INTERNATIONAL

U.S. and Mexico Agree on Fishery Zones

On Jan. 4, in El Paso, Texas, the International Boundary and Water Commission (U. S. and Mexico) outlined provisional boundaries between the exclusive fishery zones of the U. S. and Mexico in the Gulf of Mexico and the Pacific Ocean.

These boundaries were drawn to implement the U. S.-Mexico fishery agreement of Oct. 27, 1967. The 2 countries granted reciprocal privileges to fishermen to continue fishing between 9 and 12 nautical miles off each other's coasts for 5 years commencing Jan. 1, 1968. Both enacted legislation in 1966 reserving the right to fish within 12 miles of their coasts for their own citizens--except when fishing privileges are specifically granted to foreign fishermen by international agreements.

Gulf's Provisional Boundary

The provisional boundary for the Gulf of Mexico runs straight out to sea 12 nautical miles along the parallel of latitude passing through the middle of the Rio Grande's mouth. At present, this is the parallel of 25°57'15" N. latitude.

Pacific Boundary

In the Pacific Ocean, the provisional boundary is a "median line." This means that each point on it is equally distant from the nearest points on the baselines of both countries' territorial seas. For its first $5\frac{3}{4}$ nautical miles, the line prolongs the land boundary and runs from 32°32'03" N. latitude, 117°07'24" W. longitude, to 32°31'29" N. latitude, 117°14'10" W. It then turns approximately northwestward for $2\frac{1}{4}$ nautical miles to a point midway between Point Loma and the Coronado Islands, at 32°33'12" N. latitude, 117°15'51" W. longitude. From the latter point, it runs straight to 32°35'32" N. latitude, 117°27'46" W. longitude, which is 12 nautical miles from both Point Loma and the Coronado Islands.

Boundaries Now Effective

The provisional boundaries have been approved by both Governments and are now effective. (Dept. of State, Feb. 15, 1968.)

EEC Reports on Fisheries

Consumption of fish in the European Economic Community (EEC), the Common Market, for 1966 was 2.1 million metric tons; 80 percent was supplied by members' fisheries. If shellfish are included, the figure becomes 90 percent.

Because the EEC produces such a large portion of its own consumption of fishery products, protectionist tendencies may be strengthened in formulating its Common Fisheries Policy.

July 1 Target

EEC's Agriculture Committee recently urged that work on this policy be accelerated so that its provisions can be implemented as near the July 1 target date as possible. Efforts will be made to assure firm establishment of a Fisheries Policy prior to the admission to membership of other nations. (Regional Fisheries Attaché, U. S. Embassy, Copenhagen, Feb. 13, 1968.)

FAO Fishery Committee for Eastern Central Atlantic Being Organized

An FAO Fishery Committee for Eastern Central Atlantic is being organized following approval of its formation at the 48th Session of the FAO Council.

The following countries have joined: Congo (Kinshasa), Cameroon, Gambia, Greece, Italy, Ivory Coast, Japan, Korea, Poland, Senegal, Spain, Togo, and the United Kingdom. Thirteen other countries including the U. S. have not yet decided whether to join. (U. S. Embassy, Rome, Feb. 7, 1968.)

ICES Convention to Enter into Force

Italy has ratified the Convention for the International Council for the Exploration of the Sea. The Danish Government is informing all Contracting Parties that the new Convention

will enter into force on July 22, 1968. (Fisheries Attaché, U. S. Embassy, Copenhagen, Feb. 9, 1968.)

Japanese-Australian Shrimp Ventures Planned

Spurred by high prices, 3 major Japanese fishing firms are each planning to import shrimp from Australia under a develop-and-import formula. The trio--Nippon Suisan Kaisha, Taiyo Fishery Co., and Kyokuyo Hagei--recently applied to the Australian Government for permission to set up joint firms with Australian interests. Approval is expected because Australia reportedly supports the projects fully.

For 2 years, the 3 fishing firms had been test catching shrimp in the Gulf of Carpentaria and the Arafura Sea, off northern Australia. Shrimp resources are bountiful there.

The large, tasty shrimp have enjoyed good sales. They are called tiger and banana.

Tiger and Banana

In Japan, the tiger shrimp are sold wholesale between ¥1,300,000 and ¥1,400,000 (approx. $3,610-$3,880) per ton. This is US$1.64-1.76 a pound.

The banana shrimp sell for between ¥1,100,000 and ¥1,200,000 (about US$3,055-$3,333). This is US$1.39-1.51 a pound.

Those imported from the Soviet Union, Southeast Asia, and Mexico range between ¥900,000 and ¥1 million (approx. $2,500-$2,800 or US$1.10-1.27 a pound).

Joint Ventures

Nippon Suisan is planning to join with C. Itoh & Co. and set up Northern Research. This will be capitalized at A$1,000,000 (US$1.13 million) jointly with Hickman Distributors, a food maker.

Taiyo is planning to create North Australia Fisheries with William Angliss & Co., a food maker. Capital: A$300,000 (US$339,000).

Kyokuyo plans to form Gollin Kyokuyo Fishing Co., capitalized at A$100,000 (US$113,000), with Gollin Holding Ltd., a trading firm.

Each of the 3 Japanese firms will own more than half the shares of the projected companies.

Japanese fishing vessels and crewmen will be used during the first 5 years.

From the 6th year, the fishing vessels will be obtained locally at the Australian Government's request to help the local shipbuilding industry. Local labor also will man the vessels. ("Nihon Keizai Shimbun," Feb. 13, 1968.)

7 Weeks of World Baleen Whaling

The world baleen whale catch in Antarctic Ocean after 7 weeks (on Jan. 27) was 1,214 BWUs (blue-whale units), reports the International Whaling Commission Secretariat. That is about 300 BWUs fewer than the 1,527.4 BWUs reported for the 1966/67 period. However, the rate of kill is not bad because the present catch quota is 3,200 BWUs, while that for the previous, or 21st, season was 3,500 BWUs.

Japan Far Ahead

Catch by country as of Jan. 27 was: Norway (1 fleet) 128, the USSR (3 fleets) 372, and Japan (4 fleets) 714. However, the best season for Antarctic ocean whaling is normally between the 8th and 12th week. ("Suisan Tsushin," Feb. 9, 1968.)

Sweden Supplies FPC to Ethiopia

The Swedish International Development Agency has shipped 100 kilograms (220 pounds) of fish protein concentrate (FPC) to Ethiopia. It was the first FPC shipment under the Agency's aid program for Ethiopia. The product was developed a year ago by Asta Nutrition Co. of Sweden as a nutritional human food additive. The FPC will undergo a flavor acceptability test as a potential ingredient in

a children's diet supplement. It will be used under rigidly controlled conditions. ("Suisan Keizai Shimbun," Feb. 7, 1968, U. S. Embassy, Addis Ababa, Feb. 12, 1968.)

World Fish Meal Production in 1966 and 1967

	1967	1966
	. . . (Metric Tons) . . .	
Canada	89,434	88,344
Denmark	149,261	107,915
France	13,200	13,200
German Fed. Repub.	72,576	73,443
Sweden	7,824	6,189
United Kingdom	80,487	85,906
United States	167,154	175,586
Angola	2/ 24,118	54,670
Iceland	112,849	175,831
Norway	491,562	421,725
Peru	1,815,983	1,470,478
So. Afr. (including S.-W. Africa)	345,000	257,565
Belgium	1/ 3,780	4,500
Chile	130,866	194,221
Morocco	35,000	32,470
Spain	43,600	27,583
Total	3,582,694	3,189,626

1/Avg. monthly production in 1967: 315 tons.
2/Data available only for Jan.-July 1967.
Notes: Monthly data may not add to annual total because of revisions.

Japan does not report monthly fish meal production to the International Association of Fish Meal Manufacturers (IAFMM). Estimate for 1967 of fish meal and other animal meal (mostly fish meal) is 350,000 metric tons; 347,000 metric tons in 1966. (Foreign Agricultural Service, Tokyo, Nov. 15, 1967.)
Source: IAFMM.

FEO Exports in 1966 and 1967

Fish meal exports in 1967 reported by members of the Fish Meal Exporters Organization (FEO) show a 24-percent increase over 1966. FEO countries annually account for 90 percent of world exports. FEO members shipped 2.6 million metric tons in 1967, 2.1 million tons in 1966. Angola is excluded because comparable monthly data are not available.

Compared with 1966, Chilean exports in 1967 declined 40 percent and Icelandic 22 percent; Norwegian increased 85 percent, South African/South-West African 73 percent, and Peruvian 20 percent.

	1967	1966
	. (1,000 Metric Tons) .	
Chile	111.2	185.9
Angola	1/	53.6
Iceland	135.0	172.7
Norway	487.5	266.4
Peru	1,560.9	1,304.5
So. Africa (includ. S.-W. Africa)	286.0	165.6
Total	2/2,580.6	2,148.7

1/Not available (28,903 tons through Sept. 1967).
2/Excluding Angola.

Exports of fish meal from Angola through Sept. 1967 were down 22 percent from a year earlier (28,903 tons in 1967, 36,989 tons in 1966).

ICES Scheduled Meetings

The 56th meeting of the International Council for the Exploration of the Sea (ICES) will be held in Copenhagen, Sept. 30-Oct. 9, 1968. The meeting will be preceded by a Symposium on Biology of Early Stages and Recruitment Mechanisms of Herring, Sept. 26-28. (U. S. Embassy, Copenhagen, Feb. 16, 1968.)

FORTHCOMING ICES MEETINGS:

July 23-27--Symposium on "Marine Food-Chains." Organized with support of FAO, ICNAF, and UNESCO. Place: Aarhus, Jutland, Denmark, at Aarhus University.

Sept. 26-28--Symposium on "Biology of Early Stages and Recruitment Mechanisms of Herring" Copenhagen (Charlottenlund), Denmark.

Sept. 30-Oct. 9--The 56th Statutory Meeting of the Council, Copenhagen.

Sweden Will Aid Iran's Fishery Development

Sweden will help Iran develop her Persian Gulf fisheries by preparing a comprehensive plan to establish a modern fishery there. Iran will attempt to increase per-capita production of fish from present 1.1 lbs. to 11 lbs. within 10 years.

The fishing fleet will have 40 vessels and one mothership. More vessels will be added as fishery develops.

A training school is also to be constructed in southern Iran.

International Fisheries Reference

The "Fisheries Year Book and Directory 1967-68," published by the British-Continental Trade Press Ltd., is now available from the publisher (222 Strand, London) at US$5. This international reference and directory of the fishing and fish-processing industries is useful to those involved in the international trade of fishery products.

Names and addresses of firms in many countries are classified: (1) Producers, exporters, and trawler owners, (2) importers and wholesalers, (3) canners, (4) machinery and equipment, and (5) shipbuilders, supplies, transport, and packaging.

Also, there are several articles on developments in the fisheries of various nations in the last few years; processing developments; mechanical unloading of fresh fish; pumping fish from net to vessel; etc.

UN'S Caribbean Vessels Keep Busy

The 3 vessels connected with the UN/FAO Caribbean Fisheries Development Project were active in February. The "Alcyon" fished with hand lines on the Rosalind Bank, West of Jamaica, and on the margin of the Continental Shelf off Nicaragua and Honduras. About 12,000 pounds of fish, predominantly snapper, were landed at Kingston on Feb. 26. The vessel made a port call at Puerto Cabezas, Nicaragua.

The "Fregata" continued experimental fishing in the vicinity of the Netherlands Antilles, especially around Bonaire. Some success was reported in capturing flyingfish using drift gill nets and hand lines. Rough bottom conditions prevented plans to use bottom set lines. Experimental rafts that were set to attract fish disappeared before their effectiveness could be evaluated.

Port Calls

Port calls were made at Kralendijk, Bonaire, and Willemstad, Curacao. After "bilge keels" were added to the Fregata, she behaved better at sea.

The "Calamar"

The Calamar conducted exploratory trawling off French Guiana, Surinam, and Guyana. There was some gear damage off French Guiana, but good catches were made off Surinam and Guyana. Port calls were made at Cayenne and Georgetown, Guyana. At the latter port, the bulk of the catch was offloaded.

In Georgetown, the Calamar landed 22,874 lbs. of fish, of which 16,962 lbs. were sea trout. A small quantity was landed in Barbados when the vessel returned to home base.

Trawl Fish Landings

Commercial landings of trawl fish from the Guyana grounds are now made in Barbados. Up to the end of February, 4 trawlers had discharged their catches there. The fish are being purchased by the Barbados Marketing Corporation under a prearranged agreement. These landings resulted from the marketing demonstration carried out earlier by the Project through the Barbados Marketing Corporation using Calamar catches of trawl fish.

Breadth of Territorial Seas and Fishing Jurisdiction Claimed by Members of the United Nations

Country	Territorial Sea	Fishing Limits	Other
Albania	10 miles	12 miles	
Algeria	12 miles		
Argentina	200 miles		
Australia	3 miles		
Barbados			
Belgium	3 miles	12 miles[1/]	
Brazil	6 miles	12 miles	
Bulgaria	12 miles		
Burma	do		
Cambodia	5 miles	12 miles	Continental Shelf to 50 meters including sovereignty over superjacent (lying above or upon) waters.
Cameroun	18 miles		
Canada	3 miles	12 miles	
Ceylon	6 miles		Claims right to establish conservation zones within 100 nautical miles of the territorial sea.
Chile	50 kilometers	200 miles	
China	3 miles		
Colombia	6 miles	12 miles	
Congo (Brazzaville)			
Congo (Leopoldville)			
Costa Rica	3 miles		
Cuba	3 miles		
Cyprus	12 miles		
Dahomey	3 miles	12 miles	
Denmark	do	do[1/]	
Greenland		do	
Faroe Islands		do	
Dominican Republic	6 miles		6-mile contiguous zone including fishing.
Ecuador	200 miles		
El Salvador	200 miles		
Ethiopia	12 miles		
Federal Republic of Germany	3 miles	12 miles[1/]	
Finland	4 miles		
France	3 miles	12 miles	
Gabon	3 miles		
Gambia	3 miles		
Ghana	12 miles		Undefined protective areas may be proclaimed seaward of territorial sea, and up to 100 miles seaward of territorial sea may be proclaimed fishing conservation zone.
Greece	6 miles		
Guatemala	12 miles		
Guinea	130 miles		
Guyana			
Haiti	6 miles		
Honduras	12 miles		
Iceland	do	12 miles	
India	do	100 miles	
Indonesia	do		Archipelago theory.
Iran	do		
Iraq	do		
Ireland	3 miles	12 miles[1/]	
Israel	6 miles		
Italy	do	12 miles[1/]	
Ivory Coast	3 miles		
Jamaica	12 miles		
Japan	3 miles		
Jordan			
Kenya	3 miles		
Korea		20 to 200 miles	Continental Shelf including sovereignty over superjacent waters.
Kuwait	12 miles		
Lebanon		6 miles	
Liberia	12 miles		
Libya	do		
Malagasy Republic	do		
Malaysia	3 miles		
Maldive Islands		6 miles	
Malta	3 miles		
Mauritania	12 miles	12 miles	
Mexico	9 miles	do	
Morocco	3 miles	do	Exception--6 miles for Strait of Gibraltar.
Muscat and Oman			

(Listing continued on following page.)

Breadth of Territorial Seas and Fishing Jurisdiction Claimed by Members of the United Nations (Contd.)

Country	Territorial Sea	Fishing Limits	Other
Netherlands	3 miles	12 miles[1]	
New Zealand	do	do	
Nicaragua	do	200 miles	Continental Shelf including sovereignty over superjacent waters.
Nigeria	12 miles		
Norway	4 miles	12 miles	
Pakistan	12 miles		Plus right to establish 100-mile conservation zones. Continental Shelf--including sovereignty over superjacent waters.
Panama	200 miles		
Peru	do	200 miles	
Philippines	Archipelago theory		Waters within straight lines joining appropriate points of outermost islands of the archipelago are considered internal waters; waters between these baselines and the limits described in the Treaty of Paris, Dec. 10, 1898, the United States-Spain Treaty of Nov. 7, 1900, and U. S.-U.K. Treaty of Jan. 2, 1930, are considered to be the territorial sea.
Poland	3 miles		
Portugal	6 miles	12 miles[1]	
Romania	12 miles		
Saudi Arabia	12 miles		
Senegal	6 miles		
Sierra Leone	12 miles		
Singapore			
Somali Republic	6 miles		
South Africa	do	12 miles	
Spain	do	do[1]	
Sudan	12 miles		
Sweden	4 miles	12 miles[1]	
Syria	12 miles		Plus 6 miles necessary supervision zone.
Tanzania	do		
Thailand	do		
Togo	do		
Trinidad and Tobago	3 miles		
Tunisia	6 miles	12 miles	Territorial sea follows the 50-meter isobath for part of the coast (maximum 65 miles).
Turkey	6 miles	do	
Ukrainia S.S.R.	12 miles		
USSR	do		
United Arab Republic	do		
United Kingdom	3 miles	12 miles[1]	
Colonies	do		
United States of America	do	12 miles	
Uruguay	6 miles	12 miles	
Venezuela	12 miles		
Vietnam		20 kilometers	
Yemen	12 miles		
Yugoslavia	10 miles		

[1] Parties to the European Fisheries Convention which provides for the right to establish 3 miles exclusive fishing zone seaward of 3-mile territorial sea plus additional 6-mile fishing zone restricted to the convention nations.

Source: National Council on Marine Resources and Engineering Development, January 1, 1968.

FOREIGN

CANADA

BRITISH COLUMBIA FISHERMEN'S 1967 EARNINGS FELL

British Columbia (B. C.) fishermen and vessel owners earned C$49 million in 1967. While value of landings dropped sharply from C$60.6 million in banner year 1966, it was the fourth highest on record.

Salmon production of 133 million pounds was down 18 percent from 163 million pounds in 1966. Due to the larger percentage of higher-priced sockeye taken in 1967, the landed value of salmon was C$36 million, only 7 percent below 1966.

Landings of halibut by Canadian fishermen at B. C. and U. S. ports of 26.2 million pounds were 5.8 million pounds below 1966. Average exvessel prices dropped from 35.8 cents a pound in 1966 to 25.3 cents in 1967; total returns for halibut were C$6.6 million, compared with C$11.5 million in 1966.

Herring Landings Down 75%

Herring landings for 1967 were only 58,000 tons, or about one-quarter the average landings of the past 10 years. They were worth C$1.8 million--compared with C$5.1 million in 1966 and C$6.2 million in 1965.

There had been increased landings of bottomfish (other than halibut) for several years. These culminated in a 1966 catch of over 50 million pounds. But in 1967, production dropped sharply--to 37 million pounds. While part of this decrease was due to market conditions, production problems in the trawling fishery also contributed.

Grey cod production fell from 20.7 million pounds in 1966 to 11.1 million pounds in 1967. Sole landings dropped from 10.5 million to 9.1 million. Other landings, including ocean perch, declined from 14 million to 11.9 million pounds.

Ling Cod Landings Steady

Ling cod landings, including trawl and handline catches, totaled just under five million pounds worth C$462,000. Production has remained relatively constant over the past decade, although unit prices were down somewhat in 1967.

Crab, shrimp, and clam landings all were up in 1967; oyster shucking declined. The total landed value of shellfish reached a record C$2 million in 1967, 11 percent above 1966. ("Fisheries News," Canadian Department of Fisheries, Feb. 15, 1968.)

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LICENSES LOBSTER FISHERMEN

Canada is licensing lobster fishermen in an attempt to limit fishing effort. This is in addition to a previously announced policy of limiting the number of traps. Boat owners will be required to pay a C$3 registration fee and $2 for a license; each helper will pay $1. Payment is to be made to the Department of Fisheries.

Moreover, vessels must also be registered with the Department of Transport. Registration will enable the Fisheries Department to maintain accurate records on vessels, gear, and employment in the lobster fishery. The new plan is part of an overall program for more efficient management of the fishery to increase earnings of the fishermen. (Canada Dept. of Fisheries, Feb. 6, 1968.)

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FIRE DESTROYS NEW FISH MEAL PLANT

A new C$500,000 fish meal plant, scheduled to begin operations within 60 days on the former Harmon Field Base at Stephenville, Newfoundland, was destroyed by fire on Feb 13, 1968. It is rumored that close to $100,000 worth of equipment was saved. The plant was built by a group combining the U. S. firms of Litton and W. R. Grace and financed by the Newfoundland Provincial Government.

Await Decision on Rebuilding

On Feb. 17, Premier Smallwood announced that if a decision is made to rebuild the plant, it can begin operating in 6 months. A Litton representative has already visited Newfoundland; one from W. R. Grace was expected. Presumably, a decision will follow that visit. (U. S. Consul, St. John's, Feb. 19, 1968.)

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EUROPE

Norway

FISHING INDUSTRY FACES SEVERE CRISIS

Norway--world's fifth largest fish producer, second largest fish-meal producer, and major exporter to the U. S.--is undergoing what some Norwegians feel is the worst crisis since the 1930s. This despite record landings of 3.1 million metric tons in 1967. Prices, however, fell drastically.

Some industry problems are temporary: low prices domestically, and marketing difficulties abroad--loss of fresh-fish market in U. K. and stockfish market in Nigeria. Other problems are structural: overcapacity of purse-seine fleet and effects of devaluation.

The Government has begun programs to alleviate the most acute temporary problems. Industry difficulties have generated political pressure on Fisheries Minister Oddmund Myklebust.

Modern Fleet's Record Catch

The new catch record was achieved despite restrictions on purse-seine fisheries: herring, capelin, mackerel. These restrictions included stoppages and holidays brought on by 1967 world marketing conditions in fish meal and oil industry.

The production capacity of the modern purse-seine fleet far exceeds the processing capacity of the fish-meal industry. The purse-seiner building boom of 1965, 1966, and 1967 is ended. Only a few are now in order.

Government's Aid Program

Fisheries were the hardest hit export industry following devaluations. Also, the loss of the Nigerian stockfish market caused by political unrest caused inventories to grow alarmingly.

The Norwegian Government is proposing a US$850,000 subsidy to cover devaluation losses. It is extending a US$4 million interest-free loan to cover exporters' stockfish inventories. It has offered the Food and Agriculture Organization 7,000 more tons of stockfish for the World Food Program. And the Government may increase exvessel prices through increased subsidies. (U. S. Embassy, Oslo, Feb. 20, 1968; "Norwegian Fishing and Maritime News," vol. 14, 1967.)

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DEVALUATION HURTS FISHING INDUSTRY MOST

Devaluation has hit the fishing industry hardest of all Norwegian industries. This occurred despite exports in 1967 of more fish and wildlife products than ever before.

Devaluation can be fatal to Norway's already failing exports of fresh fish to the United Kingdom (U.K.) The recent outbreak of hoof-and-mouth disease in the U.K. has improved the frozen fish market for Norway.

Exporters of cod have received no orders for stockfish from Nigeria since devaluation. The exporters say this resulted from the civil war there and from the more favorable situation of Iceland following devaluation.

Devaluation Affects Economy

Throughout Norwegian industry, some firms lost significantly on sales contracts signed before devaluation in devaluated currencies. Some firms have been able to increase prices to cover losses. Although competition and the price squeeze are generally intensified, conditions vary greatly from sector to sector.

Norwegian buyers have not received the advantage of cheaper imports. Many foreign firms in devaluing countries immediately notified Norwegian buyers of price increases on contracts signed in Norwegian kroner--and so took full advantage of devaluation.

Vessel Repair and Maintenance Hurt

Some English importers have ended old ties with Norwegian suppliers because the latter can no longer compete. Several Norwegian producers have not received a single foreign order since devaluation because the British and Danish can offer similar products at lower prices on the world market.

Norway (Contd.):

Norwegian vessel repair and maintenance yards have been hit particularly hard. As for new vessel construction, deliveries of large ships to foreign buyers remain at excellent level, while sales of fishing vessels have dropped.

Exports of large fishing vessels declined from 85 million Norwegian kroner in 1965 to 50 million kroner in 1966--then fell to only 23 million kroner in the first 10 months of 1967. (Regional Fisheries Attaché, U. S. Embassy, Copenhagen, Feb. 13.)

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1967 EXPORTS OF FISHERY PRODUCTS

"Fiskets Gang" reported in January 1968 that Norwegian exports of frozen fillets in 1967 declined about 5 percent from 1966. Shipments of herring and haddock fillets declined significantly. Cod fillet exports were off only slightly at year's end.

Canned fish exports in 1967 were 27,430 metric tons, slightly below 1966 shipments. Exports of small sild sardines were up about 7 percent, but brisling shipments were down 20 percent. The main canning season for brisling and sild sardines begins in spring.

	Exports	
	1967	1966
	. . . (Metric Tons) . . .	
Frozen fillets:		
Haddock	10,966	14,602
Cod	25,583	26,056
Coalfish	19,565	17,828
Herring	6,689	8,435
Other	6,298	5,875
Total frozen fillets	69,101	72,796
Frozen herring	13,167	16,691
Canned fishery products:		
Brisling	5,963	7,539
Small sild sardines	13,463	12,637
Kippers	3,348	3,386
Shellfish	523	787
Other	4,133	4,539
Total canned fish	27,430	28,888
Fish meal	494,785	257,289
Herring oil, crude	165,721	80,841

Industrial Fish

Exports of fish meal in 1967 were up 92 percent from 1966. Norway maintained the status she gained in 1966 as the world's second largest producer of fish meal. Herring is the main species used for reduction, but mackerel and capelin are also very important.

* * *

NEW NORWEGIAN GROUP GRANTED EXPORT RIGHTS TO U. S.

Nordic Group A/L, the export organization for 11 (originally 14) frozen fish fillet producers established in fall 1967, has been granted export rights to the U. S. for one year by the Government. The export permit presupposes "positive cooperation" between Nordic and Norsk Frossenfisk A/L (Frionor) in exporting frozen fish fillets to the U. S.

Frionor Loses Monopoly

The Government's decision has been severely criticized in fisheries circles, particularly by Frionor. This group, naturally enough, wanted to retain exclusive export rights to the important and attractive U. S. market.

Nordic will start operations shortly from its Trondheim headquarters. The individual companies will be permitted to deal directly with their U. S. customers, but all exports will take place in the name of Nordic Group A/L. (U. S. Embassy, Oslo, Feb. 21, 1968.)

Denmark

1967 FISHERY EXPORTS SOARED BUT VALUE SAME AS 1966

In 1967, Denmark exported much larger quantities of fishery products than she did in 1966. But prices were lower and the total value of 885 million kroner (US$118 million) was virtually the same as in 1966. This was reported by the Ministry for Fisheries.

Exclusive of herring oil, 355,000 metric tons of fish products were exported in 1967 against 318,000 tons in 1966.

Herring oil exports nearly doubled: 62,000 tons in 1967--34,000 tons in 1966. These exports prevented the total 1967 export value from declining.

Denmark (Contd.):

Better prices in the U. S. for cod blocks were a favorable development during 1967; European prices for blocks also rose slightly.

Sales of Danish plaice in Europe fell in 1967 because of resistance to higher prices. Prices have now returned to more normal levels, and increased export sales are expected.

Denmark ranks fifth among world's fishery exporting nations by value and fourth by quantity, according to FAO data. (Asst. Regional Fisheries Attaché, U. S. Embassy, Copenhagen, March 1, 1968.)

* * *

INDUSTRIAL FISHERY IS EXCELLENT

Esbjerg's important industrial fishery started out in 1968 by breaking all records. February landings were expected to exceed 25,000 metric tons, three times those of Feb. 1967. Since Nov. 1967, more than 85,000 tons have been landed--compared with only 38,000 tons for the year-earlier period. Despite heavy supplies of fish, there are no plans to impose quotas on the cutters.

Esbjerg's 3 fish meal plants have been expanded within the last year (more expansion is planned). This permits the orderly processing of landings. The cool weather has also helped: the cutters can hold their loads up to 2 days without reducing quality appreciably.

Wait to Unload

Many cutters arriving in the harbor sit extremely low in the water because of heavy loads. Some even have net bags of fish hanging from the rigging. The ship inspection service has warned several skippers to follow the regulations on minimum freeboard.

Prices for industrial fish at the start of the season were up slightly from those at the end of 1967. Larger herring and sprat were bringing about 1.3 U. S. cents a lb. The heavy landings have now brought the price down to 1.2 U. S. cents a lb. for larger herring and sprat. Sea robins, Norway pout, and small herring and sprat are now bringing about 1.1 U. S. cents a lb.

Foreign Competition

The Esbjerg fish meal plants did well financially last year. They should do even better in the wake of last November's devaluation. The plants now pay less for raw material in relation to world price for fish meal. The Norwegians, who did not devalue, are said to be experiencing difficulties in marketing meal and oil.

However, the Danes are not rejoicing greatly over the excellent fishing now underway. They expect the Norwegians also to make heavy industrial catches and to continue effective competition. Also, they are acutely aware of large Peruvian fish meal stocks and of heavy catches there so far this year. (Asst. Regional Fisheries Attaché, U. S. Embassy, Copenhagen, March 1, 1968.)

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FISHERMEN BUY CONTROL OF FISH MEAL PLANT

Several fishing skippers who have delivered catches of industrial fish to the privately owned West Jutland Herring Oil Industry (Vestjydsk Sildolie Industri) early this year urged the firm's director to enlarge the plant. About 50 other skippers are on waiting lists to deliver catches to the 3 large Esbjerg plants. The plants are reluctant to accept more raw material because of inadequate processing capacity.

Expansion to Result from Purchase

The Vestjydsk firm countered with an offer to sell controlling interest to the fishermen. Thirty-eight of the skippers now fishing for the firm decided to accept the offer. This involves the purchase of stock worth nearly $60,000 over a 3-year period. When payment is completed, more plant capacity costing about $200,000 will be built. Then the firm should be able to accept industrial fish from more vessels. (Asst. Regional Fisheries Attaché, U. S. Embassy, Copenhagen, March 1. 1968.)

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FAROESE ORDER MORE FISHING VESSELS FROM NORWAY

A shipowner in Thorshavn, Faroe Islands, has ordered a 166-foot longliner from a

Denmark (Contd.):

shipyard in Ulsteinsvik, Norway. The new vessel will be the largest Faroese longliner. Equipped with a 1,200 hp. diesel motor, it will carry 27 men and have a hold capacity of 500 metric tons of salted fish and 100 tons of frozen fillets. The vessel will be a double-decker and permit the crew to work under shelter. The new vessel, to cost 5.2 million kroner (nearly US$700,000), will be delivered in December 1968.

9 Vessels on Order

Fishing vessels on order for Faroese owners are 3 stern trawlers, 2 longliners, and a purse seiner from Norwegian yards; one longliner and a purse seiner from Faroese yards; and one stern trawler from a West German yard. (Asst. Regional Fisheries Attaché, U. S. Embassy, Copenhagen, March 1, 1968.)

West Germany

FISHING INDUSTRY DECLINES SHARPLY

Early this year, the German Federal Republic coastal states of Bremen, Hamburg, Lower Saxony, and Schleswig-Holstein submitted a joint memorandum to the Federal Ministries for Food and Agriculture, Economics and Finance, and to the Bundestag (Parliament) asking financial support to correct critical developments in the fishing industry.

The states reported that the important trawler and lugger fisheries had lost DM7.9 million (4 DM = US$1) in 1965, DM37.5 million in 1966, and were continuing to decline in 1967. This decline was attributed to a drop in demand for fresh white fish of 12 percent in 1966 and 20 percent in 1967. The decline also affected frozen fish sales. As a result, white fish was diverted to fish-meal factories.

States Consider Fishing Essential

The coastal states consider the industry important to the total food supply and essential to Germany's economic policies. It is one mainstay of the states' economy. Though federal and state aid has improved the industry, marketing remains a critical problem; there are no prospects of a solution for the next several years. Therefore, the states believe increased federal aid is indispensable.

State Plans

The state governments propose to divert operations from white fish. They believe 25-30 trawlers and 20-25 luggers will have to be scrapped during the next 2-3 years. They are asking a scrapping premium subsidy of DM12.4 million from the government to prevent bankruptcy of fishing companies. A precedent for such premiums was established during 1961-1967.

The states also suggest that no funds from the revolving loans for vessel construction be granted for vessels designed to land white fish; that repayment terms of federal loans be extended for 2 years; and that federal aid be concentrated to improve marketing. (U. S. Consulate, Bremen, Feb. 23, 1968.)

Iceland

LIMITATIONS PUT ON HERRING FISHERY

The Icelandic Ministry of Fisheries announced on February 21, 1968, new limitations for 1968 on herring fishing off the south and west coasts. The new rules prohibited herring fishing from March 1 to August 15; limited maximum herring catch to 50,000 metric tons; and increased permissable minimum size of herring caught from 23 centimeters to 25 centimeters (almost 10 inches).

Conservation Measures

The purpose of the new measures is to conserve the south and west coast herring stock. Record catches were made during the mid-1960s. In recent years, many of the herring caught were "immature" fish, particularly during the summer. (U. S. Embassy, Reykjavik, Feb. 29, 1968.)

Spain

TUNA SEINER "SARASUA" TIED UP

The first trip of the Spanish stern-loading tuna purse seiner "SS Sarasua" was a failure.

Spain (Contd.):

It is attributed to the shipowners' lack of funds to carry out necessary operational changes and equipment adjustments.

The "Sarasua" is now laid up in Huelva awaiting creditors' decisions. (U. S. Consul, Bilbao, Feb. 29, 1968.)

Netherlands

REPORT ON 1967 FISH MEAL IMPORTS

	Metric Tons
Chile	18,333
Iceland	1,039
Norway	16,116
Peru	103,879
South Africa	1,675
Belgium	334
Denmark	3,483
Other	1,001
Total	145,880

United Kingdom

WHITE FISH AUTHORITY RAISES INTEREST RATES

The interest rates on fishery loans by the White Fish Authority, which became effective Nov. 20, 1967, are:

Loans for fishing vessels, new engines, nets, and gear for not more than 5 years--8 percent (an increase of $\frac{5}{8}$ percent).

More than 5 years but not over 10 years--8 percent (up $\frac{1}{2}$ percent).

More than 10 years but not over 15 years--8 percent (up $\frac{1}{2}$ percent).

More than 15 years but not over 20 years--$7\frac{7}{8}$ percent (up $\frac{3}{8}$ percent).

Loans to Processing Plants

Loans to processing plants for up to 15 years are $8\frac{3}{8}$ percent (an increase of $\frac{5}{8}$ percent).

Loans for over 15 years but less than 20 are $8\frac{1}{4}$ percent (up $\frac{1}{2}$ percent). ("Fishing News," Dec. 8, 1967.)

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DEVELOPMENT PROGRAMS PLANNED

The British Whitefish Authority plans 2 development programs for the fishing industry. It will proceed with these programs with or without Government support.

The programs, which will be emphasized during 1968-69, aim to revive statutory minimum prices (floor prices) and to launch a large-scale campaign to increase fish consumption. The United Kingdom fishing industry had a poor year in 1967--prices, profits and in deaths. ("Fishing News," Mar. 1, 1968.)

Italy

CANNED TUNA PRODUCTION IS STILL RISING

Canned tuna production in Italy reached 40,000 metric tons in 1967, continuing the upward trend of recent years. The 1967 increase was caused by expanded production of canned tuna in oil to meet increased domestic demand.

Production of other canned fishery products remained unchanged from 1966: anchovies and sardines in oil, 2,500 tons; salted mackerel and anchovies, 2,700 tons; and other fish products 6,000 tons. Industry sources predict further increases in canned tuna output with minor increases in other canned fish products.

To Remain Net Importer

Although the outlook for the fishing industry is promising, and the fleet and shore facilities are being modernized, Italy is likely to remain a net importer of fishery products. Total consumption by 1970 is expected to be about 200,000 metric tons, with imports supplying 30 percent of the total. ("World Fishing," Feb. 1968.)

Belgium

FISHERY LANDINGS, 1961-67

"Fiskets Gang," published by the Norwegian Fishery Directorate, reports in the Jan. 20, 1968, issue these figures on Belgian landings 1961-67:

	Total Metric Tons
1967	51,648
1966	47,305
1965	48,073
1964	47,730
1963	51,678
1962	47,775
1961	46,372

Note: In 1967, total included 48,524 tons of bottomfish; 1,001 tons of pelagic fish; and 2,123 tons of shellfish.

Yugoslavia

AIDS CONGO

The state-owned Yugoslav firm "Energoprojekt" will construct 2 fish-processing plants equipped with deep-freezing equipment for the Government of the Republic of Congo. This is in addition to 2 electric power plants. Total aid will be over US$16 million. The cost of the fish-processing plants is not known. ("Tanjug," March 1, 1968.)

USSR

CONTINENTAL SHELF LAW PASSED

On Feb. 7, 1968, the decree of the Supreme Soviet establishing sovereign rights of the USSR to her territorial Continental Shelf was published. The USSR claims the shelf adjoining her territorial waters (12 miles) to the 200-meters depth. Violations are punishable with fines up to 10,000 rubles (US$11,100) and imprisonment up to 1 year. ("Vedomosti Verkhnogo Soveta SSR," Feb. 7, 1968.)

The new legislation incorporates provisions of the 1958 Geneva Convention on the Continental Shelf into the Soviet penal system. Soviet action comes 4 years after the U. S. passed its Public Law 88-308. The U. S. law prohibits foreign fishing in U. S. territorial waters and declares that the resources of the Continental Shelf belong to the United States.

Japanese Reaction to Soviet Action

The Japanese newspaper "Nihon Suisan Shimbun" stated on Feb. 21, 1968, that Japan has no international obligation to respect the Soviet announcement because Japan did not sign the 1958 Geneva Convention. However, Japanese fishery companies fear the Soviet proclamation may adversely affect their king crab fishery in the Sea of Okhotsk and tanner crab fishery off the Kamchatka Peninsula.

A few days later, both Foreign Ministry and Fisheries Agency officials reiterated Japan's position that king crabs are not sedentary creatures of the Continental Shelf, and so are not covered by the Soviet law. Also, Japan does not consider herself bound by the Soviet declaration of authority over minerals and sedentary marine creatures of the Continental Shelf off the Soviet coasts because Japan did not sign the 1958 Convention.

* * *

BUYS FROZEN FISH FROM BRITISH

A contract to supply frozen fish to the Soviet Union has been awarded British Limited, a frozen fish exporting cooperative of the Grimsby and Hull fishing ports. The value of the contract (£460,000 or US$1.1 million) is 50 percent greater than a similar one in 1967. The British hope other export orders may be obtained during the year. There was fierce competition from other European fish-exporting countries. ("World Fishing," Feb. 1968.)

The species of fish and quantities were not given. Traditionally, the Soviets buy frozen cod and herring, mostly from Iceland.

In 1966, the Soviets produced only 160,700 metric tons of frozen fishery products. Although this was considerably more than 1960's 57,400 tons, apparently it was not enough to satisfy rapidly expanding domestic demand.

* * *

USSR (Contd.):

RESEARCH IN
EQUATORIAL ATLANTIC ENDS

Two ATLANTNIRO fishery research vessels carried out exploratory studies in the Congo-Angola portion of the west African Continental Shelf and have returned to Kaliningrad. The expedition discovered new fishing grounds and determined that a snapper fishery could be profitably started. Soviet scientists estimate that up to 40 metric tons of snappers a day could be caught by large stern factory trawlers off Congo and Angola. Concentrations of large shrimp and squid also were discovered.

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FISHING ATLAS PUBLISHED

The Polar Institute for Fisheries and Oceanography at Murmansk has published a Fishing Atlas of the White Sea containing 50 colored charts describing the effect of hydrological conditions on seasonal distribution of White Sea fish.

The Leningrad section of the Soviet Oceanographic Institute has drafted about 300 maps depicting hydrometerological and fishing data for the Caribbean Sea and the Gulf of Mexico.

MID EAST

Cyprus

PROSPECTS FOR A FISHING INDUSTRY

Despite Cyprus' natural geographic advantages, it must import 2,000 metric tons of fish every year. The local industry provides only 1,000 tons of fresh fish annually. The Government, trying to find substitute for imports, is more active now in promoting and expanding local production.

The meager production is attributable to several factors: lack of capital and training in the industry, overfishing, dynamiting, indiscriminate use of trawler nets, and possibly the deficiency of fish in coastal waters. However, recent studies showed many fish can be caught using proper measures.

Government Helps

In 1965, the Department of Fisheries in the Ministry of Agriculture and Natural Resources was established. This year, a Preventive Service was organized to curb unlawful fishing. The Government hopes to enact a new law this year regulating and policing the industry. US$120,000 is now available for loans to fishermen in inshore fishing to buy vessels, machinery, echo-sounders, and other devices required to develop the industry.

The Fisheries Department will conduct 1-month courses this year in maintenance of nautical machinery, making and repairing nets, and use of echo-sounders. It is now offering a 20-percent subsidy to buy echo-sounders. To encourage fishing in international waters, special subsidies will be given to trawlers that operate beyond Cyprus' inshore area.

FAO Helps

An FAO expert has been working with the Fisheries Department since September 1967 studying the feasibility of expanding pelagic fishing. The initial results are encouraging. Cyprus plans to buy its own research vessel this year to conduct biological and oceanographic investigations and to be a training center for fishermen. The Government is stocking, experimentally, 8 dams with freshwater fish. (U. S. Embassy, Nicosia, Feb. 28, 1968.)

LATIN AMERICA

Mexico

1967 CATCH ROSE 13 PERCENT ABOVE 1966's

Mexico's 1967 landings of fishery products were 233,274 metric tons--13 percent higher than 1966's 218,757 tons, according to preliminary figures. Several important food-fish species showed substantial gains. Shrimp continued to gain, and sardines and anchovies showed large gains. Nearly all sardines and anchovies are landed in Baja California and are canned as "sardines." The spiny lobster catch broke all records. Giant sea bass and grouper catches fell.

The output of industrial fishery products leveled off.

	1967	1966	Percentage + or - from 1966
	(1,000 Metric Tons)		
Edible fish & shellfish	197.5	171.5	+15
Shrimp	42.6	39.7	+ 7
Sardines	29.6	18.7	+58
Anchovy	22.8	13.7	+66
Lobster, spiny	1.6	1.4	+13
Mackerel	6.0	5.3	+14
Sea bass-grouper	4.6	7.7	-40
Oysters	19.7	19.9	- 1
Abalone	2.7	2.8	- 3
Fish meal production	10.2	9.6	+ 6
Kelp (landed)	20.1	22.1	- 9

Note: As landed or as first sold--heads on, heads off, dressed, round, shucked, dried, salted, or processed as in the case of fish meal.

Good Shrimp Year

The increase in shrimp catch, plus high prices during first-half 1967, resulted in a profitable year for exporters. Shrimp exports totaled US$64.1 million, up 22 percent from 1966. Shrimp maintained fourth place among all exports, led by corn, cotton, and sugar.

Most shrimp went to the U. S., but Japanese sources say 7,995 tons worth US$19.4 million went to Japan--through U. S. dealers.

Pacific Fishery Collapses

In Dec. 1967, the shrimp fishery collapsed on the Pacific Coast. Fishing was extremely poor in February 1968, and catches at the end of January were less than one percent the Jan. 1966 or 1967 level. However, catches have been holding up well on the Gulf coast.

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NATIONALIZATION OF FISHING INDUSTRY

Commercial Fisheries Review reported in January 1968 that Mexico's National Bank for the Development of Cooperatives (BANFOCO) had bought in October 1967 the 8 fishery companies known collectively as Empresas Rodriguez. It became the largest producer of canned fish. The bank bought all shares owned by the Rodriguez family and privately held shares of company officials. All officers were retained on salaries, so the companies continue to operate effectively with no change in policy.

These are the companies:

Pesquera del Pacifico, S. A., at El Sauzal, about 5 miles from Ensenada. This plant is the largest individual cannery in Mexico. It has separate lines for tuna, sardines, mackerel, anchovies, tomato products, refried beans, peaches, fruit juice, and canned pet food. It also includes a large fish-meal plant that uses waste from fish-canning operations, plus whole anchovies. Nearly all products are for the domestic market.

Pesquera Peninsular, S. A., in Ensenada, cans sardines, mackerel, and anchovies. Recently it began to can sea mussels. Its fish meal and stickwater plant use waste from the cannery; it also receives offal from all independent canneries in Ensenada. All products are marketed in Mexico.

Pesquera Isla de Cedros, S. A., a cannery on the island of the same name. It packs anchovies, sardines, and mackerel for the domestic market; it cans abalone for export. It produces fish meal from cannery offal. The sale of this plant included 6 small purse-seine vessels: "Agustin II," "Captain Tsekus," "Portola," "San Martin," "San Rafael," and "Tito."

Pesquera de Bahia Tortugas, S. A., on the bay of that name in the Territory of Baja California Sur. It cans abalone for export.

Mexico (Contd.):

Pesquera Matancitas, S.A., a combination sardine cannery and fish-meal plant, on Bahia Magdalena in the Territory. It cans sardines and uses both cannery offal and whole fish to produce fish meal. It includes a largely unused freezing plant. The sale included 2 small purse-seine vessels: "Mexicano," and "Californiano." A third boat that fishes for matancitas ("moon beam") is privately owned.

Astilleros Rodriguez, S.A., the boat-building and repair yard in Ensenada.

Pesquero Santa Isabel, S.A., in Ensenada, operates the 3 tuna purse seiners supplying Pesquera del Pacifico (tonnage capacities in parentheses): "Santa Isabel" (220), "Tesoro del Mar" (200), and "Princesa" (175).

Atun Mex, S. de R. L., in Ensenada, formerly operated both the tuna and sardine fleets, but Santa Isabel was split off to handle the tuna vessels. Atun Mex now has only the sardine purse seiners that supply Pacifico and Peninsular. Several privately owned boats also deliver to these canneries. The 6 refrigerated vessels fish for sardines, anchovies, mackerel, and bonito--and for tuna during local runs. The vessels, with tonnage capacities in parentheses: "San Juan" (150), "Santa Maria" (135), "San Pedro" (120), "Stella Maris" (100), "Aida" (90), and "Marino II" (90).

All vessels in the 4 BANFOCO fleets were built in the U. S. They used to fish out of California ports. (Regional Fisheries Attaché, U. S. Embassy, Mexico, Mar. 3, 1968.)

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1967 LANDINGS ROSE AT PILOT FISHING PORT OF ALVARADO

Although still operating far below capacity, landings and production at the pilot fishing port of Alvarado, Veracruz, have improved. Since it opened in 1964, the port has fallen short of expectations. The present management, however, is striving to increase landings and production, particularly by building large shrimp trawlers.

At the end of 1967, 15 vessels were operating from the port; 14 were under construction in local shipyards; 15 were being built in other shipyards. There were 240 persons employed ashore.

	1967		1966	
	Metric Tons	US$ 1,000	Metric Tons	US$ 1,000
Landings:				
Shrimp	273.0	457	225.5	309
Octopus	430.0	103	471.0	104
Finfish	2,081.0	170	1,446.0	170
Production:				
Fish meal	90.0	14	83.0	13
Canned fish	1/	282	1/	272

1/Not available.

* * *

JAPAN-MEXICO 12-MILE FISHING ZONE TALKS RESUME

The second round of talks between Japan and Mexico to permit Japanese fishing inside Mexico's 12-mile exclusive fishery zone opened in Tokyo, Japan, on Jan. 22, 1968. The Japanese outlook is that an agreement will be reached. ("Suisancho Nippo," Jan. 17, 1968.)

Peru

ANCHOVY FISHING SEASON REOPENS

Anchovy fishing in Peru recommenced on March 18, after a closed season ("veda") that began Feb. 17.

Fish-meal production during Jan. 1-Feb. 15 was 447,410 metric tons; shipments during same period were 285,007 metric tons.

Stocks on hand, as of Feb. 15, were 758,107 tons; 115 plants were in production. Mid-March stocks were estimated at 600,000 tons. (U. S. Embassy, Lima, March 19.)

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FISH MEAL PRODUCTION AND HOLDINGS

Peruvian fish meal stocks on Jan. 31, 1968, were the highest ever; 1967 production also set a record.

	1968	1967	1966	1965
	(Metric Tons)			
Fish meal production:				
Total for year	-	1,815,983	1,470,478	1,282,011
January	287,466	242,380	194,104	164,899
Stocks held on Jan. 31	688,943	600,340	375,165	237,443

Source: "Sociedad Nacional de Pesquera," Feb. 21, 1968.

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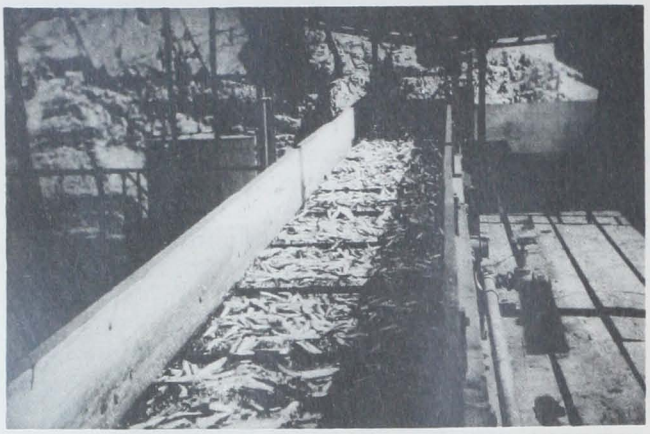
Peru (Contd.):

FISH-MEAL PRODUCERS APPEAL TO GOVERNMENT

The Association of Small and Medium Fish-Meal Producers has written the Ministry of Agriculture, which is responsible for fisheries, complaining that low fish-meal prices and lack of capital have forced many of its plants to close. The letter says that unless the situation improves, many plants will close for good.



Conveyor belt carrying anchovies into fish meal plant for processing. (Photo: M. J. Lindner)

Among the causes cited was Decree 77 of December 9, 1967; this prevents "free commercialization" of fish meal. The Association claims that the decree favors Peru's competitors: it creates an artificial saturation of the market and forces Peru to maintain enormous stocks of fish meal, which adversely affect prices.

What Association Asks

The Association asked that Decree 77 be modified to make the marketing machinery voluntary, not obligatory. The Ministry was asked also to enforce the anchoveta catch limit of 8 million metric tons, to speed paperwork involved in getting fish meal shipped, and to transfer the responsibility for recording fish-meal exports from the National Fisheries Society (SNP) to the Ministry. ("Pesca," Dec. 1967.)

* * *

CONSULTANTS RECOMMEND HAKE INDUSTRY TO GOVERNMENT

A Spanish consulting firm, "Techniberia," has recommended to the Peruvian Government that it set up a hake catching and distribution operation. The recommendation followed the firm's study of the fishing industry and fish resources.

Firm's Thoughts

Techniberia observed: (1) There is little chance of a dramatic increase in catch of currently desired species--mullet, sea bass, and others--because they are relative scarce; (2) Prospects for large-scale marketing of fish are more favorable for frozen than for fresh products; (3) Large-scale sales of frozen hake would not conflict with sales of fresh fish; and (4) It would be necessary to set up a complete new system for catching and marketing hake.

The group recommends trawlers 80-85 feet long, with a capacity of 50-60 tons, equipped to trawl at depths greater than now fished. It recommends also construction of freezing plants. The system could be operational within 18 months. ("Pesca," Dec. 1967.)

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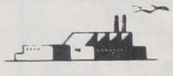
SHIPYARD BUILDS 6 LARGE PURSE SEINERS

The firm Maestranzas y Astilleros Delta, S.A., in Callao, is building 6 large purse seiners for Fabrica de Conservas Neptuno, a fish-meal plant in Chimbote.

The wood vessels are 95 feet long, can hold 350 tons, and will cost US$165,000.

The vessels were scheduled to be delivered in March ready to fish. Orders for similar vessels are pending from Pesquera Amazonas, Pesquera Trinidad, and Pesquera Taybe. ("Pesca," Dec. 1967.)



ASIA

Japan

FISHERIES DIRECTOR OUTLINES POSITIONS AND PLANS

On Feb. 13, 1968, the Director of the Japanese Fisheries Agency addressed a meeting of Chiefs of Fishery Departments (Prefectures). The following are highlights of his talk:

• Development of New Fishing Grounds: The Fisheries Agency will undertake a large-scale survey to develop new fishing grounds.

• Fishery Financing: To modernize the industry, the Agency will study the status of fishery financing and use of the Fishery Cooperative Associations' funds.

• Abolition of Fish Price Stabilization Fund: Since a bill to abolish the fund is due to be brought before the Diet, the Agency is studying other measures to stabilize prices.

• Partial Revision of Ships Safety Law: Ratification of the International Treaty on Full Draft of 1966 and a bill to partially revise the domestic Ships Safety Law--will be brought before the Diet. When revised, fishing vessels of more than 20 tons will have to identify their full draft line, and loading will be restricted. To prevent hardships, the Agency will give reasonable notice before enforcing the revisions.

• Establishing Operational Order in World Fishing Areas: Other countries are moving progressively to establish fishing zones. Japan's basic position is: (1) coastal countries can only claim a discriminatory right for control over their own territorial waters; (2) unilateral establishment of fishing zones is not valid under international law; (3) establishment of fishing zones is valid only by agreement between countries involved.

The Japan-New Zealand Agreement concluded last year is based on this position. It will be ratified by the Diet. Also, the Agency will request the Diet to approve Japan's participation in the Treaty Concerning Territorial Waters and Adjacent Waters, and in the Treaty Concerning the High Seas. ("Suisan Tsushin," Feb. 14, 1968.)

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1967 TUNA EXPORTS DROPPED 60 PERCENT

Customs data reveal that Japan's exports of frozen tuna in 1967 were only 117,914 metric tons--60 percent of 1966's 195,054 tons. The value of US$45,000,000 in 1967 was only 55 percent of the $81,000,000 in 1966.

Principal Markets by Species

	Albacore	Yellowfin	Skipjack	Bluefin	Other	Total
	(Metric Tons)					
United States.	19,979	10,337	225	-	115	30,656
Puerto Rico .	14,503	11,507	3,815	-	572	30,397
Am. Samoa .	8,052	1,341	4	-	1,433	10,830
Fiji	2,791	506	-	-	707	4,004
Malaysia . . .	1,422	314	-	4	125	1,865
New Hebrides.	557	137	43	-	226	963
Canada. . . .	1,081	278	-	-	-	1,359
France	309	-	-	-	-	309
Italy	61	27,710	625	778	3,286	32,460
Spain.	-	-	511	-	11	522
Portugal . . .	-	-	271	-	29	300
Guyana . . .	-	206	471	-	122	799
Canary Is. . .	-	18	1,000	-	34	1,052
Denmark. . .	55	-	-	-	598	653
Ivory Coast. .	-	55	347	75	3	480

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SLUMP IN FROZEN TUNA EXPORTS CUTS INSPECTION REVENUE

The Japan Frozen Foods Inspection Corp., commissioned by the Government to inspect export frozen fishery products, faces financial difficulties. The situation was caused by a substantial reduction in inspection revenue during 1967 as frozen tuna exports declined sharply.

In 1967, these exports declined about 50,000 metric tons from 1966. Revenue was cut over US$139,000. The Corporation had to reduce its overseas inspection staffs in Italy, Long Beach, Calif., and American Samoa.

Corporation Fees

The Corporation conducts mandatory inspection of fresh and frozen tuna for export at a fee of 1.3 yen a kilogram ($3.97 a short ton) for albacore, 1.1 yen per kilogram ($3.36 a short ton) for yellowfin, and 0.95 yen a kilogram ($2.90 a short ton) for other tuna species. ("Suisan Nippo," Feb. 26, 1968, and other sources.)

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Japan (Contd.):

LOSING LEAD IN U. S. FROZEN TUNA EXPORT MARKET

A recent Japanese study reveals that frozen tuna exports to the U. S. in 1967 fell below the combined quantity exported to the U. S. by South Korea, Taiwan, and others. Japan exported an estimated 70,000 short tons to the U. S.; the others, 71,000. While 1967 was extremely sluggish for Japanese frozen tuna exports, South Korean and Taiwanese exports to American Samoa and Puerto Rico increased sharply; the uptrend is likely to continue.

Japan Being Undersold

Moreover, Japan is faced with price problems: reportedly, South Korea and Taiwan are exporting tuna to Puerto Rico at prices $10-20 a ton below Japanese prices. Those countries are gaining greater control of the U. S. frozen tuna export market--in quantity and price. ("Suisan Tsushin," Feb. 10, 1968.)

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CUTS TUNA EXPORT QUOTAS TO U. S.

On Feb. 9, 1968, the Japan Frozen Tuna Exporters Association proposed export quotas of frozen tuna to the U. S. for fiscal year 1968 (April 1968-March 1969). The FY 1968 quotas are much below FY 1967's. The proposed quotas were to be presented for approval to the directors' meeting, scheduled for Feb. 21. ("Suisancho Nippo," Feb. 12, 1968.)

New quotas:

	Fiscal Year	
	1968	1967
	. . (Short Tons) . .	
To United States		
(a) Shipments from Japan:		
Albacore	30,000	35,000
Yellowfin	25,000	35,000
Loins	6,000	8,000
Additional quota:		
Albacore & yellowfin	10,000	10,000
Loins	2,000	-
(b) Transshipments from Indian Ocean:		
Albacore & yellowfin	4,000	4,000
(c) Transshipments from Atlantic Ocean:		
Albacore	20,000	25,000
Additional quota	5,000	5,000
To Fishing Bases	4,000	4,000
To Italy	45,000	45,000

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EXPORT PRICES OF FROZEN TUNA FOR U. S.

Japanese export prices of frozen tuna for the U. S. in January 1968 were:

	Prod.	Low	High	Average
		. (In US$/Short Ton f.o.b. Japan) .		
Albacore	rnd.	436 (420)	470 (505)	447 (496)
Yellowfin	g. & g.	400 (410)	413 (460)	402 (440)
Albacore	loins	- (1,056)	- (1,062)	1/985 (1,060)
Yellowfin	loins	830 (970)	876 (1,000)	855 (979)

1/Only one shipment in Jan. 1968.
Note: Figures in parens are those for Jan. 1967.

(Fisheries Attaché, U. S. Embassy, Tokyo, Feb. 7, 1968.)

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EXPORTS OF MARINE PRODUCTS DECLINED IN 1967

Japan's exports of marine products in 1967 were worth US$325,578,000 on a customs-clearance basis, down 9.1 percent from 1966 exports of $358,073,000. This is the first time such exports have declined since Japan recovered her international trade after World War II.

Value of 1967 Marine Product Exports

	1967	1966
	. . . . (US$1,000)	
Canned & bottled products	163,011	148,138
Frozen fishery products	82,923	118,365
Pearls	55,037	64,697
Fish oils	9,164	12,527
Salted/dried products	5,658	5,192
Agar-agar	4,228	2,621
Fish meal	1,769	2,619
Nonedible shellfish	1,249	1,200
Seaweed products	1,102	1,187
Dried skipjack loins	806	1,110
Live fish and shellfish	631	417
Total	325,578	358,073

Changing World of Fishing

The decline was ascribed primarily to growing world restrictions on the harvest of fishery resources--and the remarkable advance in fishery production by developing nations. Another factor is growing domestic demand in Japan for high-priced fish. In 1967, this put frozen fish products, such as tuna, in short supply for export. As a result of these developments, frozen tuna exports in 1967 declined about 45 percent in value.

apan (Contd.):

Other exports that declined markedly were earls, fish oils, and meal.

On the other hand, canned mackerel and anned salmon gained. ("Suisan Keizai Shimun," Feb. 13, 1968.)

* * *

967 CANNED JACK MACKEREL EXPORTS

Japanese canned jack mackerel exports in 967 totaled 5.07 million actual cases (1 lb. all 48's and $\frac{1}{2}$-lb. 48's) on a customs-clearance basis. Two-thirds of the exports went o the Philippine Islands. Exports to Malaysia and New Guinea also showed gains, but sales to the U. S. fell by over 60 percent from 1966 figures. ("Suisan Tsushin," Feb. 13, 1968.)

Principal Destination	1967		1966	
	Natural1/	Others2/	Natural1/	Others2/
	(Number of Actual Cases)			
Philippines	966,337	2,416,737	663,010	1,276,945
Malaysia	503	357,442	21,222	226,982
United States	171,729	10,379	425,116	44,169
New Guinea	151,736	14,510	71,401	11,221
Others	378,759	606,916	333,516	515,169
Total	1,669,064	3,405,984	1,514,265	2,074,486

1/Converted to 1-lb. tall cans, 48 cans per case.
2/Converted to $\frac{1}{2}$-lb. cans, 48 cans per case.

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EPORT ON HERRING ROE IMPORTS, RODUCTION, PRICES

Table 1 - Imports

From	1967	1966	1965	1964	1963
	(Metric Tons)				
U. S.	294	313	218	52	57
Canada	17	12	6	10	8
USSR	97	113	49	-	-
Norway	21	51	8	5	14
North Korea	-	15	-	-	-
Netherlands	1	-	-	-	-
Total	430	504	281	67	79

Source: Customs Clearance Statistics.

Table 2 - Production

	1967	1966	1965	1964	1963
	(Metric Tons)				
Dried	1/	52	55	79	326
Salted	1/	1,089	641	508	508
Total	1/	1,141	696	587	834

1/Not available.
Source: Japan Fisheries Agency.

Table 3 - Tokyo Average Wholesale Price

	Price1/	
	Yen/Kilo	US$/lb.
1967	2,300	2.90
1966	2,100	2.65
1965	3,200	4.04

1/For "large" roe, 10-13 cm. in length and 23-35 grams in weight.
Source: Japan Fisheries Agency.

* * *

TO EXPLORE OFF U. S. EAST COAST AND GULF OF MEXICO

The firm Nihon Suisan plans to send an expedition to the U. S. east coast and the Gulf of Mexico this year. In May 1967, it sent the stern trawler "Kaimon Maru," 2,500 gross tons, to the U. S. east coast on a 2-month exploratory cruise. The purpose is to develop new bottomfish grounds for the firm's trawlers now operating off West Africa. There, the fishery is becoming unstable.

The 1968 Plan

For the 1968 trip, Nihon Suisan plans to operate a 2,500- to 4,000-ton vessel. The craft will survey the Atlantic coast of North America south of the area scheduled for investigation this year by the Government research vessel "Kaiyo Maru" (3,500 gross tons). The vessel also will survey the offshore waters of the Gulf of Mexico where Japan has done relatively little exploration.

In the 1967 expedition, the firm lost about US$111,000, but the cruise resulted in the catch of interesting species--such as herring, butterfish, and red snappers. ("Shin Suisan Shimbun Sokuho," Feb. 20, 1968.)

* * *

ENDS EXPLORATORY TRAWLING OFF CHILE

The Nitto Hogei Fishing Co., which had been trawling experimentally for hake, shrimp, and other bottomfish off Chile since early Nov. 1967, ceased in early Feb. 1968. Its two 300-ton trawlers and one 7,477-ton freezership departed for Japan.

The firm had planned to fish until April 1968 in a preliminary resource study prior to joining with Chilean interests.

Japan (Contd.):

Apparently, the survey results were not satisfactory. ("Shin Suisan Shimbun Sokuho," Feb. 23, 1968.)

* * *

FIRM INTERESTED IN FISHING GREENLAND BOTTOMFISH

The Japanese firm Nihon Suisan is showing interest in fishing bottomfish in the Davis and Denmark Straits off the east and west coasts of Greenland. The firm hopes to survey those areas in summer 1968 with its trawler now operating off West Africa.

The two straits, never fished by the Japanese, were worked successfully by the Soviets in 1967. Nihon Suisan's exploration of the region's commercial potential would be in line with its plan to establish a year-round trawl fishery in the Atlantic Ocean.

Government Also Plans Cruise

Besides Nihon Suisan's proposed expedition, the Government has scheduled an exploratory cruise to the northwest Atlantic off Newfoundland in 1968 by its year-old 3,200-gross-ton research vessel "Kaiyo Maru."

The area farther south of Newfoundland, or south of 42° N. latitude off New York, was surveyed in 1967 by the research vessel "Kaimon Maru" (2,500 gross tons) with some success. ("Shin Suisan Shimbun Sokuho," Feb. 6, 1968.)

* * *

GOVERNMENT TO PERMIT ONLY TRIAL SEINING ON DISTANT GROUNDS

The Japanese Fisheries Agency has been deliberating whether to license purse seining in the Atlantic Ocean off West Africa and in the South Pacific Ocean on a full commercial scale. It has decided tentatively to continue permitting only experimental operations. The prevailing view within the Agency is that purse seining in distant waters and its effect on resources are still questionable. Therefore, more study is needed.

Present Fleet

At present, Nichiro Fishing Co. operates a fleet of 4 two-boat seiners and 2 mothership in the West African fishery. It is reported, however, that several firms, including Nichiro, have filed license applications for a total of 40 purse-seine units to operate off West Africa. Attention is focused on how many of those vessels the Agency will permit in the eastern Atlantic fishery. ("Katsuo-maguro Tsushin," Feb. 7, 1968.)

* * *

SKIPJACK TUNA SEINING TESTED OFF NEW GUINEA

Taiyo Gyogyo K. K., which has had many tuna seiners in Sanriku waters, now has the 275-ton "No. 3 Hayabusa Maru" there. The firm recently used this vessel to test fish for skipjack in tropical waters north of eastern New Guinea during the Sanriku offseason. The seiner left Nagasaki on Dec. 18, 1967, and returned Jan. 25, 1968. During the test, 49 metric tons (mainly skipjack) were caught, not a large catch. However, the operation was only a test and the usual gear for the Sanriku operation was used.

Fit Vessel To Skipjack

Technicians of the firm's Nagasaki branch were aboard. They said there would be good prospects for this fishery if the vessel's construction, rigging, gear, and methods were improved to fit the habits of the local skipjack. The vessel's catch was erratic: one haul would take 16.5 tons and the next only a few tons.

It has long been said that there is no difference in temperature between surface and deep water off New Guinea. The water is very clear and makes fishing difficult. (Japanese Fisheries News Report, Feb. 14, 1968.)

* * *

RESEARCH VESSEL RETURNS FROM NORTH PACIFIC

On Feb. 15, the Japanese Government-owned research vessel "Kaiyo Maru" (3,210 gross tons) returned to Tokyo after a 15-day exploratory cruise in the North Pacific Ocean. The surveys were conducted west of 160° E. longitude and south of 45° N. latitude, or within Area B under the Japan-USSR Fisheries Treaty.

Japan (Contd.):

Cruise Objectives

Objectives were to learn more about the biology of salmon wintering in the North Pacific Ocean, and to test efficiency of vessel's navigational and fishing instruments in cold weather.

It was established that, even in February, the salmon near 160° E. longitude dwell in waters of 3°-6° C. (37.4°-42.8° F.). Before, it was believed they wintered in warmer temperature zones. There were strong indications that pink salmon were recovering this year, a lean one for the species. ("Suisan Keizai Shimbun," Feb. 19, 1968.)

* * *

TO TIGHTEN RULE ON FOREIGN VESSEL ENTRY INTO 3-MILE ZONE

The Japanese Fisheries Agency wants to prohibit foreign vessels from fishing within the three-mile territorial sea. It plans to strengthen application of the October 1967 Fisheries Law governing fishing by foreign nationals.

Recently, more Soviet and South Korean vessels have been sighted passing through Japanese waters with fishing gear on deck or otter trawl boards towed behind. It has been difficult to determine whether these transits were innocent or attempts to fish stealthily.

Innocent Passage

While the Fisheries Law does not restrict innocent passage, the Agency intends to recognize passage as innocent only if the vessel is not ready to fish. Therefore, it plans to instruct coastal patrol officers to warn transiting foreign fishing vessels in Japanese territorial waters to stow their gear--or move out of these waters. ("Suisan Keizai Shimbun," Feb. 15, 1968.)

* * *

SAFETY PRECAUTIONS TIGHTENED IN JAPAN SEA

The Japanese Government has advised all her fishing vessels in the Japan Sea to observe strictly the safe navigation rules in the Maritime Accident Prevention Law. The Government acted as tension heightened following North Korea's seizure of the U. S. naval vessel "Pueblo."

One crab fishing vessel reported the loss of gear caused by the passage of a huge foreign naval ship; some fishermen claim their vessels were surrounded by foreign patrol boats.

The Precautions

Fishing vessels in the Japan Sea (over 6,350 craft) have been cautioned to display clearly the national flag, refrain from approaching foreign naval vessels, and to avoid South Korea's exclusive fishing zone. The Government also has asked the U. S., the Soview Union, and South Korea to consider the safety of Japanese vessels. ("Minato Shimbun," Feb. 10, 1968.)

* * *

URGES TALKS WITH SPAIN ON 12-MILE FISHING LIMIT

The Japanese trawl industry is urging the Government to negotiate with Spain as soon as possible to safeguard Japanese vessels fishing off Spanish Sahara. Spain extended her exclusive fishing limit to 12 miles in May 1967. Recently, she strengthened enforcement and reportedly seized 14 foreign fishing vessels, including a Japanese trawler, since Dec. 28, 1967.

Japanese Seriously Affected

Japanese trawlers had fished for squid and octopus in productive grounds 6 to 8 miles off the Sahara coast for 9 years until Spain proclaimed the 12-mile limit. The trawlers are now seriously affected by the new law's rigid enforcement. ("Suisan Keizai Shimbun," Feb. 20, 1968, and other sources.)

* * *

HOW JAPANESE PROCESS TANNER CRAB

Most of the zuwai-gani (tanner crab, Chionoecets apilio) taken in the factoryships is frozen. This avoids the costly problem of removing the meat from the shell.

The carapace of the raw crab is removed by hooking the shell over the sharp edge of a removing tool. The body then is broken

Japan (Contd.):

into 2 sets of legs (right and left); any viscera, etc., adhering to the leg is removed by washing. The sets of legs are frozen, packaged, and marketed.

Canned

Zuwai-gani is canned by the same method used for king crab. There are 2 variations used by industry:

Single Cooking	Double Cooking
Raw Crab	Raw crab
Remove carapace	Remove carapace
Cook (100° C. or 212° F.; 15-18 min.)	Cook (60°-70° C. or 140°-158° F.; 10 min.)
Cool (sea water)	Separate legs
Separate legs	Extract meat
Extract	Cook (100° C.; 10-15 min.)
Can	Can

The double-cooking method apparently is used more commonly in the U. S. The Japanese prefer the single-cooking method because the product has a better flavor and a firmer pack.

Meat usually is extracted by hand. The legs are cut in short segments and the meat shaken or pushed out. Frequently, the shell segment will have to be opened by scissors to extract the meat.

The legs of the zuwai-gani are smaller than the king crab's and the meat difficult to remove. The labor for picking zuwai-gani is reported to be 6 times that for king crab. That is why almost all zuwai-gani aboard factoryships is frozen--not canned.

Development of Roller Extractor

Because of labor cost to recover zuwai-gani meat, several companies began to develop in 1967 a "roller" method for meat extraction. A very primitive roller method has been used for years: Pickers frequently use bottles to roll over the leg segments to force out the meat.

In the machine, the crab segments first are fed by belt to a large roller, which cracks the claws and other hard parts; then they go to a second roller, which squeezes out the meat from the segments. The meat is washed into a belt below. The shell passes through the rollers for discard.

The method does not produce good quality crab meat--mainly because water is used to remove the meat from the belt and rollers. Several major companies are now trying to develop a better machine. (Fisheries Attaché, U. S. Embassy, Tokyo, Feb. 6, 1968.)

日本

South Korea

WILL SEND 2 TRAWL FACTORYSHIP FLEETS TO NORTH PACIFIC

Japanese sources report that South Korea plans to send 2 trawl factoryship fleets to the North Pacific in April 1968. One fleet of eight 99-gross-ton trawlers will be led by the 995-ton mothership "Samsu" (owned by Sam Yang Soo Sahn Fishing Co.); the second fleet of about 20 trawlers will be supported by the 8,000-ton freezership "Sinhung" (owned by Sinhung Cold Storage Co.). Both motherships are equipped with meal plants.

Will Fish Until October

The two fleets will fish until October 1968, north of 50° N. lat. and east of 170° W. long., primarily for Alaska pollock and rockfish. Most of the catch will be processed into fish meal for export to Australia. The fleet owners also plan to sell to Japan fish liberalized under Japanese import laws.

* * *

JOINS TWO INTERNATIONAL FISHERIES COMMISSIONS

On Feb. 10, 1968, South Korea's Ministry of Foreign Affairs announced Korea's adherence to the FAO Indian Ocean Fisheries Commission and the FAO Fisheries Committee for the Eastern Central Atlantic. Both are newly established FAO regional fisheries organizations.

The affiliation reflects Korea's interest in bottomfish and tuna fisheries of the Indian and East Atlantic Oceans. (U. S. Embassy, Seoul, Feb. 26, 1968.)

* * *

FISHERIES DEPUTY DIRECTOR IS NAMED

Fisheries Administrator Jae Sik KIM has appointed Hee Un CHANG Deputy Administrator of South Korea's Office of Fisheries filling the post KIM formerly occupied.

CHANG is a graduate of the Pusan Fisheries College and has served the Office of Fisheries for 15 years. He is respected as an able technician and administrator.

South Korea (Contd.):

CHANG was formerly Chief of the Production Bureau. He had major responsibility for informal U. S. Bureau of Commercial Fisheries-Korean exchange program and enforcement of government's policy of abstention from salmon and halibut fisheries in the North Pacific. CHANG will be succeeded in this post by In Soo KIM, an economist with considerable experience in fisheries, and a graduate of the Fisheries College in Pusan.

* * *

FISHES INDIAN OCEAN

Two South Korean tuna longline fleets (totaling 10 vessels) departed Pusan in early January 1968 for the Indian Ocean. They stopped at Shimonoseki, Japan, for about 10 days to refuel and pick up ship supplies, gear, and bait.

Entry of foreign fishing vessels into Japanese ports is restricted under Japanese laws, but the 2 fleets were permitted entry by the Japanese Government because they were not fishing off Japan.

One fleet will operate out of Durban, South Africa, and the other will be based at Penang, Malaysia. Both were scheduled to begin about mid-February 1968. ("Nihon Suisan Shimbun," Jan. 15, 1968.)

Indonesia

JOINT SHRIMP VENTURE WITH JAPAN IN INDONESIA DELAYED

Toyo Menka Kaisha of Osaka, a leading trading firm in Japan, was expected to ask the cooperation of the Japanese and Indonesian Governments in its plan to begin fishing and processing operations off West Kalimantan, Indonesia, starting March 1968.

In fall 1967, the firm had planned to set up a joint shrimp fishing and processing venture in West Kalimantan with major Japanese fishing enterprises, including Kyokuyo Hogei. But the plan was seriously delayed because Japan and Indonesia differed in interpreting territorial waters. ("Nihon Keizai Shimbun," Feb. 13, 1968.)

Pakistan

PAKISTAN AND FAO SURVEY BAY OF BENGAL

A well-planned and systematic survey of the Bay of Bengal has been undertaken by East Pakistan's Fisheries Development Corporation (FDC) together with the UN's Food and Agriculture Organization. East Pakistan possesses vast fisheries resources in marine and inland waters covering 3,656,000 acres. The coastline of the Bay of Bengal alone extends 340 miles.

The Bay's marine resources remain almost untapped. No serious attempt has been made before to exploit East Pakistan's marine resources.

Start Is Made

FDC already has started to exploit the fish resources in the Bay of Bengal pending completion of the survey underway.

In its planning, FDC is relying mostly on data collected by past sporadic surveys. It has decided to use 10 trawlers in the Bay.

FDC is carrying out a scheme to mechanize fishing craft with outboard motors; 285 motors have been received from the Swedish Government under the "Freedom from Hunger Campaign." These were installed in locally built craft and distributed among fishermen on a hire-purchase basis. Nylon nets have also been distributed.

Of the mechanized boats, 91 have been floated in the Kaptai Lake for fishing, and 61 at Cox's Bazar for catching fish in the coastal waters. ("The Pakistan Fish Industry International," Feb. 1968.)

Taiwan

1967 FISHERIES PRODUCTION ROSE 7.7%

Taiwan's fisheries production in 1967 was 458,223 metric tons, an increase of 7.7 percent over 1966.

	1967	1966
	. . . (Metric Tons) . . .	
Deep-sea fisheries	189,097	169,196
Inshore fisheries	186,540	172,330
Coastal fisheries	26,399	25,239
Fish culture	56,187	58,511
Total	458,223	425,276

Taiwan (Contd.):

It is significant that for the first time since 1945 deep-sea production surpassed inshore production. (The margin was small.) This was due to an increase in the number of large tuna long-liners (over 50 gross tons); they numbered 260 at the end of 1967.

Production from fish culture was set back due to insufficient supply of milkfish fingerlings. Normally, 160 million fingerlings are required for the 15,000 hectares of brackish water ponds; in 1967, only about 40 million fingerlings were available.

The landings by fishermen of the Matsu and Quemoy Islands (under military jurisdiction) are not included in total. These were an estimated 5,000 metric tons in 1967.

1967 Exports

Exports of fishery products totalled US$18.1 million in 1967.

	Quantity	Value
	Metric Tons	US$
Frozen fish (mostly tuna). . . .	39,109	13,771,000
Frozen shrimp	1,436	3,373,000
Other species	300	1,000,000
Total.	40,845	18,114,000

Large Purse-Seine Operation

A Taiwanese fishing company chartered large purse seiners from Japan to catch spotted mackerel and horse mackerel southwest of Okinawa. The fleet of 7 boats, including a net boat, one light boat, two search boats, and three fishery transports, arrived at Keelung (Taiwan) in November 1967 and started fishing in December. By the end of February 1968, 350 tons of mackerels had been landed. Most of the fish will be canned for export. (Contributed by T. P. Chan, Chief, Fisheries Division, Joint Commission on Rural Reconstruction, Taipei, Republic of China.)

Hong Kong

COMMUNIST CHINA'S FISH EXPORTS RISE

In 1967, Mainland China sent to Hong Kong fishery products worth US$26.4 million--23 percent more than in 1966. The increase occurred despite an overall decrease of 18 percent in total Mainland Chinese exports to Hong Kong. The reason for this is that fishery exports, unlike others, are carried in small vessels--and were not affected by the turmoil of the 1967 "cultural revolution."

Imports from China in 1967 made up 64 percent of fishery sales on the Hong Kong market. (U. S. Embassy, Feb. 23, 1968.)

* * *

FISHERIES EXHIBITION HELD

The eighth Hong Kong Fisheries Exhibition was held Jan. 29-Feb. 3, 1968, three years after the last one. It was considered a success: 44 exhibitors, including 2 U. S. firms and 3 local sales representatives for U. S. products, participated. Despite poor weather, there was a very large attendance. Considerable interest was shown in U. S. electronic equipment, outboard motors, and antifouling paints. (U. S. Consulate, Hong Kong, Feb. 14, 1968.)

Southeast Asia Center Is Closer to Reality

The Southeast Asia Fisheries Training Center moved closer to reality when the agreement establishing it was signed by Philippines, Malaysia, and South Vietnam in mid-January 1968. On Feb. 7, the Japanese Government, which will play a leading role in the organization and smooth functioning of the center, appointed M. Morizawa (Deputy Director of the Japanese Fisheries Agency) as its representative on the center's Council of Governors. Other countries are now selecting their council members.

The Council of Governors will appoint staff, collect funds from members, and approve new members.

The center is designed to increase food-from-the-sea programs of members through applied research and training. More powered fishing vessels are needed and improved fishing equipment and techniques. Finding new resources and skilled fishermen to exploit these resources are also program priorities.

Thailand

TRENDS IN THE FISHERIES

Fish are a major part of the Thai diet, The local annual catch amounts to over 700,000 metric tons. Individual fishermen, however, earn only marginal incomes.

An estimated 90 percent of the fishermen work alone and make subsistence catches. A few small cooperative ventures have at most 2 or 3 boats averaging 20 gross tons.

Influential Chinese Traders

The fishing community consists of about 80,000 families who maintain about 5,000 boats ranging from 10 to 50 tons. The catches are bought from the boats by 13 major Chinese traders. The traders are influential because they actually finance the entire fishing industry. The capital turnover of each of the 13 fish wholesalers is more than 10 million baht (US$475,000). But the wholesalers still are not willing to finance improvements in the fleet; the only industry in which they would invest is fish processing.

Buying fresh fish. (Photo: FAO)

Old Methods Used

The Thai are not seamen by tradition or inclination. Local fishermen are not very interested in deep-sea fishing, large boats, and electronic gear. They are not especially eager to learn modern techniques of commercial fishing. More sophisticated equipment, such as electronic devices and larger boats, are used only by the Government for research purposes.

Japanese Start Training School

The Japanese Government recently opened a fishermen's training school in Thailand. The school started with two, 400-ton, fully equipped vessels that can each accommodate 50 students and several Japanese technical advisers. Today, few Thai fishermen have any concept of sonar and other fish-finding equipment. Likewise, fishing boat builders prefer traditional methods and equipment.

School Could Change Things

After the Japan-sponsored school operates for a while, and new ideas get back to more fishermen in the villages, there may be changes in Thai attitudes and methods. A demand may develop for electronic depth finders, fish-finding sonar equipment, navigation equipment, marine propulsion and steering gear, fishing boats 100 to 200 gross tons, marine engines of 300-400 horsepower, winches, wire ropes and trawl nets, shrimp boats, and ice plants using sea water designed for use aboard ships.

Fish wholesalers in Phuket recently asked about purchasing U.S.-made ice plant equipment. The real market and need for U.S. goods in Thailand is in fish processing. The wholesalers buy up the fish cheaply from individual fishermen and resell it at sizable profits. They are financially able and motivated to buy more efficient U. S. quality goods. (U. S. Embassy, Bangkok, Mar. 7, 1968.)

SOUTH PACIFIC

Landings of Skipjack and Yellowfin Tuna at Papeete Market (Tahiti)

Throughout French Polynesia, there is a subsistence fishery for skipjack (Katsuwonus pelamis) and yellowfin (Thunnus albacares) tuna. In Tahiti, these fish are caught from fishing boats usually called "bonitier." The boats are diesel powered and about 30 feet long. They do not have refrigeration and have to return each afternoon with the catch. This limits the fishery area to the immediate vicinity of Tahiti.

The fish are caught with pole and line by a two- or three-man crew. The Polynesian pearl-shell lure is in common use, although other types are also employed. Live bait is not used. In recent years, trolling lines have been used when searching for surface schools of tunas. More detailed information about this fishery has been presented in Commercial Fisheries Review (Van Campen, 1953).

Boats and Landings Increased

The number of boats employed in this fishery has increased steadily in recent years. The number of fishing craft for 1954-1967 is shown in figure 1. There were 15 boats in 1954 and 107 in 1967--more than 7 times more.

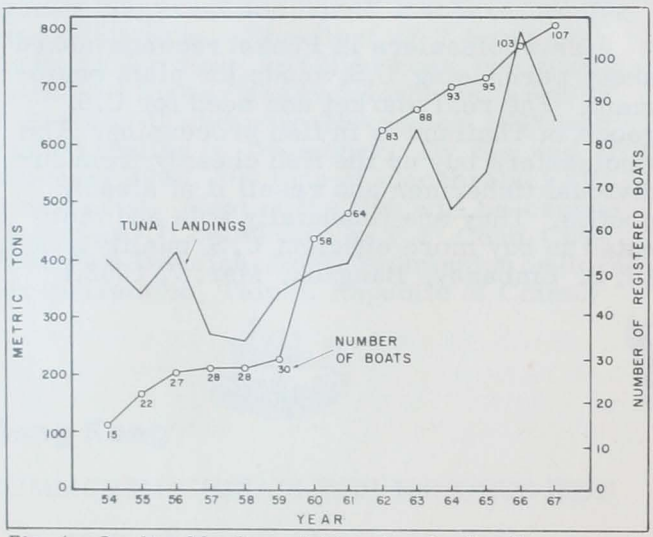

Fig. 1 - Combined landings of skipjack and yellowfin tuna, and numbers of boats engaged in the tuna fishery.

Also shown in figure 1 are landings for that period. In general, landings, have been increasing with the number of boats employed in the fishery. During 1954-1967, the catch of skipjack and yellowfin tuna fluctuated from 259 to about 731 metric tons. As the fish are gilled and gutted at sea, the weights of landings reported here are for eviscerated fish.

Monthly landings of skipjack tuna at the Papeete Municipal Market for the period 1954-1967 are shown in table 1[1/]. The same information for yellowfin tuna is shown in table 2[1/]. Nearly all skipjack caught by the Tahiti fleet pass through the Papeete Market. This used to apply also to yellowfin but,

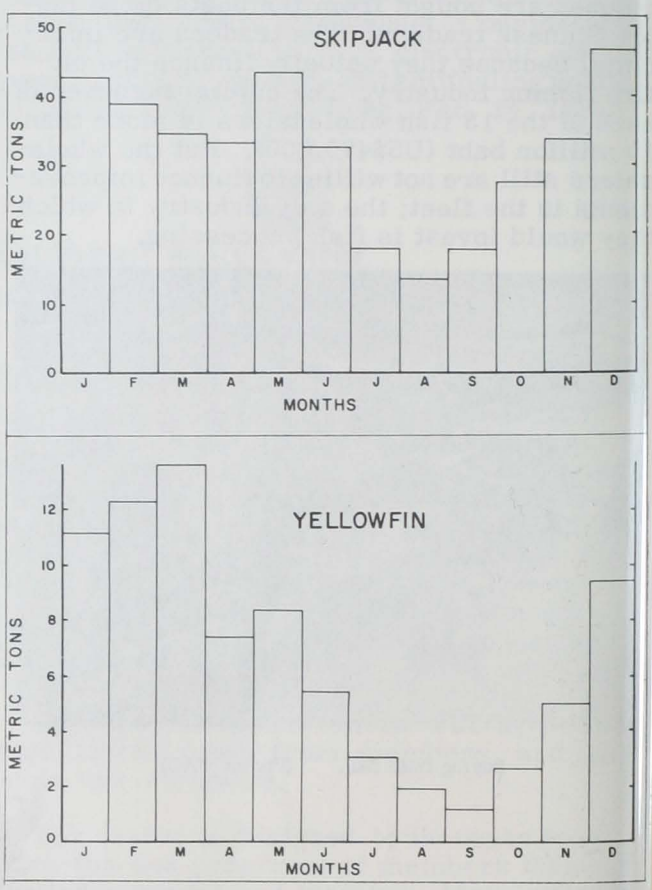

Fig. 2 - Average monthly landings of skipjack and yellowfin tuna (based on the data for the period 1954-1967).

1/All statistics are in the appendix to reprint (Separate No. 813) of this article. For a free copy of the Separate, write to Office of Information, U. S. Department of the Interior, Fish and Wildlife Service, BCF, 1801 N. Moore St., Arlington, Va. 22209.

U. S. DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Sep. No. 813

beginning in recent years, the larger yellowfin are often sold directly to store or hotel owners and are not included in market statistics.

The monthly landings of skipjack and yellowfin are illustrated in the two panels of figure 2. There is considerable variation from month to month. The lowest catches of both species occur rather consistently during the austral (Southern) winter.

Longlining

In the general area of Tahiti, tunas are also caught on longline gear, primarily by Japanese longliners. (For details, see journal "Tuna Fishing.") Catches of skipjack by longline gear are negligible because this gear appears effective only for deep-swimming tunas, such as yellowfin, bigeye (T. obesus), albacore (T. alalunga), and various spearfishes (Istiphoridae and Xiphiidae).

In 1961-1965, a French fisherman fished for tunas with longline gear but later transferred his operation to the Cook Islands. In 1967 a change occurred in the Tahitian tuna fishery. Several bonitier operators felt that by converting their boats for longlining, they could catch more tunas. By the end of 1967, there were already three such converted boats. (See figure 3.) The converted boats fish with gear consisting of 60 baskets (6 hooks to a basket). On the average, they catch 4 kg. of tunas and spearfishes per basket per day. Like the original bonitiers, these boats lack refrigeration and operate only on a daily basis.

Fig. 3 - Tahitian tuna boat converted for longlinging. (Photo: M. Brun.)

Tahiti's Fishing Future

The authors believe that because of Tahiti's geographical position in relation to the Pacific tuna fishing grounds, it will become eventually either a center for a locally based, longline fishery--or a transshipping base for one or more of the foreign tuna longlining fleets. These fleets of Formosa, Japan and Korea are already well developed, while the nucleus of the Tahitian fleet is very small.

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ARTICLES ON SHRIMP FISHERIES

The January 1968 issue of "Australian Fisheries Newsletter" contains a 31-page review of shrimp in northern Australia. It describes how scientists, technologists, administrators, and fishermen are cooperating in a program to develop the resource. There are articles on the industry, processing and packaging methods, marketing, vessels and gear, and biology of the shrimp. The review is illustrated.

The Newsletter is published by the Fisheries Branch, Department of Primary Industry, Canberra, A.C.T., 2600, Australia.

American Samoa

REPORT ON 1967 FISHERIES

The canning of tuna and the manufacture of byproducts continued to dominate the economy of American Samoa in fiscal year 1967 (July 1, 1966-June 30, 1967). Two U. S. tuna canning companies operate factories on Pago Pago Bay, one of the finest natural harbors in the South Pacific. An American Can Co. plant, located between the 2 canneries, feeds locally manufactured cans to both processing plants. Van Camp Seafood, a division of Ralston Purina Co., came to American Samoa in 1954; Starkist Samoa, a division of H. J. Heinz Co., started in 1963. At the end of FY 1967, Starkist employed about 500 Samoans, compared with 382 at the end of FY 1966. Van Camp employed about 450 Samoans, about the same as at the end of FY 1966. These employes work in processing and maintenance positions.

Foreign Fishermen Provide Tuna

Samoans do not like to go to sea for weeks to supply these canneries, so the tunas are provided by Asian fishermen whose companies work under contract with the canneries. At the end of FY 1967, over 4,000 Nationalist Chinese, Korean, and Japanese fishermen, working on 220 vessels brought to Samoa from Asia, were supplying fish. At the end of FY 1966, about 2,500 fishermen and 135 vessels were working for the 2 canneries.

The canneries combined employed at end of FY 1967 about 48 percent Nationalist Chinese, 30 percent Koreans, and 21 percent Japanese.

The Vessels

Each fishing vessel uses most of its interior space for freezing and storing freshly caught tuna. It is at sea 60-90 days; some vessels go as far as 600 miles from Pago Pago. An average 60 tons of tuna is brought back. The vessel stays in port 4 or 5 days for offloading and provisioning.

Exports

In FY 1967, 2,359,860 cases of canned tuna fish worth US$25,438,615 were exported. Also: 324,077 cases of pet food (from tuna byproducts) worth $1,102,354; 3,873,300 pounds of fish meal, $196,850; 1,175.6 tons of frozen fish, $420,527; and 890 cases of wahoo, $6,358.

Seek Bait Species

Potential bait species were surveyed for possible skipjack fishing. Several possibilities were mullet, silver sides (Atherinidae), anchovy (Engraulidae), and round-bodied sardine (Dussumieriidae). Of the 4, many mullets were seen in numerous bays and coves along Tutuila's southern coastline. Large numbers of round-bodied sardines were seen in Pago Pago Harbor. Of the numerous coves and bays, Faga'alu, Alofau, and Tafuna lagoon are most ideal for baiting. It is difficult to assess the availability of bait in supporting a hand-line tuna industry at this time. ("American Samoa 1967 Annual Report to the Secretary of the Interior.")

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TAIWAN VESSELS PREDOMINATE IN TUNA FISHERY

In Jan. 1968, there were 164 foreign tuna vessels operating out of American Samoa: 85 belonged to Taiwan, 58 to South Korea, and 21 to Japan. One year earlier, Taiwan had 58, South Korea 56, and Japan 25 vessels working out of that island.

In Jan. 1968, the 3 countries delivered about 2,354 short tons of tuna to American Samoa--Japan 16 percent, South Korea 48 percent, and Taiwan 36 percent. ("Katsuomaguro Tsushin," Feb. 26, 1968, and other sources.)

AFRICA

outh-West Africa

968 PILCHARD CATCH
AY HIT 1,750,000 TONS

The total pilchard catch off the South-est African coast in the 1968 season will most certainly set a record. It will be well er a million tons and could approach 1.75 illion tons.

Assuming that all 8 land-based pilchard ctories catch and process their full quota, is will result: The basic catch will com-rise 498,000 short tons for the 5 factories w on a 99,600-ton quota; plus 270,000 tons r the 3 plants restricted to 90,000 tons ch. Add, too, another 99,600 tons for the w Sarusas Development Corp. license and e 99,600-ton quota allocated to the white-sh licensees. (This is provided they reach practical agreement on partial amalgama-on.)

3 Million Tons

This gives 967,200 tons. To this can be dded a probable 350,000 tons taken by the 2 ctory vessels, "Willem Barendsz" and uiderkruis." So the catch processed by uth-West African shore and sea-based ntures will probably reach 1.3 million s. But this takes no account of the catch-g effort by foreign nations interested in lchard, headed by the Soviet Union.

The USSR has operated trawlers and fac-y vessels off the territory. Their com-ed pilchard catch may well exceed a con-rvative estimate of 300,000 tons. In May, e Soviet fleet probably will be joined by the nt "Vostok," 43,000 tons, which will domi-te the world factoryship arena. She will fed by her own fleet of fibre-glass catch-s. How she will fare in her first season t from her builder's yard is conjecture. t it would be surprising if 300,000 tons ere not fed into her reduction plant before e end of December. ("South African Ship-g News and Fishing Industry Review," n. 1968.)

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FACTORIES PROCESSED
RECORD 790,000 TONS IN 1967

In 1967, a record catch of well over 1.5 million short tons was landed by the combined fleets of South and South-West Africa. Although the figures are incomplete, it is clear that the Republic's bumper catch again was eclipsed by South-West Africa's; there 790,000 tons of fish were caught and processed.

The 790,000 tons include spiny lobster caught at Luderitz, seasonal snoek, and a small trawl catch. The bulk is over 780,000 tons of pilchards and a few thousand tons of anchovy. The latter were processed into 185,000 short tons of fish meal, 37,000 long tons of fish-body oil, and 167 million pounds of canned fish. The last figure was only 6 million pounds short of the 1960 record.

In South-West Africa, the pilchard comprised about 98 percent of the total catch of around 790,000 tons; in the Cape west coast fishery, the pilchard catch slumped further in 1967--to 81,000 tons or 14 percent of the total catch. ("South African Shipping News & Fishing Industry Review," Jan. 1968.)

Tunisia

REPORT ON FISH CANNING INDUSTRY

The food preservation industry in Tunisia has been an important element in the economy since World War II. It employs 5,000 people. Indirectly, it assists agriculture, container makers, shippers, and retailers. More important, canned food is one of Tunisia's few manufactured exports. In 1966, it provided US$4 million worth of foreign exchange.

After the war, French demand in Tunisia and in France spawned many small canning firms generally owned and managed by French and Italians. The first plant of any size was located at Sidi Daoud, across the Bay of Tunis from Tunis. It processed tuna and sardines. Other firms developed in the fish industry. In the early 1950s, the canning of tuna and sardines in olive oil was introduced.

Tunisia (Contd.):

It was not until the mid-1950s, however, that vegetables and fruits were canned in any quantity.

5 Companies Can Fish

The canning of fish is limited to 5 companies. One is the "Office National de Peche" (ONP), which controls 63 percent of fish canning, as well as the fishing fleets and fresh-fish marketing. ONP control has hampered the growth of private canning companies. ONP has a tuna-canning factory in Sidi Daoud on the Bay of Tunis and 5 other plants in the fishing ports of Sousse and Mahdia (sardines).

The largest privately owned and operated fish-canning company is Sfar. It has 8 percent of the Tunisian canned goods market. Sfar began in 1961 as a major fish packer, but recently it has begun to shift to vegetables and fruits. However, its growth prospects and those of the private canning sector in general are not encouraging. This is because of competition from Government-supported companies and cooperatives that have easier access to capital--and largely control allocation of raw materials. Many producers feel that private initiative in the canning industry is being smothered by public competition. They feel it is a competition not strictly subject to the economic discipline of profit and loss, and has the insurance of Government backing.

Planned Marketing In Infancy

The concept of planned marketing is in its infancy in Tunisia, especially as it applies to export sales. Domestic distribution of canned goods is improving as the traditional "Djerbian" retail outlet gives way to the new commercial units. Domestic demand also is increasing. This is due primarily to the growing institutional requirements for preserved food. It is aided also by a changing way of life that leaves less time for domestic chores.

Still, the only canned-food product with a solid domestic market is tomato paste. About 40 percent of Tunisian canned-food production is exported, 73 percent of it to France. During the past 2 years, France has offered duty-free quotas for 2,500 tons of canned fish, 4,000 tons of canned vegetables (including not more than 500 tons of tomato paste), and 1,000 tons of sugared fruit preserves.

Industry Outlook Cloudy

The outlook for the Tunisian canning industry is cloudy. Much needs to be done to improve quality, increase quantity, and reduce the cost of products. Much depends on exterior market conditions over which Tunisia has little or no control.

It has been suggested by the International Bank for Reconstruction and Development and others that Tunisian canning companies negotiate a working relationship with a large U. S. or European firm to acquire the necessary technical skills. One U. S. company looked into the possibility of licensing a local firm to use its process and sell to Europe under its label. This fell through when problems of bringing home dinar earnings were met. Also there appeared to be an insufficient supply of fruits and vegetables. However, another U. S. company recently has shown interest. (U. S. Embassy, Tunis, Jan. 29, 1968.)