INTERNATIONAL

Tuna Treaty Comes Into Force

An international treaty aimed at scientific management of heavily fished tuna stocks in the Atlantic entered into force on March 21, 1969, when Spain became the seventh nation to ratify it.

The International Convention for the Conservation of Atlantic Tunas was drafted in Rio de Janeiro, Brazil, in May 1966, under auspices of the Food and Agriculture Organization (FAO) of the United Nations. Six countries had previously been parties to it: U.S., Japan, Ghana, Republic of South Africa, France, and Canada. With the seventh, Spain, the Convention automatically took effect.

The Convention provides for setting up an international commission to recommend scientific management of tuna fishing in the Atlantic to protect and preserve the stocks.

Increasing Catches

Fishing for tuna in the Atlantic Ocean has increased greatly in recent years. Despite the increase, catches have not risen appreciably. Yellowfin catches have actually declined--from an estimated 68,000 metric tons in 1964 to 60,000 in 1966. At an FAO meeting in Miami, Florida, in 1968, experts warned that tuna stocks, while on the whole plentiful, need supervision to prevent overfishing. (FAO, Mar. 22, 1969.)

FAO Publishes Guide on National Coastal Waters

How far do the territorial waters of nations extend out to sea? A survey shows claims ranging from 3 to 12 miles for most nations and up to 200 for some.

The survey, first of its kind, was prepared by FAO and covers 102 coastal nations (including Mainland China). It includes information on exclusive fishing zones, fishery conservation zones, and claims regarding continental-shelf exploitation.

3, 12, 200 Miles

The survey shows 28 nations have a 3-mile limit. These include France, Japan, the United Kingdom, and the U.S.

Thirty-one others, including the USSR, claim 12 miles.

At least 6 countries--including Argentina, Costa Rica, Ecuador, El Salvador, Panama, and Peru--claim a full 200-mile territorial sea or exclusive fishing zone.

About 40 countries with a narrow territorial sea also claim exclusive fishing zones beyond this area, usually up to 12 miles from the coast.

International Conventions

The survey also lists the parties to the 1958 Convention on the Territorial Sea and Contiguous Zone, the 1958 Convention of the Continental Shelf, and the signatories of the 1964 European Fishery Convention. The latter, not yet in force, was the first multilateral agreement recognizing a maximum 6-nautical-mile limit for the territorial sea, and a further 6-nautical-mile maximum exclusive fishing zone.

The document was prepared by FAO as guide to the status of national coastal waters, principally for fishery purposes. It does not express opinion on national claims. (FAO, Mar. 14.)

Japan & USSR Open NW Pacific Fisheries Meeting

The Japan-USSR Northwest Pacific Fisheries Commission met in Tokyo on April 2. It discussed salmon, herring, and other fish catches in the northwest Pacific. The Tokyo talks were delayed over a month by the drawn-out king crab negotiations in Moscow. Japan feared the discussions would not be ended by April 30, when the Japanese salmon fleet normally departs for Area B (south of 45° N. latitude).

Since 1969 is a dominant year for Asian pink salmon, a major point of the talks was whether the USSR would agree to set this year's Japanese salmon catch quota at or above 108,000 metric tons. That was the quantity allotted to Japan in the previous good pink year of 1967.

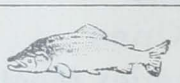
1968 Salmon Catch Data

On March 31, the Japanese Fisheries Agency released data on the 1968 salmon catches of both countries. The Soviet catch, 40,177 tons, fell about one-third short of the target. The Japanese catch in Area A (north of 45° N. latitude) just reached the quota of 46,500 tons, but in Area B it fell about 900 tons below assigned quota. The short catch was attributed to an abnormal occurrence of plankton, causing poor bait biting in the long-line fishery. ('Suisan Tsushin,' Apr. 2.)

Japan-USSR Salmon Catches, 1966-68

	1968	1967	1966
	(Metric Tons)		
Japan			
Area A:			
Catch quota	46,500	52,500	48,000
Actual catch:	46,365	52,333	47,782
Mothership fishery	37,642	42,544	38,930
Drift gill-net fishery	8,723	9,789	8,852
Area B:			
Catch quota	46,500	55,500	48,000
Actual catch:	45,647	62,540	53,395
Drift gill-net fishery	30,867	41,883	32,251
Long-line "	7,779	16,958	14,678
Japan Sea gill-net fishery	3,493	3,699	3,015
Small-vessel gill-net fishery	3,508	-	3,451
Coastal trap fishery	2/ 11,098	2/ 13,581	22,145
Total 1/	103,110	128,454	123,322
USSR			
Planned catch	60,000	83,000	65,000
Actual catch	40,177	78,000	56,223

1/Total area A & B actual catch & coastal trap fishery catch.
2/Jan.-Sept. catch.



Italian-Ivory Coast Tuna Company Formed

A joint Italian-Ivory Coast company is planning to fish tuna out of Abidjan. It will have 6 tuna seiners with freezing capacity for at least 350 tons of raw tuna. The vessels will be built in Italy from French designs based on U.S.-type vessels. They will be able to fish for sardines as well. Each will be about 145 feet long with 1,800 hp. T vessels will be managed by the Société Ivo rienne de Pêche et d'Armement (SIPAR).

European Market

Tuna landed from the new company's ve sels will be shipped to Italy, either frozen canned. Tuna also may be shipped to oth members of the European Common Mark

Norwegian Firm Opens Sales Center in Czechoslovakia

Frionor (Norsk Frossenfisk A/L), a No wegian firm has opened a sales center Prague. The 1,500-square-foot center i cludes a self-service shop for fish produc a fish demonstration section, and a sna bar. The technical equipment, includi freezers, is Norwegian. The center, to operated by Czechoslovakians, represents investment of US$280,000. One-sixth of t money came from a Norwegian Governm fund to promote fishery exports.

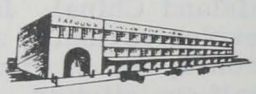
Czechoslovakia A Major Market

Czechoslovakia is a major market Norway's frozen fish fillets. Frionor h exclusive right to export Norwegian fro fish fillets to Eastern Europe. It curren sells 5,000 metric tons of frozen saithe f lets, and 1,500 tons of other fish fillets Czechoslovakia annually.

To Promote More
Highly Processed Products

Besides promoting sales of frozen f fillets, the center hopes to develop Czec slovak tastes for more highly process products. Current exports are mainly sta ard packs, but Frionor plans to increase supply of consumer packed frozen fish fil under its own brand name.

Frionor sales centers are supposedly ing planned for Moscow and Budapest. (U Embassy, Oslo, Mar. 7, 1969.)



da Seizes
nese Fishing Vessel

Feb. 25, 1969, a Canadian patrol boat the Japanese fishing vessel 'Kotoshiro (480 gross tons) within 12 miles off h Columbia. Canadian authorities re- ly will prosecute the captain and 31 en on charges of violating Canada's e exclusive fishery zone. This is the ime Canada has seized a Japanese vessel. ('Minato Shimbun,' Mar. 1.)

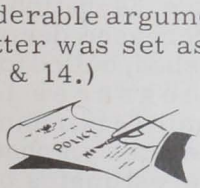
an-USSR Crab Talks End

e Japan-USSR crab negotiations held in ow since Feb. 6, 1969, were concluded pril 11, with the signing of a one-year ement.

pan's 1969 quota of king crab and tanner in the northwest Pacific is about 20% and ess, respectively, than actual 1968 pro- on. In the Okhotsk Sea, off western hatka, Japan's king crab quota is 216,000 .

pan is reported to have accepted the So- emand for a complete ban on fishing of rab (a king crab) off Cape Olyutorski. 8 Japan operated one fleet, producing) cases. Japan also accepted a ban on crab fishing off the Maritime Province eria. Twelve Japanese fleets harvested illion tanner crabs in 1968.

viet negotiators had contended that the are Soviet Continental Shelf resources, ter considerable argument with the Jap- , the matter was set aside. ('Kanzume ,' Apr. 5 & 14.)



an Considers
Mile Fishing Zone

he Japanese Government, spurred by So- mackerel fishing off Japan, is studying blishment of a 12-mile exclusive fishery . However, the Government may not ily reach a decision since Japan stands se more than she would gain. Adoption 12-mile limit would affect adversely Japan's distant-water tuna and trawl operators. Their operations in the 12-mile zones of foreign countries yield an annual production worth about US$55.6 million.

Japan also would find herself unable to oppose extension of sea limits by other countries. She would no longer be able to ignore the legal questions of jurisdictional rights over resources in negotiating agreements with foreign countries.

Government's Dilemma

There is a large difference between 3 and 12 miles in the tuna fishery, especially off the Pacific islands and in distant-water trawling. Japanese vessels cannot operate profitably in the eastern Bering Sea and the Atlantic unless they are allowed to fish within the 12-mile zones of other countries.

The problem is that more nations are tending to recognize a 12-mile jurisdiction. Pressure is also building among Japanese coastal fishermen, lawmakers, and news media to widen the fishery limit. ('Suisan Tsushin,' Mar. 20.)

Soviet Vessel Finds Commercial Shrimp Quantities Off Tunisia

Significant commercial quantities of shrimp were discovered in the Gulf of Gabes off Tunisia's east coast. They were discovered during a FAO study cruise by the Soviet research vessel 'Akademik Knipovich' in the Mediterranean from Nov. 3 to Dec. 1, 1968. The largest catch per hour of trawling was 154 lbs., compared to an average of 44-55 lbs. in the Gulf of Mexico. FAO scientists believe the resource is large enough to make commercial shrimp trawling with small vessels profitable.

Some concentrations of sardines were found. Reasonably good catches of shrimp were made in depths of more than 100 meters (50 fathoms) on the Algerian Continental Shelf.

The Tunisian and Algerian governments will be provided with data collected during the cruise. FAO believes the information may be important to the fishing industries of both countries.

CFR May issue 1969

Underwater Fish Tagging

A cruise highlight was an undersea demonstration in fish-tagging techniques by Erdogan F. Akyüz, FAO marine biologist from Turkey. Akyüz dived to 100 feet off Tunisia to tag fish held in the trawl. Colored plastic identification markers were inserted into the fish to trace their growth, migration patterns, and behavior. The tagged fish were kept in a large metal cage to see whether the tagging had been successful and to evaluate the usefulness of various tags.

The tagging demonstration showed that fishery studies and research can be moved from laboratories into the sea.

Joint USSR-FAO Project

The cruise was organized by FAO and the USSR under the United Nations Development Program (UNDP). Its purpose was to provide instruction and training in fishery and marine science techniques to personnel from countries interested in expanding and modernizing their fisheries. Although the Soviet Union is not a member of FAO, it cooperates in various FAO/UNDP projects.

Trainees from 9 Countries

Fifteen trainees from Algeria, Ethiopia, Indonesia, Philippines, Romania, Syria, Sudan, Tunisia, and Turkey participated in the study cruise. Their work was guided by Soviet and FAO scientists and technicians, who conducted lectures and practical demonstrations in marine biology and oceanography.

Following the cruise, which began in Tunis and ended in Naples, trainees and Soviet officials visited FAO headquarters in Rome. ('Fishing News International,' Jan. 1969.)

FAO Says World Will Need 100 Million Tons of Fish by 1985

The world's need for fish is expected to rise from about 60 million tons to 100 million tons by 1985, FAO says.

The estimated increase is part of a study of future world food needs by the Indicative World Plan for Agricultural Developme being prepared by FAO. The study's fishe aspects were discussed in April 1969 by t FAO Committee on Fisheries at FAO hea quarters in Rome.

Projects World Demand

The study findings are not final. The st starts from a 1962 base and assumes a pr dictable rate of increase in demand. It pr jects world demand for fish and fishery pr ucts at 70 million tons in 1975--and about million tons in 1985. About one-third of demand would be for fishmeal for feedi animals.

At the same time, the estimated potent of species fished now in marine and inla waters was estimated at 140 million to This excludes krill, lantern fish, and oth small fishes that people do not eat; if the species were included, the potential harv would be raised to 200 million tons or mo

The greatest proportionate increase demand is expected from the developing co tries. However, the greatest increase fishing effort seems likely to be made by veloped countries, such as Spain, the Repub of South Africa, and the Soviet Union.

Uneven World Fishery Output

The study notes that world fishery prod tion has been increasing at a faster rate t population growth. But it has been an une increase--in species caught and geographi distribution. "Much of the rise was not u for human food."

Members of the 34-nation committ agreed that the increased demand, especi for species now fished, called for internati al surveys and measures to manage f stocks. The committee recommended furt study after delegates emphasized the n for more precise estimates of consump and demand.

Dr. William M. Chapman of the U.S. pr dicted that technological advances and e panded world trade in fishery products wo push production and demand even higher t the FAO study forecasts.

FAO Official Warns of Dumping Chemical Wastes into Sea

Marine pollution is being aggravated by new forms of contamination. One is the long-distance pipe used to dump chemical wastes into the sea, says Dr. Sidney I. Holt of FAO's Department of Fisheries. There is an "increasing tendency to deliberately discharge wastes at considerable distances from shore through pipes extending into the sea instead of using ships for the purpose."

Dr. Holt adds that some pipelines extend many miles from shore and carry industrial and municipal wastes harmful to fish and other marine life. There are no international regulations to register or control this dumping. However, Dr. Holt points out, most dumping is done from ships. He notes the growing danger of accidental pollution from bulk transport of toxic substances.

FAO Committee Meets

Dr. Holt spoke recently before the 34-nation FAO Committee on Fisheries during debate on marine pollution problems and the international action necessary to prevent future 'Torrey Canyon' disasters.

Poland and Finland reported to the Committee that pollution in the Baltic Sea continued to worsen because of industrial wastes and the shallowness of coastal waters. The Baltic's pollution is the subject of an international study expected to be published in October 1969 by the International Council for Exploration of the Sea.

Spain complained about the continued dumping of radioactive wastes in the Iberian trench 200 miles off Spain and Portugal.

Algeria warned of the effect on fisheries of shock waves from underwater detonations in explorations on continental shelves.

Tanzania expressed fear of pollution from oil tankers too large to navigate the Suez Canal. At present, she has no coastal pollution problem.

Other African countries expressed concern that industrialization might make their continent the newest area of marine pollution.

The United Kingdom noted that new forms of pollution occur all the time, including run-off of pesticides from the land.

Dr. Holt concluded that the variety of pollutants is "increasing almost faster than our ability to get information on them."

In late 1970, FAO will hold an International Conference on Marine Pollution and its Effects on Fisheries.

Peru Offers Aid to Developing Countries

A leading Peruvian fishery industrialist has promised that Peru, the world's largest producer of fish meal, will assist Asian and African developing countries to establish fish-meal industries.

L. Banchero Rossi, president of Peru's National Association of Fisheries, told an FAO subcommittee that Peru would be "delighted" to offer its experience in fish-meal production to countries bordering the Indian Ocean.

Indian Ocean Resources

Banchero spoke during a debate on proposals to promote development of the vast resources of the Indian Ocean. The possibility of increasing its yearly fish catch from about 2.2 million metric tons a year--about 1/20th the world marine catch--is being studied by the FAO Indian Ocean Fishery Commission.

Banchero said that his country could train personnel from Asia and Africa in fish meal factories in Peru. Efforts would be coordinated through FAO. ('Fishing News International,' Mar.)

FOREIGN

CANADA

PROPOSALS TO ASSIST FISHING INDUSTRY

Canadian Fisheries Minister Jack Davis said in House of Commons, Feb. 20, 1969, that the groundfish industry is in trouble because export prices for frozen groundfish products have declined sharply since 1967. He noted that the industry sells close to 90% of its output in the U.S., and that the Canadian government must reinforce the industry's position abroad to improve the marketing outlook permanently. The proposed assistance to the Canadian commercial fisheries consists of:

1. Government purchase of frozen groundfish products to strengthen and stabilize the market. Accumulated supplies eventually will be sold through ordinary commercial channels, but not at prices lower than those paid for them. Nor will they be sold until the export price is high enough to cover basic costs of production, including an adequate price to fishermen. Close to 15,000 fishermen, plant workers, and their families depend on the groundfish fishery. The government hopes to hold fishermen's prices at a level no lower than the 1965-67 average.

2. Emergency loans to fishing and processing firms in 1969 for working capital and industry restructuring. Repayment will be waived until the market price of principal groundfish products reaches a level that will ensure adequate returns.

3. Mid-term and long-term measures are also contemplated because important economies may be achieved soon both at sea and in processing plants. The groundfish industry will be encouraged to get financial assistance under the Canadian General Adjustment Assistance Program. Under this program, assistance is available to any firms prepared to restructure operations to improve its competitive position, between now and the early 1970's.

* * *

FAVORABLE REACTION TO GROUNDFISH PURCHASE PLAN

General industry reaction to the proposed new groundfish purchase plan is favorable, although Nova Scotia fish producers are not sure whether it includes all groundfish, or just some of more beleaguered species such as cod. No additional details have been announced since the plan was proposed in the House of Commons on Feb. 20. It is believed, however, that the overall cost would be more than the C$4 million deficiency payments of last year.

Adequate storage space exists for any government purchases that may be made. There is some risk that the government eventually might be forced to dispose of some purchases for fish meal or other low-return products, thereby taking a loss.

Program's Goal

The goal of the program is to make sure exvessel prices do not fall below 1965-67 levels. Canadian newspapers speculate that the government will pay a few cents above the current average production price of 26 cents a lb. for cod--6-7 cents a lb. more than the industry now gets on the U.S. market. Large producers are particularly pleased with the new program because they own the warehouses in which government-purchased fish must be stored. (U.S. Consul, Halifax, Feb. 26, 1969; U.S. Consul, St. John's, Mar. 1969.)

* * *

INTERNATIONAL COOPERATION ON GROUNDFISH MARKETING

A major Canadian move to assist the deflated world markets for groundfish has brought promises of cooperation from Denmark, Iceland, and Norway.

Canadian Fisheries Minister Jack Davis said: "I am delighted to hear that the Nordic countries, who are our chief competition in the groundfish field, have endorsed our programme of price stability for the froze

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undfish industry. The programme, in- ated here, puts the Government, through Fisheries Support legislation in the Ca- ian market itself and was designed to raise prices by holding back supplies until market adjusted itself upward.

The participating nations agreed to watch trends on world markets under review to meet again later this year. (Canadian sheries Ministry, Mar. 5,1969.)

* * *

GFISH CANNED SUCCESSFULLY

A Canadian has claimed success in canning gfish. He reports it tastes like black cod. gfish had defied canning before because of high ammonia content.

Armand St. Jean of Nanaimo, who worked this project for 3 years, intends to open a $200,000 complex employing 50 people to n and market the product. ('Canadian Fish- rman,' Mar. 1969.)

* * *

RENGTHENS LOBSTER CENSING PROGRAM

Four new regulations have been added to lobster licensing program for the waters Nova Scotia, New Brunswick, and Prince ward Island:

(1) Minimum trap limits are being estab- shed to define the lower limit of commer- l fishing operations in all lobster dis- icts; (2) Fishing for lobsters on Sunday l be prohibited in all districts after April , 1969; (3) Provision allowing jointly owned d operated lobster boats to fish additional aps have been terminated. However, boats at were in this category last year will retain is privilege, subject to certain qualifica- ons; (4) Future changes in ownership of li- ensed boats must be registered promptly ith the Department of Fisheries.

easures to Improve Incomes

The new regulations are a sequel to the easures to improve fishermen's incomes nnounced Jan. 20. These placed an upper limit on the number of boats allowed to fish in the Maritimes in 1969 and thereafter. (Canadian Dept. of Fisheries, Feb. 27, 1969.)

* * *

MARITIME PROVINCES LANDINGS INCREASE

The January 1969 catch of the Maritime Provinces--Nova Scotia, New Brunswick, Prince Edward Island--indicated their fisheries were off to a very good start.

Maritime Fish Landings, Jan. 1969 and 1968

	Jan. 1969	Jan. 1968
Landings (million lbs.)	32,919	17,945
Total value (million C$)	2,319	1,133
Price per pound (C$) (paid vessel by first buyer)	0.0704	0.0631

Landings, total value, and price per pound were well above Jan. 1968. The improved catch was attributed to unusually good weather. Only haddock, halibut, and scallop landings were below normal. (U.S. Consul, Halifax, Feb. 25, 1969.)

* * *

SEMIFACTORY TRAWLER FOR FROZEN HERRING PRODUCTION TO BE BUILT

The Nova Scotia Fishermen's Loan Board has granted a loan for construction of a steel midwater trawler. Described as a semifactory vessel, it will be the first of its kind in Canada.

The vessel, capable of staying at sea for 15 days, will carry a crew of 22. It will be 155 ft. long overall, is designed to displace 950 long tons, and will have a 13.5 knot cruising speed. It will fish food herring.

Packed & Frozen Aboard

Herring will be graded, packed, frozen on deck, and stored in a fish hold at -20° F. When removed from the vessel the fish will be placed in refrigerated containers.

The owners have contracted to supply Industrial Importers of Hamburg, Germany, 10,000 metric tons of frozen herring a year. ('Canadian Fisherman,' Mar. 1969.)

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Canada (Contd.):

FISHERIES MINISTER DISCUSSES INTERNATIONAL FISHERY ISSUES

Speaking to the United Fishermen and Allied Workers' Union in Vancouver on Feb. 1, 1969, Canadian Fisheries Minister Jack Davis presented his ideas on several major international fishery problems.

He said: "Only by managing our fish resources in a more effective way will be able to enjoy a higher standard of living all around. We need to cooperate with other nations in the best possible management of all of the fish resources available to mankind. Each species should be assessed, managed and fished with an eye both to maximizing our future food supplies and producing the best possible return to the fishermen themselves. Canada. . .must press for another Conference on the Law of the Sea. This must come and come soon.

"I would like to see Canada press, not only for better conservation, but also for the best possible management of fish resources everywhere. I would like to see the nations of the world agree on the establishment of broader and more realistic fishing limits. By broader and more realistic fishing limits I mean whole fishing zones which describe those great areas of the sea in which most of our commercial species live out their natural lives. I mean the Continental Shelf in the case of bottomfish. I mean natural boundaries, such as the boundaries of the Continental Shelf, as opposed to artificial lines negotiated and drawn by politicians who have little or no understanding of the life cycle of the fish themselves.

"I believe that the United Nations should actually be responsible for the development of all our fisheries on the 'high seas.' International treaties will no doubt continue to be a useful device. But the United Nations is a better forum in which to develop many of these international understandings. Fishermen would, of course, be active over great areas of the deeps. But their entry into this great international fishery would be restricted in various ways. It would be limited so that their total fishing effort would bear the proper relationship to the amount of the resource and by the need for the fishery to renew itself as the years went by.

"Each nation would be left to manage th resources living out over its own Continent Shelf. It would keep an inventory of the fi stocks within its own Shelf areas and it wou follow their movements using the latest ele tronic devices which technology can provi

"Of course each nation would license own nationals to take many of these fi But. . .each host nation would also licer foreign fishermen to operate inside its o Shelf areas as well. These outsiders wou of course, have to pay a fee. They would ha to pay a fee in order to help defray the h country's management costs. But if the are species of fish in which a country, li Canada for instance, has no immediate com mercial interest--fish which may neverth less be cropped without damaging the tot resource--then why not let others take the fish in order to feed hungry people living other and less fortunate lands?"

* * *

1968 LANDINGS WERE 16% OVER 1967's

Statistically, 1968 was a good year f Canadian fishermen. Landings reached 2 million short tons, 16% over 1967. Landi value rose C$19 million to $169.6 millio 13% over 1967. Herring, salmon, ocean perc and cod made up the bulk of the increas landings and higher total values.

Selected Species	Landings		Value	
	1968	1967	1968	19
	. . (1,000 Lbs.). .		. . .(C$1,000)	
Atlantic Coast:				
Cod	587,296	520,898	24,889	23
Haddock . . .	90,737	102,763	6,829	6
Pollock . . .	33,793	32,739	1,149	1
Flounder & sole	226,673	236,459	7,889	7
Herring . . .	1,152,467	757,293	12,287	8
Ocean perch .	201,871	173,078	5,250	4
Swordfish. . .	7,338	8,005	3,728	3
Lobsters . . .	37,322	34,920	24,515	23
Scallops . . .	15,648	14,711	13,399	8
Pacific Coast:				
Halibut . . .	28,319	26,222	7,080	6,
Herring . . .	6,319	116,742	162	1,
Salmon . . .	168,220	133,185	43,656	36,
Cod	10,764	11,179	732	
Total . . .	2,766,163	2,388,970	169,571	150,

Source: 'Monthly Review of Canadian Fisheries Statistics,' D 1968.

Despite the fact that landings, exvess value, and market value of fishery produc were generally high--reaching record leve in some cases--for much of the industry 19

Canada (Contd.):

was a difficult year. Increased living costs and higher operating costs cut deeply into apparent gains.

* * *

GOVERNMENT TIGHTENS CONTROLS ON FOREIGN FISHING VESSEL ENTRY

On March 18, 1969, the Canadian Department of Fisheries announced tightened controls on foreign fishing vessels in "Canadian territorial waters or fishing zones." The controls will take effect May 1, 1969, in the coastal waters and fishing zones around Nova Scotia, New Brunswick, and Prince Edward Island.

License Requirements

According to Department officials, the tightened controls are primarily aimed at better control over the increased number of foreign fishing vessels. The key element is the requirement of a license for each entrance of a foreign fishing vessel into permissible entry ports.

Little Effect on U.S. Vessels

The officials said the controls will not make much difference to U.S. fishing vessels. Since U.S. fishing vessels normally do not enter Maritime ports for supplies--but only for shelter, engine trouble, or to offload sick crew men--their requirements for the C$1 license are not expected to be large. Heretofore, only an annual entry license was required. (U.S. Consulate, Halifax, Mar. 26.)

* * *

$4.2 MILLION ALLOTTED FOR LOANS TO GROUNDFISH PROCESSORS

Fisheries and Forestry Minister Jack Davis has announced that the Canadian Federal Government will make loans to companies processing frozen groundfish products. A fund of C$4.2 million has been set up for this purpose. The loan plan is designed to overcome the problems facing companies that are short on working capital and unable to obtain financing elsewhere. It is part of a general Government plan to aid both fishermen and processors.

Loan Conditions

Davis said the loans will be made at the government borrowing rate plus 2%. Principal need not be repayed for 5 years. Interest payments also may be deferred for 5 years. Half the money may be available to the borrowing company on April 1, 1969, or as soon thereafter as the loan is approved. The remainder may be drawn down in equal installments on July 1, 1969, and Oct. 1, 1969.

Davis emphasized that all loans are conditional upon the processor's agreement to pay fishermen prices for groundfish (cod, ocean perch, and small flatfish) equal to prices paid for similar quality fish in 1968.

* * *

BUILDS FIRST OYSTER HATCHERY

Canada's first oyster hatchery, at Freeland, Prince Edward Island, was scheduled to be ready this spring.

Oyster harvesting in the Maritime Provinces has dwindled to almost subsistence level due to environmental hazards and disease. However, scientists are firmly convinced that the industry can be rejuvenated through carefully controlled rearing methods. It is thought that, eventually, oyster farming could exceed the financial returns Canadian fishermen now get for lobsters.

Mobile Hatchery

The decision to build the C$9,600 oyster hatchery was based on the success of a mobile hatchery constructed by the Department of Fisheries. This large trailer will tour the maritime region to interest fishermen and others in the new process. ('Fishing News International,' Jan.)

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ST. PIERRE WILL HAVE NEW FISH WAREHOUSE

Albert Pen, St. Pierre-et-Miquelon's representative in the French Senate, has announced that construction of a huge refrigerated warehouse was scheduled to begin this

Canada (Contd.):

spring on one of the new wharves in St. Pierre Harbour. It will contain about 28,000 square feet of refrigerated fish storage space for Dutch, French, and West German fishing companies.

He said that the warehouse will permit European fishing vessels to land catches on the western side of the Atlantic and return to the fishing grounds, instead of returning to European ports each time a full load is taken.

Program to Attract Foreign Vessels

The refrigerated warehouse, expected to be ready by November, is another step in the continuing program of modernizing and expanding the facilities on the French islands to attract foreign fleets operating on the Grand Banks. Although some European fleets still visit St. John's on a more or less regular basis, St. Pierre facilities for servicing and provisions are attracting more and more foreign trawlers.

Other facilities built at St. Pierre within the past few years include modern ship-repair facilities and a large, new, artificially formed harbor. ('Canadian Fisherman,' Apr.)

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PRODUCTION STARTS AT NEW NEWFOUNDLAND PLANT

A new fish-meal factory was officially inaugurated on Oct. 24, at Isle aux Morts, on the southwest coast of Newfoundland. Isle aux Morts is very close to Port aux Basques, which has an excellent harbor and a year-round railway ferry connecting Newfoundland and Nova Scotia.

Built on the site of a former filleting factory, the new plant will be particularly important to Isle aux Morts. It will provide, among other things, an adequate supply of water to the islanders' homes.

The plant has 2 production lines, each with a 500-ton/24-hour capacity. There is also room to instal another 500-ton/24-hour production line.

Production Processes

The fish is pumped from the boats to the top of 2 steel storage tanks, dewatered, and weighed on an automatic belt scale. Each tank holds enough fish for 36 hours' production. Each is equipped with a system for circulation of blood water to prevent brid of fish in the tanks. Screw conveyors tra port the fish from the tanks to a feeding paratus common to both lines. This appar automatically regulates the feed to 2 cook Discharge of raw material from the tan automatically controlled by level-regula membrane switches installed on the fe apparatus. Before entering the double-s presses, the boiled fish passes through ting prestrainers. The presscake then to disintegrators for further fluffing pri drying.

Direct Fired Dryers

Two amply dimensioned direct-fi dryers are arranged so both production li can be operated in series, with either dr as pre-dryer. The dryers also can be op ated in parallel and supplied by either pr Both are equipped with return-screw con or for meal recirculation.

The dryers have automatic tempera controls and automatic fire alarms and extinguishers.

Treatment

The meal is carried to the meal sto from the dryers by screw conveyors. Be grinding and bagging, it passes a magnet moving tramp iron. The meal bags are tened between rollers for easier stacking meal is treated with antioxidants immedi after leaving the dryers.

Sludge & Stickwater Used

Sludge and particles of dry matter a moved from the press-liquid by 3 cylin vibrating sieves and returned directly presses. The sludge is returned to th duction together with the stickwater co trate. (An automatic triple-effect stick evaporating plant has been included.) factory manufactures only whole me stickwater concentrate is added to the cake immediately after the presses.

Oil Separation

Oil is recovered from the press-liq 3 automatically controlled separators. oil is pumped to large settling tanks, pu and pumped to storage tanks. ('Ca Fisherman,' Apr.)

EUROPE

Norway

WINTER HERRING FISHERY COLLED WORST IN CENTURY

After almost total failure in 1967, Norwegians had hoped the winter herring fishery would come back in 1968. But this winter's catches, through mid-March, were even worse than the year before. Fishing began during the third week of February as small schools approached the coast. Full migration was expected the first week of March, but bad weather curtailed fishing. Only a few fishing days have been possible since and results have been called "miserable." About 1,100 purse seiners participated.

"Storsild" and "Vårsild"

After this poor start with the early "storsild" fishery, Norwegians hoped the following "vårsild" season would bring catches up to a more respectable level. The ripe, prespawning winter herring arriving at the coast are called "storsild" (large herring). The spawning and spawned-out fish are "vårsild" (spring herring). Because of quality differences that affect the market value, there is a "cut-off day." Before that day, all herring caught are considered storsild, after that they are vårsild. The "cut-off day" this year was March 1.

Good Fishing in Faroese Waters

One bright spot was the excellent fishing reported in late March near the Faroe Islands. Both herring caught by Norwegian and Faroese boats in the area was very high quality and was sold for human consumption. Some was sold even by boats not equipped with refrigerated seawater tanks.

Capelin Fishery Excellent

The capelin fishery at North Norway also provided excellent results; catches up to mid-March were double those of the same period last year. A total of 370 purse seiners and trawlers were in the fishery off Finnmark and off Island of Senja. The latter ground is shallow and vessels with deep seines have experienced difficulties and suffered much gear damage. Heavy catches burst the nets of some vessels. (U.S. Embassy, Copenhagen, Mar. 28.)

* * *

TO EVALUATE COASTAL SALMON FISHERY

In the wake of protests against the prohibition of drift gill net-fishing for salmon inside Norwegian base lines, the Department of Agriculture announced that scientific investigations of the salmon fisheries will be extended and intensified. The objective will be to evaluate the effect of the netting prohibition. A committee is being considered to conduct economic evaluations of this fishery and its regulation.

Agriculture Minister Defends Ban

The Minister of Agriculture has defended the prohibition. He said that several possibilities were considered to find a way of reducing the salmon harvest. It was decided that total prohibition of drift gill-netting inside a certain boundary would best provide the needed protection. He pointed out that if an international agreement to control the salmon fishery beyond the limits is desired, Norway must seek to limit the damage from drift gill-net fishing within its own jurisdiction.

Longlining Begins Earlier

The longline fishery beyond the limits off North Norway began much earlier this year than in previous years. The first vessel arrived on the grounds by mid-February. There are serious doubts in Norway about the quality of salmon caught so early. (U.S. Embassy, Copenhagen, Mar. 28.)

* * *

PROHIBITS DRIFT GILL-NETTING FOR SALMON INSIDE BASELINES

Effective Feb. 7, 1969, Norway prohibited drift gill netting for salmon, inshore from Norwegian territorial sea baselines. This action was taken to reduce exploitation of salmon stocks. The Ministry of Agriculture, responsible for freshwater fishery resources including salmon runs, had pushed this prohibition.

Possible Extension of Ban

Extending the prohibition against drift gill-net fishing beyond baselines, either to

Norway (Contd.):

territorial limit or to 12-mile fisheries limit, will be considered during coming months. The prohibition inside baselines affects only Norwegian fishermen.

Fishermen Protest

Protests have developed in wake of the ban; the fishermen claim it will mean a catastrophic loss of income. The Fishermen's Association, declining to seek special exceptions for certain areas, will accept nothing less than complete withdrawal of the prohibition.

High-Seas Long-Line Fishery

Long-line fishing for salmon within the Norwegian fisheries limit has been forbidden for some time. Some officials would like to ban the long-line fishery beyond the Norwegian fisheries limit. This fishery, carried on in international waters by Danish and Swedish fishermen, could be prohibited only by international agreement.

Administration Change Sought

The Fisheries Director (Ministry of Fisheries) stated that the prohibition was effected by the Ministry of Agriculture before the Fisheries Directorate heard of it. Resulting controversy has evoked a demand that the administration of salmon and trout fisheries be removed from the Ministry of Agriculture, and placed under the Ministry of Fisheries. (U.S. Embassy, Copenhagen, Mar. 7.)

* * *

ALL SEALING MADE SUBJECT TO CONCESSION

Sealing operations in all sealing grounds will be subject to Government concession, according to a Royal Decree of March 21. Sealing operations in the Northeast Atlantic have been subject to concession since 1965. The Ministry of Fisheries says a concession can be granted to anyone who conducted regular sealing operations for at least 3 years during 1964-68. Sealing must be carried out in the same vessel used in that period. The Ministry may grant dispensations from this rule, provided the applicant is known to be, or have been, connected with the sealing industry and possesses the necessary qualifications. The sealing must be justifiable in terms of a ra tional exploitation of the stocks. The Mini try also may stipulate tonnage, engine pow and vessel equipment.

After granting a concession, the Minis may limit further particular sealing ope tions by stipulating maximum catch quota

Recommended by Biologists

The new regulatory measures were bas on recommendations of marine biologi made several years ago. The Ministry h been considering the recommendations sin then. (U.S. Embassy, Oslo, Mar. 28.)

* * *

EXPLORATORY VESSEL FINDS GOOD FISHING ON GEORGES BANK

The distant water long liner 'Pero', char tered by Norway's Institute for Marine Re search for a 2-month exploratory cruis found "very good" stocks of cod on George Bank. This happened after an initial perio when catches were not impressive. On metric ton of fish, gutted weight, was take on 2,000 hooks. She also found significa quantities of herring.

Cruise Results Reported

Frequent reports of the cruise results ha been carried in the Norwegian trade pap 'Fiskåren.' The most recent report--"Po sibilities for Norwegian Utilization of Herri Stocks on the American East Coast"--i cluded a detailed account of the West Germa herring fishery on Georges Bank (publishe earlier in a German trade paper).

The report commented that the distance t Georges Bank is too great, even for vessel with refrigerated sea-water tanks, to retur catches to Norway for processing. However there should be good possibilities for vessel that can process herring on board, and fo factory ships that can fillet herring for freez ing, and produce meal and oil from the waste

Exploration to Continue

During the second week of March, whil 'Pero' was weatherbound near Nova Scotia the crew reported shoals of herring all aroun the vessel. Fishing was to proceed farthe west and north as soon as the weather im proved. (U.S. Embassy, Copenhagen, Mar. 28

Denmark

CATCHES AND EXPORTS ROSE IN 1968

In 1968, Denmark's fishing fleet made record catches and her fishery exports reached new highs. Favorable weather throughout the year made a record number of fishing days possible. Prices generally were from the 1967 low. Although exvessel prices averaged slightly lower for some species, a larger catch made up the difference. This provided higher overall earnings.

Catch

According to preliminary data, the 1968 catch was 1.4 million metric tons, more than 4% over 1967. This puts Denmark in third place--behind Norway and Spain--among Europe's leading fishing nations. Denmark will rank about 11th in the world.

Export Earnings

Fishery products exported from Denmark provided over US$133 million in exchange. Denmark ranks fifth among the world's leading fish exporting countries; she is surpassed only by Peru, Japan, Norway, and Canada.

Fishery products contributed about 5% of total Danish export earnings. About 8% (by value) is exported to the U.S., 40% to the Common Market, and 40% to EFTA countries.

Greenland Fisheries Unsatisfactory

Greenland fisheries were the one unsatisfactory area in 1968; cod catches were substantially smaller than in previous years. (U.S. Embassy, Feb. 20, 1969.)

United Kingdom

BLANKET OF PLASTIC BALLS SPEEDS GROWTH RATE OF YOUNG FISH

To sustain the high growth rate of young sole being reared experimentally in warmed sea water, some of the tanks will be blanketed with floating plastic balls during the coming winter. Careful measurements have shown that ball blankets minimize heat losses. These losses are particularly heavy at low winter temperatures.

The experiments are being carried out by the British White Fish Authority at Hunterston, Scotland. The aim is to develop a fish-farming technique to a point where industry can take it up as a commercial proposition.

Shortens Growing Period

Experiments at Port Erin, in the Isle of Man, have shown that tens of thousands of eggs spawned by such fish as plaice and sole can be successfully hatched in captivity; only a small percentage survives in the open sea. The Hunterston work has shown that sole can reach market size in 2 years, instead of 4 required in the open sea. Ball blankets during the winter, and improved feeding methods, may reduce this growing period to 18 months.

Reduces Heat Loss

The insulating ball blanket technique, or Allplas system, is widely used in industry on heated open process tanks. Independent tests have shown that the system reduces open tank heat losses up to 70% and evaporation by nearly 90%. Within certain limits, the size of the ball has no bearing on the results. Therefore, it is a matter of choosing a size most appropriate for the application.

Keeps Growth Rate Steady

At Hunterston, a constant flow of sea water enters the fish tanks at between 61° F. and 64° F. Under adverse winter conditions, a ball blanket keeps the tank's temperature at 59° F. This is not only ideal for the growing fish, but 13° F. higher than the open sea in winter. The current experiments may prove that reducing heat losses from warmed water helps to maintain a steadier growth rate in winter.

Details of Allplas balls and their suppliers throughout the world are available from Allplas AG, Alpenstrasse 12, Zug, Switzerland. ('Canadian Fisherman,' Mar. 1969.)

* * *

BUILDS 'SEABED CRAWLER'

A seabed crawler designed to work on the Continental Shelf (as deep as 100 fathoms) is being built by a British shipyard and Britain's National Research Development Corp. It will cost about US$850,000. The government will provide 50% under long-term loan arrangements.

Launched from a mothership, the crawler will wind down to the seabed on a presunk weighted cable. Power will be supplied by

United Kingdom (Contd.):

cable from the surface. It will move on 4 large wheels powered by electric motors.

The Vehicle

The vehicle will have 2 compartments: one at normal pressure for the driver and an expert in the operation; another, open to the sea, from which divers can operate. The latter can also serve as a decompression chamber during and after return to the surface.

The vehicle will be fully equipped for communication with the surface and between command compartment and divers. It will also contain life-support systems and carry lighting and closed circuit TV. ('Canadian Fisherman,' Mar. 1969.)

West Germany

NEW FISH-WASHING MACHINE DEVELOPED

A new machine to wash a variety of fish has been developed by the German firm, Baader of Lubeck. The Baader 670 fish-washing machine is suitable for both gutted and whole fish. It is claimed that the extremely compact machine can be installed on board a vessel athwartship.

Operating Characteristics

The hexagonal drum-shell-type machine has an incorporated worm 6 inches high and turning rails. A centrally mounted water pipe washes the fish during its run through the machine. Dirty water, discharged through gill-shaped openings in the drum shell, runs to a water-collecting tray under the drum and drains off through an outlet pipe.

The drum, fitted between 2 synthetic spur rings, is supported by plastic rollers. Drive for the drum is provided by a combined spur and gear rim.

Size

The machine is 144 inches long, 47 inches wide, and 57 inches high. The 38-inch-diameter drum is about 118 inches long. ('Fishing News,' Mar. 14.)

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USSR

ARTIFICIAL CULTURE OF SEA STURGEON ATTEMPTED

In early April 1968, scientists of the A Union Research Institute of Fisheries a Oceanography began an experiment in arti cial culture of sea sturgeon, Acipenser stur Tests were performed in the area of Poti the Black Sea. Three females were placed a 5 x 7 x 1.2 meter enclosure at the mouth the Rioni River. Despite stagnating wate salinity exceeding 15 parts per million, a water temperatures of 12 to 15.4° C. (54 59° F.), eggs were obtained, fertilized a incubated. Some hatched larvae were obser ed. The outlook for future large-scale s sturgeon farming is promising.

Endangered Resource

The sea sturgeon, a valuable marine fis was once native to the North Atlantic. It o curred along European coasts from Nor Cape to Black Sea, and along American coas from Hudson Strait to South Carolina. T resource has been almost completely d troyed. Today, sea sturgeon spawns only the Rioni River and is found only in the Bla Sea.

Characteristics

Sea sturgeon reaches a length of 130-1 centimeters (cm) and a weight of 20-25 ki grams (kg) in 8 to 10 years. Specimen meters long weighing 50 kg have been enco tered. Russian sturgeon, Acipenser gulde stadti, is somewhat smaller and lighter at t age (100-110 cm and 10-12 kg). Male s sturgeon are mature at 7 to 9 years, and males at 9 to 12--2 to 5 years earlier th the Russian sturgeon. Unlike other Acipe seridae, sea sturgeon can withstand hi salinity and fairly low water temperature Its food is mainly anchovy and other sma fish. It spawns a month earlier than Russia sturgeon, usually in the lower reaches rivers, 80 to 120 km from the mouth. ('Ryb noe Khoziaistvo,' No. 12, 1968.)

* * *

70-80 PURSE SEINERS FISH MACKEREL IN NORTH SEA

The skipper of the Norwegian vess 'Borgøygutt,' interviewed after his retu from mackerel fishing in the North Sea, r ported: "Norway has about 35 vessels fishi

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

om these North Sea grounds, but we are not the oml ones there. At the Viking and Patch Ba s, we saw a Soviet fleet surpassing the tot fleets of all other countries. They have 700 power block-equipped fishing vessels sup rted by large motherships. I would estim e there were about 10 Soviet factory vessels ranging in size from about 3,000 to 20,000 dea weight tons." He saw only 2 Soviet gillnetrs.

The Soviet effort seems successful," the c ain added. "Their purse seines fish deep and they have the most modern gear. When the urse seiners have a full load, the motherships come alongside and take the fish dir tly on board. This is a rational and fast met od." ('Fiskåren,' Mar. 6.)

* * *

SEINERS FOR PACIFIC FLEET BEING BUILT IN SIBERIA

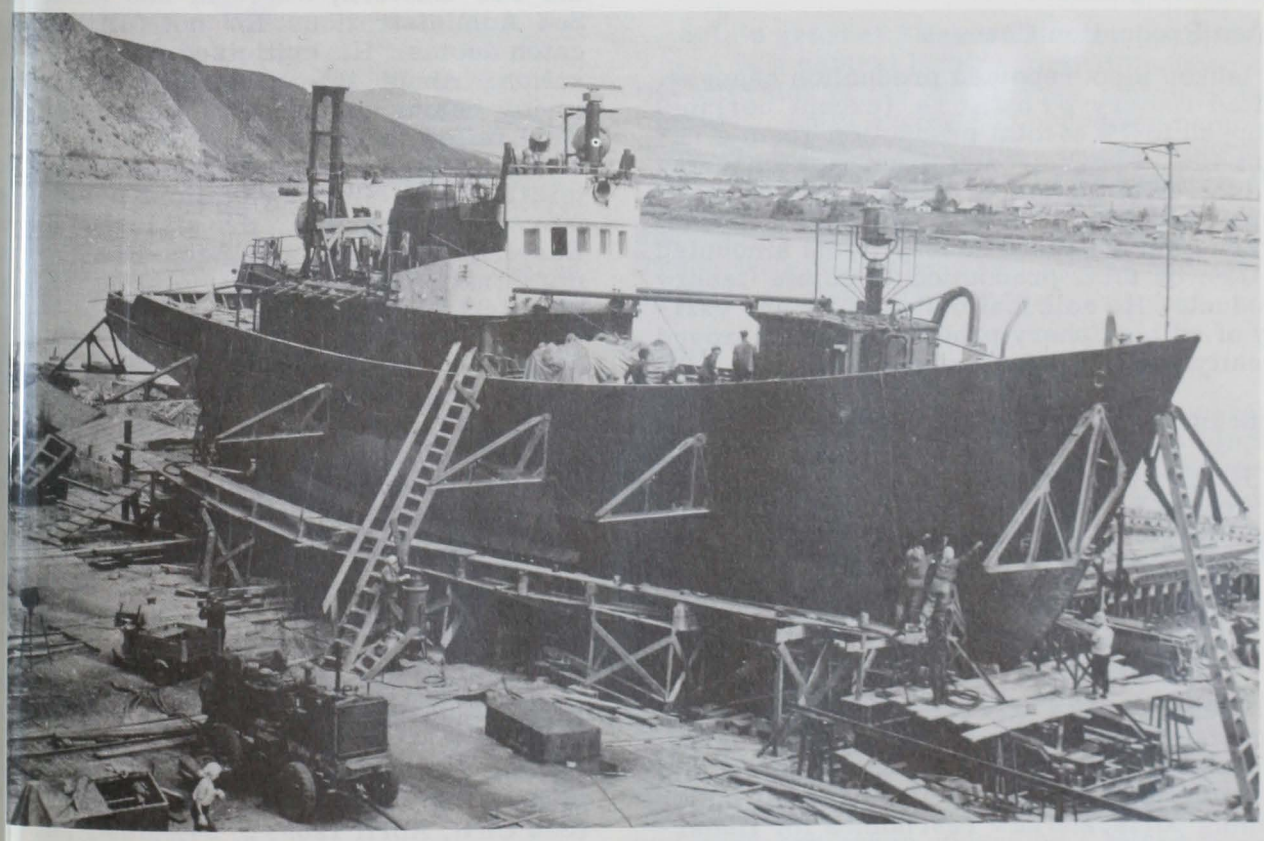
A new production line for oceangoing seiners has been set up at Sretenskii Shipyard, in the southeastern Siberian province of Chita. The hulls, reinforced to withstand ice pressure, will have up-to-date navigational equipment and communications systems. The gear issued will depend on the fishery in which the seiners are to be used.

More Comfort for the Crew

The fishermen will sleep in greater comfort: instead of the 6-man bunks provided in previously built seiners, the new type will have 2- and 4-berth cabins. (Various Soviet news agencies.)

North Pacific Deployment

The shipyard is on the River Shilka (see photo). The Shilka flows into the Amur River, dividing Mainland China from the USSR. As the Amur flows into the north Pacific, these seiners may be destined for north Pacific fisheries close to Soviet shores. This would explain the reinforced hulls.



Workers at Sretenskii Shipyard in southeastern Siberia build oceangoing seiner. (Photo: Tass)

* * *

USSR (Contd.):

FISHERIES MINISTER REPLIES TO REPRIMAND

The reply of Fisheries Minister A. Ishkov to a reprimand from the Soviet Council of Ministers has been published by 'Vodnyi Transport,' official organ of the Merchant Marine Ministry and the Trade Union of Merchant Seamen. The Council had blamed 'weak leadership' of the Fisheries Ministry for inefficient use of the fishing fleet, failure to meet the growing demand for fishery products, and inefficient market promotion.

In his reply, Minister Ishkov stressed that the 1968 catch plan had been fulfilled 103%--6.7 million tons landed, 230,000 more than in 1967. He pointed to a 101% fulfillment of the 1968 sales plan. He noted that 68% of all fishery enterprises had switched to the new economic planning and stimulation system. Over 1 billion cans of fish had been packed. And, between 1966 and 1968, the fishing fleet had received 500 new vessels, including floating fish canneries, refrigerated fish carriers, and floating bases.

Notes Production Changes

Ishkov also reported production changes. Salted fishery products (except herring) dropped to 7% of total production from a recent 40%. Fresh-frozen production amounted to 60%. Production of fillets, sprats, sardines, and saury canned in oil increased. Production of canned fishery items amounted to 12% of total production of edible fishery products. He said that both quality and variety of edible fishery products have improved greatly over the past 3 years.

Announces Targets For 1969

He announced that targets for 1969 include increases in nearly all branches of the fishing industry: 7.4% in profits; 7% in sales; 10.4% in output of edible fishery products; 11.8% in canned fish; 14% in fillet production, and 35% in pond fisheries. The fleet is to receive 366 new large tonnage units.

Other targets are new fish-processing combines for Leningrad, Minsk, Volvograd, Alma Ata, and Donetsk; expansion of repair, docking and mooring facilities in all major fishing ports; and new rest homes for fishermen in Vladivostok, Nakhodka, Arkhangelsk, and Murmansk.

Stresses Switch to New Economic Syste

Ishkov said fish industry performan the future will no longer be measured in t of quantity of catch, but in ruble value o output of edible fishery products. This ch has been dictated by the need to meet gr demand for products of better quality. fishing fleet has been directed to inc catches of higher-priced species.

Emphasis in the current year will continued conversion to, and developme the new economic system. Results o past 1½ years show greatly improved duction efficiency, expanded personal in tive, and better use of basic capital. fishing industry combines fishing, proces packaging, ship repair, etc. So new plan and more effective stimulation methods be developed to find better use for the ra growing fixed productive capital.

Criticizes Fishery Administrations

The Minister severely criticized se principal fishery administrations. He ra the Far Eastern, Western, and Azov-B Sea Administrations for not fulfilling catch quotas. He criticized poor fleet u zation. About 46% of the high-sea ves (many belong to the administrations u fire) failed to fulfil the 1968 plan. He sured 'certain administrative executive tolerating systematic violations of vess ployment schedules. He attacked the Eastern, Western, and Azov-Black Se ministration for 'brutally violating' flee pair schedules.

Ishkov also deplored the slow progr mechanizing cumbersome fish catchin processing operations aboard vessels. prevents effective crew cuts and opera cost reductions. He added that current e tional and professional crew-training grams are inadequate. ('Vodnyi Transp Feb. 18.)

Council Reprimand

The Council's reprimand was a reso titled 'Additional measures to improv efficiency of the fishing fleet, better the ity, and expand the selection of fishery duction.' It was adopted in late January (See CFR, April 1969, p. 54.)

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USSR (Contd.):

TOO UY IRANIAN CAVIAR

w prices for Iran's Caspian sturgeon and aar exports to the USSR were set by the r a n State Fisheries Organization and the oo Commercial Bureau on Mar. 15, 1969. All ices will be 25 to 30% higher than pre- USSR-Iran trade contract prices. This vi ring them to the level of world prices o se commodities.

Th greement

der the 3-year agreement, Iran will sell o USSR 1,000 metric tons of sturgeon and 00 ns of caviar. The new prices will give r n additional 150 million rials a year.

e USSR also agreed to deliver a fleet of i g vessels to Iran. The Soviets also will s Iran in building inland hatcheries. 'I han International,' Mar. 16.)

P nd

P OTES SALES OF HER F NG VESSELS

l and is actively promoting foreign sales o fishing vessels. Here are 2 examples:

e CENTROMOR firm has commissioned C ian naval architects of Montreal to un- de e a design study for a fresh-fish stern r er suitable for use off Canada's east c . In the past, European-designed trawl- e ve not been found ideal for the rugged c ions off Canada.

V l Characteristics

e 172-ft., 2-deck stern trawler will be o ed by a 1,600-hp. diesel with a service s of about 13 knots. The engineroom will o ward, and a 315-ton capacity hold aft. A w of 18 to 20 will be housed in single or 2 th cabins. A model has been thoroughly t ested. Special care has been taken to i e stability under adverse weather con- d s, particularly in ice.

A nced Design

e trawl winch will be well forward of the o e superstructure but beneath the deck-house. This will allow safe working positions, and free almost the whole length of the deck for easier hauling. The advanced design may make the new vessel class equally suitable for some European fishing nations. ('Fishing News International,' Jan.)

Demonstrating Trawler in Ireland

In Ireland, CENTROMOR organized demonstration trips of a 96-ft. Polish TR27A-type stern trawler. The trips were made from Howth, Castletownbere, Killbegs, and Cork, in March 1969. Irish skippers were invited along.

The prototype of this series, 'Sola,' was introduced in 1968 as a replacement for the 78-ft. side trawlers used by the Polish fleet.

A basic unit in a number of models offered by the Gdynia Ship Repair Yard, Sola was designed by the Vessel Design Bureau of Gdansk. The Sola class vessels can carry a 9-man crew on trips of up to 20 days.

Layout

Sola's general layout is very practical. There is a central fishing control position at the afterside of the wheelhouse, which is set forward. Main engine and propeller remote controls are housed on the bridge. The 140 cu.m. capacity fish hold is insulated with styrofoam, lined with wood and hydronalium, and cooled down to a temperature of 0° C. Fresh-water tanks have an 8.9 cu.m. capacity, and fuel oil tanks 55.9 cu.m.

Gear

Deck machinery is hydraulically powered from a main engine take-off. The trawl winch comprises 2 separate units. On the stern gantry above the slipway, 2 hydraulically powered warp blocks can be moved from the outer side of the gantry to the middle just above the slipway.

After the main trawl warps have been taken on the twin trawl winches, the doors are secured to the stern, and the cables clipped on to the auxiliary wires for hauling inboard. At this time, the blocks are moved to their inner position and the trawl wings are taken up the center slipway. When these are aboard, the cod ends are taken aboard by a gilson from an auxiliary drum. For shooting the procedure is reversed. ('Fishing News,' Mar. 14.)

Iceland

FISHING INDUSTRY DEVELOPMENTS

Record catches of capelin were made in March. The 1969 catch reached 100,000 tons; this compared with just over 78,000 tons for all of 1968, and a little over 97,000 in 1967. All storage facilities were full. Landings were running up to 10,000 tons a day. Capelin was being stacked in open areas to await reduction. Capelin meal prices were reported rising. Much of the meal was sold as soon as processed.

Capelin for human consumption is being tested by the Japanese, who had several technicians in Iceland last year. Iceland exported about 500 tons of frozen capelin to Japan in 1968 and has contracted to sell 750 tons in 1969.

White Fish

White fish catches had been somewhat lower than in 1968 due to strikes and poor weather. Catches in March were improving. However, the trawler catch was similar to last year's, and over 3,000 tons of iced fish had been sold in England and West Germany in January.

Marketing Developments

A sales contract, negotiated in February with Soviet trade representatives, provided for Icelandic sales of 21,000 metric tons of fishery products, including 13,000 tons of frozen fillets, during 1969.

The firm Einar Gudfinnsson of Bolungarvik has been experimenting recently with catching and processing scallops and other mollusks for the U.S. market. The quantity of available raw material reportedly is abundant. The quality of the product is good, but production and processing are still on a trial basis.

Technological Developments

On March 11, the West German shipbuilder, Uterwesen of Bremerhaven, contracted to build a US$2.4 million research vessel for the Icelandic Government. The 'Bjarni Saemundsson,' will be a stern trawler 49 meters long and 800 gross tons. She will be the first Icelandic ship powered by a diesel-electric system and be able to trawl at greater depths than any other Icelan vessel.

Some Icelandic boats soon will be equip with an improved purse seine, invented Ingolfur Theodorsson of the Westman Islan It has already been tested, with excell results. The net purses faster than exist seines.

On-board tests of the Lowe-Temp s water ice maker are about to start in I landic waters. It is produced by a comp in Longwood, Florida. The ice maker alre has been tested ashore by the laborator the Fisheries Research Institute. It is lieved the new equipment (which produces flakes from undiluted sea water) may crease quality and value of catch of groundfish boats through improved cooli (U.S. Embassy, Reykjavik, Mar. 20.)

* * *

LANDINGS AND UTILIZATION, 1967-68

	Year	
	1968	19
	. . . (Metric Tons 1/)	
Landings by Species:		
Cod	234,653	204,
Haddock	34,386	38,
Saithe	38,032	29,
Ling	8,896	7,
Wolffish (catfish)	8,972	10,
Cusk	4,873	2,
Ocean perch	30,571	30,
Halibut	1,054	1,
Herring	142,820	461,
Capelin	78,166	97,
Shrimp	2,451	1,
Other	14,423	12,
Total	599,297	896
Utilization:		
Fish:		
Quick frozen	202,237	167
Stockfish (unsalted)	15,174	59
Canned	1,444	
Smoked	21	
Salted	115,178	70
Reduction	4,431	2
Herring:		
Salted	28,834	53
Frozen (bait)	9,024	15
Reduction	132,631	473
Home consumption (fish)	7,015	8
Crustaceans:		
Frozen	4,825	4
Canned	113	
Home consumption	3	
Fish landed abroad	78,367	41
Total	599,297	896

1/Whole ungutted fish.
Source: 'Hagtidindi,' Mar. 1969.

A'T AMERICA

le:xico

96:8 SHERY PRODUCTION A:S LY 2.8% ABOVE 1967

Mico's 1968 fishery production was 40,0 C metric tons, only 2.8% more than 1967, cc:o ng to preliminary data from the Sec- eta:a of Industry and Commerce. It had in- re:a 12.8% from 1966 to 1967.

Fishery Production (Preliminary)			
Sipes	1968	1967	1966
	(Metric Tons)		
rimp	36,061	42,719	39,743
yste	24,484	20,168	19,921
rdili	27,889	29,634	18,761
ach o	15,883	22,755	13,748
ack-k	7,056	5,973	5,247
roup	5,717	4,630	7,767
allo	3,404	2,691	2,778
inyw ster	1,337	1,571	1,386
hes	72,597	67,447	62,154
To dible	194,428	197,588	171,505
elpo	28,229	20,141	22,212
sh m	11,433	10,163	9,602
hes	5,981	5,541	3,644
To ndustrial	45,643	35,845	35,458
To roduction	240,071	233,433	206,963

Shrimp landings, off 9.4% in volume for rs half 1968, continued to decline during ec half; at year's end, these were 15.6% es an in 1967. Industrial products, led y Ik , moved ahead of 1967 by 27.3%. Fish he:a roduction continued to climb slowly pw , increasing 12.5%.

hr i No. 4 Export in Value

Shrimp exports, mostly to the U.S., were orr 76 million pesos (US$54.08 million), ow 5.6% from 1967. Still the most im- orr t fishery product in dollar value, the e t high market prices moved shrimp ac l fourth place in value among all ex- orr after cotton, sugar, and corn). (U.S. Embassy, Mexico, Mar. 6.)

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THE FISHERIES OF CIUDAD DEL CARMEN

Ciudad del Carmen lies at the western end of Isla del Carmen, on Campeche Bay, at the northern end of the Gulf of Mexico. It depends almost entirely on shrimp for its economic stability. Unlike other Mexican Gulf ports, where finfish play important role, shrimp is king in Carmen. Finfish are handled only in some smaller plants catering to the domestic market.

Fish and Shrimp Production in Carmen		
	Quantity	Value
	Metric Tons	US$1,000
1967	8,308	5,954
1966	8,059	6,656
1965	7,741	6,664
1964	8,446	6,990

Processing Plants

Ten shrimp-processing plants in Ciudad del Carmen process and pack shrimp for export--all to the U.S. Almost all of the exported product is peeled, deveined, and individually quick frozen (IQF), except for occasional small packs of larger sizes (10-14 and 15-20 shrimp per pound) in the green headless form.

Shipment to the U.S. is mostly by refrigerated truck, although some is shipped by refrigerated vessel. Combined production capacity of the 10 plants is 90,000 pounds a day of IQF (about 112,000 pounds of green headless shrimp). In order of size, the plants are: Productos Refrigerados, Isla Camaronera, Mariscos del Carmen, Congeladora del Carmen, Naviera Rex, Perla del Golfo, Booth Fisheries de Mexico, Congeladora Jomar, Congeladora Mexicana, and Fausto Cruz. Eight smaller plants process and pack shrimp and fish for domestic consumption.

Ice Production

There are 8 ice plants, each associated with a shrimp-processing plant. The combined daily capacity is 275 tons of block ice. Most of this goes to the shrimp vessel fleet for icing catches, but some is used in the plants. Several plants have flake-ice machines to supply in-plant needs.

Freezing-at-sea equipment has been introduced on a few vessels recently. A growing interest in this equipment has led to the local design and manufacture of an on-board freezer at a cost considerably below the better-known U.S.-built equipment. However, this locally built machinery is still quite new, and has to establish its reliability and trouble-free operation.

Mexico (Contd.):

Fleet Size & Maintenance

Carmen's shore plants are supplied by a fleet of 320 shrimp vessels of varying types, ages, horespower, and condition. All use modern double rig shrimp gear. Most plants have their own marine railways and repair yards to maintain and repair their own vessels and those supplying them. There is also a small shipyard presently building new shrimp boats, both wood and steel. (Regional Fisheries Attaché, U.S. Embassy, Mexico, Mar. 18.)

* * *

NEW FISHERIES COUNCIL FORMED IN CAMPECHE

On Mar. 5, 1969, the newly formed Fisheries Council for the Campeche area launched an ambitious program to develop and improve the fishing industry. The Council is composed of representatives of the local trade association branch, the federal fisheries bureau, ice manufacturers, vessel owners, packers and processors, repair and maintenance services, fisheries unions and cooperatives, health department, and the State of Campeche.

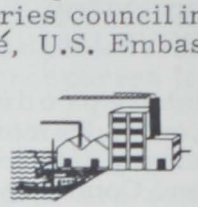
Council Goals

The Council's objectives are: (a) improvement of the economic condition of the fishing industry and upgrading its products; (b) improvement of sanitary conditions on vessels, docks, and processing plants; (c) upgrading of training and competence of fishermen; and (d) increased knowledge of resources, particularly shrimp.

The Council plans to attain these objectives by pooling resources and efforts of the industry and government participants. As a first step, several Council members have drawn up proposed rules for sanitary practices aboard vessels and in processing plants. Mexico's fishing industry attaches great importance to the subject of improved sanitary practices.

May Spread to Pacific

The initial group in the Council represented interests in the Campeche area only. Later, neighboring fishing centers such as Ciudad del Carmen, Progreso, Veracruz, Alvarado, and Tampico will be invited to join in a co prehensive program covering the whole (of Mexico coast. Mexico's Pacific Coast fi ing industry, which provides about 70 Mexico's annual production, may adopt s form of fisheries council in the future. (Fish. Attaché, U.S. Embassy, Mexico, 31.)



Peru

EXPORT TAXES ON FISH PRODUCTS REINSTATED

Certain export taxes on fishery prod have been reestablished by Peru (Mar. 1969). This was done because a 1967 abolishing them had reduced the fiscal re nue required to finance the national bud and had suppressed funds essential for tional defense.

The new law virtually invalidates the b efits accorded by the 1967 law, No. 16 Reestablishment of a 5% stamp tax on exp is considered a heavy burden to the indus The provisions of the new law will be v for 5 years, from April 1, 1968.

Reinstated Taxes

A 5% ad valorem stamp tax on expo fish products (payable on the f.o.b. price) been reinstated. A 5% stamp tax had waived on both domestic transactions an ports of fish products by the 1967 law. 1969 law exempts only domestic transacti

Fish & Whale Oil

There will be a tax of US$5.16 a m ton on crude fish and whale oil, and US$ a metric ton on semirefined fish and w oil. These export taxes on fish oil were o inally imposed in 1965 and abolished in 1 Refined or hydrogenized fish and whale are not subject to these export taxes.

Other Taxes

Other export taxes established in 196 main:

1% on f.o.b. Peruvian port price or and whale meal.

Contd.):

on f.o.b. Peruvian port price a metric crude fish oil when export price does eed US$160 a metric ton; 4% when ex- ice is higher.

on f.o.b. Peruvian port price a metric emirefined fish oil when export price t exceed US$170.00 a metric ton; 2% rice is higher.

the above taxes, except the 5% stamp e collected as advance payment of in- and profit taxes. The 5% stamp tax geable only to general expenses.

sion of 5% Tax

esponse to intense industry opposition, reintroducing the 5% ad valorem tax ery products exports has been sus- for 2 months, effective Mar. 28. The sion does not affect the other individual n fish and whale oil. (U.S. Embassy, Mar. 27 & Apr. 11.)

* * *

EAL PRODUCTION XPORTS, JAN.-FEB. 1967-69

duction of Peruvian fish meal was low uary 1969 due to a short closed season ited fishing to the southern part of Ilo. remained high, however, due to good . (U.S. Embassy, Lima, Mar. 27.)

Meal Production and Exports, Jan.-Feb. 1967-69

	1969	1968	1967
	(Metric Tons)		
Jan.	240,495	284,021	287,466
Feb.	17,357	191,575	109,644
	257,852	425,596	397,110
Jan.	140,283	192,056	100,281
Feb.	185,938	188,222	115,673
	326,221	380,278	215,954
hand Feb. 28	315,556	689,039	552,359

7 leading buyers, in first 2 months of ere West Germany, 43,949 metric tons; ental U.S., 43,748 tons; Netherlands ; East Germany, 29,464; Spain, 26,843, K., 20,456.

Chile

ANCHOVY CATCH, FISH MEAL & OIL PRODUCTION, 1966-68

Although far fewer plants operated in 1968 than in 1967, fish meal production increased 46%. During 1968, about 175,900 metric tons of fish meal and 28,000 tons of fish oil worth US$20,087,300 were exported. Most meal went to the U.S. and West Germany. The Netherlands took 90% of the oil.

Anchovy Catch, Fish Meal & Oil Production, Jan.-Dec. 1966-68[1/]

	1968	1967	1966
	(Metric Tons)		
Total landings of fish and shellfish at major ports	1,216,796	886,927	1,225,816
Anchovy catch:			
Dec.	61,500	61,300	18,000
Jan.-Dec.	963,300	708,600	1,072,300
Anchovy fish meal prod., major ports:			
January	31,403	16,343	33,547
February	24,669	20,608	27,318
March	7,665	8,703	14,054
April	2,024	1,651	14,786
May	5,729	3,765	27,013
June	30,069	16,948	19,031
July	29,428	14,279	18,046
August	36,638	6,304	18,014
September	6,103	11,730	12,819
October	1,049	12,933	3,235
November	7,214	8,206	2,137
December	12,111	11,502	3,664
Jan.-Dec.	194,102	132,972	193,664
Meal production from fish other than anchovy, south of Antofagasta:			
Dec.	1,870	2,450	2,700
Jan.-Dec.	42,600	33,000	27,000
Anchovy fish oil prod., major ports:			
Dec.	1,700	1,300	600
Jan.-Dec.	29,100	10,300	19,200
Oil production from fish other than anchovy, south of Antofagasta:			
Dec.	142	282	218
Jan.-Dec.	4,736	4,125	3,425

1/Some figures rounded.

Protein content of fish meal produced in December 1968 averaged 65%. The price varied between US$123-138 c. & f. (Instituto de Fomento Pesquero, Informe Mensual No. 12, Feb. 12.)

Cuba

FISHING INDUSTRY IS GROWING RAPIDLY

Cuba's rapidly expanding fishing industry may become one of Latin America's leading seafood exporters. But the industry is hampered by a lack of trained personnel. Some question whether disproportionate amount of investment has not been made for the returns.

New Markets

Despite this, the industry's outlook appears bright. Cubans themselves are developing a taste for more fish, a necessity because of chronic meat shortages. And a ready market exists in Western Europe for Cuba's spiny lobsters, shrimp, and other seafood. Most of Cuba's fishing exports go to France, Italy, Britain, and to socialist countries. Most of these exports represent new markets created by Cuba's need to pay for machinery and equipment.

Catch Increases

A new US$38 million fishing port near Havana was built by the Soviets in 1967. Since 1959, fishery production has almost quadrupled. Total catch in 1968 was an estimated 82,000 metric tons, compared with 22,000 in 1958. If present plans are realized, the 1968 record will be more than doubled to 200,000 tons by 1971. The forecast is based on an expansion program to increase substantially the tonnage of the fishing fleet, and its docking and storage facilities.

Shrimp Fleet Expands

Emphasis is given to increase the shrimp-fleet catch. Cuba recently acquired 90 steel-hulled shrimp trawlers almost exactly like those used by U.S. companies in Texas and Florida. Also, 12 shrimp vessels will b in Cuba for 1969 delivery. Cuban s vessels are intensifying operations off zuela, near mouth of Orinoco River, a Surinam, Guayana, and French Guiana.

By 1970, Cuba expects to have 300 v and catch 10,000 metric tons of shrim nually.

State-Run Industry

The industry is administered by th tional Fishing Institute established in following a technical-assistance agree with the Soviet Union. It is a sprawling a that directs 3 fleets, fishing port of Ha fishing cooperatives, warehouse and t portation units, a big shipbuilding fac canning units, a scientific research ce and an export company. ('The Wall S Journal,' Apr. 1.)

* * *

SPAIN BUILDS STERN TRAWLER

The super-trawler 'Mar Caribe' was completed for Cuba at one of the Vigo (S shipbuilding consortium yards in Jan. It will be one of Cuba's largest fishing sels.

The 315-foot vessel, powered by a hp. diesel engine, is equipped with a full er processing factory. She will carry a of 82 and have hold capacity for about metric tons of frozen fish. The vess ordered originally by Spanish owne launched as the 'Arcos.' ('Fishing International,' Jan.)

The first of 5 more stern trawlers o from East Germany was delivered Jan.

TS 1968 EXPORTS

968, Japan exported 7.85 million cases
48's) of canned mackerel--2.51 million
of natural pack and 5.34 million cases
ato sauce and other packs. The sharp
55% from 1967 total of 5.07 million
--was due primarily to increased pur-
by the Philippines and South Vietnam.
rmer bought 1.3 million cases of natural
and 2.7 million cases in tomato sauce
her packs; the latter 43,000 cases of
l pack and over 1.2 million cases in
sauce and other packs. Exports to the
taled 318,000 cases of natural pack and
cases in tomato sauce. ('Suisan Tsu-
Feb. 12.)

n Tuna Exports Steady

zen tuna exports were 107,084 metric
alued at about US$41.1 million, com-
to 107,132 tons and $45.4 million in
Albacore tuna exports were down
y--12,754 tons below 1967--but yellow-
skipjack exports were up.

4 leading buyers were the U.S., 36,371
uerto Rico, 27,630; Italy, 24,954; and
an Samoa, 5,757. ('Suisan Tsushin,'
, 1969.)

Frozen Fish

orts of swordfish, shrimp, saury, and
increased, while oyster shipments de-
sharply.

orts of Other Selected Frozen Fish Products, 1968

	1968		1967	
	Quantity	Value	Quantity	Value
	Metric Tons	US$	Metric Tons	US$
. . . . .	14,367	4,382,661	12,953	4,294,000
. . . . .	12,526	4,188,492	11,825	3,108,958
am	9,494	1,466,472	9,607	1,526,036
. . . . .	4,935	3,032,511	4,379	2,260,489
h fillets . .	4,809	4,981,900	3,511	2,595,922
h steaks . .	2,226	2,900,386	1,811	1,732,178
l	3,044	573,167	3,268	595,236
r trout . . .	2,563	2,315,600	2,406	2,425,033
. . . . .	2,312	5,309,330	1,286	2,497,211
h	711	384,325	785	394,578
. . . . .	571	425,036	1,310	738,339
. . . . .	18	26,856	24	38,050

Sharks previously were exported mostly to Italy but, since 1967, Holland and West Germany have become the major buyers. In 1968, Holland took 2,294 metric tons (1967--1,992), West Germany, 1,554 tons (1,515), and Italy 972 (700).

Frozen saury exports have increased steadily in recent years. In 1968, shipments to American Samoa totaled 3,099 tons (1967--3,275 tons), Mauritius 1,705 tons (1,245), Canary Islands, 1,205 tons (1,060), and Malaysia 1,184 (717). ('Suisan Tsushin,' Feb. 12.)

* * *

REPORTS 1968 IMPORTS OF TUNA AND OTHER FISH

Frozen tuna imports in 1968 totaled 28,964 metric tons worth about US$10.7 million--79% higher in volume and 84% in value from 1967 imports of 16,184 tons worth $5.8 million.

Okinawa was the leading supplier with 9,692 tons (6,407 in 1967). Imports from Taiwan rose sharply from 2,061 tons in 1967 to 7,407 in 1968. Purchases from the Trust Territory of the Pacific Islands (Marshall, Marianas, and Caroline Islands) jumped from 278 tons in 1967 to 1,613 in 1968.

Other suppliers were: South Korea, 3,854 tons; New Hebrides Is., 1,592; American Samoa, 1,374; Malaysia, 1,139; Libya, 431; Panama, 377; U.S., 342; Fiji, 288; Italy, 253; Philippines, 253; and others, 349.

Imports of Other Selected Fishery Products (Not Canned)

Product	1968		1967	
	Quantity	Value	Quantity	Value
	Metric Tons	US$	Metric Tons	US$
Spanish mackerel. .	8,605	3,762,728	9,417	4,043,400
Squid	8,503	2,584,561	5,166	1,563,167
Salmon roe	5,016	14,989,728	2,765	7,503,850
Herring	4,277	716,661	3,372	552,433
Croaker.	3,392	744,728	5,013	1,085,847
Hairtail.	2,308	450,133	4,605	887,428
Salmon & trout . . .	2,232	2,022,961	1,483	1,164,839
Yellowtail	1,382	754,364	469	356,689
Sea bream	1,146	367,544	1,556	516,067

Other Fish

Data on other fish imports (not canned) show salmon roe increasing sharply. These

Japan (Contd.):

rose from 2,765 metric tons in 1967 to 5,016 tons in 1968, reaching the 5,000-ton level for the first time. The U.S. supplied 3,663 tons (1967--1,888 tons) and Canada 1,343 tons (872).

Salmon and trout also were about 800 tons over 1967 imports. Leading suppliers were the U.S. with 1,293 tons (1967--1,019 tons), USSR, 485 tons (100 tons), Communist China, 303 (277), and Canada 170 (10). ('Suisan Tsushin,' Feb. 6 & 7.)

* * *

1969 TUNA FISHERY STARTS SLOWLY

In Jan.-Mar. 1969, the 4 Japanese purse seiners in the eastern Pacific yellowfin tuna fishery did not fare well because of unfamiliarity with local fishing conditions. However, recent reports indicate they finally found some good grounds off Mexico.

Indian Ocean

In the western Indian Ocean, the good yellowfin run that developed in early 1967 and 1968 was absent this year. Fishing was generally poor, except near the Arabian Sea where some vessels were making good catches. Several dozen Taiwanese long liners in the western Indian Ocean also experienced poor fishing.

Atlantic Fishing

In the Atlantic, fishing was also generally slow except in the Gulf of Guinea. There, yellowfin fishing began picking up. Some vessels were taking 3-4 tons per operation. In the central equatorial Atlantic, 14 Japanese long liners based at Sao Vicente, Cape Verde Island, were averaging 3 tons per operation (80% albacore). The Mar. 1969 price for Atlantic-caught albacore transshipments from Sao Vicente to Puerto Rico was quoted at f.o.b. US$421 a short ton. ('Suisan Tsushin,' Mar. 22.)

* * *

TUNA FISHERY REGULATION URGED

Scientists at the tuna research meeting in Tokyo, March 11, 1969, warned that continued tuna fishing at or above the present level would deplete western Pacific stocks. N the fate of whale resources, they urged tion of a workable catch regulation fo The meeting was sponsored by the Japan ery Resource Conservation Assoc.

The scientists were Drs. Hayashi a of the Far Seas Fisheries Research L tory, Fisheries Agency. They report the recent sharp decline in hook rate southern bluefin fishery had caused v to shift to other grounds worked by S. K and Taiwanese. This will increase pressure and deplete resources. The s tists said that resource management m clude tuna species other than southern fins.

Threaten Other Tunas

Dr. Hayashi said the vessels shift new grounds may concentrate next on tunas, such as big-eyed, and deplete th sources. He urged that fishing be re to half the 1966 effort, when 90 million were used, to restore the resources.

During the past few years, Dr. Suda s it had been wise to hold the tuna fleet 1963-64 size. In the earlier period, the were divided between those fishing f port trade and those supplying domestic ket. This achieved a balance of ha When "immense interest" in southern fins developed, effort concentrated on species. One species was overfishe another.

"It is becoming increasingly neces regulate the tuna resources," he emph

Management Proposals

Dr. Suda proposed 2 important s manage the resources:

1) Establish restrictions on area, season, vessel operations, and a catch by species and area.

2) Japan should persuade S. Korea an wan to discuss resource management. ese efforts alone have been "relatively v

Although Japan has stopped increasi tuna fleets, other nations have increase fishing capacities to around 100,000 Competition of Japanese with these fl the new areas will deplete the reso ('Suisan Keizai Shimbun,' Mar. 14.)

* * *

(Contd.):

S RISE ON
N TUNA EXPORTS TO U.S.

use U.S. fishermen were making good
n tuna catches in the eastern Pacific
April, major U.S. west coast packers
t importing yellowfin. However, some
packers continued buying actively
pan. Prices for frozen, gilled-and-
yellowfin were c.i.f. US$427.50 a short
slight increase over earlier prices.
round albacore rose to c.i.f. $530 a
on, somewhat above the $515-520 in

re in Demand

ort demand for albacore in early April
ed brisk owing to strong buying in-
y major U.S. packers. But practically
anese trading firms are out of supplies.
ing to some firms, albacore prices
tinually rising because of supply scar-
may remain high even after the sum-
bacore fishery begins. Because
ic packers are eagerly waiting to buy
mer catch, it may be difficult to obtain
supplies.

Rican Deliveries

e Indian and Atlantic oceans, albacore
d to be small and not suitable for pack-
ose taken off Angola, where fishing
dually picking up, were 20-40 pound
rade A fish were bringing c.i.f. $440
d grade B $390 a ton, delivery Puerto
('Katsuo-maguro Tsushin,' Apr. 4.)

* * *

N TUNA EXPORT TARGETS
R BUSINESS YEAR 1969

Japan Frozen Foods Exporters Assoc.
pted frozen tuna and frozen swordfish
targets for business year (BY) 1969
, 1969 to Mar. 30, 1970).

& U.S.

target for frozen tuna exports to the
d Canada is 75,000 short tons, 25,000
ss than the 100,000 tons in 1968. The
r frozen tuna loins and discs exports
da and the U.S. is 4,500 tons. The 1969
swordfish export quota for the U.S. and
is 5,500 short tons.

Overseas Bases

The export targets for overseas bases, reduced 50% from 1968, are (in metric tons): American Samoa, 12,500 tons; Espiritu Santo, New Hebrides Island, 3,000 tons; Fiji Island, 4,500 tons; Penang, Malaysia, 3,000 tons; Saint Martin Island, West Indies, 1,000 tons.

For other areas, the export goal for the new business year is 35,000 metric tons. ('Katsuo-maguro Tsushin,' Mar. 20.)

* * *

CANNED TUNA IN BRINE STOCKS DROP, PRICES RISE

The Tokyo Canned Tuna Sales Co. had about 750,000 cases of export canned tuna in brine in stock at the end of 1968. Practically all of it was sold by late March 1969. This left the company virtually no stock for the new business year (BY) beginning April 1. This occurred because of the buying rush by trading firms. The firms, assessing the recent low canned tuna output by domestic packers and the production outlook, felt they would face supply shortage unless they stocked up immediately. This was especially true because some major trading firms had been buying all can sizes, particularly the 4-lb. cans (6 to case), since around mid-Feb. Consignment of production to the Sales Co. by domestic packers has fallen far below expectations this year. The trading firms do not foresee any large increase in output before the summer albacore fishery starts in early May.

BY 1969 Canned Tuna in Brine Export Prices[1/]

Case & Can Size	White Meat, Solid		Light Meat, Solid	
	Old Price	New Price	Old Price	New Price
	(US$/Case)			
7-oz. 48's	11.01	11.11	8.40	8.49
13-oz. 24's	10.18	10.33	7.72	7.86
66½-oz. 6's	11.58	12.06	8.97	9.30
3½-oz. 48's	6.56	6.66	-	5.11
6½-oz. 48's	8.01	8.11	-	6.13
6.6-lb. 6's	19.94	20.67	-	15.98
6.6-lb. 6's Chunk	-	18.49	-	14.29

1/Ex-warehouse, Shimizu, Japan.

Export Prices Rise

The company announced a slight increase in export prices on April 1. The price revision was made because of the company's stock situation and the U.S. tariff cut of 1% (effective

Japan (Contd.):

Jan. 1, 1969) on canned tuna in brine imports in 1969. ('Suisan Tsushin,' Apr. 1.)

* * *

SEINERS FISH YELLOWFIN IN EASTERN PACIFIC

Four Japanese purse seiners entered the tropical eastern Pacific yellowfin tuna regulatory area in Feb. 1969, and began fishing in early March.

'Hakuryu Maru No. 55' (500 gross tons) and 'Gempuku Maru No. 82' (500 gross tons) fished off Ecuador. By early Mar. 1969, they had caught 50 tons and 10 tons of yellowfin, respectively.

'Hayabusa Maru No. 3' (275 gross tons) caught about 30 tons off Costa Rica. Her catch per day of operation--about 10 tons, more than twice the quantity normally taken by long line--is low compared to large U.S. seiners that catch as much as 30-40 tons a day. Her owners are hoping for a haul of at least 12-13 tons a day or 370-380 tons a month.

The 'Nissho Maru' (252 gross tons) was scheduled to start fishing in early March. All 4 vessels were searching for productive grounds in second week of March.

Performance Rating

It is too early to draw any definite conclusions concerning the performance of the seiners. However, some Japanese believe that their handicaps are already apparent--slower speed, 10 knots compared to 15-16 knots for U.S. seiners, and slower net-sinking speed compared to U.S. gear. ('Suisancho Nippo,' Mar. 11, and 'Katsuo-maguro Tsushin,' Mar. 7.)

* * *

EEL PRICES SET RECORD

A shortage of cultured eel has pushed prices at Tokyo wholesale market to a record US$1.28 a pound. This topped the earlier high of $1.26 in Osaka. Since January 1969, prices have risen almost 50 cents a pound. Eel processors, displeased over this trend toward a sellers' market, are considering suspending sales promotion.

Broiled eel is very popular in Ja
('Minato Shimbun,' Apr. 1.)

* * *

1968/69 ANTARCTIC WHALING ENDS

The 3 Japanese whaling fleets partici
in the 23rd Antarctic whaling expedition
operations Mar. 22, 1969. All attaine
signed targets. Japan was assigned a
of 1,493 blue-whale units (BWU) fo
1968/69 season. ('Shin Suisan Shimbun S
ho,' Mar. 26.)

Catch & Production	
	No. of Wh
Catch:	
Fin.	1,82
Sei	3,49
BWU's	1,49
	Metric T
Production:	
Frozen	72,47
Whale oil	27,52
Salted	2,03
Solubles & others	3,25
Total	105,28

* * *

YAIZU LANDINGS DECLINED IN MARCH

Landings at the leading tuna port of
in March 1969 totaled 15,315 metri
worth US$5.85 million, about 2,000 tons
the March 1968 landings of 17,002 tons
$6.08 million. The decline was attribut
marily to the sharp dip in albacore tuna
ings, down nearly 85% from comparabl
landings. ('Nihon Suisan Shimbun,' Apr

	Quantity			Average P	
	1969		1968	1969	
	Mar.	Feb.	Mar.	Mar.	Feb.
	. . . (Metric Ton) . . .			. (US$/Short	
Tuna:					
Bluefin[1/] .	4,980	3,712	4,906	706	785
Albacore .	225	251	1,521	479	492
Skipjack .	3,962	2,946	4,717	267	284
Mackerel .	5,347	3,018	5,288	73	115
Others . . .	800	435	570		
Total . .	15,314	10,362	17,002		

1/Includes yellowfin and big-eyed tuna.

* * *

(Contd.):

MER ALBACORE TUNA FISHERY
TS SLOWLY

e summer albacore tuna fishery is con-
ably later this year than in 1968. In
April last year, about 3,000 metric tons
e-caught albacore had been landed at
. This year only a small quantity under-
und albacore had been landed by the
time.

Expect Improvement

e summer albacore forecast, published
kai University, indicates that the rather
flow of warm waters off Bonin Islands
heast of Tokyo) could be expected to de-
rmation of the main fishing school con-
ably. However, since the oceanographic
tions this year resemble those in 1965
xcellent catch of 42,000 tons) and 1967
catches of 28,000 tons), some observers
ct a good summer albacore fishery.
ancho Nippo,' Apr. 10.)

日本

ublic of Korea

) STORAGE COMPANY GETS
RNATIONAL LOAN

e Asian Development Bank announced a
million loan to the Korea Cold Storage
KCSC) on March 13. The loan, guaran-
by the Government of the Republic of
(ROK), will be amortized over $15\frac{1}{2}$
, including a 4-year grace period; an-
interest is 6.9%. Five Japanese com-
ial banks have agreed to participate in
oan--each with US$100,000. The loan
assist the development of fisheries, a
priority sector in Korea's development
ram.

n Development Bank Assistance

his is the first time specific financing has
lted from a technical assistance program
rtaken by the Asian Development Bank.
March 1968, the Bank entered into a
nical assistance agreement with the ROK
rnment and its Agriculture and Fisher-
Development Corporation (AFDC) to help
anize and develop AFDC activities.

AFDC, established in Nov. 1967 as a government-owned statutory corporation, is charged with developing and promoting the storage and processing of agricultural and fishery products. Most of the technical assistance was completed in 1968, although 2 refrigeration and fishery experts are still serving in Korea under the agreement. The most important project proposed for Bank financing was the construction of processing facilities for fishery products intended for local markets. In July 1968, AFDC established a subsidiary--KCSC--to undertake this specific project.

Project Facilities

The loan to KCSC will finance foreign exchange costs of freezing, cold storage, ice-making, ice storage, and supplementary processing facilities in Seoul, Pusan, Mokpo, and Mukho; marketing facilities in Seoul, and transportation equipment. The total cost is estimated at US$18.2 million, including working capital funds of US$2.9 million.

Fisheries Problems

ROK's fisheries provide a livelihood for about 6% of her population, but low productivity of fishermen and inadequate distribution facilities hamper an increase in the living standard of fishermen. Efforts to expand fishery catches have been successful, but deficiencies in marketing and distribution have prevented full benefits from being realized. Prices of fishery products have been increasing faster than those of other foodstuffs, and fishery products continue to be too expensive for many Koreans.

Project Goals

KCSC will seek to eliminate bottlenecks in marketing and distribution by developing adequate freezing and cold-storage facilities and an efficient marketing system in Seoul. The facilities will enable the company to buy fishery products during peak periods and sell them off-season. This will eliminate price fluctuations due to seasonal changes of supply. Acquisition of refrigerated land transportation equipment and carrier vessels, also included in the project, will permit efficient operation and utilization of the planned facilities. (U.S. Embassy, Manila, Mar. 13.)

SOUTH PACIFIC

Australia

TUNA CATCH SETS RECORDS IN NEW SOUTH WALES

By Dec. 14, 1968, the New South Wales tuna catch was a record 4,358 short tons--311 tons above the entire 1967/68 season.

Fishermen used sea-surface temperature maps prepared by the CSIRO Division of Fisheries and Oceanography. CSIRO used a radiometer-equipped charter aircraft. Maps drawn in December showed a remarkable pattern of temperature fronts moving down the coast, providing ideal conditions for tuna schooling. Sixty live-bait pole boats and 37 trolling boats fished for tuna in southern New South Wales waters this season.

New Tagging Scheme

A new tuna tagging scheme was introduced. Fishermen marked selected fish as they were caught, then released them. Up to mid-December, more than 4,000 tuna had been tagged, and about 2,000, tagged in present and past seasons, had been recaptured. ('Australian Fisheries.' Jan.)

American Samoa

TUNA PRICES, MARCH AND APRIL 1969

Japanese tuna suppliers and U.S. p in American Samoa agreed to mainta 1969 prices for March tuna deliverie Japanese had sought a $5-a-ton in (later reduced to $2.50), but U.S. packe fused to grant any increase over Feb. p

March prices were, per short ton: albacore: frozen $415, iced $400; gille gutted yellowfin: frozen $337.5, iced $ ('Kanzume Nippo,' Mar. 14.)

Prices Up in April

In April, Japanese tuna suppliers ar packers agreed on a $5-a-ton increa albacore.

The new prices (per short ton) for albacore are frozen US$420 and ice Gilled-and-gutted yellowfin prices re March levels: $337.5 frozen and $317. ('Suisan Tsushin,' Apr. 5.)

DO EAGLES SWIM?

On March 10, the biologists at BCF's Auke Bay (Alaska) Biological Laboratory had a ringside seat to the performance of an eagle diving upon a duck so swiftly that the eagle went into the water still holding the duck. The eagle swam to shore and hopped up on a rock, fluttered its wings and then sat there stoically while many of a flock of crows darted about it. After a short rest, the eagle flew across the bay with the duck still in its talons.

AFRICA

South Africa

CANNED PILCHARDS FOR PET FOOD

Canned pilchards packed at Walvis Bay as a special brand of pet food will be featured as part of a special spring promotion in the U.S. Eight different brands of canned pet food will be displayed coast to coast by a U.S. company. A container of a million cases have been ordered from Walvis Bay this year. ('South African Shipping News and Fishing Industry Review,' Mar.

South-West Africa

FISHMEAL SEASON IS UNDERWAY

The 1969 Walvis Bay pilchard season started during the first week of February when the first factories sent out fishing vessels. The other factories started in February or the first week of March.

Factoryships

The South African fish meal factoryships, 'Willem Barendsz' and 'Suiderkruis,' arrived off South-West Africa on Jan. 1, 1969, to start their 8-month season. Initial catches were reported poor, with a lot of anchovy present. But, north of Walvis Bay, catches had improved considerably by the third week of Jan.

Land-Based Plants

The 8 land-based pilchard plants--7 at Walvis Bay and one at Luderitz--are limited to a quota of 90,000 short tons each; a special research levy is placed on an additional 6,000 tons. However, as in 1968, the factories will divide the 96,000-ton quota of the new plant, Sarussas Ontwikkelingskorporasie, equally among them. Sarussas' additional quota can be used only after the company has established its factory around Rocky Point, well north of Walvis Bay.

Quotas

The 12,000 ton-per-plant anchovy quota was a concession for 1968 only; it is not known whether it will be extended to the current year. Last year, any anchovy caught in excess of 12,000 tons was deducted from the pilchard quota.

New Plant at Walvis Bay

The 96,000-ton quota granted to the white-fish consortium probably will be processed by the consortium plant now being built at Walvis Bay. It is expected to be operational by about midyear. ('South African Shipping Industry Review,' Feb.)

WHERE DO WAVES COME FROM?

The commonly seen waves on the surface are caused principally by wind. However, submarine earthquakes, volcanic eruptions, and tides also cause waves.

A breeze of less than 2 knots (2 nautical miles per hour) can form ripples. As the wind speed increases, larger more visible waves form. The wave height in feet usually will not be more than half the wind speed in miles per hour, although individual waves may be higher.

As long as the wind blows consistently from the same direction, the waves are referred to as sea. When the wind stops or changes direction, the waves that continue in a direction different from that of the local winds are called swell. ("Questions About The Oceans," U.S. Naval Oceanographic Office.)