of September 3, 1959.)

WHALING

JAPANESE WITHDRAW PROPOSAL TO REDUCE NUMBER OF CATCHER BOATS:

Japan's whaling industry has withdrawn its proposal that each Antarctic whaling fleet should reduce the number of catcher boats for next season, according to an industry spokesman in Tokyo. He gave the main reason for this as the rejection by the Norwegian whaling industry of the proposal and Norway setting itself a limit of 5,800 blue-whales units. British whaling firms had supported the proposal.

The spokesman added that the Japanese whaling industry was discussing its voluntary limit for next Antarctic season. The withdrawal of Japan's proposal should not be taken as indicating that Japan intends to increase the number of her catchers.

NEW RUSSIAN WHALING FLEET:

A new Russian whaling fleet will be operating in the Antarctic next whaling season, according to Russian press reports. These claim that the expedition's factoryship has "probably no equal" among foreign whaling vessels.

The Russians say the ship is equipped to make full use of byproducts, with several mechanized lines for processing raw materials, also a research Laboratory.



Argentina

FISHING INDUSTRY CONTINUES MODERNIZATION PROGRAM:

A Buenos Aires, Argentine, fishing company has announced a 100-million-peso (about US\$1,171,000 at rate of 85.35 pesos to US\$1) expansion and modernization program. The company has chartered the modern 695-ton Japanese trawler-freezership, Yoshino Maru. This vessel, with a Japanese crew of 50, was due in Mar del Plata in September. The vessel is expected to fish tuna and swordfish in the Atlantic about 200 miles offshore.

The catches will be processed and frozen aboard the Japanese vessel, and after landing will be distributed by refrigerated trucks from the company's plant in Mar del Plata. Eventually the company hopes to produce fish for export. (Canada Foreign Trade, September 12, 1959.)

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SHRIMP INDUSTRY TRENDS:

Argentina's landings of shrimp have shown no unusual changes during the past few years. Landings of 1,535 metric tons jumped to 2,471 tons in 1956, but

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then in 1957 dropped back to 1,575 tons. For the first 11 months of 1958 only 1,096 tons were landed. However, since the height of the Argentine season occurs towards the end of the calendar year, it is assumed that when December data become available the landings for 1958 will be about the same as in 1957.

Although there has been no drastic change in the landings, exports show another picture. Exports of fresh and frozen shellfish (believed to be mostly shrimp) have risen manifold since 1955. From a low of 2.8 metric tons in 1955, exports jumped to 45.6 tons in 1956 and 244.8 tons in 1957. In 1958 exports of 423.1 tons were almost double the amount exported in 1957. For the first three months of 1959 exports amounted to 89.3 tons.

When looking at the exports to the United States, it becomes evident that more and more Argentine exporters are concentrating on shipping shrimp to the United States. There were no exports of shrimp to the United States in 1955, but in 1956 a total of 10.2 tons were shipped. In 1957 exports to the United States rose to 145.2 tons and spurted to 414.5 tons in 1958. During the first three months of 1959, 89.3 tons were exported to the United States--100 percent of Argentine's exports of fresh and frozen shellfish.



Australia

FISHERIES CONSERVATION EXTENDED TO EXTRATERRITORIAL WATERS:

The Australian Government has taken action to protect spiny lobster (crayfish), an important dollar-earning export, and shark in extraterritorial waters. These are already protected in territorial waters by State legislation. The essential purpose of the new regulations is to conserve existing stocks. The regulations apply to Australian nationals only; no other nationals at present take spiny lobster or shark off Australia. The new regulations took effect from August 1, 1959.

Spiny Lobster: Australia exports about US\$5 million worth of spiny lobster tails to the United States annually and Commonwealth Fisheries officials hope that the conservation measures under-

taken will keep the catch stable. There is no hope of an increase in supplies from presently-known grounds, although a survey of the islands western of the Great Australian Bight may reveal new crayfish grounds.

The Commonwealth Government, under legislation passed in 1959, is able to provide in extraterritorial waters the same protection for female spiny lobster already provided by State legislation in territorial waters. A closed season for female spiny lobster has been established and the taking of berried ones has been prohibited.

School Shark: Australia's third most important fish (in terms of quantity caught) is shark, and is principally sold by "fish and chips" shops. The school shark is a particularly important source of fish for the Victoria market.

The latest proclamations by the Minister for Primary Industry have established a legal minimum length of 36 inches and a closed season during November in extraterritorial waters.

The news release announcing the conservation measures in extraterritorial waters pointed out that the Commonwealth Gazette of July 23, 1959, contains a number of notices issued under the Commonwealth Fisheries Act designed to protect school shark and crayfish stocks in extraterritorial waters.

One of the notices prohibits the taking in all proclaimed waters of female spiny lobster of any species having eggs or spawn attached, which means that the protection given to berried spiny lobster by the various States in territorial waters has now been extended to extraterritorial waters.

The other notice dealing with female spiny lobster provides for a closed season for females of the species Jasus lalandii from August 1 to November 30 in proclaimed waters off Victoria and Tasmania. This closed season would be extended next year to cover the period June 1 to November 30 to coincide with the closed season in Victorian and Tasmanian territorial waters.

Because of changes in the wording of the Act it was necessary to publish new notices covering: (1) a legal minimum length of 36 inches for school shark; (2) a closed season during November for school shark both in extraterritorial waters off New South Wales, Victoria, South Australia, and Tasmania; (3) a legal minimum length of $2\frac{3}{4}$ inches on the carapace for the spiny lobster Panulirus longipes in extraterritorial waters off Western Australia; (4) a closed season from September 1 to November 14 for the spiny lobster Panulirus longipes in extraterritorial waters in Western Australia between 30° S. latitude and 33° S. latitude.

These four notices continued the regulations at present in force without any alteration.

A notice has been included to provide a separate closed season from December 15 to January 31 for southern spiny lobster in the King Island area and the notice providing for a closed season in the whole Victorian Tasmanian area from September 1 to October 15 has been amended accordingly.

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The notice covering a legal minimum of 4 1/4 inches on the carapace for southern spiny lobster in extraterritorial waters off Victoria and Tasmania has also been amended at the request of the Tasmanian Government to include prohibition of the cutting up or dismembering of spiny lobster on a boat.

The tenth notice, setting a closed season for the spiny lobster *Panulirus longipes* from August 16 to March 14 in the Abrolhos area, provides for a slight extension of the area to include the Turtle Dove Shoals.

LONG-LINE FOR DEEP-WATER SPECIES DEVELOPED:

The Australian Commonwealth Scientific and Industrial Research Organization (CSIRO) has announced the perfection of a new method of catching deep-water "trevally" (genus *Caranx*), a fish which weighs 15-40 pounds. Trevally are caught off the continental shelf at depths of more than 100 fathoms. After years of experimentation, CSIRO had perfected a method which involves attaching 25 hooks, spaced a fathom apart and baited with tuna or barracuda, along a line weighted down with a 70-pound weight, according to a September 4, 1959, dispatch from the United States Embassy in Canberra.

SHRIMP LANDINGS AND EXPORTS:

Landings: Australia's landings of shrimp have shown a steady decline since fiscal year 1954/55 from 6,648,000 pounds to 4,687,000 pounds in fiscal year 1957/58. Most of the shrimp is landed in the states of New South Wales and Queensland.

Fiscal Year	New South Wales	Victoria	Queensland	Western Australia	Total
(1,000 Lbs.)					
1957/58	1,520	20	3,000	147	4,687
1956/57	2,386	-	2,500	189	5,075
1955/56	3,672	1	2,400	75	6,148
1954/55	4,603	19	2,000	26	6,648
1953/54	3,558	-	700	45	4,303

Exports: Only a small percentage of the landings are exported, and the bulk of the exports are shipped to the United

States. Most of the exports consist of frozen raw headless shrimp.

Destination	Raw		Cooked	Total
	Heads-on	Heads-off		
(Pounds)				
1957/58:				
United States	-	170,050	143	170,193
Honolulu . .	2,050	94,300	-	96,350
Other	300	7,050	25,629	32,979
Total . . .	2,350	271,400	25,772	299,522
1956/57:				
United States	-	128,885	-	128,885
Honolulu . .	-	83,265	20,190	103,455
Other	4,193	7,665	73,179	85,037
Total . . .	4,193	219,815	93,369	317,377

1/Excludes re-exports.

Fiscal Year and Type	New South Wales	Queensland	Tasmania	Total
(Pounds)				
1957/58:				
Raw, heads-on	100	2,250	-	2,350
Raw, heads-off	5,100	266,300	-	271,400
Cooked . . .	10,229	15,543	-	25,772
Total . . .	15,429	284,093	-	299,522
1956/57:				
Raw, heads-on	2,747	1,446	-	4,193
Raw, heads-off	21,545	198,270	-	219,815
Cooked . . .	27,154	66,215	-	93,369
Total . . .	51,446	265,931	-	317,377

Note: Fiscal Year--July 1-June 30.

TUNA LANDINGS BREAK RECORD:

Tuna fishing is booming in New South Wales and is on the upgrade in South Australia, the Australian Minister for Primary Industry announced on April 26, 1959. He was commenting on this season's (1958/59) record catch reported in the two states in which Australia's main tuna fisheries are based.

Landings of tuna at New South Wales and South Australia ports this season to April 22 totaled 2,369 metric tons--a new record. They were 68.5 percent above the two-State catch of 1,406 tons in 1957/58.

The New South Wales season closed about the end of February when the canneries at Eden and Narooma had received a combined total of 1,797 tons, double the previous season's total. The New South

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Wales tuna landings were worth at least £80,000 (US\$180,000) ex-vessel.

In South Australia, the season's landings were 572 tons, or about 30 tons above 1958. There was still a possibility of additional landings in South Australia.

The present commercial-scale Australian tuna fisheries have expanded 25-fold in seven years, from a catch of 95 tons in 1951/52 to nearly 2,370 tons already this season.

Most of the tuna caught by Australian fishermen is used for canning and in recent years this fishery has become a useful earner of foreign exchange through exports of canned tuna to the United Kingdom and the United States.



Bolivia

IMPORTS OF FISHERY PRODUCTS, 1958:

During 1958 Bolivia imported about 1.6 million pounds (valued at US\$269,402) of fishery products, of which, 82.3 per cent consisted of canned sardines in tomato sauce. The only other important fishery product imported in 1958 was about 200,000 pounds of preserved or canned fish.

Product	Kilos	Pounds	Value US\$
Caviar and fish roe . . .	54	119	51
Anchovies (all types) . . .	2,186	4,818	1,754
Dried fish	23,582	51,989	16,487
Preserved fish	90,649	199,845	49,031
Fresh and cured fish . . .	21,637	47,700	3,784
Canned sardines (tomato)	603,596	1,330,687	198,118
Fish paste	864	1,904	177
Total	742,568	1,637,092	269,402



British West Indies

GRENADA TUNA LANDINGS:

Grenada (one of the Windward Islands), British West Indies, fishermen catch from 50,000 to 70,000 pounds of tuna a year, mostly bluefin and yellow-

fin. The fish range from 100 to 150 pounds each.

Experiments with miniature long lines (20 hooks) are now being carried out and it is believed that landings of tuna could be quadrupled if the long-lining experiments are successful and if a ready market for the tuna can be developed. (West Indies Fisheries Bulletin, May/June 1959.)



Canada

HERRING OIL SHIPPED IN TANKER:

When the small Norwegian deep-sea tanker Nordgard slipped into her berth at Vancouver's LaPointe Pier late in March 1959 it marked the first time in the history of the British Columbia fishing industry that a tanker had been chartered to load herring oil. Up until now, herring oil was shipped overseas in the deep tanks of cargo freighters.

After the Nordgard had her tanks, pipes, and pumps surveyed to ensure they were in spotless condition, the 3,800 long tons of herring oil, the equivalent of 140 railway tank cars and worth over C\$500,000, was loaded by two different methods. Approximately 1,800 long tons were pumped at full capacity of 60 tons per hour from the dockside storage tanks into the tanker. The remaining 2,000 long tons were transported from tank storage facilities at Steveston, B. C., some 25 miles, by a small coastal tanker then pumped aboard the Nordgard. The oil was consigned to Manchester, England, for use in the processing of margarine and cooking oils. (Trade News, April 1959.)

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PLANS FOR NEW OCEANOGRAPHIC INSTITUTE ANNOUNCED:

A member of the Canadian Parliament from Nova Scotia in a statement published in a Halifax newspaper on August 4, 1959, outlined plans for a greatly expanded program of oceanographic research. His statement follows:

"Canada, which possesses the longest coastline of any country in the world, is

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taking steps to expand oceanography in the Department of Mines and Technical Surveys to fill the gaping need for oceanographic data on its coastal waters for defense and research assessment purposes.

"It is setting up on the east coast, in Bedford Basin near Halifax, a C\$3 million oceanographic institute, which will have the facilities to allow studies in any phase of the science. The new institute will take five years to complete and, when in operation, will have a staff of some 300 oceanographers, hydrographers, submarine geologists and other scientific personnel, plus supporting staff, and an operating fleet of oceanographic vessels.

"A multi-million dollar ship-building program has already been set under way to provide the fleet of oceanographic vessels. The first of these vessels, the \$7 million C.G.S. Hudson, is expected to be commissioned in 1961.

"The establishment of the institute which is to be known as the Bedford Institute of Oceanography, is announced today, on the eve of Dartmouth Natal Day.

"Specifically, the new institute will turn an oceanographic spotlight on Canada's Atlantic and sub-Arctic coasts to study the physical characteristics of the waters and underlying seabed. The resultant data is needed for anti-submarine defenses to ascertain the resources potential of the country's continental shelf in these regions and to assist navigation.

"It will also permit the overdue expansion of the Atlantic and sub-Arctic sections of the Canadian Hydrographic Service. These sections will be moved from Ottawa to Bedford Basin, which will greatly facilitate hydrographic operations in eastern and northern areas. In addition, it will house the regional office of the Geological Survey of Canada.

"The whole project will mean the building up, near Dartmouth, of a strong centre of marine science. It includes liaison with the Fisheries Research Board, the Atlantic Oceanographic Group,

which will be housed in the new institute, and with Dalhousie University which is setting up--with the help of a National Research Council grant--an Institute of Oceanography for the training of scientists, many of who will be employed by the new Federal Institute. It will also be the headquarters of the polar group of oceanographers, hydrographers, geologists and other scientists, working in the icebound sections of the far Arctic. They will carry out a broad program of oceanographic research on the rim of the Arctic Basin.

"Canada possesses little knowledge of the oceans which surround it. Except for a specialized program in oceanography by the Fisheries Research Board over the years, oceanography in Canada has been a neglected science, mainly because of the size of the job to be done and the great expense entailed in doing it.

"Today, however, the knowledge derived from oceanographic research is vitally needed by government and industry for purposes of defense, commerce and science. In the face of the growing danger of ballistic missile-carrying submarines, a detailed knowledge of the characteristics of the water and of the sea bed is necessary for the development and operation of adequate instruments of detection.

"Knowledge gained from oceanography is required, too, to ascertain the resource potential of the country's continental shelves. This is especially important today because of the conclusions arrived at by the Geneva Convention of 1958 that the resources of the continental shelves belong to the adjacent nation. On the east coast, Canada's continental shelf extends 100 to 200 miles out into the Atlantic Ocean.

"An extensive program of work is envisaged in the new project. Oceanographers and hydrographers will study and map the topography of the ocean floor and measure the movements, temperature, density and chemical properties of the water at various depths.

"They will study the separate and distinct layers of water of which the oceans are comprised, and each of which has its own characteristics. Modern methods of submarine detection depend on the transmission of sound in water,

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which requires a detailed knowledge of these characteristics.

"Geologists will study bottom sediments and cores taken from the ocean floor. Such studies will yield valuable data on the life of the earth's crust, changes in climate, vegetation, volcanic activity, etc; enable geologists to re-create the history of mountainous formations on land because, in the depths of the ocean, the temperature remains practically unchanged, there is no erosion and little movement of water; and reveal possible mineral resource wealth on the shelf.

"Geophysicists will use magnetometers, gravimeters, and seismic equipment to diagnose the structures underlying the floor.

"The new institute will be a combined laboratory and office building, with separate depots, shops and storage facilities. The scientific personnel will carry out investigations and research in modernly equipped laboratories. It will provide all needed store facilities for its fleet in the way of docking and berthing facilities, and routine repair and maintenance services. The institute is so planned, moreover, to permit the expansion of these facilities, if needed, to meet the requirements of a growing fleet.

"The heart of the new project will lie of course in its fleet of oceanographic and hydrographic ships. The shipbuilding program will add additional ships until the requirements are met for new ships and for the replacement of old and chartered ones now in use by the Canadian Hydrographic Service. The new C. G. S. Hudson and all new vessels will be combined oceanographic and hydrographic ships, equipped with laboratory and other facilities for survey and research work. They will be capable of working in any season of the year, while the larger ships, like the Hudson could work anywhere in the world. All vessels will be strengthened for work in the Arctic.

"The expansion in the charting activities of the department's Canadian Hydrographic Service is long overdue. Many factors, including defense needs,

the entry of Newfoundland into Confederation, and resource development and exploratory and other activity in the Arctic, have greatly increased demand for charts and information on the coastline and waters involved.

"Since its establishment in 1883, the service has been operating on a scale far out of proportion to the size of the task to be done. Canada possesses some 120,000 miles of coastline. The greater part of this coastline, much of which is extremely complex and shoal-studded, has not yet been charted. The uncharted areas include almost all of the arctic archipelago, the northern mainland coast, Hudson Bay, and the Labrador coast.

"As a start on the expansion of its hydrographic activities, the department has added the chartered ship, M/V Theta, to its fleet. It is carrying out tidal, current, and oceanographic surveys in Cabot and Hudson Straits. Included in the fleet are the C.G.S. Baffin which is charting in Hudson Strait; the C.G.S. Kapuskasing which is sounding off the east coast of Newfoundland; the C.G.S. Cartier, engaged in charting work in the region of Cape Bald and Chaleur Bay in New Brunswick; and the C.G.S. Acadia which is doing similar work on the northeast coast of Prince Edward Island. By 1960 the service hopes to add . . . two additional ships for oceanographic work, and by 1962 the first ship under the new program, C.G.S. Hudson, will be added to the fleet.

"In setting up the Bedford Institute of Oceanography, Canada is taking cognizance of the importance of the fast-growing science of oceanography and of the value of the contribution it can make in the unravelling of the scientific mysteries of the country's last frontiers--its coastal waves."

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SURGE IN FISHING BOAT CONSTRUCTION:

In the Canadian Maritime Provinces this past spring boat builders reported the heaviest program of fishing boat construction in the postwar period.

Construction was in progress of scores of fishing craft ranging from draggers to small lobster fishing boats. So busy are

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small lobster fishing boats. So busy are some of the yards that many fishermen have had to wait weeks before their orders could reach the cradle stage. While most of the larger craft--draggers, long-liners, and some of the larger Cape Island-type craft--are financed by fishermen's loan boards in the three Maritime Provinces, some of the smaller ones are financed by fishermen themselves.

This upswing in boat-building is general throughout the three provinces. New Brunswick reports the greatest fishing craft building boom in its history, while Prince Edward Island and Nova Scotia also report heavy activity along that line.

In the Caraquet-Shippegan area of northern New Brunswick, for instance, there are six 65-foot Gloucester-type draggers being built in addition to four long-liners and nearly 20 lobster boats in the 25-foot class. Two of the draggers will be operated in the Bay of Fundy area, while four will join the Shippegan fleet.

The Port Elgin district in eastern New Brunswick reports nearly 50 lobster boats building ranging in length from 40 to 44 feet. Two small draggers are being built at Black's Harbor, N. B.

Boat-building in Nova Scotia is keeping pace with its sister province. The major boat-building centers are reported working full tilt to keep up with orders. Two long-liners and several boats of the Cape Island class are being built at Lunenburg and there is also boat construction at Port Greville. At the latter place two draggers are being built for the Souris fleet in Prince Edward Island.

In the Yarmouth area two Cape Island-type boats have been built since the first of the year and two more are under construction. Reports from Wedgeport-Pubnico show that nine Cape Island boats are being built there in addition to one long-liner.

Until the current boat-building program is completed, final figures on the growth of the fishing fleets in 1959 will not be available. However, a glance at last year's figures shows an almost phenomenal growth in the postwar period. Last year the more than 26,000 fishermen reaped a sea harvest representing about C\$35,000,000 in landed value.

Not counting the thousands of small boats engaged in the lobster fishery and other types of inshore fishing, there were more than 500 trawlers, draggers, long-liners, dory schooners, and swordfish boats operating out of Maritime ports in 1958.

Nova Scotia tops the list in all classes of boats. Last year that province had a dragger fleet of 163 vessels, while 99 draggers operated out of New Brunswick ports. Prince Edward Island had 13 draggers, all operating out of Souris. A dragger might be classified as a vessel of 100 feet or less in length which uses otter-trawl nets. There are, of course, vessels of the dragger-type fishing scallops and herring and using other types of gear.

The only large trawler fleet in the Maritimes operates out of the main ports in Nova Scotia. In 1958 it numbered 34 vessels, each ranging in length from 153 feet to 103 feet. Nova Scotia trawlers vary in tonnage from 399 to 132 tons.

The long-lining fleet in Nova Scotia included 85 vessels in the 26- to 50-ton bracket; 55 long-liners with tonnages from 51 to 150 tons and three vessels of that type over 150 tons.

Of the once-mighty fleet of schooners sailing out of Nova Scotia fishing ports to the fishing banks, in the North Atlantic, there are only 8 dory schooners left. Most of them sail out of Riverport.

There were 16 scallop draggers registered in Nova Scotia last year. Heaviest scallop landings last year were at Lunenburg. Bulk of the catch was taken from Georges Banks.

About 14 purse-seiners fish herring in the Bay of Fundy. Most of them are

Canada (Contd.):

of New Brunswick registry. In addition, there are 11 herring carriers which take the catches from the seiners at sea.

Nova Scotia has a fleet of swordfish boats. Yarmouth has become one of the major swordfish ports, and seven of the boats are owned there. During the swordfish season, which gets under way in June, a good portion of the long-liner fleet also engages in that type of fishing. (Trade News of the Canadian Department of Fisheries, April 1959.)

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TRANSFER OF DISEASE-RESISTANT OYSTERS ON EAST COAST IN FINAL PHASE:

"Operation Oyster" is in its final phase. This three-year project, sponsored by the Department of Fisheries of Canada, provided for the transfer of 10,000 barrels of disease-resistant Prince Edward Island oysters to rehabilitate stocks in New Brunswick and Nova Scotia.

The motor vessel Lamna, flagship of the Department's 30-boat patrol fleet in the Maritimes, conducted the transfer of the final 4,000 barrels to beds in the two mainland provinces. Assisting the Lamna were four other boats.

This final phase of the project called for the transplanting of oysters in specific areas in the Northumberland Strait extending from Pictou County in Nova Scotia to the Shippegan-Caraquet districts in northern New Brunswick.

A quantity is being held in reserve for seeding beds at Miscou in the same general area later if disease spreads to those waters. Results of the transplant program have been described as a singular success.

Depletion of the stocks in the two mainland provinces created a crisis in the once-profitable oyster industry. Production slumped drastically. In 1957 only 9,000 barrels were fished in the two provinces. In 1958 the production was less than half that amount. Normal production is around 30,000 barrels. Prince

Edward Island's production in 1958 brought the fishermen C\$263,000, an increase of \$108,000 over the previous year. The devastation of mainland beds was similar to that which destroyed Prince Edward Island's beds in two epidemics from 1915-1920 and 1935-1940. Oysters which survived the heavy mortality are resistant to the disease (harmless to humans) and that is why they are being used to rehabilitate mainland stocks.

History of the present oyster crisis goes back to 1950. In that year heavy mortalities hit the oyster stocks in Kent County and later the mortalities spread throughout New Brunswick and into Nova Scotia. In 1952 there were nearly 8 million pounds of oysters harvested from Maritime oyster beds. Then for six years there was a sharp decline in New Brunswick and Nova Scotia until the production had been reduced by nearly two-thirds.

Early restoration of the commercial oyster fishery is promising if the oysters encounter favorable years for reproduction. With luck most fisheries should be producing again in 1965. (Canadian Trade News of June 1959.)

Note: Also see Commercial Fisheries Review, Dec. 1958, p. 65, Jan. 1958, p. 78.



Ceylon

U. S. S. R. BETTERS JAPANESE FISHERY AID PLAN TO CEYLON:

The realization of Japan's plan for economic aid in the development of Ceylonese fisheries is endangered by the Soviet Union's offering a similar plan on more advantageous conditions. The Japanese Government some time ago decided to give economic aid for the development of Ceylon's fishing industry through a \$4 million deferred payment loan from the Export-Import Bank. Now it is reported by authorities concerned that the Soviet Union is approaching Ceylonese authorities with a similar plan but involving a loan of \$30 million to be repaid over a 12-year period with interest at 2.5 percent.

Since the Japanese Import-Export Bank loan which the Ministry of Agri-

Ceylon (Contd.):

culture and Forestry had been pushing was for a smaller amount, the Ceylonese have not shown much interest in it. The Japanese plan had also run into much domestic opposition because it involved the supplying of tuna fishingboats to Ceylon. Under the circumstances, the Ceylonese may break off negotiations with Japan and accept the Soviet proposition. (Suisan Keizai Shimbun, August 6, 1959.)



Colombia

CANNERY ARRANGES FOR DIRECT DELIVERIES OF JAPANESE TUNA:

A Colombia packing plant, located in Barranquilla, announced early in September that it has made arrangements with the Japanese fishing vessel Seiun Maru to deliver a considerable quantity of frozen tuna. The Japanese vessel, which has been fishing in Colombia waters for some time, has refrigerated space for 250 tons of fish and the first consignment to Barranquilla is for 40 tons.

The packing plant plans to can the tuna to help meet the Colombian demand for fish.

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JAPANESE TUNA VESSEL LANDS TRIP FOR FISH CANNERS:

On August 31, the 230-ton Japanese tuna fishing vessel Seiun Maru docked in Barranquilla with about 50 tons of tuna caught on the high seas off Jamaica. The Seiun Maru has a 33-man fishing crew in its complement. The ship is working under a purchase agreement with a Barranquilla cannery. In addition, part of the catch was expected to be purchased by two other canneries on the north coast of Colombia, one in the town of Cienaga, Department of Magdalena, and the other in the city of Santa Marta, which is near Barranquilla. (United States Consulate report, Barranquilla, August 31, 1959.)



Cuba

CLOSED SEASONS ON CERTAIN FISH ENDED:

The Cuban National Fisheries Institute of the Cuban Maritime Development Agency announced the end of the closed season originally imposed on April 1, 1959, on the capture of mojarras (perch), jotoru, biajaca (tripletail), and dajao, effective July 25, 1959. The order was published in the Official Gazette No. 135 of July 25, 1959. Also in the same issue was published a Resolution ending the closed season originally imposed on April 5, 1959, on the capture of biajaiba (lane snapper), effective August 15, 1959. A later resolution published in the Official Gazette No. 144 revised the effective date to August 8, 1959.

A Resolution revoking the closed season on the capture of sponges, originally imposed on May 5, 1959, north of Caibarien and south of Batabano was published in the Official Gazette No. 143 of August 5, 1959, effective August 15, 1959. (United States Embassy report, Habana, August 18, 1959.)

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CLOSED SEASON FOR OYSTERS ENDED:

The National Fisheries Institute of the Cuban Maritime Development Agency terminated the closed season on the capture of oysters effective September 14, 1959. The closed season on oysters was originally imposed on June 10, 1959.

A Resolution announcing the above termination was published in the Official Gazette No. 166 of September 4, 1959. (United States Embassy report, Habana, September 10, 1959.)

* * * * *

CLOSED SEASON FOR SNAPPER AND MORO CRAB:

The Cuban National Fisheries Institute (Instituto Nacional de la Pesca) of the Cuban Maritime Development Agency (Fomento Marítimo Cubano) announced a closed season on Cuban snapper (cubera), grey snapper (caballerote), and Moro crab for the period beginning August 1, 1959, and ending October 24, 1959. Ac-

Cuba (Contd.):

According to the Cuban General Law in Fishing a closed season of 84 lunar days is established for those species of fish and shellfish that require such protection during their spawning season. The above closed season, apparently setting a new trend in that both beginning and termination dates are shown, was published as a resolution in the Official Gazette No. 139 of July 29, 1959. (United States Embassy report, Habana, August 24, 1959.)

* * * * *

QUOTA FOR 1959 CANNED BONITO IMPORTS:

The Cuban Minister of National Economy in a Resolution published in the Official Gazette No. 126 of July 10, 1959, fixed a maximum total import quota of 1,010,200 pounds of canned bonito which may be brought in by Cuban importers during 1959.

The stated reason for the quota appears to be an attempt to keep imports of canned bonito within reasonable limits pending the implementation of the new Cuban customs tariff reforms.

It is interesting to note that imports of canned bonito as reported by the Cuban National Fisheries Institute (Instituto Nacional de la Pesca) for 1958, however, only amounted to 805,530 pounds which is considerably under the 1959 quota. Approximately two-thirds of all Cuban bonito imports normally originate from Spain.

Eighty percent of the 1959 quota is reserved for regular commercial importers of canned bonito who were engaged in that line during the three-year period 1955-57. The remaining 20 percent of the quota is allotted to occasional bonito importers who have been engaged in that line during the first five months of 1959. Importers who exceed their self-declared quota may sell or assign such imported bonito to other importers who still have an unfilled quota. (United States Embassy report from Habana, August 4, 1959.)



Egypt

FIRM EXPANDS FACILITIES FOR FREEZING SHRIMP:

A company established in mid-1957 for the canning of fruits and vegetables at Siouf, Egypt, during 1958 processed and froze a sizable quantity of shrimp for Alexandria exporters. This cannery, which is controlled by the Egyptian Government Economic Organization and in which an American Company has a minority interest, hopes to enter the frozen shrimp export business in 1960.

The company's cannery has recently rebuilt and expanded its freezing facilities at a cost of about \$40,000 and will be ready for operation by the beginning of the new shrimp season in November 1959. The new facilities, housed in a separate building, consist of shrimp holding space (15 tons at about 34° F.-41° F.), cleaning and grading areas, and frozen storage space (60 tons at about -4° F.), in addition to the contact freezing units themselves. All of this equipment is of United States manufacture. This expansion will quadruple previous capacity. In order to take advantage of this facility, however, it will be almost essential to obtain the services of a well-trained expert in the shrimp freezing business. (United States Consulate report from Alexandria, September 2, 1959.)

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JAPANESE FISHERY PLANTS RECEIVED:

Egypt received in mid-August 1959 four plants from Japan in accordance with an agreement signed in November 1958 under the \$30.0 million Japanese industrialization loan to Egypt.

The plants, which were unloaded in Cairo, are for manufacturing fishing nets, cans for preserving fruit, shrimp freezing and preservation, and fish packing.



France

NEW TYPE TUNA-TRAWLER VESSEL SUCCESSFUL:

For some months this year two dual-purpose vessels of a new type have been fishing for French owners. The new class could be described as trawler-tuna boats, and they have already proved themselves capable of carrying out either form of fishing with equal efficiency.

The two vessels in question are the Cote d' Argent and the Simone Valentine.

The principal particulars are: length over-all 91 ft. 10 in.; length between perpendiculars 78 ft. 9 in.; breadth 22 ft. 8 in.; depth 12 ft. 1 in.; refrigerated fish hold capacity 2,825 cu. ft.; fish well capacity 1,413 cu. ft.; fuel capacity 9,250 gallons.

Both vessels have a gross tonnage of 250 tons, and are built to the highest Bureau Veritas standards in their class.

While a number of tuna boats habitually practice trawling also, this is the first time that a basic design has been evolved for dual-purpose fishing of this type, and their form has been somewhat influenced by that of the United States tuna clipper. The reason for this new departure lies in the limited period during which tuna fishing can be practiced off the French and Spanish coasts, namely from May to October. While the fishing still continues off the African coast, this presents certain problems of marketing, and of preservation and transportation in medium tonnages. The decision was therefore taken by the owners, to build vessels that could engage in live-bait fishing in season, and afterwards turn to trawling or sardine fishing. Although there were some misgivings at first as to sea-keeping qualities and crew-accommodation problems, the results of some two years' research was reassuring, and the decision was taken to build.

The vessels are of all-welded steel construction, zinc-sprayed where necessary, and are flush-decked, except for the forecastle, which is slightly raised to accommodate twelve 3-tier bunks for the crew, the number of which varies according to the type of fishing in progress. Access to the crew's quarters is by a passageway below deck, opening on to the superstructure. Leading off this passageway is the mess room, galley and cook's quarters, and access to the engine room, though in fine weather this is entered from the deck.

The engine room is well forward, and houses main engines, auxiliaries, and refrigeration plant. The main engine of the Cote d'Argent is a V-8, developing 400 hp. at 1,250 r.p.m., and driving through an oil-operated reverse reduction gear of 4:1 ratio. The Simone Valentine is powered by V-12 type 12 v. 18/22, and this develops 450 hp. at 1,000 r.p.m., driving through a oil-operated gearbox having 3:1 reduction ratio. Both normally are bridge-controlled.

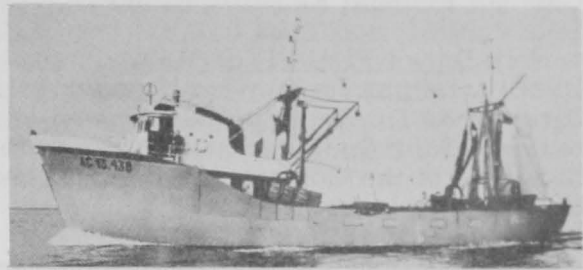
The intermediate shafts in both vessels are supported on roller bearings and pass beneath the refrigerated spaces in an insulated tunnel.

Auxiliary engines are in both cases two developing 50 hp. at 1,200 r.p.m. coupled to gearboxes through which the pumps, generators, and refrigerating units can be driven, and which, coupled together by a shaft, drive the hydraulic pump for the trawl winch. In the event of main-engine failure the auxiliaries can be coupled to the propeller shaft and a speed of 5 knots can be achieved. The auxiliaries to be driven include 2 pumps for circulating water in the bait tanks, each of 150 tons per hour capacity; 2 refrigeration units, a general service pump, an exhaust pump, and a 2-1/2 kw. and 6 kw. generator.

Aft of the engine room are the live-bait tanks, two on each side of the vessel, separated by a refrigerated compartment, which in turn gives access to the cold-storage room. Right aft is a large storage room. Fuel is stored in double-bottom tanks and in 4 lateral tanks.

All the living quarters are insulated and the floors are rubber-covered.

The refrigerated compartments of the Cote d'Argent are cooled by cold-air circulation, and those of the Simone Valentine by pipes around the chambers. High and low-temperature safety controls are fitted, and temperature control is to within 1/2 a degree approx., the minimum temperature being in the region of 5° F.



The trawler-tunny boat Cote d' Argent.

The bait tanks are of steel sheet, the interiors being zinc coated. Sea water for the conservation of live bait is circulated from the tank bottom. They are insulated with thick cork, as they are also capable of being cooled to below freezing point by immersed refrigerating coils, to serve as cold storage, refrigerated brine tanks, or quick freezers.

The steering gear favored for these vessels is the irreversible-direct hydraulic type, in preference to rod and chain.

The trawl winch also is hydraulically-operated and is fitted aft of the superstructure. Other deck features include small bait tanks and the usual gunwale ramp for tuna fishing, both to starboard. Detachable galleys are fitted on either side.

A laminated unsinkable ship's lifeboat is provided, and two inflatable liferafts are mounted on the bridge, where navigational equipment includes an echo-sounder, fish-finder, navigator, and radiotelephone.

Both vessels have fished profitably from French and Spanish ports in depths approaching 200 fathoms, and the owners are satisfied with their new venture.



German Democratic Republic

EAST GERMANY BUILDS MORE FISHING VESSELS:

Under the new seven-year plan for East Germany, its shipyards in Rostock, Warnemunde, Wismar, and Stralsund will build over 500 freighters, passenger vessels, and fishing craft, according to a report in Dansk Fiskeritidende (July 17, 1959), a Danish fishery trade paper. Sixty-seven of these will be fishing vessels designed for fishing in distant waters in the South Atlantic. Each of these distant-water vessels will measure 2,900 tons and be built in Stralsund.



German Federal Republic

NEW FISHERY RESEARCH INSTITUTE:

A new research institute for fishery economics and fishery policies has been registered in Bremen, according to a re-

German Federal Republic (Contd.):

port in Dansk Fiskeritidende (July 10, 1959), a Danish fishery trade paper. Its Director is Dr. Wilhelm Blanke who also is head of the State's research office for fisheries of the Commission for Economic Research in Bremen.

The new institute has been formed to investigate fishery economic and fishery policy problems on a scientific basis. It is the first of its kind both in Western and Eastern Europe. As a more flexible organization than the research office, it will supplement the latter's work, which because of its character as a State organization works too slowly to be able to make prompt decisions and regulations. The institute hopes to have all the trawler companies as well as other fishery industries as its members. The first problem will be to clarify the economic basis for the use of new fishery areas in the North Atlantic.



Ghana

UNITED STATES PACKING COMPANY SIGNS AGREEMENT TO MAKE TUNA SURVEY:

The Minister for Economic Affairs of Ghana, who is also the Minister responsible for Commerce and Industry, on behalf of the Ghana Government, signed an agreement late in August with a United States west coast tuna-packing company.

The company will carry out, in conjunction with the Ghana Fisheries Department, a survey to determine:

(1) The most effective method of capturing the available tuna and other pelagic fish, and the type of vessels best suited for the work.

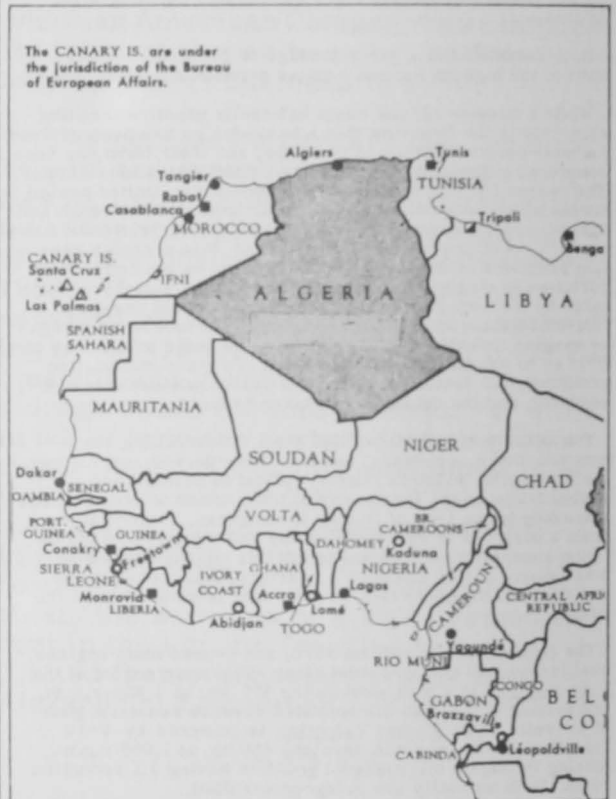
(2) The feasibility of the project and economic studies relative to the establishment of a tuna-freezing and canning industry at Tema.

(3) The abundance and availability of tuna within a thousand-mile range of Tema.

(4) The abundance and availability of tuna bait along the coast of Ghana.

(5) The availability of other shoal fish susceptible of being processed at Tema.

(6) The feasibility and economic studies relative to the establishment of a wet-fish industry at Tema.



The survey, which is being financed jointly by the Ghana Government and a United States firm, will prove the feasibility of establishing a deep-sea fishing industry based at Tema with shore establishments for canning, freezing, and the manufacture of fish meal. (Ghana Times, August 31, 1959.)



Iceland

SUMMER HERRING LANDINGS LARGEST SINCE 1946:

Iceland's herring catch off the north and east coasts has assumed unexpectedly large proportions in 1959--the largest summer herring catch since 1946 or

Iceland (Contd.):

1947. Record landings of 135,000 metric tons of herring were reported as of August 24, 1959, as compared to 62,000 tons at the same time in 1958. By the end of August 1957 it was expected that the boats would commence on the south coast herring fishery with drift nets.



An Icelandic fisherman.

The catch was of high fat content. Salting continued briskly after a 6-day pause until the Soviets took an additional 40,000 barrels. Salting towards the end of August slowed down as orders were filled.

Iceland's Summer Herring Landings and Utilization to August 15		
	1959	1958
	. (Metric Tons).	
Used for:		
Salting	27,163	38,747
Reduction	98,631	26,742
Freezing	1,743	1,275
Total	127,537	66,764

A local newspaper estimated the export value of the north coast catch at

Ikr. 72.4 million (US\$4.4 million) for the salted and Ikr. 112.5 million (US\$6.9 million) for the oil and meal, or a total of Ikr. 184.9 million (US\$11.3 million). The same paper states the vessels were paid Ikr. 19.9 million (US\$1.2 million) for the herring catch.

Herring used for salting purposes amounted to 201,204 barrels (298 pounds a barrel) as of August 15 and actual export commitments to that date were about 190,000 barrels (220 pounds a barrel). Therefore, they are roughly in balance. Contracts for north coast herring, which are now largely filled, come to 80,000 barrels to the U. S. S. R., 50,000 barrels to Finland, and 60,000 barrels to Sweden. This compares with advance contracts last year for salted herring amounting to 300,000 barrels (north and south coast). Negotiations were in progress for the sale of up to 8,000 barrels of salted herring to the United States from the north coast catch.

As for the south coast catch, only 40,000 barrels of salted herring have been signed for by the Soviet Union in advance, compared with 110,000 barrels sold last year. Trade agreements with East Germany and Poland call for 15,000 barrels and 20,000 barrels, respectively, of the south coast catch, but these amounts have not been contracted for as yet.

Meanwhile the relatively low prices prevailing for oil and meal was causing some concern to the reduction plants. According to the press, the Executive Manager of the State Herring Factories remarked that he hoped the sale of those products would be good in the fall, but that very little herring oil or meal has been sold so far. He added that 1,000 metric tons of meal have been sold to Iceland's chief fish meal market, Great Britain, but that the usually good West German market has been fully loaded with meal from Peru, Holland, and Denmark; sales of fish oil to Germany have been proceeding fairly well; however, some optimism prevailed that meal prices would rise this fall.

The manager of an oil and meal plant on August 13 said his plant had produced about 4,800 metric tons of meal and 1,000 metric tons of oil in 1958 with an export value of nearly \$1 million (including the

Iceland (Contd.):

55-percent subsidy), but that he had on hand over 2,000 metric tons of fish meal undisposed of due to the low prevailing prices. He had sold his fish oil in advance to Norway at £72 10s. a metric ton (better than 9 U. S. cents a pound), but quoted August 1959 prices at about £62 a ton (less than 8 cents a pound).

Contracts for north and south coast salted herring to date therefore amount to 230,000 barrels, compared with 300,000 barrels contracted (288,000 filled) for last year. The herring salters made advance arrangements this year to salt 300,000 barrels. (United States Embassy report from Reykjavik, Aug. 20, 1959.)

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PLANS FOR TWO FISH CANNERIES UNDER STUDY:

The Federation of Iceland Cooperative Societies (whose members are responsible for 20 percent of the country's fish exports and all its agricultural exports) with the aid of Swedish engineers is completing studies for the erection of two canneries in Iceland. One would be built in or near Reykjavik to pack both fish and meat products and would cost about US\$800,000. Another plant is planned for Akureyri to process fish products only and would cost about \$200,000. Of this \$1 million projected cost it is expected that the Federation of Swedish Cooperatives will provide about \$800,000 in the form of a loan.

The Swedish Federation would export various products from its member cooperatives, which would be sold through the Icelandic Federation's cooperative retail outlets. The "counterpart" from these sales would help generate local currency for the construction of the canneries. Other segments of the Swedish loan would take the form of shipments of Swedish machinery, or, as necessary, advances of certain third country currencies for other foreign machinery purchases.

The fish products which the Icelandic Federation could pack in these plants, particularly if there is a demand in the United States and other free currency areas for them, are: herring in tomato or mustard sauce or natural style; sardines in oil

or tomato sauce; fish balls; gaffelbiter (spiced herring in vinegar); spiced herring fillets; shrimp; and small lobster. Total annual fish canning capacity for the two plants is estimated at about 1,500 metric tons.

The smaller-scale meat canning would take the form of lamb in "Irish stew," and mutton and whale meat for pet food.

The Iceland Federation is anxious to increase its export sales in the United States and western Europe. In 1958 it exported fish products worth 143.4 million kronur (about US\$8.8 million), of which 56.8 percent went to the dollar and western Europe areas, as compared with 45.5 percent in 1957. (United States Embassy report from Reykjavik, Sept. 9, 1959.)

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THREE NEW SHRIMP PROCESSING PLANTS BEING COMPLETED:

Three new shrimp-processing plants are being completed on the northwest coast of Iceland, two of which will shortly receive new shrimp-peeling machines from the United States. The shrimp catch has been good despite unfavorable weather conditions.

The shrimp, which is largely canned, goes to Great Britain. That which is frozen is shipped to the United States. This expansion is a further step towards further specializing in preparation of seafoods, the United States Embassy in Reykjavik reported on August 27, 1959.



India

SMALL MODEL FISH-MEAL PLANT DEVELOPED:

A demonstration of a small model fish-meal plant, developed by a United States-educated fisheries engineer, was held late in June 1959 at a fisheries plant in Bandra, Bombay, India. The plant was designed and built by the fisheries engineer with the help of an expert on boilers, for the manufacture of fish meal from nonfood fish and fish waste. The demonstration was attended by the Bombay Director of Fisheries, members of the Bombay Fish Meal Exporters' Associa-

India (Contd.):

tion, Japanese fisheries experts, and local fishermen.

The Director of Fisheries remarked: "I was very happy to see a small model of a fish meal plant made locally. This is an important and valuable step in the fish meal industry."

Fish meal is exported and is a source of considerable foreign exchange to India. Fish meal has been manufactured locally by sun-drying the fish on concrete floors, which is a laborious process, requiring some two to three days to complete the process, depending on weather conditions. In addition, the final product contained a large amount of sand, and the protein content was never higher than 50 percent.

This fish-meal plant is the first of its kind in India and is built entirely to suit local conditions. It requires no power and it consists of a double-jacketed dryer, a superheater, boiler and furnace, all built as one compact unit. The unique feature of this plant is that it can be operated on any fuel available, hence suitable for any part of the country, even when installed on fishing boats. The cost of operation is as low as Rs. 15 (about US\$3.15) per ton of fresh fish, and requires only one man to operate it. It is so built that it does not come under the regular Boiler Act, hence it needs no registration. Each unit can handle some 5,000 pounds of raw fish per 24 hours, and the unit is expected to cost about Rs. 6,000 (about US\$1,270).



Indonesia

FISHERIES--A MAJOR INDUSTRY:

The Union of Indonesian Fisheries Cooperatives (GKPI) has announced that, according to data compiled by the Union, there are now about 400,000 fishermen in Indonesia. The fishermen operate 950 motor fishing vessels, and about 110,000 sailing craft of various sizes, the United States Embassy in Djakarta reported on September 14, 1959.



Fishing in Jakarta harbor, Indonesia.



Japan

ATLANTIC TUNA FISHERY:

The assistant chief of the fishing department of a large Japanese company returned to Japan on July 22, 1959, completing a full year of observations of the Atlantic tuna fishery bases at Haiti and Trinidad and tuna industry centers such as Ponce, Puerto Rico, and New Orleans, United States. He had the following to say about conditions in those areas:

Haiti is unsuitable as a tuna fishing base because of the lack of port facilities for fishing boats. After only 12 trips out of Haiti, the base was shifted to Trinidad. Trinidad is a shipping and distribution center linking North and South America and Europe, and has port facilities commensurate with the 10 or 11 ships of the 10,000-ton class that daily enter or leave the port. Petroleum resources are abundant, and fueling is easy.

As for the problem of the recently increasing claims against tuna exported from the Atlantic fishery to the United States, it looks as if the tuna taken off the Gold Coast from April to June are liable to have "green meat" or dark meat because they are in post-spawning condition. This official had personally examined tuna against which claims had been made at the cannery in

Japan (Contd.):

Ponce, and found that they were off-color, had off-odors, and were definitely substandard.

Two 150-ton United States boats were fishing in the Gulf of Mexico out of New Orleans. There, too, 20 percent of the fish taken in September and October was unsuitable for packing because of off-colors. He found it interesting that those boats were using Cremona line imported from Japan and operating in the same way as Japanese long-liners. (Nikkan Suisan Tsushin, August 4, 1959.)

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ATLANTIC TUNA FISHERY TRANSSHIPMENTS TO U. S. DROP SHARPLY:

A quota for this year of 120 trips was set for Japanese tuna fishing operations in the Atlantic for transshipment to the United States, but because of the large cannery claims against fish produced in May and June, the operator's interest in selling to the United States market has faded considerably. At the same time, Italy, Yugoslavia, France, and other European markets have welcomed Japanese tuna far above expectations, and vessels which were sent to the Atlantic with the primary object of exporting their catch to the United States are turning to direct exporting to Europe. As a result, it is anticipated that probably only about half of the quota of 120 trips will be used up.

Performance and plans for the first half of the export year, from April to September, show only 30 trips for export to the United States and 41 trips for European markets. (Nikkan Suisan Tsushin, August 17, 1959.)

Plans for Japanese Atlantic Tuna Fishery Transshipments,
April-September 1959

Month	U. S.		Italy		Yugoslavia		Other European	
	Shorts Tons	Trips	Short Tons	Trips	Short Tons	Trips	Short Tons	Trips
April	1,039	4	760	2	977	3	-	-
May	3,397	9	595	2	-	-	-	-
June	1,460	5	1,310	3	492	2	476	2
July	1,110	4	1,974	7	910	2	420	1
August	640	4	734	4	750	3	1,560	4
Sept.	1,095	4	400	2	980	2	690	2
Total	8,841	30	5,773	20	4,109	12	3,146	9

It is considered that most of the deliveries to France (2,456 tons) and other countries (690 tons) and a part of the deliveries to Yugoslavia are being or will be shipped to Italy.

The export quota to Italy has been set this year at 12,000 tons. But it is reported that more than 3,000 tons of Japanese tuna has already entered Italy by transshipment from France and North Africa. If the sales of this tuna were made with knowledge that it would be diverted to Italy, it clearly constitutes a violation of the Japanese Government's export control measures, but there is no way of controlling this situation. At present there is absolutely no fear that these transshipments will break the Italian market, and the base price of \$280-\$285 c. & f. is being maintained. The present quota of 12,000 tons for Italy far from meets the demand. There has been no quota set up for the other European countries receiving Japanese tuna. (Nikkan Suisan Tsushin, August 21, 1959.)

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FROZEN TUNA EXPORTS, APRIL 1958-MARCH 1959:

During the Japanese 1959 fiscal year (April-March), 113,107 short tons of frozen tuna (valued at US\$30.6 million) were exported to the United States, Italy, and six other countries. The exports to the United States consisted of 67,148 tons of yellowfin (value US\$17,388,000), 27,207 tons of albacore (value \$8,772,000), and 6,195 tons of other tuna (value \$1,573,000). The United States imports of Japanese frozen tuna accounted for about 89 percent of the quantity and 90 percent of the value of the total frozen tuna exports. Japan's only other important customer for frozen tuna was Italy. This country imported 11,460 tons of yellowfin (value \$2,531,000) and 77 tons of albacore (value \$17,000).

In the latter half of 1958 and the first quarter of 1959, exports of Japanese frozen tuna caught in the Atlantic Ocean and shipped to the United States and Italy without being landed in Japan, began to play an important part in the export trade in frozen tuna. (See table on following page.)

Japan (Contd.):

Destination	Quantity					Value				
	Albacore	Yellowfin	Skipjack	Biq-eyed	Total	Albacore	Yellowfin	Skipjack	Biq-eyed	Total
	(Short Tons)					(US\$1,000)				
From Japan:										
United States	25,862	48,358	2,752	1/3,443	80,415	2/8,772	12,981	531	3/842	23,126
Canada	948	-	-	-	948	466	-	-	-	466
Other	3	68	1	-	72	1	15	-	-	16
Atlantic Ocean Fishery:										
United States	1,345	18,790	-	-	20,135	-	4,407	-	-	4,407
Italy	77	11,460	-	-	11,537	17	2,531	-	-	2,548
Total	28,235	78,676	2,753	3,443	113,107	9,256	19,934	531	842	30,563

1/Includes 10 tons of unclassified tuna.

2/Includes value of albacore delivered to U. S. from Atlantic Ocean fishery.

3/Includes value of 10 tons of unclassified tuna.

Note: Shipments of frozen tuna to "other" countries included small quantities to Belgium, France, Netherlands, United Kingdom, and Guam.

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SUMMER ALBACORE TUNA FISHERY TRENDS:

With the Japanese summer albacore fishery drawing to a close at the end of July, landings were averaging about 150 metric tons daily. The albacore schools were moving east and late catches were being made at about 31°10'-32°30' north latitude and 158°00'-158°50' east longitude.

As the end of the season approached purchases by freezers of summer albacore increased and as of July 25 they were reported to have purchased 500-600 metric tons. In July there was less competition from the tuna canners for available supplies of albacore and ex-vessel prices and export prices were about in balance. Some sales of frozen albacore were reported to have been made to United States canners at US\$390 a ton f.o.b. Japan. A backlog of unfilled orders for frozen albacore, amounting to 1,000-2,000 tons which were originally booked at \$320 a ton f.o.b., makes it difficult to book new orders.

Almost all the tuna canners, with the exception of three large firms, had completed canning their production quotas of at least 35 percent whitemeat tuna by the middle of July. As a result, ex-vessel tuna prices dropped from about \$452 a ton late in June to about \$352-365 a ton in July. If the frozen albacore tuna exporters can maintain the export price of \$390-400 a ton, no losses will be taken.

One of the large Japanese fishing companies in July was offering mother-

ship-caught albacore for export to the United States. The first shipment was sold to a west coast United States canner at \$360 a ton f.o.b. This large Japanese firm estimates that about 4,000 tons of mothership-caught albacore will be available for export to the United States from the 1959 season. Almost all of this quantity is expected to be sold to a single United States tuna canner. (Nikkan Suisan Tsushin, September 28, 1959.)

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TUNA CANNERS TAKE STRONG POSITION ON SALES POLICIES:

Shizuoka Prefecture tuna canners held a meeting on July 31, 1959, at Shimizu and discussed measures to overcome the continuing slowdown of canned tuna sales to the United States market. The majority of the larger packers were present. The meeting agreed on three goals: (1) maintenance of the present price for lightmeat; (2) a \$1.50 per case increase from the going price for whitemeat (which would be \$2.50 above the price at the last round of sales); (3) an early reopening of sales by the Joint Sales Company.

The packers' strong position is considered to be supported by the whitemeat production which has been greater than expected, and it will be possible to sell 400,000 cases of whitemeat, so that the relative importance of lightmeat sales has decreased.

This unilateral agreement by the Shizuoka packers does not, of course, have the binding effect of a decision by any formal body, but it is considered certain that the packers' officials will in fact be-

Japan (Contd.):

gin negotiating along these lines with the trading companies. However, it seems likely that the trading companies, which have been calling for a \$1 a case price cut on lightmeat, are going to accept the packers' position. (Nikkan Suisan Tsushin, August 4, 1959.)

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TUNA INDUSTRY TRENDS, JULY 1959:

Exports: The value of Japanese tuna exports to the United States in the first 5 months of 1958 was US\$5,976,000 frozen tuna and \$5,154,000 canned tuna; for the same period of 1959 exports were \$8,861,000 frozen tuna and \$3,657,000 canned tuna, according to Japanese Customs data. (See tables 1, 2, and 3.)

July 1959 status of export quotas for United States was approximately 30,000 short tons annually of round albacore. For yellowfin shipped from Japan 35,000 tons, for yellowfin transshipments through foreign ports 120 landings, equivalent of approximately 35,000 tons. For albacore and yellowfin loins and discs combined 3,000 tons annually, which must be subtracted from round fish quotas at rate of 2 to 1. Samoa and New Hebrides exports are not included in these quotas.

Quotas for canned tuna in brine exports are determined by the United States tariff structure and consumption. Practically no tuna in oil is exported to the United States. Japanese canned tuna industry planning on 1959 exports to United States of approximately 2,450,000 cases.

Table 1 - Japanese Frozen and Canned Tuna Export Validations for Shipment from Japanese Ports^{1/}

Product	Jan. - June 1959		Jan. - June 1958		Year 1958	
	To U. S.	To All Countries	To U. S.	To All Countries	To U. S.	To All Countries
..... (Short Tons)						
Frozen:						
Albacore, round	8,905	9,409	11,951	11,952	21,537	21,637
" loins	752	1,036	8	8	317	402
" discs	-	9	-	-	-	-
" flakes	16	16	74	74	84	84
Total albacore	9,673	10,470	12,033	12,034	21,938	22,123
Yellowfin, gilled & gutted . .	18,822	19,230	17,192	17,204	39,366	39,435
" loins	874	874	-	-	437	437
" discs	-	-	-	-	-	-
" fillets	1,266	1,295	3,206	3,206	6,627	6,627
" dressed	-	570	-	121	-	121
" chunks	-	24	9	-	-	-
" flakes	2	2	-	-	-	-
Total yellowfin	20,964	21,995	20,407	20,531	46,430	46,620
Total frozen	30,637	32,465	32,440	32,565	68,368	68,743
..... (Standard Cases)						
Canned:						
Albacore, in oil	-	124,178	-	121,078	236	242,971
" in brine	245,137	245,137	485,576	485,576	1,311,314	1,312,265
Skipjack, in oil	-	58,432	-	18,470	479	315,779
" in brine	298,239	298,239	205,252	205,252	731,102	742,290
Other lightmeat, in oil . . .	-	143,267	-	123,838	1	313,505
Other lightmeat, in brine . .	8,850	8,850	25,670	25,670	66,220	67,623
Miscellaneous	9	11,621	-	2,116	3,267	51,477
Total canned	552,235	889,724	716,498	982,000	2,112,619	3,045,910

^{1/}Does not include transshipments from other countries. Data supplied by Japan Frozen Food Exporters Association.

Table 2 - Japanese Fresh and Frozen Tuna Transshipment Exports to United States from Direct Landing at Cristobal, Trinidad, and Haiti^{1/}

Product	Jan. - June 1959		Jan. - June 1958		July - Dec. 1958	
	Short Tons	US\$	Short Tons	US\$	Short Tons	US\$
Yellowfin	15,064	3,638,794	2/	2/	10,241	2,632,917
Albacore	1,060	321,861	2/	2/	515	178,865
Total	16,124	3,960,655	2/	2/	10,756	2,811,782

^{1/}Export license validations. Data supplied by Agricultural and Fishery Products Sections of MITI. From Japanese vessels fishing in the South Atlantic.
^{2/}No fishing in Atlantic first part of 1958.

Prices for Frozen: In July 1959 official Japanese frozen tuna export check or floor prices f.o.b. Japan per short ton were: albacore round \$270, loins \$730, discs \$780. Yellowfin gilled and gutted up to 80 pounds \$220, 80 to 100 pounds \$210, over 100 pounds \$190. Yellowfin dressed up to 120 pounds \$210, over 120 pounds \$190. Yellowfin: fillets regardless of fish size \$210, loins \$565, discs \$615. Check prices for yellowfin transhipped through Panama \$10 less

Japan (Contd.):

per short ton for all types. Although the tuna check or floor prices have not been increased, actual export prices are about \$360 a ton f.o.b. for round mother-ship albacore and the Japanese Frozen Food Exporters' Association were re-

Table 3 - Japanese Direct Landings of Fresh and Frozen Tuna at American Samoa and New Hebrides^{1/}

Product	Year 1958
	Short Tons
Albacore	10,096
Yellowfin	2,254
Big-eyed	317
Total	12,667

^{1/}Export license validations. Japanese policy is to limit American Samoa deliveries to 12,000 tons and New Hebrides deliveries to 3,600 tons annually. Deliveries to those islands are over and above Japanese over-all frozen albacore and yellowfin export quotas, but direct landings at and transshipments from Carribean ports are included in over-all quotas.

reported to have raised the basic price for 20-80 pound (gilled and gutted) yellowfin tuna to \$245 a ton f.o.b., effective July 3, 1959. Price of yellowfin gilled and gutted delivered to Puerto Rico by large Japanese fishery carriers was reliably reported as \$250 per short ton c. & i. Basic price of yellowfin delivered to American Samoa was reported as \$190.

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TUNA MOTHERSHIP FLEET OPERATIONS IN SOUTH PACIFIC NEAR THE FIJI ISLANDS:

When the 3,710-ton Japanese tuna mothership Tenyo Maru No. 3 visited Suva, Fiji Islands, August 10, 1959, the fleet's fishing manager reported that fishing had proved very good since the ship left Japan. As of the date of the visit, 3,300 metric tons of the fleet's quota of 5,400 tons had been caught, and 56 percent of the catch was albacore tuna. The fleet expected to fill its quota by the end of August, at which time the mothership was expected to leave the fishing area--about 300 miles southwest of Suva--and return to Tokyo. The fleet's 35 tuna catchers were then to be serviced by the 7,600-ton mothership Koyo Maru, which was due in the area on September 1.

An additional 15 catcher boats were expected to join the 35 catchers already in the area. The Koyo Maru had a tuna quota of 5,700 tons.

Because the fishing had been poor in waters nearer Japan, the Fishery Agency was issuing a permit for an extra mother-ship fleet in the South Pacific this year--making four in all.

The mothership Jinyo Maru, 7,200 tons, built last year, was also scheduled to leave Tokyo on September 1 to operate in the area west of the Gilbert and Ellice Islands. This mothership is owned jointly by the owners of the other two motherships mentioned above. The Jinyo Maru has a catcher fleet of 30 boats and a tuna quota of about 5,700 tons.

Taking into consideration the 5,700-ton quota of the fourth mothership fleet operating in the South Pacific, there would be a total harvest of 22,500 tons from Japanese motherships in the South Pacific this year.

In addition, there are about 30 independent tuna boats, averaging about 250 tons gross each, or somewhat larger than the fleet-type catcher boats.

The Japanese Fishery Agency fixes the mothership quotas each season on the basis of results of earlier seasons. According to the Japanese, this season's catch and especially the high percentage of albacore in the catch, gave no indication that the Gilberts-Ellice-Fiji area was being overfished as yet.

The Nojima Maru, the fourth mothership, commissioned last December, visited Suva on August 5. This mothership left Kobe on May 15 for the South Pacific where she rendezvoused with her 36 tuna catcher boats two weeks later near the Ellice Islands, and within a few hundred miles of the Tenyo Maru No. 3, which had sailed from Tokyo on May 18 for the same area. At the time the Nojima Maru called at Suva, it had taken aboard 2,700 tons of fish of which 950 tons had been transhipped to the freezer vessel Aiko Maru in two shipments to Japan. The Nojima Maru expected to attain its quota of 5,700 tons by the end of September. The vessel was stationed near 22° south

Japan (Contd.):

latitude, 177° east longitude, within 70 miles of the Tenyo Maru No. 3. Both fleets worked their way south gradually along the west side of the Ellice Islands and Fiji. The tuna catcher boats of both fleets were operating over a wide area, some of them almost 1,000 miles from their respective motherships. The mother-ship Nojima Maru has a crew of 64 and 140 fish handlers. The crew of the Tenyo Maru is 55 and it also carries 119 fish handlers. (Letter from J. P. Shortall, Suva, Fiji, August 11, 1959.)

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TUNA VESSEL CONSTRUCTION CONTINUES AT HIGH RATE:

The Japanese tuna fishing industry at present is in rather good condition, and the large fishing companies are taking an optimistic view of its future, according to Suisan Keizai Shimbun (August 19 and 25, 1959), a Japanese periodical. Many Japanese firms are very enthusiastic for the tuna fishing business, and each are planning the construction of from 2 to 5 new vessels to add to their present tuna fleets.

All Japanese companies seem to be aiming at the tuna fishery, which, although smaller in scale than Antarctic whaling or North Pacific salmon fishing, is stable, and with plans for advance bases overseas, it looks as if the expansion of the tuna fishery next year will be more active than this year. One company has two 410-ton tuna vessels under construction and is also planning to buy a 500-ton vessel. One whaling company is building four 500-ton vessels, another a vessel of 680 tons, and a third company a 240-ton vessel.

In some quarters it is feared that this build-up of the tuna fleet may lead to depletion of the resources, but the majority opinion is that the question at present is not one of overfishing, but of finding good fishing grounds. On the trade front, there is optimism about the development in the future of markets other than the United States and Canada.

On August 19 a reception was held at the port of Yaizu for the new tuna long-

liner No. 3 Shoyu Maru. The vessel was built at Shimizu at a cost of 115 million yen (about US\$322,000), has such modern equipment as radar, fish-finder, electric harpoon, and well ventilated and insulated living spaces. Freezing capacity is 110 tons, carrying capacity full loaded is 230 tons of tuna, and the vessel can cruise for 150 days. The No. 3 Shoyu Maru will start her maiden voyage to the Indian Ocean around the end of August. Her over-all length is 44.4 meters (146 feet), beam 8 meters (26 feet), and she has a maximum speed of 13 knots with a 800-horsepower Diesel.

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FISHING VESSEL BUILDING PERMITS ISSUED BY JAPANESE FISHERIES AGENCY:

According to a summary table attached to the announcement of fishing boat building permits issued by the Japanese Fisheries Agency on August 7, 1959, the number of permits issued from the first of April 1959 through the first week in August totaled 333 vessels, representing 24,491 gross tons. The largest category was tuna vessels, with 88 permits issued. These included 21 steel vessels totaling 7,172 tons and 67 wooden vessels totaling 3,655 tons.

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TUNA FISHING COMPANIES OPERATING OUT OF AMERICAN SAMOA ASK FOR QUOTA INCREASE:

The two Japanese companies which are fishing for tuna out of American Samoa for the cannery in that Territory early in August made a joint request for an increase in the quota of tuna that they can handle, giving as reasons the expansion of tuna-processing facilities at Samoa and the stability of the operations.

The Japanese authorities appear disposed to grant this request on condition that the contract price of tuna supplied to the cannery is first raised above the August level. (Nikkan Suisan Tsushin, August 18, 1959.)

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Japan (Contd.):

TUNA VESSEL OPERATORS HOPING FOR MORE FUELING PORTS IN FOREIGN COUNTRIES:

Ports where Japanese tuna vessels can fuel in foreign countries now number more than 20, but the operators are hoping for a further increase in fueling bases close to the fishing grounds. At present the Ministry of Transportation has given to almost all fishing vessels of more than 200 tons gross the status of vessels engaged on foreign runs, and they are freely entering foreign ports for refueling. Even vessels which lack this status are, in some cases, fueling at foreign bases with the special permission of the foreign government.

Principal fueling bases at present are Madagascar, Capetown, Singapore, Colombo, Mobasa, Cristobal, Trinidad, Haiti, Recife, Belem, Dakar, Casablanca, Venice, Naples, Palermo, Port Said, Suva, Tahiti, Samoa, and Curacao. In general base arrangements are adequate for the Mediterranean and African areas, but the problem is considered to be bases for transshipments to the United States. (Suisan Keizai Shimbun, July 18, 1959.)

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PRELIMINARY TALKS HELD ON UNITED STATES-JAPAN MEETING ON TUNA PROBLEMS:

Preliminary Japan-United States talks on intergovernmental meeting on tuna problems began at the Japanese Agriculture Ministry's Sanbancho Annex on August 14, with the Japanese Agriculture Minister and the Fisheries Agency Director and Vice-Director on the Japanese side, and the United States Economics Minister and Fisheries Officer on the United States side. When the U. S. Secretary of the Interior visited Japan on July 26, met with the Foreign Minister, the Minister of Trade, and the Minister of Agriculture, and proposed an intergovernmental meeting, with participation of industry representatives, on technical aspects of tuna fishing, processing, and trade. Thereafter the matter was brought up concretely in talks between the Japanese Foreign Minister and the United States Ambassador and this led to the August 14 meeting.

At the August 14 meeting the United States representatives showed a desire to hold an intergovernmental tuna conference at Washington during September for a period of two weeks and with the delegations of each side to comprise 10 persons.

To this the Japanese side countered that Japan has set up a tuna regulatory council and is striving unilaterally for the stabilization of the United States tuna market, so that intergovernmental negotiations are inappropriate. If necessary, it is desirable that talks be held only at the industry level. The Japanese showed an intention to consider specific problems further at the level of working officials.

With respect to the five points proposed by the United States--(1) investigation and conservation of tuna resources, (2) improving the efficiency of tuna fishing, (3) tuna processing technology, (4) improving the efficiency of marketing, and (5) expansion of tuna markets--the Japanese argued back as follows: (1) the study of tuna resources is very difficult at present, so Japan would like to carry on the exchange of data among Japanese and United States research agencies; (2) Japanese and United States tuna fisheries are basically different, so it would have little effect to discuss them; (3) the Japanese tuna industry is constantly making positive efforts, so it is inappropriate to make this the subject of debate between governments; (4) Japan has set up a regulatory council and is giving thought to the condition of the United States market, so intergovernmental talks are inappropriate; (5) Japan has set up a special agency (the International Tuna Council) on the Ministry of Trade's budget and has requested United States participation, but this has not materialized because of a lack of unity in the United States industry.

The Japanese side proposed that talks should be carried on at the industry level, but the United States representatives held out for intergovernmental talks, and that is how the preliminary meeting ended. (Suisan Keizai Shimbun, August 15, 1959.)

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RESTRICTIONS ON HIGH-SEA FISHING:

Japan's salmon fishing fleet of 460 ships sailed out of Hakodate on May 15, 1959, for the fishing

Japan (Contd.):

grounds in the North Pacific Ocean. The annual departure has always been festive, with banners and bunting decorating the vessels. This year, however, their departure was not as spectacular for two reasons.

The protracted Japan-Soviet fishing negotiations delayed the sailing and Japan's salmon quota for this year was drastically reduced.

From ancient times, the Japanese have relied on the sea for much of their daily food. The waters which surround Japan abound in many species of edible fish, and have been the principal source of animal protein in the Japanese diet. Because some 90 million people have to live in an area of only 142,644 square miles, fish has become even more precious as a source of food.

For several years after the end of World War II, Japan was able to fish only in coastal waters because of Occupation restrictions and the loss of practically all her fishing vessels during the war.

With the abolition of the restrictions and the signing of the San Francisco Peace Treaty, the Japanese fishing industry made a remarkable recovery. Today, Japanese fishing vessels are operating in the Arctic, Antarctic, and Indian, Atlantic and Pacific oceans. They are seen even in such distant places as South American waters.

Japan's total exports of fishery products now come to about \$160 million annually (1958) and catches total 5,400,000 metric tons. Japan today is the leading fishing nation in the world, accounting for approximately two-fifths of the world's total haul. However, the operations of the Japanese fishing industry on the high seas are being subjected to certain restrictions.

The third Japan-Soviet fishery negotiations which opened in Tokyo in January 1959 were finally concluded after four months of protracted and difficult talks. Although negotiations on Japan's crab quota had already been settled in May, with Japan's catch curtailed to 280,000 cases or 10 percent less than last year, the talks on the crucial problem of Japan's salmon quota were not completed until May 13, after the salmon fishing season had already started. Japan's salmon catch in the area regulated by the Japan-Soviet Fisheries Convention was fixed at 85,000 metric tons as compared to 110,000 tons for last year and the 120,000 tons permitted for 1957. Thus, the results of the negotiations were not satisfactory to Japan.

The first Japan-Soviet fishery negotiations were held in 1956, with the aim of conserving salmon and other fish resources in North Pacific waters. The two countries agreed that the Japanese quota in the waters prescribed by the Fisheries Convention should be fixed annually by negotiations between the two countries. The Soviet Union has announced its own salmon quota every year but this has been merely a goal and does not mean that actual total catch must not exceed the announced quota.

During 1958 negotiations, the Japan-Soviet Fisheries Commission, established under the Conven-

tion, decided to suspend fishing in the Sea of Okhotsk during and after 1959. This decision was based on the consideration that the catching of salmon immediately before they went to their spawning grounds would not produce favorable conditions for their reproduction. This naturally narrowed Japan's salmon fishing grounds considerably.

Japan also concluded the North Pacific Fisheries Convention in 1952 with Canada and the United States. Under this convention, Japan abstains from fishing for salmon of Canadian and American origin in the area west of 175° W. as well as herring and halibut off the coast of the North American Continent, while Canada and the United States continue to carry out necessary conservation measures for these species.

Two other restrictive areas are found west of the Japan Sea. These are the so-called Rhee Line, established unilaterally by the Republic of Korea, and the no fishing area established by Communist China. Proclamation of the Rhee Line by President Syngman Rhee in January 1952 has closed to Japanese fishermen a wide area of fishing grounds hitherto considered high seas. Although Japan does not recognize the validity of the Rhee Line, the Republic of Korea has been capturing Japanese fishing craft and crewmen operating near the line, and interning them. This is one of the focal points in Japan-Korea negotiations, and it was also taken up at the Geneva talks concerning the problem of repatriating Korean nationals living in Japan. Two Japanese women representing the families of men still held by the Korean Government went to Geneva to appeal for the return of their husbands and sons.

The off-limits fishing area along the coast of the Chinese mainland is based on the Fisheries Agreement between private interests of Japan and Communist China concluded in Peiping in April 1955. This agreement expired in June last year, but Japanese fishermen are continuing to abstain from operating in the area.

In 1953, Australia claimed jurisdiction over the continental shelf adjacent to its coast and also announced it would apply the Australian Pearl Fisheries Act of 1952/53 to all who engage in pearling outside the territorial waters within the continental shelf area. A dispute arose between Japan and Australia on these points, and hampered Japanese pearl fishing in the Arafura Sea. The Arafura Sea is located north of Australia and is famous for its mother-of-pearl oysters.

The term "continental shelf" is defined as referring to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 meters or, beyond that limit, to where the depth of the superjacent waters permits the exploitation of the natural resources of those areas.

The two countries decided at the end of 1953 to refer their respective claims to the International Court at the Hague. However, an agreement was reached between Prime Minister Kishi and Premier Menzies when the former visited Australia at the end of 1957, to postpone indefinitely the appeal to the International Court of Justice. They agreed that Japan's pearl oyster catch would be limited to a certain quota to be fixed annually by negotiation be-

Japan (Contd.):

tween the two countries. However, in 1958, the International Conference on the Law of the Sea in Geneva recognized that living organisms belonging to sedentary species on continental shelves are to be exclusively claimed by the coastal countries. Thus, Japan's position concerning the Arafura Sea seems to have been weakened considerably. The Japanese catch of pearl oysters, 1,000 tons in 1956, was gradually curtailed and the 1959 quota was 375 tons as compared to 470 tons in 1958.

It was mainly because of the freedom to fish in the high seas--one of the fundamental principles of international law--that Japan managed to develop her fishing industry to its present high level. Unfortunately, however, this principle is being violated in some cases and Japanese fishermen are gradually being shut out from the high seas.

Three reasons can be found for the growing restrictions:

The first reason lies in the problem of conserving marine resources. It is generally agreed that catch quotas are necessary for the conservation of fish resources. However, because of the lack of scientific data on marine resources, the recent Japan-Soviet fishery negotiations ended without establishing why salmon resources are diminishing. If more thorough research were carried out in this direction a more equitable salmon quota could be fixed. Japan is willing to carry out a scientific study on salmon resources.

Another reason for the reduction of high-seas areas open to fishing is the expansion of territorial waters. It has been a standing international precept up to the present that territorial waters extend three nautical miles from a country's coast. But recently, some countries are claiming that waters extending 12 nautical miles and even 200 miles offshore are their territorial waters. During last year's International Conference on the Law of the Sea, Japan, as well as such countries as the United States, Britain, West Germany, Sweden and Greece, advocated a three-mile limit on territorial waters. However, South and Central American, Southeast Asian, Arab, and Communist nations claimed a 12-mile limit. No definite conclusion was reached by the conference.

The vast majority of opinion appears to favor limiting territorial waters to between 3 and 12 nautical miles. At any rate, it is urgently desirable that some sort of international decision be reached on this problem.

The third reason is concerned with the problem of distribution of marine resources from the standpoint of conserving fish resources. This problem, of course, is interrelated with the first reason. The problem lies in the fact that Japanese fishing operations in coastal waters are being restricted or completely shut out even though there is no scientific data to justify such a lockout.

For example, the Soviet Union in its negotiations with Japan claimed that it had priority in fishing for salmon because the salmon had been spawned in rivers in its own territory. In the case of the Japan-United States-Canada fishery agreement, the latter two countries have com-

pletely barred Japan from fishing in a certain area, claiming that the two countries alone are catching the allowable limit of the fish. Furthermore, it is reported that there are movements afoot in the United States Congress directed at further restrictions on Japanese salmon fishing.

At the four-nation whaling conference held recently in Tokyo--Japan, Britain, the Netherlands, and Norway failed to agree on the distribution among them of the quota catch of 12,000 whales.

The fishing industry not only provides the Japanese with necessary animal protein but also provides exports which earn needed dollars. Domestically, Japan must rationalize its fishing industry. This will necessitate extensive measures to alleviate the present plight of small fishing companies as well as individual fishermen. Japan must also devise means of utilizing the limited marine resources to their fullest. Many fishing firms have already initiated the canning or packing of fish meat into hams and sausages. However, there are certain limits to domestic measures, and if the situation continues as at present the Japanese fishing industry will be faced with increasing difficulties.

As one way to cope with the situation, some Japanese fishing firms are starting to develop new fishing grounds in cooperation with such countries as India, Burma, and Argentina which are trying to foster and develop their own fishing industry. (Japan Report, July 15, 1959, Consulate General of Japan, New York City.)

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TUNA FISHERY FEDERATION PUBLISHES WHITE PAPER ON INDUSTRY PROBLEMS:

Late in July the Japan Federation of Tuna Fishery Cooperative Associations issued a report entitled "The Present Situation and Problems of the Tuna Fishing Industry," copies of which were widely distributed within the fishing industry and in Government fishery administration circles. The purpose of the pamphlet is to express the Federation's opposition to a proposed redeployment of excess salmon fishermen into the tuna fisheries, and to explain the conditions in the tuna fishing industry which make the entrance of additional fishermen undesirable.

The report stresses the importance of the tuna fishing industry in Japan's economy, pointing out that tuna boats make up nearly 20 percent of the powered fishing boat tonnage and land nearly 10 percent by weight of Japan's total marine fisheries catch. Tuna products make up the biggest single category--over 28 percent--of Japan's fishery exports, which in turn are about 6 percent in value of all Japanese exports.

Japan (Contd.):

The industry is said to be in a generally weak financial condition. About 65 percent of the tuna boats are operated by individual owners, and most of the so-called company operations are small-scale and inadequately capitalized. An apparent decline in the abundance of tuna on near grounds has forced the operators to build larger vessels with which to reach more productive distant waters, and the lack of adequate capital or government financing for this building has put many of them in a precarious financial condition. Productivity appears to be on the down-grade even on the newer distant fishing grounds, while operating costs are going up as longer trips become necessary.

Among other serious problems of the industry, according to the report, are strongly fluctuating prices, inability to forecast accurately the seasonal abundance of fish, and very slow expansion of domestic consumption of tuna. The Federation is strongly opposed to any expansion of the over-all scale of production, i.e., the number of boats and fishermen, until a greater degree of stability has been achieved at the present level of development. Among the solutions proposed for some of these problems are changes in the government's regulations that would allow owners of boats of under 100 tons gross to build replacements of greater size and efficiency, which is not possible under the present licensing system, or the acquisition of rights to use bases closer to the tropical tuna grounds, so that smaller vessels could operate more efficiently.

The report shows a strong awareness of the importance of the export trade to the tuna fishing industry, stating that about 40 percent of the tuna catch is exported, and 80 percent of this to one market, the United States. With domestic consumption showing little growth, the only key to the future is held to be an orderly expansion of exports. In this connection, the report places great emphasis on the need for effective measures to prevent excessively cheap exports and to insure orderly marketing. (United States Embassy dispatch form Tokyo of August 6, 1959.)

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CANNED SALMON SALES
OF 1959 PACK:

The first round of sales of canned salmon for the United Kingdom was closed by the Japanese Joint Sales Company on August 5, and it is certain that contracts will be made for the total quantity of red, pink, and chum salmon. Attention in the industry is now being centered on the timing and sales methods for the second round of sales. It was expected that between August 10 and 15, when private arrangements on silvers would have been ascertained, a supplementary sale would be held.

In some quarters an early supplementary sale on pinks is desired, but there is rather strong fear that for such a sale to be held before the goods sold in the first round reach their destinations might soften the market, and so it is considered certain that no such supplementary sale will be held at least until after announcement of the United States and Canadian opening prices, slated for the latter part of August. It is thought that if this is done, there may be considerable possibility of another price rise.

Of the canned salmon offered at the first round of sales, about 125,000 cases of 4-dozen red sockeye No. 2's and about 70,000 cases of 4-dozen pink No. 4's for early shipment were sold to the United States, and a second pink sale was scheduled shortly. The Joint Sales Company closed bidding by United States buyers for the time being on August 5, and will determine the amount of sales on that basis. However, the pack of pink No. 4's is less than half of the quantities ordered, and sales will probably be held within 200,000 cases. It is expected that quantities of pink No. 2's available will just about match the orders received. It seems most likely that the second round of sales will settle on a figure of about 300,000 standard cases. (Nikkan Suisan Tsushin, August 5.)

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EXPANSION OF TRAWL
FISHERIES IN NORTH PACIFIC:

Japanese expect that there will be a great boom in the North Pacific trawl fisheries this year and next year, because of the increasing operations of fish-meal and frozen-flatfish fleets.

Japan (Contd.):

These fisheries, however, face increasingly serious problems with respect to bottom fish resources, administrative guidance, relations with other fisheries, and the economics of operation. Although at the present time the magnitude of the northern bottom fish resources is not clear, the authorities and the industry are setting up optimistic estimates, planning additional fleets, and considering the fisheries as a possible place in which to redeploy excess fishing power resulting from reorganization of the salmon fishery. At the same time, there are plans for sending out more fleets to produce frozen flatfish, as the popular market for this product grows. On the other hand, some elements in the industry doubt whether the bottom fish resources are capable of supporting 10 or more fleets.

There are already plans for sending six fleets to the Bering Sea and the Okhotsk Sea in September to produce frozen flatfish. This year there are two fish-meal fleets in operation, but it is expected that next year this number may increase to six, if the plans of the operating companies materialize. At this rate, the frozen flatfish operations will take 30,000 metric tons of fish, and each of the fish-meal fleets will use from 70,000 to nearly 100,000 tons of flatfish and Alaska pollock. The total catch of bottom fish, if all fleets operate as planned, will be over 500,000 metric tons.

Considering the fleet operations in detail, the 9,600-ton Kinyo Maru and the 11,000-ton Tenyo Maru are operating as fish-meal factoryships in the Bristol Bay area, each using 22 trawlers. Early in September the 9,800-ton Miyajima Maru, the 7,400-ton Kashima Maru, the 7,500-ton Criyo Maru, and the 10,000-ton Kyokusan Maru, each with a number of trawlers, sailed to the Bering Sea to produce frozen flatfish, while the 7,400-ton Itsukushima Maru and the 7,400-ton Eijin Maru departed for the Sea of Okhotsk for the same type of operation. The fish-meal factoryships sailed in April and the frozen flatfish fleets in September, and if the plans for increasing the number of fish-meal fleets materialize, the latter part of the fishing season next

year may see more than 10 fleets on the north Pacific grounds.

The effect on the resources is not the only problem. There is also that of the physical capacity of the fishing grounds. On August 10 the Japanese authorities closed an area to fish-meal fleet operations because of possible effects on crab resources. This was an area on the east side of the fishing grounds around 57° N., 165° W., an area of good catches which is essential in order to make fish-meal fleet operations pay. The operating companies say that the value of their fishing grounds has been cut in half by this action. Not only have the grounds on the Bristol Bay side been shaved back because of the relation to the crab resources, but they are pinched on the north by the Soviet crab fleet, and to the west, on the Bering side, by the Soviet trawling fleet of 48 ships, so that it seems to be a question whether there is room for 10 or more fleets to operate. (Suisan Keizai Shimbun, August 16, 1959.)

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LANDINGS OF FISHERY PRODUCTS INCREASED IN 1958:

Japan's total landings of aquatic products (excluding whales) in 1958 amounted to about 5.5 million metric tons (about 12.1 billion pounds), as compared with 5.4 million tons (about 11.9 billion pounds) in 1957. The lower rate of increase of about 2 percent, as compared with an increase of 13 percent from 1956 to 1957, is an indication that the expansion of Japanese fisheries production may be reaching its limits. The average price to the producer for all aquatic products was down by 9 percent in 1958 from the preceding year.

Landings from general marine fisheries, fresh-water aquaculture, and whaling increased, while landings declined in fresh-water fisheries and marine aquaculture, the latter primarily because of the poor laver (edible seaweed) crop. Among the important species, skipjack tuna, saury or jack mackerel, and sand lance landings were up; albacore tuna, sardine, herring, and Atka mackerel catches dropped considerably.

Statistics compiled on the worldwide landings of tuna by Japanese boats in

Japan (Contd.):

1958 show a total of 416,246 metric tons for all species, of which 10,710 tons were produced by mothership fleets, and 43,946 tons were landed in foreign ports from Samoa to Haifa, Israel. Ex-vessel tuna prices were generally higher than in 1957: the average price of bluefin tuna was up 86 percent, to \$567 a short ton, because of the short catch; yellowfin, at \$234, was up 10 percent; and big-eyed, at \$257, was up 7 percent, the United States Embassy in Tokyo, reported on July 7, 1959.

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A JAPANESE AND A UNITED STATES COMPANY PLAN TO CAN OYSTERS IN JAPAN:

In mid-August a Japanese fishing company entered into an agreement with a United States west coast oyster canning firm under a provisional contract for the production of canned oysters using Hiroshima oysters as raw material. The president of the United States company arrived in Japan on September 7 to work out the details of the plan.

According to the plan, a factory will be built in Hiroshima with capitalization of about 250 million yen (US\$694,000). An engineer and an inspector will be sent from the United States. Canned oysters will be produced to meet United States pure food standards and the product will be exported to the United States oyster company. A trading firm of Nozaki is also involved in the agreement.

The cannery will pack small shrimp and fruits during the oyster off-season, and it is estimated that annual sales will amount to about 600 million yen (US\$1.7 million). (Nikkan Suisan Tsushin, September 7, 1959.)

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INVESTIGATE FROZEN RAINBOW TROUT EXPORTS TO UNITED STATES:

Since last year the price of Japan's frozen trout exports to the United States has been steadily dropping because of overproduction and competition from Danish trout. Towards the end of August the price was down to 33 to 34 U. S.

cents a pound c.i.f. United States west coast port.

It is reported that the U. S. Treasury Department has taken note of this situation and has instructed the United States Embassy to investigate to see whether or not there is any suspicion of dumping in connection with rainbow trout exports.

The August 1959 landed price for trout in Japan was about 500 yen per kan (8.27 pounds) or 17 U. S. cents a pound, but it went down to 400 yen (13 cents a pound) for a while, so the average is about 450 yen per kan or about 15 cents a pound. (Nikkan Suisan Tsushin, August 25, 1959.)

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COMPANY FORMED TO HANDLE FUR-SEAL AND OTHER MARINE-ANIMAL SKINS:

A Japanese company has been formed, capitalization 20 million yen (US\$55,600) to handle marine-animal pelts or skins. The Company's first activity was expected to be a bid on 2,847 fur-seal skins offered at Osuchi on August 26.

The company will engage in general development of marine leathers; utilization of the hides of such salmon predators as salmon sharks, sea lions, and porpoises; improvement of tanning technology and export of products; and mink rearing in the colder parts of Hokkaido.

Up to the present time the Japanese Government has consigned its 15-percent share of seal skins taken under the North Pacific Fur Seal Treaty to a Saint Louis, Mo., Company, and has received the money from their sale. The new Japanese company will try to have these pelts sold in Japan, as a way of encouraging development of a new business. (Nikkan Suisan Tsushin, August 22, 1959.)

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SURVEY OF FISHERMEN'S LIVING STANDARDS:

The Fisheries Department of Kagawa Prefecture is trying to improve the living standards in fishing villages, which are lagging far behind those of farming villages. This spring the Department's newly-established Fishing Village Livi-

Japan (Contd.):

hood Improvement Guidance Section carried out a survey of the actual living conditions of fishermen's families, with the cooperation of the women's auxiliaries of 15 fishery cooperative associations in the Prefecture.

Some of the major points revealed by the survey were as follows: The monthly average budget for the families in each cooperative ranged from a high of 22,000 yen (US\$61.60) to a low of 8,000 yen (US\$22.40), with four cooperatives reporting average budgets of less than 10,000 yen (US\$28). The majority of the families reported that they could not live on their earnings from fishing alone, the difference being made up by farming, day labor, and borrowing.

On the question of whether they would encourage their children to take up fishing as a career, the cooperative with the highest percentage of affirmative answers reported only 40 percent, while all members of six cooperatives replied in the negative. (Nippon Suisan Shimbun, August 21, 1959.)

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TRADE AGREEMENT WITH ITALY INCLUDES TUNA:

Italy and Japan agreed sometime ago to conclude a new trade agreement, but it has been put off month after month. Recently, the Chief of the Trade Promotion Bureau, Italian Ministry of International Trade, was reported to be due in Japan and preliminary negotiations were expected to begin at the end of July.

Frozen tuna can only be exported to Italy in barter for Italian rice and unless Japan buys rice, tuna cannot be exported even though orders for frozen tuna are received from Italy. The Japanese tuna industry, therefore, has been making a strong representation urging speedy conclusion of a new trading agreement so as to make tuna exports more freely. With the prospect of the renewal of the Italian-Japanese trade agreement the Japanese tuna industry became more optimistic regarding future trading in frozen tuna. (Industrial News, July 25, 1959.)

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Republic of KoreaSHRIMP CATCHES IN DEEP-WATER DURING OFF-SEASON PROMISING:

A Korean fishing company reported good catches of shrimp in deep water off Pohang in July 1959. The vessel fishing for shrimp is operating under the guidance of Fisheries Research Station technicians. The catches made are significant because heretofore commercial shrimp fishing had not been carried out during the summer. It is considered an important development because attempts are being made to fish for shrimp off Korea year-round. (U. S. Operations Mission in Seoul, August 21, 1959.)

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TWO MODERN TRAWLERS ADDED TO FISHING FLEET:

Two 80-ton trawlers arrived in Korea from Japan at the end of June. The vessels are equipped for multiple-purpose fishing, are completely refrigerated, and are of modern Japanese design and workmanship. They were expected to start trawling for fish as soon as customs formalities had been completed. (U. S. Operations Mission in Seoul, August 21, 1959.)

**Mexico**EXPORT DUTY CUT ON SHRIMP FROM SOME AREAS:

Effective August 30, 1959 (Diario Oficial, August 27, 1959) Mexico lowered the export duty on frozen shrimp originating from the Gulf of Mexico, Salina Cruz, Oaxaca, and Santa Rosalia, Baja California, by about 0.75 U. S. cents a pound. At the same time the export duty on fresh or iced shrimp of the same origin was lowered about 4.2 U. S. cents a pound. The change in duty was effected by decreasing the official price, upon which duties are calculated, from 1,700 pesos per 100 net kilograms to 1,250 pesos (from about 61.8 cents to 45.4 cents a pound). Duties for shrimp from other points in Mexico remain as previously (about 2.9 U. S. cents a pound for frozen and about 15.75 cents a pound for fresh or iced). Before the present reduction

Mexico (Contd.):

the export duties throughout Mexico were the same irrespective of the origin of the shrimp.

Practically all shrimp exported from Mexico are frozen. The present duty change will give producers in the Gulf of Mexico and Salina Cruz a slight relief from low production and falling prices in the United States market.

Frozen shrimp in 1958 ranked fourth in Mexican exports with a value of about 400 million pesos (about US\$32 million). In 1959 Mexican shrimp exports through June were about 50 percent higher than during the same period in 1958. This ratio dropped during July and August owing to a closed season in the Pacific. (United States Embassy dispatch from Mexico, September 4, 1959.)

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NEW SHRIMP FREEZER AND FISH CANNERY:

A combined shrimp freezing plant and fish cannery is under construction at Santo Domingo, Baja California, Mexico. Freezing capacity will be 26,000 pounds daily with storage capacity for 600,000 pounds of frozen shrimp. The plant will also produce 50 tons of ice daily and have storage space for 500 tons.

In addition to freezing shrimp (the principal objective) and some fish, the plant will can tuna, sardines, and abalone. Completion date for the freezing section is scheduled for the end of November 1959, and January 1, 1960, for the cannery.

Santo Domingo is on the west coast of Baja California at approximately 25°30' latitude. It is situated in the lagoon area which connects with the northern end of Magdalena Bay.

During the past two seasons, the area along the west coast of Baja California between Scammons Lagoon and Cape San Lucas has been quite productive in shrimp. The freezing plant is being constructed to eliminate the costly transport of the catch to plants on the mainland or

in Mexicali. (United States Embassy dispatch from Mexico, August 28, 1959.)

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SHRIMP FISHERY TRENDS, AUGUST 1959:

Shrimp production and exports by Mexico were down during August 1959 due to the closed season for shrimp trawling in the Gulf of California which began on July 16 and ended on September 15. Bay fishing in that area began on September 1, but catches were not expected to be higher than in 1958 because of the low price of small shrimp on the United States market.

Falling prices on the United States market during August caused considerable distress in the Salina Cruz fisheries. Prevailing prices paid on shrimp smaller than 25 to the pound were generally less than the cost of production. To alleviate the situation somewhat, the Government at the end of August reduced export duties on frozen shrimp by about $\frac{3}{4}$ of a U. S. cent a pound. This reduction only affected shrimp exports originating from the Gulf of Mexico, Salina Cruz, Oaxaca, and Santa Rosalia, Baja California.

At Ciudad del Carmen fishing improved a bit the latter part of August but still was averaging less than one ton of headless shrimp per 10- to 12-day trips. Catches at Campeche were somewhat less. Salina Cruz catches were reported to be a little better than those in the Gulf of Mexico.

Carmen landings were about two-thirds pink and one-third white shrimp with a smattering of browns. About 45 percent of the catch was 26 to 30 count and under.

Campeche landings were about 95 percent pink and 5 percent white with no browns reported. The sizes of the shrimp in the catches ran larger than at Carmen. About 65 percent were 26 to 30 count and under, states a dispatch (September 4, 1959) from the United States Embassy in Mexico.



Morocco

CAMPAIGN LAUNCHED TO INCREASE USE OF FISH AND FISH FLOUR:

The first real attempt to fulfill the hope that Morocco increase her consumption of fish was "Operation Poison," a campaign launched by the Ministry of Health in two low-income neighborhoods in Rabat. The advantage of such an increase would be: (1) to absorb a part of Morocco's overproduction of sardines, and (2) to supplement the population's protein-deficient diet. Although concentrating on the sale of fresh sardines, the campaign also aimed at popularizing the use of a fish flour produced in Safi for human consumption. Much publicity has been given to the drive by the press. Permanent effects are difficult to estimate, and sales may fall off when the fanfare subsides, but the results of the campaign exceeded the expectations of the government.

The fish flour (Farine Alimentaire de Poisson--80 percent protein) is a whitish powder, slightly fish-flavored, made from dressed sardines. The process was developed by a chemist, who worked in cooperation with the Food and Agriculture Organization, which has since taken an active interest in the product and has sent experts from time to time to make tests. A pilot plant capable of producing a ton of fish flour a day went into production in August 1958, and the flour has since been used by the Government in orphanages and hospitals.

The importance of the product to Morocco (and to many other countries with protein-deficient diets) lies in its low price, its keeping quality, and its high protein content. It is not yet sold commercially except in pharmacies, but the factory-door price is only 192 francs a kilogram (about 20.7 U. S. cents a pound at rate of exchange 420 francs equal US\$1). The normal supplementary protein needs of an adult in Morocco can be satisfied by 25 grams (about 0.9 ozs.) of fish flour a day, which costs about five francs or a little over 1 U. S. cent. Although the retail price would no doubt be considerably higher due to distribution and packing costs, the price is still extraordinarily low for a high-protein food. A kilogram (2.2 lbs.) of fish flour is said

to be the equivalent of about seven kilograms (15.4 lbs.) of red meat.

The fish flour is presently packed in polyethylene bags and is said to keep very well. When mixed with spicy Moroccan foods, the fishy flavor of the product can be concealed to some extent. During the campaign, the flour was baked into a kind of Moroccan bread made with anise and ginger which reportedly had no fishy taste. (United States Consulate in Casablanca, September 8, 1959.)

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FISHERIES TRENDS, JULY 1959:

On June 10, after the first three days of fishing, the owners of the sardine fleet of Safi, Morocco, decided unanimously to keep their boats in port rather than yield to the demands that the fishing crews be chosen by the fishermen's union rather than by the boat-owner. On June 19, after Government intervention, the union conceded that the owners have the right to select their crews. Work was immediately resumed, and some boats went out on the day of the settlement.

During the first three days of fishing, 95 percent of the catch was sold to fish meal and oil plants and the rest frozen for export. The canneries, which used to buy most of the cannable sardines, had not yet opened. There remain about 700,000 cases of canned sardines from the 1958 season, which because of Morocco's failure to devalue her franc along with French franc will be hard to sell in France.

The devaluation crisis has also had the effect of completely stopping the export of shrimp to France. This product in 1958 brought in 400 million francs (about US\$952,000). France has turned to less expensive suppliers including Italy, Egypt, and the Scandinavian countries.

France is expected to renew the customs free import quota for Moroccan sardines and admit up to 600,000 cases of canned sardines and 3,000 metric tons of frozen sardines. It is probable that without this advantage on the French market, the fish-canning industry in Morocco, already in dire straits, would col-

Morocco (Contd.):

lapse. There is great concern that France's obligations to the Common Market may prevent her from continuing to permit customs privileges to Morocco.

Moroccan fishing boats have been selling fish to French and Portuguese boats out at sea rather than landing their catches. The sale is illegal because it evades the landing tax. The price received is not known, but it presumably exceeds that expected in a Moroccan port where most fish are sold to byproducts plants.

Large French sardine boats continue to fish off the Moroccan coast but outside the six-mile limit. The fish are frozen aboard ship and taken back to France for canning. The Moroccan fisheries industry, thus bypassed, is eager to have Moroccan territorial waters extend out twelve miles, which is about the average extension of the continental shelf.

The fish meal and oil plants until now the only prospering segment of the fisheries industry, are finding themselves hard pressed and are rebelling at the relatively high price they must pay for their fish (9 $\frac{3}{4}$ francs per kilogram or about US\$21.00 per short ton--and 11 francs or about US\$23.75 per short ton after July 31). The fish meal plants are not working in Agadir and fish are being caught there only for freezing and for a very small sardine canning activity.

The electrical fishing experiments which have gone on for over a year off the Moroccan coast have so far failed completely, the United States Embassy in Rabat reported on July 29, 1959.

Note: Moroccan francs converted to US\$ at rate of 420 francs equal US\$1.



Netherlands

UNDERWATER STUDIES OF TRAWLING:

Working with the Institute for Fishery Research at Ijmuiden, Dutch frog-

men for the first time have observed the reaction of fish along the sea bed as they are caught in the nets of a trawler. The study was carried out on the sea bottom by four amateur frogmen, at a depth of between 50 and 60 feet, 12 miles northwest of Ijmuiden on the Dutch coast.

The most surprising result of the study, according to the Institute, was the discovery that about 20 percent of the fish caught escape through the meshes when the trawl is drawn up from the sea bed. The frogmen also reported that flatfish did not move until the trawl was only about six inches away and then swam upwards to try to keep ahead of the net. The fish usually gave up this effort after about 30 seconds.

Owing to the success of the tests and the amount of study material produced by them, plans are now being made to train frogmen for work exclusively with the Institute during which underwater cameras will be used. (United States Embassy, The Hague, June 25, 1959.)

Nicaragua

SHRIMP FISHERY TRENDS:

Shrimp fishing off the Caribbean coast of Nicaragua has been quiet since the beginning of 1959 and the Collector of Customs reported only 154,000 pounds exported during the first quarter of 1959. The Compania Maritima Mundial Sociedad Anonima of Nicaragua has been granted a 10-year concession to fish off the Atlantic coast and a United States company from Florida asked for a concession to fish off the same coast.

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SHRIMP LANDINGS AND EXPORTS:

Landings: Prior to 1958 shrimp fishing in Nicaraguan waters was done primarily to supply the domestic demand and few shrimp were exported. Since the Nicaraguan market is small (population 1,400,000), probably not more than 220,000 pounds of shrimp were caught each year from 1954 to 1957. In 1958 a law for the development of the country's natural resources was approved and foreign companies, primarily Panamanian

Nicaragua (Contd.):

and American, began fishing for shrimp off both coasts of Nicaragua by virtue of licenses granted by the Nicaraguan Office of Natural Resources (Oficina de Riquezas Naturales). The catch in 1958 was estimated by the Office of Natural Resources at 728,000 pounds of which almost 617,000 pounds were exported--includes both shrimp (90 percent) and lobster (10 percent). The catch in 1959 should exceed the 1958 catch.

Exports of Crustacea and Mollusks: Nicaragua's Customs Collector includes shrimp under Crustacea and mollusks, code 031-03 of Nomenclature Arancelaria Uniforme Centroamericana, published by the United Nations in December 1955.

A total of 1,000 pounds, valued at US\$746, of shellfish (mostly frozen shrimp) were exported to Costa Rica in 1954 and 1,300 pounds, valued at \$700, were exported to the United States in the same year. There were no exports during 1955 and 1956.

A total of 1,200 pounds valued \$575, were exported to Costa Rica in 1957 and 1,600 pounds, valued at \$750, were exported to Panama in the same year.

A total of 6,000 pounds, valued at \$3,600, were exported to Panama in 1958 and 603,000 pounds, valued at \$315,721, were exported to the United States in the same year.

During January and February 1959, 101,000 pounds valued at \$55,497, were exported to the United States. (United States Embassy, Managua, report of June 8, 1959.)



Norway

FISHERMEN'S MARKETING ORGANIZATION ENDS EX-VESSEL PRICE DISPUTE WITH FILLET INDUSTRY:

North Norway's fishermen's marketing organization (Norges Raafisklag) in July 1959 agreed to comply with the Norwegian Ministry of Prices and Wages directives calling for a reduction

in the price spread between ex-vessel prices paid by the filleting and freezing industry (Norsk Frossenfisk) and other processors. The fishermen's organization also announced that it will honor the terms of an agreement with the filleting and freezing industry on summer fish prices. In turn, the filleting and freezing industry announced that it had withdrawn its breach of contract suit against the fishermen's marketing organization.

The long-standing dispute between the fishermen's marketing organization and the filleting and freezing industry over ex-vessel prices appears to have been settled, if not permanently, at least for the time being. (United States Embassy dispatch from Oslo dated July 31, 1959.)

Note: Also see Commercial Fisheries Review, June 1959, p. 73.



Pacific Islands Trust Territory

FISHERIES IN 1958:

The potential fishery resources of the Trust Territory of the Pacific Islands^{1/} are substantial. Subsistence fishing is an important daily activity for most of the inhabitants. Fish and other seafood provide the chief source of protein for the local diet. Fishing is carried out mainly on the reefs and in the lagoons; a limited amount of deep-sea fishing is done.

The potential of commercial fishing is recognized, and the Administering Authority for a number of years has been exploring ways and means of developing this important asset. A fisheries biologist was employed in 1958 to survey the fishery resources of the Territory and assess the fisheries potential and need of the various districts. Following the completion of this survey, it was determined that initial development efforts would be made in the Palau District. A subsistence fishing project was conducted during the year in that district and a small-scale commercial fishing project begun.

A substantial concrete dock, a steel shed, together with adequate adjacent land was obtained for the fisheries project and rehabilitation of the buildings started. The items of equipment necessary to the initial plant such as a freezing unit, ice plant, and the like have been purchased and are awaiting installation. The fisheries biologist made arrangements in Japan for the construction of a 20-ton fishing vessel, which will operate out of the Palau fisheries project headquarters. The delivery of this fishing vessel was scheduled for November 1958. The goal of the fisheries project is to cut down the Trust Territory's imports of canned fish in Palau and elsewhere in the area by instituting efficient

^{1/}Under Trusteeship of the United States since July 18, 1947. Occupies a vast ocean area of some 3 million square miles in the Western Pacific north of the equator and consists of three major island groups--the Marshalls, the Carolines, and the Marianas. Administered by a High Commissioner under the supervision and direction of the U. S. Secretary of the Interior.

Pacific Islands Trust Territory (Contd.):

fishing and fish-preserving techniques, which could be operated by local industry. Plans called for the opening of a fish-processing plant for the preservation of fish by methods other than by canning to be in operation by mid-1959. Eventually it is hoped that an experimental small-scale pilot canning plant can be put into operation.

To a very limited degree, localized commercial fishing is being carried on presently in the Ponape and Palau Districts. In Ponape limited freezing facilities are available at the district center and local fishermen are able to sell their catch for local use and for export to the neighboring Marshall Islands and Truk Districts for use of administration, school, and hospital activities. In 1958 Ponape fishermen provided some 27,000 pounds of fish for this purpose. During the year fishermen of the Palau District shipped approximately 14,000 pounds of fish to Guam, which was double the amount shipped in the previous year. In addition, some 1,400 pounds of crabs were shipped to the Guam market. Lack of equipment, storage facilities, and uncertain markets have kept this localized commercial fishing on a small-scale basis. During the year a certain amount of localized commercial fishing was attempted at the Truk District Center. Saipan District exported some 4,000 pounds of fish to the Guam market during the year. In addition, sizable amounts are sold there in the local markets.

In 1958 a training and demonstration program in subsistence fishing was established in Palau. The two Micronesian fisheries trainees who had attended the South Pacific Commission Fisheries Training Course in 1957 and who later in that year worked with the Pacific Oceanic Fisheries Investigations of the U. S. Fish and Wildlife Service in Honolulu joined the staff of the fisheries biologist. Courses of instruction in net making and repair were given to the students of Palauan schools. The Subsistence Fisheries Project also constructed several different types of nets and tested them in Palau waters. Through the development of a program of subsistence fishing, the Administration hopes to enable the Micronesians to better utilize the valuable resources of the sea.

The marine biologist working in the Territory completed his contract during the year under review. The various programs that he originated during his 2½-year assignment will be carried on under the direction of the fisheries biologist. During 1958 the marine biologist, in addition to completing the trochus survey, conducted a special survey of many of the islands of the Marshall and Caroline Islands to determine their potential as trochus habitats in order that a subsequent trochus planting program could be organized. Various experiments were conducted in the Marine laboratory in Palau and in the field to determine optional methods whereby trochus could be transported to planting areas. Among such experiments was the introduction of trochus into remote reefs through experimental airdrops by Trust Territory aircraft.

A handbook of practical trochus management instruction written in simple English for Micronesians was also prepared by the marine biologist. This handbook Trochus and You is illustrated and

was designed so that it can be easily translated into the various languages of the Territory.

Experimental work in other fields of fishery work continued during the year.

Species of tilapia, first introduced from the Philippines to Guam and thence to the Trust Territory, appears to have been successfully acclimated to fresh-water pond conditions in the Territory. In the Saipan District, tilapia of mature size are now being caught by hook and line in lakes and ponds on Saipan, Tinian, Anatahan, and Pagan. In Ponape District tilapia have been successfully raised at the agricultural station and are being distributed to local people.

The experimental work on sea turtle culture that started during 1957 has continued. Sea turtles provide a source of food, and certain species also provide shell which is in demand for use as a local handicraft item. Experimental raising of young turtles under controlled conditions is being carried out in Ponape District and some planting of marked young turtles in outlying areas was made. (Eleventh Annual Report to the United Nations on the Administration of the Trust Territory of the Pacific Islands, July 1, 1957 to June 30, 1958.)



Panama

SHRIMP INDUSTRY:

The shrimp export business of Panama accounts for about 27 percent and ranks second to bananas in total exports. In 1958 the value of shrimp exports fell below that of 1957.



Shrimp samples being measured. On the advice of FAO fishery expert, the Government of Panama has set up a marine fishery research station where studies on the shrimp population of Panama are being carried out.

In July 1959 the Government of Panama established regulations for fishing and the export of fishery products. Both the Government and the shrimp industry (valued at about US\$8.5 million)

Panama (Contd.):

have re-examined policies and practices in the hope of assuring the continued development of the shrimp resource as a profitable enterprise. During the first seven months of 1959 catches of white shrimp continued spotty, but were better than during the similar period of 1958.

All Panamanian shrimp trawlers were fishing in Panama waters during the first seven months of this year. Due to the drop in shrimp prices in the United States market, however, prices paid the shrimp vessel owners and crews have been cut. One of the largest shrimp processing companies has installed a mechanical shrimp peeler and has also absorbed several smaller plants. The drop in shrimp prices has caused some distress to various segments of the shrimp industry. (United States Embassy dispatch from Panama, August 31, 1959.)



Poland

FISHERY LANDINGS, 1958:

Poland's fishery production during 1958 totaled 126,000 metric tons. The most important fishery product was herring caught in the North Sea which amounted to 55,000 tons. The second most important product was hake from the Baltic Sea which consisted of about 40,000 tons.

Of the total fishery landings, 95,000 tons were landed by the Government-owned fishing fleet, 16,000 tons by co-operatives, and the remaining 15,000 tons by individual fishermen.

The Polish Institute of Marine Fishery at Gdynia announced that during 1958, 22,000 persons were employed by the fishing industry and related industries. Of the total, 6,000 were actually employed as fishermen and the other 16,000 were employed on land in processing and canning plants. (Industrias Pes-

queras, Special Issue, Vigo Spain, May 15, 1959.)

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HERRING CUTTERS OPEN BASE IN BRITAIN:

The Polish herring fisheries have opened a shore base on Britain's northeast coast, at Sunderland, for the use of their cutter flotilla. This is part of Poland's new fish landing method known as "expeditionary fishing," by which the fleet fishing on the North Sea grounds is relieved at sea of barrels of salted herring for shipment home by base ships.

A number of British firms have been asked by Polish fishery promoters for offers to organize shore bases at one or more British east coast ports, mainly to accommodate 79-foot cutters.

The Sunderland base consists of a 650-foot quay, two warehouses with a total storage capacity for 8,000 barrels of salted herring. Another 12,000 empty barrels--or with salt--can be stored at the quay outside the warehouse; also short-term warehousing is possible for about 50,000 barrels of herring, including the services of local dockers.

It is estimated that the Sunderland base will handle about 50,000 barrels of salted herring to be re-forwarded to Poland by the end of this year.

Poland's fishing industry estimates that their landings of salt-water fish from the North Sea this year will reach about 146,000 metric tons, of which 61,000 tons will be herring.

Polish Maritime News says: "These herring catches are not high in comparison with those achieved by British, Dutch, or West German fishing fleets. This is because Polish ports are situated far from the fishing grounds, a serious disadvantage as our proportionately small fleet has to undertake long, unproductive sailing time from 3 to 5 days each way."

It explains that under the "expeditionary fishing" method the base ships also supply the fleet with provisions, fresh water, fishing equipment, empty barrels, and salt.

Taking advantage of the services by base-ships, the time which would otherwise be taken by unproductive sailing can be used for operations on the fishing grounds.

The "expeditionary fishing" in the North Sea usually lasts from the beginning of May till the beginning of December. Up to the end of June, due to the services given by a mother-ship and three auxiliary vessels, the herring catches in the North Sea amounted to over 16,000 tons, the paper claims. The fishing in the area for this year is for 61,000 tons of herring, the highest catches falling into the third quarter. (The Fishing News, August 28, 1959.)



Portugal

ALUMINUM DORIES TESTED IN GRAND BANKS FISHERY:

A newly-designed aluminum fishing dory or boat may replace the traditional wooden dory and change the fishing methods on vessels of the Portuguese line-trawl fleet operating in northwest Atlantic waters.

Portugal (Contd.):

The new boats are being fished experimentally by the 600-ton modern dory vessel, the Lousado. This vessel fished during the spring of 1959 on the Grand Banks and fished off Greenland during the summer.

The 75 dories which the Lousado was designed to carry were replaced this year by ten 21-foot aluminum boats, built in Bergen, Norway. Each of the new boats is powered by an 8-hp. Swedish Diesel engine and a variable-pitch propellor. They are capable of speeds up to 6½ knots. Airtight compartments along the boat's side and at the stern give the small craft added buoyancy and safety. The boat weighs about 1,800 pounds and has a capacity for about 2,000 pounds of fish. Each is equipped with compass and oil lanterns and can fish at night if necessary.

Each boat carries two fishermen who use three metal tubs of 15 lines each, for a total length of approximately 2½ miles. The baited line is paid out over the stern along a specially-designed chute. It is brought back over a removable roller on the side by means of a mechanical gurdy.

One of the remarkable features of the new boat is the method of handling fish. Once the fish is aboard it is kept cool and clean by means of a constant flow of sea water which is mechanically pumped in and out of the boat. A hand pump is provided for use in the event of a breakdown. Unloading the fish is another mechanical operation. The bottom of the boat is covered with a small mesh net which enables a hydraulic hoist to unload the catch in a single lift. The catch is unloaded after the boat is lifted aboard the Lousado. These boats can be launched in approximately two minutes and hoisted back, with a full load, in about three minutes.

The Lousado is the only Portuguese vessel engaged in this particular type of experimental fishing at the moment. Four trial runs have been completed and the operations of the new boats have caused the master of the Lousado to predict that the new-type fishing boat

will prove successful. The advantages are obvious ones, but principally they are those of safety and less arduous toil for the fishermen plus increased efficiency in both fishing methods and handling.

The results of this experimental fishing will be watched closely by the Portuguese fishing industry, but not more so than by the fishermen themselves, who see in the new boats a welcome change from the century-old dory operations. (Trade News, July 1959, Canadian Department of Fisheries.)

CANNED FISH EXPORTS, JANUARY-MAY 1959:

Portugal's exports of canned fish during January-May 1959 amounted to 28,781 metric tons (1,587,000 cases), valued at US\$14.6 million as compared with 32,868 tons, valued at US\$17.1 million for the same period in 1958. Sardines in olive oil exported during the first five months of 1959 amounted to 21,247 tons, valued at US\$10.4 million.

During January-May 1959 the leading canned fish buyer was Germany with 6,569 tons (valued at US\$3.3 million), followed by Italy with 3,560 tons (valued at US\$1.9 million), Great Britain with 2,592 tons (valued at US\$1.2 million), United States with 2,531 tons (valued at US\$1.8 million), and Belgium-Luxembourg with 2,161 tons (valued at US\$1.1 million). Exports to the United States included 1,266 tons of anchovies, 52 tons of tuna, 1,156 tons of sardines, and 20 tons of mackerel. (Conservas de Peixe, July 1959.)

Portuguese Canned Fish Exports, January-May 1959		
Species	January-May 1959	
	Metric Tons	US\$ 1,000
Sardines in olive oil	21,247	10,363
Sardine & sardinelike fish in brine	865	174
Tuna & tunalike fish in olive oil	398	642
Anchovy fillets	2,845	1,997
Mackerel in olive oil	1,823	901
Other fish	1,103	564
Total	28,781	14,641

CANNED FISH PACK, JANUARY-MAY 1959:

The total pack of canned fish for January-May 1959 amounted to 7,905 metric

Portugal (Contd.):

tons as compared with 8,797 tons for the same period in 1958. Canned sardines in oil (3,407 tons) accounted for 43.1 percent of the January-May 1959 total pack, down by 32.7 percent from the pack of 5,066 tons for the same period of 1958, the July 1959 Conservas de Peixe reports.

Product	Net Weight	Cases
	Metric Tons	
In Olive Oil:		1,000
Sardines	3,407	179
Sardinelike fish	7	-
Anchovy	2,800	279
Tuna	1,145	41
Mackerel	70	3
Other species	476	24
Total	7,905	526

Note: Values unavailable.

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FISHERIES TRENDS, JANUARY-MAY 1959:

Sardine Fishing: During January-May 1959, the Portuguese fishing fleet landed 10,808 metric tons of sardines (valued at US\$1,077,638 ex-vessel or about \$99.71 a ton).

May 1959 landings of sardines totaled 5,030 tons, valued at US\$522,819. Canneries purchased 25.2 percent or 1,267 tons of the sardines (valued at US\$135,305 ex-vessel or about \$106.79 a ton) during May 1959. The balance of 3,763 tons was purchased for the fresh fish market. None was salted.

Other Fishing: The January-May 1959 landings of fish other than sardines were principally 9,189 tons of chinchards (value US\$519,619). (Conservas de Peixe, July 1959.)

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SARDINE PRODUCTION, 1958:

Sardines continued to be Portugal's leading commercial fish species during 1958. Fishermen (members of the Sardine Fishermen's Guild) landed 202,729 metric tons of sardines valued at about 440 million escudos (US\$15.3 million). The 1958 sardine landings surpassed by 19,000 tons the best catch ever recorded

previously, which was in 1941. Also, the record 1958 sardine landings were 53,000 tons greater than the average yearly amount landed during the 17-year period 1941-57.

Prices for sardines were lower in 1958 due to less demand on the part of the sardine canning industry which had accumulated stocks of canned sardines that could not be sold in 1957.

Portugal's total fishery production in 1958 attained a record high--11,000 tons higher than in 1957 which was the previous record high year. (Boletin de Informacion, Sindicato Nacional de la Pesca, Madrid, Spain, June 1959.)



Somalia

TUNA FISHERY, 1958:

There are two tuna canneries located at Candala and Abo on the Gulf of Aden in Somalia. Most of the tuna are caught by Somali commercial fishermen in the Gulf of Aden.

The estimated catch of tuna in Somalia in 1958 was about 10.7 million pounds. All types of fish and shellfish landed in Somalia amount to about 11.8 million pounds, therefore, tuna is by far the predominant species. The types of tuna caught were not reported. Besides tuna, 1 million pounds of shark were landed, and the balance consisted of blackfish, needlefish, sailfish, red snapper, spiny lobster, perch, and squid.

Fishery exports by Somalia in 1958 totaled 1.2 million pounds--mostly canned tuna and dried and salted fish (mostly tuna) shipped to Italy. But since most of the fishing is done in the Gulf of Aden, fishing vessels land some catches direct in Aden which are not reported as Somalia landings or exports. The value of Somalia's fishery exports is about US\$667,000, or 5 percent of Somalia's total exports, the United States Consul in Mogadiscio reported on August 18, 1959.



Surinam

PRODUCTION AND EXPORTS OF PROCESSED SHRIMP, 1952-58:

Shrimp production in Surinam varied from a low of 300 metric tons in 1952 to a high of 927 tons in 1958. Prior to 1956, the catch was limited to a small estuarial variety of sea bob, which was dried and used largely for local consumption.

Year	Dried Sea Bob	Frozen Pink Shrimp		Total
		(Metric Tons)		
1958 . .	893	34		927
1957 . .	353	12		365
1956 . .	730	6		736
1955 . .	560	-		560
1954 . .	450	-		450
1953 . .	400	-		400
1952 . .	300	-		300

In 1955 a shrimp processing and freezing firm was established at Paramaribo with exclusive shrimp fishing and exporting rights. With the discovery of stocks of large pink and white shrimp off the Guiana coast, the Surinam shrimp company has concentrated on processing the larger shrimp for export.

Year	Quantity		Value	
	Metric Tons	Sf 1,000	US\$1,000	
1958 . . .	59	154	82.9	
1957 . . .	22	72	39.0	
1956 . . .	47	136	72.8	
1955 . . .	12	26	13.9	
1954 . . .	7	12	6.4	
1953 . . .	10	14	7.5	
1952 . . .	1/	1/	-	

1/ Less than 1 ton at Sf 1,000.
Note: Surinam florin equals US\$0.535.

The Surinam Fisheries Service continues to dry sea bob, some of which are exported to the Netherlands, Curacao, Puerto Rico, and other Caribbean islands. No shrimp is imported into Surinam. (United States Consulate report from Paramaribo, August 7, 1959.)



U.S.S.R.

DEVELOPMENT OF A TUNA FISHING INDUSTRY:

The development of a commercial tuna fishery for the U. S. S. R. is discussed by A. V. Mikheev, a member of

the Fisheries Division of the U. S. S. R. State Planning Authority, in the June 1959, issue of the Soviet fisheries periodical *Rybnoe Khoziaistvo*. The article is titled: "For a More Rapid Development of Tuna Fishing."

The article points out that in order to create the broad range of fishery products called for by the present U. S. S. R. 7-year plan, commercial exploitation of such species as tuna, sardines, and saury or mackerel pike must be developed as soon as possible. The author points out that sardine fishing by Soviet vessels in the tropical Atlantic and saury fishing in the Pacific are already on a commercial basis, but that much work remains to be done on tuna fishing, where experience so far has been on a small scale.

The present 7-year plan calls for an annual tuna catch of 200,000 centners (22.0 million pounds) by 1965. To attain this production, it is planned to build a number of specialized tuna boats to be based in the Far East for year-round tuna fishing in the Pacific, and a larger number of combination tuna boat-trawlers to be based in Baltic and Black Sea ports for seasonal tuna fishing in the tropical Atlantic.

The writer considers the various methods used for fishing tuna, and concludes that the U. S. S. R. fishing industry should concentrate first on the development of long-lining and seining, as techniques in which Soviet fishermen are more experienced. Pole-and-line fishing, because of the specialized skill which it requires and because of the difficulties associated with the use of live-bait, should be left for development at a later stage.

The article indicates that large-scale programs of exploratory and experimental fishing have been set up this year by the Kaliningrad Sovnarkhoz for the tropical Atlantic and by the Primorsk Sovnarkhoz for the Pacific.

The article indicates that the Soviet attempts to develop a tuna fishery have been attended by many difficulties so far, and states that the attempt to start off using the most complex types of tuna fishing methods and those least suited to Soviet conditions has had negative results and has

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

delayed the development of the fishery. The author also stresses the need for making available materials for fishing gear, as well as building tuna boats, and states that at the present time it is difficult even to get together enough gear to equip a few exploratory fishing boats.

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FISHERY PRODUCTION AND PROCESSING POTENTIAL BEING EXPANDED:

The Soviet Union is expanding to a considerable extent its fishery production and processing potential. Both the east and the west areas in which the fish are landed are located at great distances from the large consumption centers. Preservation on a large scale is a necessity and distribution of fish in the fresh state is almost excluded.

The difficulties have primarily been mastered through an appreciable expansion of the freezing capacity. Freezing capacity out at sea is larger than that on shore.

Russia has long experience with floating freezing factories. In 1880 they installed freezing machines on barges which were towed along the Volga from Astrakhan up that river. In a similar way, they started to utilize the fish of the river Yenisei in 1904. But present day Russia does not freeze fish only in its own waters. Through its modern freezing fleet, consisting of more than 300 units, of which some have a freezing capacity of 50 tons per 24 hours, it has become feasible to extend operations to distant waters far from their own coast.

In freezing units, designed by their own scientists and engineers, fish is frozen in slabs or blocks. Very little of the present fish catch is frozen and retail packed. After having brought the slabs to port, they are transported frozen, chiefly in railway cars, to fish-processing plants, frequently located in the areas of consumption.

Frozen fish is then defrosted and constitutes the basis for continuous

packing operations in the canning plants. Some of the fish is smoked, and no small quantities are used after defrosting for the preparation of ready-made dishes. Fried fish fillets and boiled fish in plastic bags are a couple of the major bulk items. They are currently manufactured in continuously-operating production lines. In one of the large fish combines in Moscow, each processing line had a capacity of 10 to 20 metric tons per 24 hours.

In the North Pacific naval skirmishes between the Soviet Union and Japan were frequent in the 1930's. The real reason was the struggle for fish. Russia had built floating factories which could be towed to various areas around the sea of Okhotsk. Japan, on the other hand, manoeuvred out to sea and caught the salmon before it reached the Russian rivers for spawning. The Soviet Union, since World War II restricted Japanese fishing by allowing Japan to operate only one single floating cannery in that region.

Each Russian mothership is accompanied by 50 to 60 fishing boats. These floating factories chiefly can pack of various salmon and crab, at present an important export item. In the waters around Newfoundland, Soviet Russia is further operating regularly four floating salting factories. Even these are central units which serve a great number of fishing boats.

In spite of their extensive endeavors to acquire fish for food purposes, the Soviet Union has not met its needs. The investments made are, however, so sizable that their production capacity most likely will allow an appreciable increase in the annual production of fish for a number of years. The present 7-year plan is said to anticipate a freezing capacity of approximately 9,000 metric tons (19.8 million pounds) per 24 hours--i.e. three million metric tons (6.6 billion pounds) per year, of which almost one million (2.2 billion pounds) would originate on these mobile freezing units at sea. At present Soviet Russia is supplementing its own catch by buying fish on the world market. Significant quantities are obtained from Norway, England, etc.

Traditional canning has also enjoyed very active support. Several hundred

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

plants have been erected within the frame of the terminated 5-year plans. In the first place they have been located in the large landing ports, but quite a number of these factories have been established in places with a flourishing inland fishery. Particularly interesting are those plants located in different sections of the large Siberian rivers and their tributaries. Fish-processing units (fish combines) are being built close to or inside large cities such as Moscow and operate in the way indicated above. It is noteworthy that even in the area of canning a penetrating, aimful research program is carried on. This has resulted in a remarkably rich diversification of canned fish products--stews or simply-cooked products. Besides the traditional fish varieties as salmon, tuna, etc., a number of other fish are put up in cans, such as cod, pike, bream, etc. The total pack of canned fish exceeds far what Canada, France, and Norway together pack. The number of canning plants is given as surpassing 190.

Quite another way to meet the fish requirements of this vast country is through the cultivation of fish in order to compensate for the declining yields of the natural waters. This has carried the Soviet Union to a leading position among the fish cultivating nations. Even if they in no way can compete with China, located in a much more favorable climate and having approximately 30 million hectares (74 million acres) of fish ponds, according to the latest information, the Russian accomplishments, nevertheless, are impressive. They now have 40,000 hectares of special fish-producing establishments and furthermore, half a million hectares of fish ponds and other waters on their sovchozes (state farms) and kolchozes (collective farms). The goal is to give each village at least one fish pond and to raise equally as much fish in this semiartificial way as in all internal waters of the Union, including the Caspian, Sea of Azow, etc. Without prejudices they have tested the most diverse fish varieties as to their productivity and reproduction. They also succeeded in mastering many difficulties in the raising of several fish varieties which earlier were not utilized for this purpose. Consequently, they do not only cultivate

carp and certain salmon fishes, but also pike, large-mouth bass, and white fish are encountered in the ponds. For an efficient productivity, the simultaneous cultivation of two different species and varying ages is practiced. To the Fish Combine in Moscow is delivered young sturgeon, half-size, from fish ponds. They come raised in a type of "broiler" production of fish. They arrive at the plant in a living condition being brought in by specially-constructed refrigerated railway cars. These sturgeon are used in the manufacturing of ready-made dishes, and cooked fish cutlets in plastic bags.

Carp is, however, the dominating crop. No less than 113,200 metric tons (249 million pounds) was raised of this single species in 1957. The average yield was 825 pounds per hectare (2.471 acres). Methods and special strains of carp have been developed which allow profitable production even at the 60th latitude north, corresponding to southern Alaska.

At the large Industrial Exhibition in Moscow could be seen this year, not only a special railway car for the transporting live fish, but there were also given detailed descriptions of various types of fish-raising ponds developed by Soviet research workers and fish technologists. There is also experimentation with transplantations. The fishes of the lake of Bajkal and of Balkash are taken to the waters in the west and conversely the fishes of the European part of Russia are tested in the east. Special mention should be made of the large-scale efforts to acclimatize fish in the lower stretches of the rivers Don and Kuban, running into the Sea of Azow. Various salmon are transplanted and bred in the Baltic and Barents Sea. Sturgeon breeding is going on in the Caspian. They have also been successful in the crossing of several fish species--in some cases even when they were distantly related. The Government is operating more than 130 hatcheries. Approximately 2,000 billion larvae and 5,000 billion young fish are released annually.

If one compares fisheries with agriculture, it is quite evident that proportionately larger resources are put to the disposal of fisheries in the Soviet Union. This indicates that in the long run they show greater confidence in fisheries than

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

in agriculture when it comes to providing food for the rapidly-growing population and particularly animal protein. (World Fishing, May 1959.)

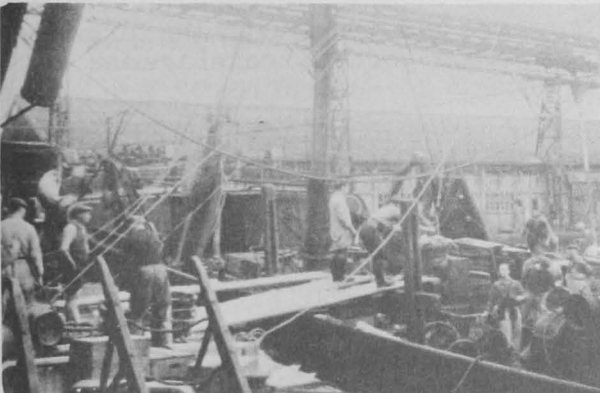
Note: 1 hectare equals 2.471 acres.



United Kingdom

DISTANT-WATER TRAWLERS MAY REQUEST SUBSIDIES:

During July a member of the United Kingdom Parliament suggested the possibility of a request for subsidies for the distant-water trawling fleet. He said that the fleet at Hull was faced with many problems, including obsolete slip-



Unloading distant-water trawler at Grimsby, England.
Note movable winch on dock and gangplanks on which baskets of fish slide to dock.

ways, the problem of replacement, and competition. There was the supreme problem of the 12-mile limit and the

threat voiced to bring out the limit to 100 fathoms. These "limits" problems and the cost of replacement might lead the distant-water fleet to ask the Minister for subsidies in the future. (The Fishing News, July 24, 1959.)

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HERRING FISHERMEN PROTEST PRICE DROP:

The Scottish herring fishing fleets based at Peterhead and Fraserburgh were due to tie up about August 22 if the Herring Industries Board (HIB) implemented a decision to reduce the price of herring consigned to the meal and oil plants from 40/0 to 33/0 per cran (about 2.0 to 1.7 U. S. cents a pound). The price reduction, effective August 17, was announced when minimum prices were fixed for the season. But, claim the fishermen, the lower price in the circumstances of the present season will make fishing uneconomic. (Fish Trades Gazette, August 22, 1959.)

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NEW FACTORYSHIP-TRAWLER COMPLETES MAIDEN TRIP:

The new factory-ship-trawler Fairtry II returned to Grimsby, England, late in July from its maiden voyage. The vessel landed 600 metric tons of fillets and whole fish, 202 tons of fish meal, and 3,600 imperial gallons of fish oil from a trip that started on April 2, 1959. Before the Fairtry II returns to sea for its second voyage, she will undergo minor modifications. The Fairtry II is a sister ship to Fairtry I which pioneered in England a new type fishing vessel that combined fishing and processing in the same hull. (The Fishing News, July 24, 1959.)

