

INTERNATIONAL

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THREE NATIONS OWN HALF WORLD'S FISHING VESSELS

Eighty-seven countries own trawlers and other fishing vessels over 100 gross tons. More than half these ships and their total tonnage are concentrated in 3 fleets: Soviet, Japanese, and Spanish. This was reported in 'Fishing News', Nov. 21, 1969.

Lloyd's Register of Shipping Statistical Tables for 1969 shows 11,535 commercial fishing vessels in world merchant fleet of 52,276. There are also 414 fish carriers and factoryships.

USSR Leader in Larger Vessels

The Soviet Union is the leading owner of the larger fishing vessels. Her fleet of trawlers and other catchers totals 2,604; 382 of these are above 2,000 tons. She owns 304 carriers and factory vessels--66 of these above 10,000 tons, and 80 between 4,000 and 10,000 tons. The Soviet larger-ship fleet aggregates 3,405,148 tons, just short of half the 87-nation total.

Japan No. 2

Japan is in second place with 2,067 trawlers and fishing vessels (719,097 tons) and 58 fish carriers and factories (169,374 tons). She has 44 fishing craft over 2,000 tons; in this category, she is not far ahead of Poland's 34 ships.

Spain has the third largest fleet--1,289 ships, 398,755 tons--but only 9 of these are above 2,000 tons. She also has one factory ship of 10,413 tons.

The United Kingdom has only 2 ships above 2,000 tons (the presently laid-up Fairtry trawlers). However, she is in fourth place with 578 fishing vessels (240,212 tons) above 100 tons.

Smaller Fleets

Then follow: France 663 (192,876 tons) fifth, Norway 623 (178,156 tons), Poland 168 (176,275 tons), West Germany 215 (161,886 tons), Canada 458 (124,134 tons), East Germany 161 (107,111 tons), Portugal 154 (105,523 tons), Italy 158 (71,617 tons), and Iceland 228 (62,310 tons).

Small Craft Important Too

Lloyd's Tables also show the extent to which some major fish-catching countries depend on smaller coastal fishing craft. Peru has a yearly harvest of around 10 million tons of anchoveta--but she is well down in the big-ship league with 294 vessels (44,643 tons) between 100 and 500 tons. South and West Africa have 100 ships (31,818 tons). The Philippines, with a catch of 750,000 tons, has 32 vessels 100 to 500 tons; and Thailand, 850,000 tons, has only 2 vessels above 100 tons. Indonesia, more than one million tons, has 4 vessels.



ICELAND HOSTS CONFERENCE ON FISH HARVESTING

Recent developments in commercial fishing technology--locating fish concentrations, purse seining, and trawling on the bottom and in midwater--will be principal topics of an international conference in Reykjavik, Iceland, May 24-30, 1970.

Dr. Leslie L. Glasgow, Assistant Secretary, U.S. Department of the Interior, said the conference is open to private individuals and representatives of companies, Federal and state agencies, and academic institutions.

Reykjavik will be the third FAO-sponsored meeting dealing with fish-harvesting technology in recent years. The first was in Hamburg in 1957, the second in London in 1963.

Advances in Technology

In recent years, much has been learned about the distribution, abundance, and movements of fish--and their reaction to fishing gear. Methods of finding and identifying fish also have improved considerably through more efficient echosounders, sonar, and net-sounding equipment. These developments have led to spectacular advances in gear and operational methods used in purse seining and trawling, and in vessel design. Purse seining and trawling, adaptable to small and large vessels, now account for two-thirds the world fish catch.

USCF Liaison

Those attending conference must pay all costs involved. U.S. residents should contact U.S. Liaison Officer: William H. Stevenson, Chief, Division of Exploratory Fishing, Bureau of Commercial Fisheries, U.S. Department of the Interior, Washington, D. C. 20240. Telephone: Area Code 202, 343-6643.



COMMON MARKET RAISES TUNA AND COD QUOTAS

The Common Market tariff quota for tuna--fresh, chilled or frozen, whole, headless or in pieces intended for processing--has been raised from 50,000 metric tons to 65,000 tons. This was done at the Dec. 8-9, 1969, meeting of the European Communities (Common Market) Council.

The Council also increased from 34,000 tons to 39,500 tons the Community tariff quota for cod, including stockfish and klippfish, whole, headless or in pieces, salted, in brine or dried. (U.S. Mission, Brussels, Dec. 15, 1969.)



JAPANESE-BRITISH TUNA-PACKING VENTURE SLATED FOR MAURITIUS

The Japanese Overseas Fisheries Co. and Bryce Bros., a British firm, are planning a joint tuna-packing venture in Port Louis, Mauritius. Mauritius Tuna Enterprise will start with about US\$181,000, half from each firm.

Plant Capacity

A two-line packing plant with a yearly 100,000-case (48 7-oz. cans) production capacity is scheduled to start in March 1970. The pack will be primarily tuna-in-brine for export to the U.S., but tuna also will be packed in oil.

Supplies from Foreign Longliners

Foreign longliners working out of Port Louis will supply the raw tuna. About 50 Taiwanese, 6 Okinawan, and 15 Japanese ves-

sels now serve the Overseas Fisheries Company. Annual landings are around 30,000 metric tons. The cans will come from Japan.

Government Backing

Mauritius has little industry other than sugar. To develop more, the Government is making loans to Bryce Bros. ('Suisancho Nippo,' Jan. 8, 1970.)



INTERNATIONAL PACIFIC HALIBUT COMMISSION SETS 1970 REGULATIONS

In January 1970, the International Pacific Halibut Commission met for the 46th time, at Prince Rupert, British Columbia. The Commission is responsible to Canada and the U.S. for developing halibut stocks to levels that will permit maximum sustainable yield. Its regulations must be based on scientific investigations.

Benefits of Management

Before regulation began in 1931, annual catch had declined to 44,000,000 pounds. Under management, halibut stocks steadily increased, and annual yield rose to record catch of 75,000,000 pounds in 1968. The yield has diminished since then. The 1969 catch was considerably below record, but its value was second highest. In British Columbia, halibut was most valuable species in 1969, worth a record C\$12,000,000 exvessel, a record high.

The Commission, concerned about the resource, recommended reducing Area 2 catch limit by one million pounds to 20 million pounds, a reduction in Area 3A by one million pounds to 30 million, and Area 3B by 500,000 pounds to 3 million. The Commission also will study the desirability of licensing all vessels landing halibut.

The Commission recommended the following regulations for 1970:

1) Area 2--all convention waters south of Cape Spencer, Alaska--shall open April 25 and close when 20,000,000 pound catch limit is attained, or Oct. 15, whichever is earlier.

2) Area 3A--between Cape Spencer and Shumagin Islands--shall open on April 25 and

close when 30,000,000 pound catch limit is attained, or Oct. 15, whichever is earlier.

3) Area 3B--Shumagin Islands to Atka Island, not including Bering Sea--shall open first on April 1 for 5 days, then reopen April 25, and close when catch limit of 3,000,000 pounds is attained (including poundage taken during first season of 5 days), or on Nov. 15, whichever is earlier.

4) Area 3C--west of Atka Island, not including Bering Sea--open March 17-Nov. 15.

5) Area 4A--the Bering Sea edge-Unimak Pass to Pribilofs--open for 12 days, March 22-April 4.

6) Area 4B--Fox Islands grounds, Bering Sea--open for two 12-day periods, March 22-April 4, and Sept. 1-14.

7) Area 4C--edge grounds and Bering Sea side of Aleutians between 170° W. and 175° W.--open March 17-April 11.

8) Area 4D--east of 175° W. and north of line between St. Paul Island and Cape Newenham and waters of Bering Sea west of 175° W.--open March 17-Nov. 15.

Nursery Area

The flats in southeastern Bering Sea east of Area 4A, and south of line between Pribilofs and Cape Newenham, have been declared a nursery area and are closed to all halibut fishing.

Hours

Opening hour of Areas 2, 3A, and 3B will be 1500 hours Pacific Standard Time (PST). Closing time will be 0600 PST. Areas 3C, 4A, 4B, 4C, and 4D will open and close at 1800 and 0600 hours PST.

Closure Notices

The Commission will provide 10 days' notice of closure of Area 2; 18 days' notice of closure of Area 3A; and at least 18 days' notice of closure of Area 3B.

The next annual meeting will be held at the Commission's office and laboratory in Marine Sciences No. 2, University of Washington, Seattle, Washington 98105. Mr. Haakon M. Selvar of Bainbridge Island, Wash., was elected Chairman, and Dr. William Sprules of Ottawa, Ontario, Vice Chairman for the ensuing year. (IPHC, Jan. 30, 1970.)

CANADA AND U.S. AGREE ON RECIPROCAL FISHING PRIVILEGES

Representatives of the United States and Canada met at Ottawa Feb. 10-13, 1970, and negotiated a draft agreement on reciprocal fishing privileges in certain areas off the coasts of the two nations. In recent years, each had established exclusive fishing zones. The draft agreement is subject to Governmental approval.

The Canadian Delegation was led by Dr. A.W.H. Needler, Deputy Minister of Fisheries and Forestry. Ambassador Donald L. McKernan led the U.S. Delegation. Their advisors included state, provincial, federal, and fishing industry representatives from both coasts.

The areas covered by the draft agreement include east and west coasts of Canada and the U.S. including Alaska. The species involve all commercial fisheries affecting both nations. The 2-year draft agreement applies only to commercial fisheries and to the areas named.

Fisheries of the two nations will continue much as before in the areas designated as reciprocal fishing areas: (a) Salmon trollers by Canadians will continue to be permitted only in a 3- to 12-mile area off the U.S. U.S. salmon trollers will be permitted to continue off Canada's Vancouver Island. (b) Pacific halibut fishing in each nation's reciprocal fishing area will continue. (c) Trawl fisheries conducted in each nation's reciprocal fishing area by vessels of the other nation will continue. (d) The longstanding practice of transferring herring on the east coasts of the U.S. and Canada will continue; but neither will fish herring in the other's reciprocal fishing area. (e) Fishing for any species of clam, scallop, crab, shrimp, or lobster will not be permitted in the other nation's reciprocal fishing area. (f) The initiation of a new fishery by vessels of one nation within the other's reciprocal fishing areas will require prior consultation and agreement.

Fishing regulations in the reciprocal fishing areas are to apply equally to the fishermen of both nations.



CANADA

1969 LANDINGS IN MARITIME PROVINCES WERE RECORD VALUE

Landings in Canada's Maritime Provinces--Nova Scotia, New Brunswick, and Prince Edward Island--totaled 1,233 million pounds worth a record C\$76.9 million in 1969. This compared with 1,374 million pounds worth C\$74 million in 1968, and 1,090 million pounds worth C\$63.2 million in 1967.

Quantity Declined

The decrease in quantity from 1968 was due largely to smaller herring landings. Record quantities and values of ocean perch (redfish) and crabs were landed in 1969. The value of 1969 lobster landings was a record C\$25.4 million, 33% of value of all landings. (Canadian Dept. of Fisheries and Forestry, Jan. 28, 1970.)

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PREDICT IMPROVED BRITISH COLUMBIA SALMON RUN

After the very poor salmon runs in 1969, the industry is expecting better luck this year. Predictions are that 1970's total pack will be on the high side of the 1,400,000-case, 5-year average.

Canadian Salmon Pack, 1965-69 ^{1/}					
Species	1969	1968	1967	1966	1965
.....(48 Lb. Cases).....					
Sockeye	358,505	611,011	558,892	407,949	245,798
Spring	5,300	7,416	14,679	14,585	18,891
Steelhead	584	933	1,296	2,480	843
Blueback	2,146	10,389	7,799	21,087	21,300
Coho	55,566	177,205	138,878	260,536	273,984
Pink	153,386	669,347	650,142	951,794	287,925
Chum	46,369	270,688	94,022	160,784	65,216
Total	621,856	1,746,989	1,465,708	1,819,215	913,957

^{1/}Includes salmon canned from U.S. imports. (British Columbia Canned Salmon Pack Bulletin, Dec. 17, 1969.)

Northern Areas

Sockeye forecasts for the north are disappointing. A run of 1,000,000 fish, and a catch of only 320,000, has been predicted for the Skeena. The Nass run, expected to be average, could provide a catch of 224,000 sockeye.

Rivers Inlet Run Small

Only 500,000 sockeye are expected in the Rivers Inlet run; all could be used on the spawning grounds. The Fisheries Department, concerned about the effect of the efficient Rivers Inlet fleet on such a small run, is considering very drastic closures. Smith Inlet also is expected to be below average.

Fraser River Outlook Good

The Fraser River is a bright spot. The International Pacific Salmon Fisheries Commission has placed total run in Convention waters at 6,300,000 sockeye, and total catch at 4,500,000 (2,250,000 each for Canada and U.S.). The Fraser does not produce significant number of pinks in even-numbered years, but prospects for pinks in the north are most encouraging.

The Fisheries Dept. expects above-average returns in all areas from Cape Caution north, including Queen Charlotte Islands. Local stocks from Johnstone Strait also are expected to be above average. Coho and chum returns should be average; chinook possibly below. ('Facts on Fish')

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NEWFOUNDLAND FISH-MEAL PLANT OPENS

A \$2,750,000 herring reduction plant opened in Newfoundland in late January 1970. It is a joint project of Spencer Lake and the Clyde Lake Group of fishing industries (Nfld.), and National Sea Products Ltd. (Nova Scotia).

1,000 Tons Daily

The plant can process 1,000 tons of herring a day into meal and oil. Ten to 20 seiners will supply the fish. (U.S. Consul, St. John's, Jan. 30, 1970.)

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FOREIGN FLEETS CAUSE CONCERN

Canada's Fisheries Department has disclosed that 744 foreign vessels, including 111 Soviet, fished off Canada in 1959; 211 Canadian vessels fished. In 1968, 1,815 foreign vessels (553 Soviet) and 558 Canadian vessels fished.

CANADA (Contd.):

In 1968, the Soviets caught 460,000 metric tons off Canada, compared with Canada's 1,160,500 short tons.

Fisheries Minister Criticizes Soviets

The Canadian Fisheries Minister has said that, in the Atlantic, "the haddock catch has been reduced in 10 years from 100 million pounds to 20 million. . . . the Soviet trawlers zero in on a school of fish and by the time they have finished they have virtually wiped out the entire school, there is nothing left . . . Major grounds off Canada's Atlantic coast were found to be critically overfished and in 1968 many Newfoundland fishermen had their catch cut in half."

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TRIES ELECTRONIC TRACKING
OF SALMON

Canada is tracking salmon electronically in the Miramichi River to discover how pollution affects salmon movements. The Miramichi is one of the world's greatest salmon-producing streams.

Tags & Sonar Capsules

Forty-eight salmon have been tagged. Sonar capsules (2" long and 1½" in diameter) also have been inserted in their stomachs. Each capsule contains an electronic package powered by 4 mercury batteries. These have a life span of 30 days and can be tracked from as far as 1½ miles.

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HIKES SALMON-LICENSE FEES

New rulings in the salmon-licensing program, including a sharp increase in category A commercial salmon-license fees, have been announced. The increases will fund a buy-back program to reduce British Columbia's

salmon fleet. The regulations will go into effect April 1, 1970. Category A includes vessels producing 10,000 pounds or more of pink or chum salmon or the equivalent. Category B vessels are those producing less than 10,000 pounds.

Beginning this year, category A vessels under 10 registered tons will pay a \$100 salmon-license fee, and those 10 tons and over will pay \$200. There will be no increase in the \$10 license for category B boats. Under the new rulings, a category B salmon license will terminate in 10 years. The B boat will not have its salmon license renewed, but after that will be allowed to fish any other species.

Categories of Boats

Owners of category A vessels will be allowed to drop to B category. They can make this choice at any time, but can never move back to category A. The 10-year terminal clause applies whenever they decide. Category B boats have the same fishing privileges as 'A,' can have the same earning power, and can be sold as producing 'B' salmon fishing vessels during their life span. Category B boats cannot be replaced to bring a new boat into the fleet. Only a category A boat can be replaced.

Company Boats 12% of Total

In April 1969, company-owned boats were frozen at 800, about 12% of the total commercial salmon fleet. They will be reduced at the same rate as the fleet when the buy-back program gets underway.

Another change will allow category A vessels to retain their salmon fishing privileges even though they do not fish for salmon. But they must take out a salmon license each year. (Canadian Dept. of Fisheries and Forestry, Jan. 16, 1970.)



EUROPE

USSR

DESIGN NEW BOTTOM AND PELAGIC TRAWLS

A new 50.8-meter universal trawl that can be used for bottom and pelagic trawling was designed and manufactured aboard the factory stern trawler (BMRT) 'Novaia Era.' Its vertical opening is 17.5 meters; horizontal 17.5-18 meters; each otter board is 6.2 sq. meters.

Tested Off U.S. West Coast

In Sept. 1968, the trawl was tested for Pacific hake at 250-400 meters between 43° and 49° N. latitudes off Oregon and Washington. In Nov. 1968, off Vancouver Island, 95 hauls yielded 1,000 metric tons of hake; average haul was 10.5 tons. In Dec. 1968, Novaia Era used the trawl in the Bering Sea for bottom and pelagic trawling for herring. Total catch was 4,300 tons, average haul 10.3 tons (usually 5.1 tons with conventional trawls), with peaks of 20-40 tons. The tests proved the trawl successful at various depths and bottoms.

New Pelagic Trawl

A 50-meter pelagic trawl also has been designed for 'Natalia Kovshova' class (8,500 gross tons) fish-canning stern trawlers. The horizontal opening is 25 meters. The vertical opening is 20, 18, 17, 16, and 15 meters at trawling speeds of 4, 4.5, 5, 5.5, and 5.8 knots, respectively. The otter boards are 8 sq. meters each. The wings and the first two bag sections are 3.1 millimeter diameter synthetic fiber line. The other trawl parts are made of lighter line.

Tests

Tested for 500 hours, the trawl caught 2,000 tons, with no hang-ups. It was 30% more efficient than the 38.5-meter trawls used by 'Atlantik'-class stern trawlers. ('Rybnoe Khoziaistvo,' Nov. 1969.)

SALMON IN PONDS RAISED UNDER NEAR-NATURAL CONDITIONS

In April 1965, scientists of the Sakhalin Branch, Soviet Pacific Fisheries Research Institute (TINRO), placed 1,680,000 chum fry in a 620-square-meter pond with a maximum

pond depth of 50 centimeters. Its bottom, gravel, sand, and silt, was much like the bottom of natural spawning grounds. Water flow was regulated. Benthos for feed, reproducing naturally, had increased from 960 to 4,118 units per square meter. By the end of July 1965, it prevailed over nonfeed benthos. Wall-eye pollock eggs were placed on underwater feeding tables 2-3 times daily. The fry's average daily weight increase was 11.3 milligrams. After 37 days, their stomachs were 3 times as full as those of chum in a conventional nursery or in Sakhalin's Iasnomorka River. ('Rybnoe Khoziaistvo,' Nov. 1969.)

SALMON BRED ON SAKHALIN

The Sakhalin salmon hatcheries have succeeded in crossbreeding Siberian and humpback salmon. The crossbreed has the Siberian's weight and taste, and the humpback's quick growth. The hybrid fry will be released in the Pacific in spring 1970.

USSR's Largest Salmon Hatchery

The Sakhalin salmon hatcheries are the USSR's largest. They produced over 600 million fry in 1969, and the hatchery directors hope for as many this year. Great amounts of Siberian and humpback eggs are air-shipped to other salmon hatcheries, particularly in the Caucasus and on the Kola Peninsula.

New Installations

A new Sakhalin laboratory has been set up to increase salmon resources. It will coordinate the activities of both existing hatcheries and ones that will be built in the next few years.

To preserve the salmon, timber floating has been stopped on all rivers with natural spawning grounds. (TASS, Jan. 4, 1970.)

RECORD SOUNDS MADE BY KING CRAB AND SALMON

Soviet scientists have succeeded in recording the sounds made by king crab and Pacific salmon. They have made experimental tape recordings in the Pacific, the Sea of Okhotsk,

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and Kuril Lake. Salmon make sounds like a buzzer or the ticking of a clock. King crab emit crackling sounds that grow into a noise like breaking waves.

Sound recording appears most successful with non-schooling fish such as salmon, tuna, and sharks. It also is effective with crustaceans like crab and shrimp.

The scientists claim it is possible to determine the species of the fish and even its size and migration patterns through its sounds. (TASS, Jan. 4, 1970.)

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COMPILE MEDICO-GEOGRAPHICAL MAP OF PACIFIC

A medico-geographical map of the Pacific has been authored by 2 Soviet scientists, Artur Keller and Innokentii Krasnoreev. (TASS, Nov. 18, 1969.) The map supplies navigators and researchers with information on diseases. It details areas inhabited by fauna dangerous to man: sharks, snakes, poisonous fish, echinodermata, jellyfish, etc.

TASS claims that it is the world's first medico-geographical map of the Pacific. It reflects the Soviets' increasing concern with the Pacific where their fisheries are expanding continuously.

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SOVIET-BLOC COUNTRIES DISCUSS FISHERY PROBLEMS

COMECON (also known as CEMA or Council for Economic Mutual Assistance) countries met in Leningrad in early Nov. 1969 to discuss the Tri-Partite Agreement (USSR, Poland, and East Germany) on cooperation in Marine Fishing. The agreement was signed on June 28, 1962; Bulgaria and Romania joined later.

Bulgaria & Romania Progress

In 1969, the Joint Commission noted that Bulgaria and Romania had achieved considerable success in diversifying their coastal fisheries into high-seas operations. This was made possible by joint studies of fish stocks in potential fishing areas, a coordinated plan

to deploy research vessels, and exchange of information. One practical result of joint research is an "electric trawl which increases catches by 40 percent." The gear was designed by Poles, Soviets, and East Germans.

What They Discussed

The delegates of 5 countries discussed increasing their cooperation, unifying their "scientific potential" (for marine research), and relations with "other international fishery bodies."

The Commission's next (8th) annual meeting will be held in Rostock, East Germany, Sept. 21, 1970.

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FAR EASTERN FISHERMEN PROTEST INEFFICIENT ADMINISTRATION

On November 20, 1969, the leading Soviet newspaper, 'Izvestiia,' printed unusual 'letters to the editor' from Far Eastern fishermen. They complained of the lack of refrigerated fish carriers, insufficient moorage in Vladivostok and Nakhodka, and poor at-sea servicing for factory stern trawlers (BMRTs).

Refrigerated Carriers Lacking

The writers claimed that 20-25 BMRTs of Kamchatka's High Seas Fishery Administration were idle a total of 394 days in 1968, and 390 in first 8 months 1969, while waiting to transfer catches to carriers. This represented a catch loss of 18,000 metric tons, or about 23 tons a day.

Kamchatka's Trawler and Refrigerator Fleet vessels were idle for 1,500 days in 19 months (Jan. 1968-July 1969) for the same reason. They could have caught and delivered 10,000 tons of fish in this time. The combined loss was equivalent to about 4% of Kamchatka's total annual catch.

Excessive Demurrage

There is a striking imbalance between the fleet's fishing and processing, and carrying capacity. Fishing vessels are demurred for weeks waiting for fish carriers to unload. The carriers, in turn, may have waited weeks, or even months, to unload in port. Demurrage time of all Kamchatka's fishing fleets amounted to 72.2% of their total operating

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time in 1967, 69.1% in 1968, and 73.1% in first-half 1969.

One letter accused the Soviet Far Eastern Fisheries Administration (DAL'RYBA) of operating Nakhodka and Vladivostok fishing harbors inefficiently. Some vessels have had to wait 40-60 days in the roadstead before mooring in port. The 'Donbass' class vessel 'Kadievka' was demurred 67 days in 9 months because of this. Demurrage of a 'Pervomaiski' or 'Donbass' class vessel costs 2,000 rubles (US\$2,200) a day.

Poor Servicing At Sea

Another letter complained of disorganized at-sea servicing of BMRTs. In summer 1969, the 'Khingana' ('Maiakovskii' class) lost 5 days in June, 6 in July, and 10 in August waiting for refrigerated carriers to transship her catch. She could have caught 700 tons of fish and produced 500,000 rubles (US\$550,000) worth of fishery products in that time. The Khingan fished off Hawaii in August 1969. (U.S. Embassy, Moscow, Nov. 22, 1969.)

The First Deputy Minister of Fisheries admitted late Jan. 1970 in 'Pravda' that the protests were justified. He said the following measures would be taken to improve the situation: (a) equip the entire Soviet fishing fleet in 1970 with lighter large-mesh trawls permitting 20% increase in towing speed and 10-15% in catches; (b) attach one mothership to a group of fishing vessels to streamline fishing and catch-transfer operations (experiments successfully conducted in N. Atlantic with 'Trudovaia Slava' and fleet of 37 fishing vessels); (c) construct improved factory stern trawlers with mechanized production lines. (U.S. Embassy, Moscow, Jan. 24, 1970.)

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STAGE TV FILM FESTIVAL ON FISHING & FISHERMEN

In September 1969, the 4th TV Film Festival on seamen and fishermen was held in Riga, Latvia. East Germany, Czechoslovakia, Poland, Bulgaria, Finland, and USSR entered films dealing with the life, labor, and adventures of seamen and fishermen.

Czech Film Wins

The first prize went to a Czech film, second to a Finnish film, and third prize was awarded to a Soviet film on tuna fishing in the Atlantic. A Polish TV film on a Polish journalist (Leonid Telig) who sailed around the world on a sailing yacht received a citation. ('Rybnoe Khoziaistvo,' Dec. 1969.)

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SCIENTISTS STUDY LUMINESCENCE OF MARINE ANIMALS

Bioluminescence studies in the Soviet Union are described by biologist A. Kovalev in an article translated by the Novosti Press Agency.

Many marine animals, including fish, possess luminescence. Sometimes its intensity is so great that one can read a newspaper near a glass jar containing 5-6 euphausiidae crawfishes (krill) about 27 millimeters long. Oceanographers in bathyscaphes and bathyspheres deeper than a kilometer photographed some fish and other animals without using spotlights.

When & Where Organisms Shine

Most marine surface organisms do not shine in calm weather. They produce a flare only when irritated mechanically. So along a ship's side--or in wake-stream with very high concentration of shining organisms--a light strip appears that often disappears just a few dozen meters behind ship's stern.

What is biochemistry of live light? Luciferin and luciferase were found in the special organs of many shining organisms. With aid of luciferase, oxygen oxidizes luciferin; the reaction is attended by luminescence and secretion of very little heat. Bioluminescence interests scientists because they can't obtain light without a great expenditure of heat.

The commercial fish of the oceans' surface layers do not shine themselves. But they concentrate and move quickly--and cause small organisms to shine. This allows fishermen to locate shoals.

Research at Sevastopol

Soviet scientists have turned from describing bioluminescence to studying it quantitatively. The Sevastopol Institute of the Biology

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of Southern Seas, using photoelectronic equipment, showed that the shining intensity of Black Sea noctiluca varies seasonally. Maximum intensity occurs in June and October. The Institute also measured the intensity of luminescence in the Mediterranean and the north Atlantic.

One scientist hypothesizes why fish concentrate around light sources. He assumes that in the process of evolution, they have developed a positive reaction to the bioluminescent field. The reaction appears when they move and is caused by excitation of small, shining, plankton animals.

When catching fish using light, the lamps immersed into water to attract fish must conform to spectral characteristics of the bioluminescent field.



UNITED KINGDOM

MOVES TOWARDS SMALL STERN TRAWLERS

The British deep-sea trawling industry now widely accepts the stern trawler for distant-water fishing. However, this attitude has not extended to vessels under 140 ft. In the near-water fleet--189 vessels 80 to 110 ft.--there were no stern trawlers at the end of 1968; there were only 3 in the 177-vessel middle-water fleet.

New Stern Trawler

But there have been recent signs of a change in attitude. A Hull-based firm will try a prototype 82½ ft. stern trawler. It will operate from Fleetwood on the west coast.

Boston Fleet

Boston Deep Sea Fisheries Ltd. has announced a more ambitious project. The firm, Britain's second largest trawler group, has vessels based at Hull, Grimsby, Fleetwood, and Lowestoft. The Boston fleet is like other vessels working in the North Sea from the Suffolk port of Lowestoft. It consists of 100-120 ft. diesel-powered side trawlers. The Lowestoft industry has long believed that

stern fishing is not suited to North Sea conditions. Some efficient new vessels have been built for Lowestoft in recent years, all side trawlers.

Prototype for Boston Fleet

Now the Boston group has concluded that the time has come to introduce a stern trawler to the port. The vessel, about 100 ft. long, incorporates many interesting new features. It may set the pattern for future trawlers in near-water fleet. It will be followed by at least 5 more. (It is believed the new trawlers will use the net drum.) ('Fishing News International,' Dec. 1969.)



FRANCE

INCREASES SUBSIDIES FOR DEEP-SEA FLEET

To encourage modernization of long-range fishing vessels, France recently announced a 15-25% increase in subsidies to owners of such vessels. The Fund for Economic and Social Development also is providing credit to owners building new vessels. Few vessels have been added to the distant-water fleet in recent years, although several trawlers for middle-water fishing have been built in Poland. One reason for the lack of new vessels is the hake scarcity on Irish and Scottish grounds. The scarcity also has sent some vessels venturing off the coasts of Iceland.

Buys Vessels From Poland

From 1952 to 1969, French companies were authorized to purchase 26 vessels from Poland. Deliveries were made to 7 different French ports, but most went to St. Malo. An order for one freezer-trawler, to be delivered in 1971, was placed with Gdynia shipyards recently. To operate in the North Atlantic, it will be the largest and best equipped in the French fleet. The vessel, homeported in St. Malo, will be 89.9 meters long overall, 1,350 gross tons, and have a 2,061 cubic meter total hold capacity.

The French fleet has about 706 vessels over 100 gross tons each, and totals 194,200 gross tons. ('Fishing News,' Jan. 9, 1970, and 'Polish Maritime News,' Oct. 1969.)

THE FRENCH TUNA INDUSTRY

David K. Sabock

Tuna canning is an old French industry. It started at La Rochelle and Les Sables d'Olonne in 1850. By 1869, the island of Croix had become the tuna center, but it wasn't until 1891 that the first major tuna-fishing campaign was organized in Concarneau.

Today, French tuna vessels fish the nearby Atlantic and Mediterranean waters--and range to the distant fisheries in the Gulf of Guinea off W. Africa, and in the Indian Ocean. Despite the fleet's wide range, the industry is oriented domestically. However, with its fleet expanding, France sees herself becoming a more important factor in the international tuna market.

A significant amount of production takes place in several African countries tied to France by cooperation agreements. The French fishing fleet is responsible for most of this production, which is processed in African canneries with large shares of French ownership.

Catch Doubled in 10 Years

Tuna landings almost doubled from 1958 to 1968: from 34,000 metric tons (live weight) to 65,600 tons. Estimated landings for 1969 are 67,000 to 70,000 tons. This increase corresponds to increased French activity off the W. African coast, a fishery France entered in 1955-56. Since then, yellowfin has become the dominant species, accounting for 49,100 tons in 1968--75% of the total catch.¹ Albacore, formerly the main species, accounts for most of the remainder. Albacore catches were steady from 1958 to 1964, but then declined 40% to 14,600 tons. Small amounts of bluefin, skipjack, and bigeye also are caught. Tuna account for 8% of total fish and shellfish landings--and 12% of total value.

In the last decade, world tuna landings rose from 990,000 tons to 1.4 million tons. The French catch has increased more rapidly. France now accounts for almost 5% of the world catch, compared to 3.5% in 1958. It is now the world's 4th largest tuna harvester, behind Japan, the U.S., and Taiwan.

Some confusion exists over the French names for tuna. The French equivalents of English names are given here in parentheses: Albacore (Thon blanc, Germon), bluefin (Thon rouge), and yellowfin (Thon albacore). In English translations, albacore may also be called white tuna; bluefin, red tuna.

Fishing in European & W. African Waters

Albacore and bluefin are caught almost exclusively in European waters including the Mediterranean. Yellowfin, bigeye and skipjack, but primarily yellowfin, are caught in W. African waters (Gulf of Guinea).

Albacore and bluefin are fished in nearby French waters from July to October by about 450 vessels berthed at nearly every important Atlantic port. Primary ports include Douarnenez, Concarneau, St. Geunole, Lorient, Les Sables d'Olonne, l'Ile d'Yeu, and St. Jean de Luz. Concarneau and St. Jean de Luz are the leading ports.

Early in the African fishing season, effort is concentrated between Libreville, Gabon, and Point Noire, Congo. As a warm-water oceanographic front moves southward during that hemisphere's summer months, the yellowfin also move southward. The fishing area then spreads from Libreville to Luanda, Angola, in the fall--and from Point Noire to south of Luanda in the winter. French fishermen have fished as far north as Port Etienne in Mauritania. July to December is the peak season for the African fishery.

Search for Other Fishing Areas

The expanding industry has looked elsewhere for tuna. In 1968, 20 vessels explored in the Mediterranean's Gulf of Genoa. Results were satisfactory. Vessels sailed from Port-Vendres, Agde, Marseilles, and other southern ports. Observations indicated two migrations of tuna, one in spring and one in summer.

In July 1969, the French CIAP Corporation placed a US\$556,000 order with a Japanese fish net and gear manufacturer for a

¹Mr. Sabock is Foreign Affairs Officer, BCF Office of Foreign Fisheries, Washington, D. C. 20240.
²Landings data for yellowfin include small amounts of skipjack and bigeye.

modern 400-GRT double-deck longliner. The vessel will work in the Indian Ocean from the tuna base at Reunion Island, a French possession about 400 miles east of Madagascar and near Japanese base at Port Louis, Mauritius.

CIAP is a semigovernment corporation established in St. Denis, Reunion. It was formed to develop a tuna base in the Indian Ocean in line with the EC (European Communities) common fishery policy of promoting tuna fisheries. Plans call for initially conducting exploratory fishing with a longliner and, eventually, increasing the fleet to 10 vessels. Catches will be delivered to tuna packers in France.

Reports circulated in 1969 that France's (and Europe's) largest tuna seiner, the 'Biscaya' (1,082 GRT), would be fishing tuna in the Eastern Pacific. More recent information indicates the ship is working W. African grounds.

Fleet Develops

Only 20 years ago, most of the fleet was sailing boats. Since then, vessels were developed for longlining and purse seining. Vessels also grew larger. Orders for 155- and 165-foot vessels have been placed within the last few years for St. Jean de Luz and Concarneau, mostly the latter. The success of large seiners off W. Africa has stirred considerable interest among French companies; more "super-seiners" similar to the Biscaya are being built or planned.

Two Fleets for African Fishery

There are two fleets operating in African waters: one supplies fresh tuna to local canneries, the other ships frozen round tuna via refrigerated carriers to France. Vessels include bait boats, seiners, and combination seiner-bait boats. Emphasis is swinging to the seiners because their catch rates have been higher.

Considering the rapid development in the Gulf of Guinea, total catches there should continue to increase over 1968's 50,000 tons (live weight). The 1969 fishery may not have fulfilled expectations.

Although the U.S., Japan, Taiwan, South Korea, Spain, Italy, and Portugal fish tuna off W. Africa, the French fleet is dominant. About 42 French vessels fished in 1969, including 31

freezers and 11 bait boats. Operations are controlled by the Societe de Vente de Thon Congele (SOVETCO), an association of vessel owners headquartered at Concarneau, with representatives at African transshipping ports.

Canned Pack Rises--45,000 Tons in 1970?

Canned tuna production increased 53% from 19,600 metric tons (product weight) in 1958 to 30,000 tons in 1968. An output (preliminary figure) of 37,500 tons was attained in 1969. A pack of 45,000 tons is forecast for 1970. Since 1958, total canned fish production rose from 57,000 tons to 92,700 tons in 1967. It fell to 83,400 tons in 1968 as output of canned sardines dropped drastically. Tuna now dominates the canned fish pack with close to 40% of total output in 1968. Sardines (28%) and mackerel (24%) represent most of the remainder.

France ranks as the world's 4th largest tuna packer, behind the U.S., Japan, and Italy. It produced 8% of the world's 1968 tuna pack.

Firms Concentrate

Output has increased with reduction in number of firms and plants in the canning industry, and an increase in productivity of existing canneries. The number of firms dropped from 159 in 1956 to about 107 now. These firms operated 207 plants in 1956, 130 now. Average production per plant is about 600 tons, but average capacity is 1,000 tons. Eighteen plants produced more than 2,000 tons, 16 between 1,000-2,000, 16 between 500-1,000, and 47 under 500.

Processing techniques vary, depending on how tuna are to be packed. An oil pack is most common, although much is canned in brine. Other ingredients are used, mainly tomato sauce.

Imports High, Exports Low

France is a net importer of canned fish. It purchased 39,000 tons in 1968, while exporting only 2,100 tons. In recent years, both imports and exports have been relatively steady. About 11,700 tons of canned tuna were imported in 1968, a 30% increase over 1967. Principal suppliers were Senegal (8,050 tons) and the Ivory Coast (1,800 tons). Preliminary 1969 data indicate a 15,000-ton import level with a proposed 20,000-ton purchase in 1970.

Fresh and frozen tuna also are imported, though fresh tuna purchases are only 90 tons, almost all from Italy. Frozen tuna imports were 2,400 tons, up 33% from the 1,800 tons shipped in 1967. Japan supplied 40% of the total.

Special Arrangements with African Countries

Most tuna imports originate from Senegal, Ivory Coast, Congo-Brazzaville, Malagasy, Cameroon, Dahomey, and Mauritania. Their association with EC gives them the right to sell duty free on the French market, but quota limitations are in force. Quotas are assigned annually, with added provision that the tuna canned must have been caught by French fishermen. About 70% of the quota is assigned to Senegal, most of the remainder to the Ivory Coast.

The domestic fleets of these African countries are improving, with resulting increases in catches. It is becoming increasingly difficult for France to absorb this expanding output. The French quota is considerably below the capacity of African canneries, output is rising, so attempts will be made to export to the U.S., Italy, and West Germany. To assist in this effort, a guaranteed minimum price system for tuna exported is being considered.

Besides quota arrangement, Senegal also controls the supply of fish to various canneries. Senegal has 4 canneries with a total annual capacity of 35,000 tons (1968/69 quota was only 12,500). The canneries--SAPAL, Conserverie du Senegal, SCAF, and SOSAP--are in the Dakar-Rufisque area. Local tuna consumption is very low.

The Ivory Coast's quota in recent years, has been assigned to one firm, the Societe des Conserveries de Cote d'Ivoire (SCODI). Its daily capacity is about 35 tons of tuna and sardines.

Consumption Rising

Although French consumption of all types of canned fish is rising, this form accounts for only 20% of total fish consumption. Canned tuna consumption has more than doubled in ten years. Much of the increase is attributable to large nationwide advertising campaigns. Consumption is widespread, except for poorest people. Most tuna is consumed as cold hors d'oeuvres. In 1970, consumption is expected to approach 47,500 tons, 32% more

than in 1968. The supply will be fulfilled easily from domestic production, plus imports from Africa.

Government Control and Assistance

Financial support given to the industry is the same as that for all French fisheries. Aid is provided for shipbuilding, interest rebates are granted to induce owners to build new vessels or modernize existing units, and the Credit Maritime Mutuel makes loans to fishermen and cooperatives to promote ownership of vessels and foster cooperation in small-scale fisheries.

The Comite Interprofessionnel du Thon (Interprofessional Tuna Committee) controls the industry by establishing or assisting in establishing exvessel prices, quotas, special trade arrangements, allocating supplies, and planning and setting the length of each season. It also assists the industry by supporting exploratory fishing, technological development, marketing, and other programs.

Fixed Price Systems

Most fish sales are by auction, but tuna for canning, along with sardines and salted cod, are exceptions. Prices of tuna used in canning are fixed for a 3-year period by agreement within the trade and approved by government authorities. There is provision for amendment, if necessary. A minimum price system does not exist.

The system requires that a single price be set for each species. The Comite Interprofessionnel du Thon operates the system, which includes setting quantities and allocating supplies. Pressure to adopt this type of pricing arrangement came in the early 1960s when canners could not obtain adequate supplies of raw tuna, and fluctuating catches made the existing seasonal price system inadequate. A 3-year fixed price system was adopted in 1963.

In fixing quantities, priority is given to French production. Quotas for sales in the French market are assigned to African countries in October of each year based on their tonnage caught, and the capacity of the French market to absorb output. African production for 1970 may reach 20,000 tons, about double 1968's.

Supplies are allocated to canners based on firm orders accompanied by an irrevocable payment with a partial bank guarantee. Canners are held to prices as long as economic conditions remain unchanged during the life of the contract. There is a levy on value of catches to finance a partial price-equilibrium fund and a countrywide advertising campaign.

The Future

Two items are particularly interesting in considering the future of the French tuna industry: (1) the results of their preliminary attempts at establishing a tuna base in the Indian Ocean, and (2) plans for marketing tuna from francophile West African countries.

Increasing worldwide interest is being shown in the fisheries potential of the Indian Ocean. France is entering that tuna fishery in its early stages. Also, the capacity of the West African canneries is far above their quota for the French market, and the output is increasing yearly. Where will they attempt to market their production? To what extent? And how will ability to sell elsewhere affect their efforts in France?

Main sources for this article were reports in 'La Pêche Maritimeé,' 'France Pêche,' and U. S. Embassy dispatches. A 35-entry bibliography is available on request from BCF Office of Foreign Fisheries.



WEST GERMANY

HERRING SHORTAGE GROWS

A growing shortage of herring has left the German canning industry unable to fill the strong domestic demand. German fishermen supply only about two-fifths of the canners. Foreign suppliers face the same difficulty as German fishermen--a declining herring catch from traditional fishing grounds. For the past three years, German fishermen have been increasing their herring fishery off the U.S. Atlantic Coast, especially on Georges Bank. However, they are still unable to satisfy the canners' demands. The canners are considering importing frozen herring from Canada.

They also are thinking about shifting to other types of fish.

Opportunity for U.S.

This situation has created a real opportunity for the U.S. fishing industry. If need be, the industry could exploit Georges Bank herring stocks. The German market would not be a stop-gap business. The annual sales potential for U.S. frozen herring there has been estimated at well over one million dollars.

Detailed Report Available

German importers and canners would welcome U.S. offers. (U.S. Consul, Bremen, Jan. 27, 1970.)

A detailed report, FFL-181, is available from Office of Foreign Fisheries, BCF, Department of the Interior, Washington, D. C. 20402.



NORWAY

FISH MEAL QUALITY IS UPGRADED

Installation of 4 solvent-extraction plants has greatly increased Norway's supply of up-graded fish meal. This was reported by the University of Rhode Island's Commercial Fisheries News Letter in Jan. 1970.

Solvent extraction is used to upgrade regular fish meal. Defatted Norwegian herring meal contains over 80% of highly digestible protein and has a pleasant malty flavor.

Pet Foods & Animal Feeds

Used in pet foods and animal feeds, defatted fish meal partially replaces dried skim milk as a source of high-quality protein. Commercial quantities are being exported to the U.S.



DENMARK

GREENLAND TO BUY 2 NEW TRAWLERS

Greenland's first stern trawler, 'Nuk,' began operations in mid-May 1969. She landed good catches despite technical difficulties and wrecks during the summer. Experience indicated that raw material for fish fillet factories must be obtained on the banks far outside Greenland's coasts.

New Trawlers Planned

Now, funds have been set aside for 2 more trawlers to operate in 1971. The design, worked out with a Norwegian firm, calls for a 58-meter-long, 11.2-meter-wide, modern trawler with a load capacity of about 550 cubic meters. Nuk has a load capacity of 280 cubic meters, is 50 meters long, and 9.45 meters wide.

Equipment

The new trawlers will have a double trawl tray, reinforced hulls, and 16-cylinder 1,960-hp. diesel engines. Reduction gear will allow a speed of about 14.5 knots. Crew's quarters will include 24 one-man cabins.

Ready in 1971

The two vessels are expected to enter Greenland fisheries in summer 1971. They will be based at Sukkertoppen and Frederiksbab. (Regional Fisheries Attaché, Copenhagen, Jan. 5, 1970.)

* * *

THE FISHING FLEET

Denmark's fishing fleet (including Greenland and the Faroes) totals 4,634 vessels; gross registered tonnage is 156,000, and total horsepower is 571,467. About 13% are over 10 years old, and 25% less than 10. The bulk of this fleet--4,136 vessels, 106,000 gross tons--operate from Denmark proper. Of the Denmark-based fleet, 982 (24%) were built in the last 10 years. Most of the vessels are 50 GRT size.

Faroese Fleet

There are 274 vessels in the Faroese fleet, 75% over 50 years old, and about 100 less than 10. This fleet also 'boasts' the oldest vessel, 'Simm Systrar,' 99 years old.

Greenland

In Greenland, no vessels are older than 50 years, and 84% of the 224 were built in the 1960s. (Reg. Fish. Att., Copenhagen, Jan. 27, 1970.)

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OCEANOGRAPHY COUNCIL SEEKS \$13.3 MILLION FOR RESEARCH

Denmark's National Council for Oceanography has requested \$13.3 (US) million in government grants for a 10-year ocean research program. Projects in Danish, Greenlandic, and Faroese waters will include studies of fisheries, pollution, and the ocean bottom. The studies are part of an international project under UNESCO and the Ocean Decade. (Reg. Fish. Att., Copenhagen, Jan. 27, 1970.)



ICELAND

FISHERY CATCH ROSE IN 1969

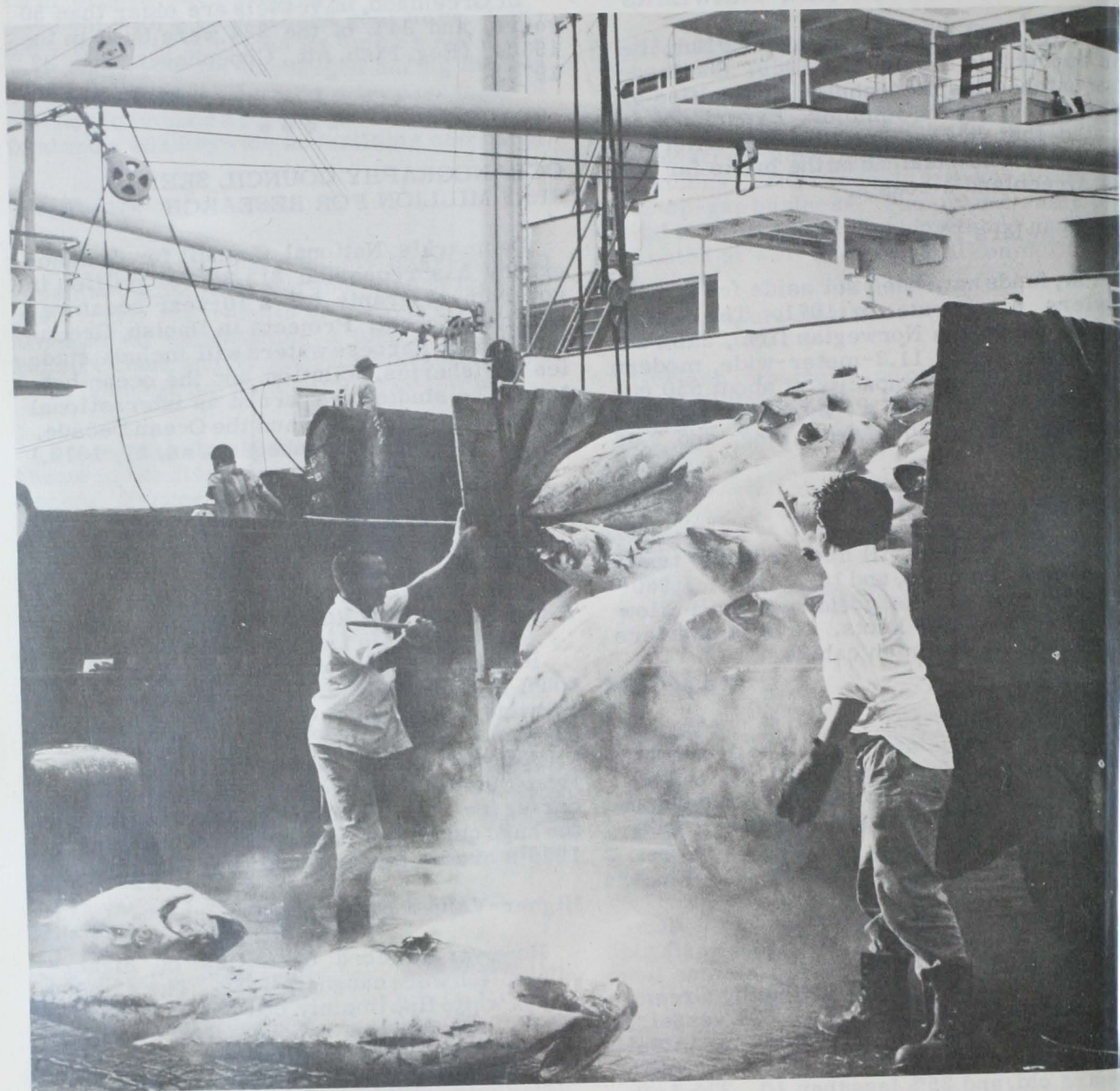
Iceland's 1969 catch was 665,246 metric tons. It jumped 9% in quantity and about 15% in value over 1968.

Although better than 1968, it was a relatively small improvement over other years during the 1960s. Primarily, this was because the huge quantities of herring caught in early 1960's are no longer found near Iceland.

Higher-Valued Fish Caught

However, record quantities of higher-valued fish were caught in 1969. The 424,000 tons of white fish (mainly cod catch) exceeded 1964's 415,000-ton record. The combined catch of shrimp and lobster set a new record, slightly over 6,000 tons. The herring catch was a minimal 53,000 tons, less than 10% of the mid-60's level, but the catch of capelin was a record. The combined quantity of capelin and herring remained near 1968's 220,000 tons. (U.S. Embassy, Reykjavik, Jan. 13, 1970.)





Unloading frozen tunny in Penang, Malaysia. (Photo: ILO)

ASIA

JAPAN

U.S. CANNED TUNA MARKET SURVEYED

The Tokyo Canned Tuna Sales Company's director spent 3 weeks in January 1970 surveying the U.S. canned tuna market. He wanted to determine U.S. reaction to Japanese exports of chunk-style, light meat tuna in brine. Japanese packers would like to increase chunk-style exports because this pack uses mostly skipjack tuna.

Skipjack More Available

Skipjack are more available than other species and would considerably ease difficulties in obtaining raw material. Japan's 1969 skipjack landings were mostly small fish unsuitable for solid pack, but usable for chunk style. ('Kanzume Nippo,' Jan. 10, 1970.)

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FROZEN TUNA IMPORTS INCREASE AS EXPORTS DECLINE

Japan imported 31,600 metric tons of frozen tuna, valued at about US\$12 million, during Jan.-Nov. 1969, a 25% jump in quantity over same period 1968. In 1969, South Korea and Taiwan, the major suppliers, doubled their 1968 exports to Japan. The imported tuna are marketed fresh or frozen, or are used for canning. Japanese tuna imports climb yearly; in 1970 they are expected to reach 40,000-45,000 tons

Exports

Japan's exports of frozen tuna are steadily declining. Jan.-Nov. 1969 exports to the U.S. and Canada totaled 38,972 short tons valued at \$16,155,203, compared with 70,854 tons worth \$27,454,545 for same period 1968; exports to other countries totaled 17,262 metric tons valued at \$7,107,108, compared with 29,007 tons and \$11,620,650 for same period 1968.

To Change Fishing Method

The Japanese feel that present method of long-line tuna fishing cannot adequately meet the needs for exports. They feel the only solution is to increase production by using large seiners like the U.S. A joint company

to operate a fleet of purse seiners belonging to different fishing firms has been proposed, but little progress has been made. There are too many differences of opinion, selection of officers, investment ratios, profit distribution, and other matters. ('Katsuo-maguro Tsushin,' Jan. 1, 1970.)

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FROZEN TUNA EXPORTS TO U.S. & CANADA DROPPED IN 1969

Japan exported 42,527 short tons of frozen tuna to the U.S. and Canada in 1969, and 18,505 metric tons to European and other countries, including Mexico and Ghana--a total of about 57,000 metric tons. This was sharply below the 100,000 metric tons exported in 1968. ('Suisancho Nippo,' Jan. 12, 1970.)

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U.S. EXPORTS TO ITALY CUT JAPANESE SALES

U.S. frozen-tuna exports to Italy are cutting into Japan's market. In 1969, the U.S. exported 4,650 metric tons of Atlantic-caught tuna in Sept. and Oct. alone. Japan exported 12,088 metric tons of frozen tuna to Italy in 1969 (9,989 tons Atlantic transshipments and 2,099 tons direct shipments from Japan). This is 39.3% less than the 19,893 tons delivered in 1968 and 56.9% below 1967's 28,026 tons. The decline in Japanese exports was due to sharply reduced fishing effort in the Atlantic owing to reduced profits and the transfer of vessels to other oceans to supply the domestic market in Japan where tuna consumption is rising.

Commission Sales

In order to retain their share of the Italian market, Japanese fishery and trading firms are selling tuna taken by South Korea, Taiwan, Malaysia, and Panama to Italy. In 1968, such commissioned sales probably reached 15,000 tons. In 1969, total Japanese tuna sales to Italy will be around 30,000 tons--15,000 tons from Japanese vessels including those in the Indian Ocean. The Italian market annually requires 47,000 metric tons of tuna and this means that Japan will retain barely a 63.8% share. ('Shin Suisan Shimibun Sokuho,' Jan. 7, 1970.)

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JAPAN (Contd.):

ITALIANS REJECT
JAPANESE FROZEN TUNA

The representative of the Japan External Trade Organization (JETRO) in Venice, Italy, reported that Italian packers are expanding production despite their complete dependence on imported raw material.

Why Tuna Rejected

He urged Japan to solve the problem of continuing Italian rejection of Japanese tuna. In 1969, he inspected about 26,752 metric tons. About 3,590 tons, 13.4%, of 29 shipments were rejected for greenness, sponginess, or orange color in the meat when cooked.

U.S. Tuna Well Received

The U.S.-supplied tuna are said to retain good quality after cooking and therefore are well received by Italian packers. ('Suisancho Nippo,' Jan. 10, 1970.)

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YAIZU LANDINGS DROPPED IN 1969

In 1969, landings at Yaizu totaled 142,597 metric tons worth about US\$71,971,000. Landings were down 3,844 tons from 1968, close to 3% in quantity, but up \$6,790,000 (10%) in value. ('Suisancho Nippo,' Jan. 7, 1970.)

Species	Yaizu Landings, 1968-69			
	1969		1968	
	Quantity Metric Ton	Value \$1,000	Quantity Metric Ton	Value \$1,000
Tuna:				
Bluefin ^{1/}	50,461	42,904	53,710	40,040
Albacore	19,139	10,165	16,295	7,876
Skipjack	45,928	14,550	48,085	12,526
Mackerel	20,166	1,803	21,341	2,284
Others	6,903	2,549	7,010	2,455
Total	142,597	71,971	146,441	65,181

^{1/}Includes yellowfin and big-eyed tuna.

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WINTER ALBACORE FISHERY
WAS GOOD, PRICES HIGH

In January 1969, Japanese pole-and-line fishermen were taking large, good-quality, winter albacore off the home islands. Ex-vessel prices were as high as US\$541 a short

ton, the same price as ship-frozen albacore bought by cold-storage operators for export. Japanese packers could not buy much at that price. To operate profitably, they could pay no more than about \$504 a short ton. ('Shin Suisan Shimbun Sokuho,' Jan. 13, 1970.)

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TRAWL OFF U.S. EAST COAST

Fourteen Japanese trawlers belonging to 5 owners fished squid off the U.S. east coast near New York in January 1970. The 2,500-gross-ton trawlers were landing 17-18 metric tons a day when fishing was good. Most catches were exported to Italy, France, Spain, and Greece; some were shipped to Japan. The export price averaged US\$550 a metric ton, cost, insurance, and freight (c.i.f.).

Butterfish in March & April

In March and April, the trawlers were scheduled to concentrate on butterfish and smelt. However, seas off New York became rough in March and hampered operations. Another problem is that fish with high fat content are preferred and bring a better price, but butterfish are small and lean in March.

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LIVE SEA BREEM SHIPPED BY AIR

The Nagasaki Prefectural Fishery Public Corporation started air-shipping live cultured sea bream from Kyushu, southern Japan, in December 1969, to Tokyo-Yokohama area, where they are very popular in 'sashimi' (sliced raw fish) restaurants.

They are shipped in a specially built tank with a holding capacity of 170-180 kilograms (374-396 pounds), or about 200 fish. They are sold for about US\$1.52 at Kyushu, and about \$3.16-3.79 at the Tokyo Wholesale Market. Air transport costs about 57 cents a pound.

Vessel Shipments

The corporation previously had made 2 shipments by vessel. This method enables delivery of large quantities at low freight cost, but it also produces high fish losses and higher storage costs after unloading. While air freight is more expensive, shipments can be adjusted to consumer requirements, and very little die-off occurs in transit. Three fish died in the first air shipment; only one in the third. ('Suisan Keizai Shimbun,' Jan. 7, 1970.)



NORTH KOREA

FISHING INDUSTRY EXPANDS

North Korea has launched a new 3,500-ton refrigerated fish carrier, according to a report in the 'Pyongyang Times.' The 'Maebosan' is the sistership of one completed in 1968. Designed to process and freeze fish, it will also serve as a mothership to repair and replenish the growing North Korean trawler fleet.

Fleet Modernization Successful

Fishing industry modernization, started 12 years ago, is apparently successful. In the first year, fish landings rose 7.5 times; by 1959 they were up 12 times.

Government Aid

The trend is continuing due to substantial government expenditures on building and educational programs. Construction of a large, new fishing port on the west coast was begun in 1957. This was followed by an attempt to motorize existing fishing vessels--most of them primitive and small. Ten modern trawlers were added. Fishermen also were encouraged to exploit distant waters, and to fish throughout the year, regardless of season. ('Fishing News International,' Oct. 1969.)

Comment by Milan Kravanja, BCF Office Foreign Fisheries: Catch data reported are obviously incorrect. According to FAO statistical yearbooks, North Koreans caught in 1953 only about 122,000 metric tons. This is less than one-eighth of 1938 fishery landings. The decline was caused by disappearance of sardines, and ravages of World War (1941-1945) and Korean War (1950-1953). Considerable progress was made in immediate postwar years. By 1954, North Korea landed 315,000 metric tons of fish and shellfish. Mismanagement and unfavorable natural conditions reduced this figure to 291,000 tons by 1957. After "modernization drive" began in 1957, the North Koreans discontinued reporting their fishery catches.

Had such catches increased in 1959 by 12 times, as Pyongyang Times claimed, over those of "the first year of the project" (1957), the North Koreans would have landed in 1959 about 3.5 million metric tons of fish and shellfish. Had this trend "continued to date," North Korea would have become the world's largest fishing nation several years ago.

Instead, available information indicates that North Korean catches in recent years barely exceeded 600,000 metric tons. This was considerably below the 1969 record catch of 860,000 tons landed by fishermen of the Republic of Korea (S. Korea).



SOUTH KOREA

SALMON EXPORTS TO JAPAN ROSE IN 1969

The Republic of Korea (South Korea) exported about 324 metric tons of Pacific salmon to Japan in 1969. About 310 tons, mostly red salmon caught in Bristol Bay, off Alaska, were exported in August and September.

According to the Japan Tariff Association, salmon were exported (probably gilled and gutted) either fresh, chilled, or frozen. Some may have been exported after processing (salting), but such figures are not available from customs records.

Salmon exported in the early months of each year probably were caught off Korean coast. (U.S. Reg. Fish. Attaché, Tokyo, Jan. 27, 1970.)



INDONESIA

SUSPENDS FOREIGN INVESTMENTS IN SHRIMP FISHING

Indonesia has suspended further foreign investments in her shrimp fishery. On Nov. 20, 1969, the Minister of Agriculture said the action was necessary to survey effect of fishing by foreign companies on efforts to build up the shrimp beds, and on native shrimp fishing. He exempted domestic shrimp fishing and 7 foreign firms that previously had received permission to survey and fish shrimp.

Survey To Be Made

The Director-General of Fishing explained that the shrimp resources have never been surveyed--nor is the effect of present shrimping known. A survey is required before any increase in foreign activities could be allowed. He said no restrictions on other types of fishing are being considered.

INDONESIA (Contd.):

Data Collection

The Director-General also explained that a survey report will be compiled from data collected by the seven foreign companies (and Indonesian officials working aboard the companies' boats), the UNDP, and by his own staff.

The survey will last until end of 1971. The Directorate General then will be able to make recommendations regarding further foreign investments. He said most survey data probably would be made public. (U.S. Embassy, Djakarta, Jan. 7, 1970.)



TAIWAN

LEASES JAPANESE PURSE SEINERS

The recently formed Tayu Fishing Co. of Taiwan has employed a team of Japanese fishery technicians to work in Taiwan. It also has obtained a 1-year lease of 7 large purse-seine fleets from Okura Fishing Co., Japan.

Operations will be based at Keelung, Suao, and Kaohsiung ports. ('China Aquatic Products')

* * *

NEW PROFIT-SHARING PLAN SUGGESTED

The Taiwan Fisheries Bureau has suggested to the Kaohsiung Municipal Fishermen's Association new standards for profit-sharing on deep-sea tuna longliners.

Its suggestions include:

- 1) The balance from total sales of the catch, minus direct costs and a 10% management overhead, be shared equally by management and labor.
- 2) A guaranteed minimum salary of NT\$1,500 (US\$37.50) a month.
- 3) A foreign-base subsidy for vessels 50 tons and over: US\$30 in Pacific and Indian Oceans; US\$40 in Atlantic.
- 4) Life insurance: NT\$50,000 (US\$1,250) for each crew member; NT\$100,000 (US\$2,500) for each apprentice-crewman. Payment of premiums are to be considered a direct cost. ('China Aquatic Products')



SOUTH PACIFIC

AUSTRALIA

ITALY TO FINANCE AUSTRALIAN TUNA INDUSTRY

Western Australia may have an Italian financed tuna fishing industry in 1970. Two vessels, and up to 200 men, would start operations from Onslow, Broome, or Port Hedland. Vessels would be supplied by Italy and manned by Australians. The tuna would be frozen for processing at a modern cannery at Bari, Italy.

The joint venture follows months of negotiations between the Italian government-controlled organization, E.F.I.M., and the Australian Fremantle Fishermen's Cooperation Society Ltd. Similar Italian moves to set up a tuna industry on the East Coast in 1968 seem to have failed.

Italian Requirements

E.F.I.M. requires at least 10,000 tons of tuna a year and has been buying from Japan. The Japanese, however, cannot continue to supply this amount.

Australian Survey

The Fremantle Society, interested in Western Australia tuna fishery, made a North-West survey several months ago. The main grounds appeared to be between North West Cape and Port Hedland, out to the edge of the Continental Shelf, and from Broome to Cape Leveque, out for about 60 miles. ('Fish Trades Review,' Dec. 1969.)

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TRY NEW METHOD FOR CATCHING SPINY LOBSTERS

The builders of an experimental 25-ft. submarine are testing a new method of catching tropical spiny lobsters. An electric current is passed through the sand where the lobsters settle, shocking them and making them jump out. A device then sucks them into the submarine.

Dominant Species

Tropical lobster, 'Panulirus polyphagus', is found in muddy sea bottoms in northern Western Australia. This species is dominant on the west coast of India. There, it is caught in hoop nets, or by trawling at 35 fathoms or below. ('Australian Fisheries')



LATIN AMERICA

PERU

FISHING INDUSTRY DEVELOPMENTS

The 1969/70 anchovy fishing season started very poorly. There was a nationwide fishermen's strike in Nov. 1969. Warm water drove fish below normal depths, and the 'peladilla,' or immature anchoveta, appeared early. However, near-record catches in Dec. 1969 and good fishing in first weeks of Jan. 1970 revived industry optimism.

Production, Exports, Prices

About 1,840,000 metric tons of anchovy were caught in December; fish-meal production was about 330,000 tons. End-of-year stocks were about 300,000 tons, but heavy exports in first weeks of 1970 reduced stocks in hand to an even-lower level. Future prices for fish meal dropped from close to US\$200/metric ton to \$140-150, still a relatively high price.

'Peladilla'

To cope with 'peladilla' (small fish), the government chose to close fishing ports selectively rather than declare a general closed fishing season or 'veda' as in the past. Because fishing was so poor early in the season, the government chose this half-measure to meet industry needs and still protect the anchovy resource. However, industry sources reported that up to 80% of the December catch on some vessels was 'peladilla.' Callao, Ilo, Pisco, and Chimbote were closed on and off for short periods.

Tax On Industrial Use

On Jan. 1, 1970, taxes were increased on fish and whale meal, and crude and semirefined fish-oil exports. Industry did not object loudly. The taxes include a 'Fishing Canon' of 1.5% of f.o.b. value of all exported fish and whale meal and oil in payment for industrial use of national resources. There is a similar 'canon' on exploitation of mineral resources.

Advance Payments on Income Tax

Exporters will pay customs an advance on income taxes at rate of: 5% of f.o.b. value on fish-meal exports; 2.5% of f.o.b. value on

whale-meal exports; 6% of f.o.b. value on crude fish oil; 2% of f.o.b. value on semirefined fish oil. These charges will have the effect of a tax only when a firm's income taxes are less than advance payments.

New Vessels

Despite poor fishing, industry sources reported that Peruvian shipyards produced 75 large, modern fishing vessels in 1969 (many up to 350 tons). An even larger production is expected in 1970. This activity contrasts sharply with lack of active expansion of fish-meal plants or other sectors of economy. It may be that the need to renovate the fishing fleet has become so acute that industry can no longer delay.

New Minister Discusses Policies

At a press conference in Lima, Feb. 5, the new Fisheries Minister, General Javier Tantalean Vanino, discussed policies to be followed by the new Ministry. It had begun operations on Feb. 2.

He said fishing industry is pillar of Peru's economy. He recommended that fish-meal plants use their stickwater, that obsolete 100-ton vessels be replaced by 300-ton vessels, and that Peru develop an edible-fish industry. He would welcome foreign capital and technology to effect these changes. And he believes Peru should "occupy all 200 miles of littoral seas to insure sovereignty."

The Minister made two other significant comments: (1) No new fishery law is being planned; any necessary changes in fishery management will be made under existing procedures. (2) No fishing companies will be nationalized, but the government plans to control fish-meal marketing 'from beginning to end.'

He announced a closed fishing season from Feb. 11 to March 17. (U.S. Embassy, Lima, Jan. 20 and Feb. 6.)



EL SALVADOR

JAPANESE WILL SURVEY EL SALVADOR FISHERIES

Taito Seiko, a net-manufacturing subsidiary of Taiyo Gyogyo, Japan, will conduct a 1-year feasibility study of El Salvador's fisheries.

Five domestic firms, interested in a joint venture and believing FAO data inadequate,

had asked Taito Seiko to carry out the survey. The 5 want information on the abundance and kinds of fish available. If survey results are favorable, Taito Seiko may join the 5.

S. Korean Survey

S. Korea sent experts to El Salvador for a similar survey in March-April 1969. They made recommendations, but so far no action has been taken. (Reg. Fish. Att., U.S. Emb., Tokyo, Jan. 30, 1970.)



Workers at the Puerto El Triunfo plant in El Salvador unload a catch of fresh shrimp. (Photo: FAO, Y. Hagata)