WORLD FISH MEAL PRODUCTION RISES

During Jan.-Sept. 1970, fish-meal output by major producers-exporters, Peru, Norway, and Chile, totaled nearly 2.6 million short tons; the figure was 1.8 million in 1969 period. The 3 nations export about 97% of their output and account for about 75% of world exports. This was reported in "Foreign Agriculture," U.S. Dept. of Agriculture, Jan. 11, 1971.

Their combined exports during Jan.-Sept. 1970 were 2.1 million tons--only 47,000 tons above 1969 period--and 487,000 tons less than production. In 1969, exports at just over 2 milliontons had exceeded production by over 200,000 tons. A substantial buildup in stocks occurred in 1970. The last time it happened was in 1967. That was followed in 1968 by heavy stock dispersals, which boosted exports to 5% over production.

Imports by 'Big 8' Drop

The 1969 decline in imports into 8 selected countries continued through the first 9 months of 1970. In the past, the '8' had taken bulk of imports. The decline resulted from relatively scarce supplies and high prices that began in May 1969.

Imports by the '8'--at 1.4 million tons for Jan.-Sept.--were down 365,000 tons (20%) from level of 1969 period. When compared with exports, 600,000 tons remain unaccounted. This may reflect, in part, the lag between export and import data; and, partly, possibility that larger quantity is probably moving to other importing countries in East and West Europe.

Agriculture Dept. Observations

Although 1971 fish-meal production "is indeterminate," says U.S. Department of Agriculture, several observations can be made:

(1) Aggregate fish-meal production in the three major countries trended upward at annual average volume of 246,700 short tons during 1960-68 period.

(2) Their production since 1960 increased in 7 years and declined only in 2--1965 and 1969.

(3) Exports from the three have accounted for over 95% of combined output. During 1960-68, it trended upward at volume of 243,900 tons annually.

(4) Export availabilities in 1971 from 1971 production would amount to 2.7 million tons-if 1971 production does no more than stagnate at 1970 volume, currently estimated at 2.85 million tons, and local use continues at about 150,000 tons.

(5) Also, a substantial quantity of fish meal (roughly 380,000 tons) accumulated in 1970 will be available for export.

(6) Although aggregate imports into major consuming countries declined sharply in 1969, and continued to decline in 1970, imports into all countries, except U.S., were well maintained through 1969. Only in 1970 was decline in fish-meal availabilities felt in major consuming countries. This indicates that U.S. exports of soybeans and meal were not affected by 1969 decline in fish meal availabilities--but did benefit significantly from reduction in 1970.

(7) In 1970, fish-meal production may have reached record. However, as before, impact of large production would not be felt in consuming countries until 1971.



JAPANESE ARE PESSIMISTIC ABOUT 1971 FISHERY EXPORTS

The Japanese fishing industry is apprehensive over recent U.S. actions banning the sale of mercury-contaminated fishery products. In 1970, Japan sold to the U.S. 3.3 million cases of canned tuna worth about US\$36 million. This was almost 10% of all fishery exports. Exporters expect U.S. purchases to drop to practically nothing while the mercury problem is studied in the U.S. The same is true for frozen tuna and swordfish.

The U.S. also has banned imports of whale meat and oil under the Endangered Species Act. ('Japanese Economic Journal', Jan. 19, 1971.)

Although exports of whale products to the U.S. were worth only \$2.5 million in 1970, the ban will hit whalers hard for 2 reasons: there is a high profit ratio in the sale of whale products, and the industry already is troubled.

Canned Tuna No. 1

Canned tuna is Japan's most important fishery export. In 1969, sales expanded 20% to \$66 million. More than half was bought by the U.S., the rest by West Europe. Japanese sources report several European Community nations, particularly Italy and France, are considering minimum import prices for Japanese canned tuna to protect domestic producers.

Japanese frozen tuna exports to the U.S. were worth \$35 million in 1969.

On Jan. 20, 1971, the U.S. National Fisheries Institute announced that under provisions of existing contracts 5 million lbs. of

frozen swordfish, worth \$2 million, would be returned to Japan because of high mercury levels. The swordfish can be sold in Japan if the government permits. ('Japan Times', Jan. 22, 1971.)

W. German Situation

West Germany, too, is seriously concerned about mercury-in-tuna situation. A movement is under way to prohibit sales of canned tuna containing more than 0.4 part mercury in a million parts of canned tuna. Some buyers are demanding that Japanese exporters of canned tuna attach certificates attesting less than 0.4 ppm mercury.

The move by West Germany to establish a more rigid standard than the U.S. apparently is aimed at preventing the diversion of U.S.rejected shipments to W. Germany.

Japanese exporters claim they cannot comply with German demand because Japan's position is not to issue individual certificates for canned tuna exports. The West German move will hurt because W. Germany is Japan's second-best canned-tuna market (after U.S.) and best market for Japanese cannec tuna in oil. ('Suisan Tsushin', Jan. 14, 1971.)

<u>NMFS Comment</u>: Japan used to be net exporter of fishery products. During last few years, it has imported more and more. In 1969, fishery imports increased 30% over 1968 to \$261 million; exports decreased 2% to \$347 million. The continued rapid decrease of exports could severely affect fishery trade balance.

JAPAN

FISHERY BUDGET IS RAISED FOR FISCAL YEAR 1971

The Japanese Government approved on Dec. 30, 1970, the Fisheries Agency budget of 50,052 million yen (US\$139 million) for fiscal year (FY) 1971 (April 1971-March 1972). The requested sum is 23.7% higher than the FY 1970 fishery budget of 40,462 million yen (\$112.4 million).

Some Large Increases

The Agency is requesting large increases for: improvement of fishing ports (26.3%); development of deep-sea fisheries (53.4%), which includes establishment of a \$278,000 marine fishery center; and a marketing program including a \$47,000-subsidy for experimental tuna marketing.

For first time, the Fisheries Agency is seeking funds to control pollution on fishing grounds (\$267,000).

Amounts for some programs are shown below. ('Nihon Suisan Shimbun', Jan. 6, 1971.)

SAURY PRICES RISE AS LANDINGS FALL

Saury prices in Japan have risen sharply in recent years as landings declined. Once considered poor man's food, the saury now is high priced.

In 1969, landings declined 60% from 1968 and reached a record low of 52,200 metric tons; the average exvessel price tripled. So earnings of vessel owners suffered less than had been expected.

Earlier Season Opening Suggested

Still, saury fishermen want to increase the catch to make the fish available to all. Fishing captains have suggested an earlier season opening. ('Shin Suisan Shimbun', Feb. 1, 1971.)

SQUID FISHING OFF U.S. EAST COAST IMPROVES

Japanese trawlers fishing squid off New York since late Nov. 1970 reported in Jan. 1971 that fishing had improved. Earlier reports had indicated that about 14 trawlers were having difficulty finding good concentrations. Although January catches were still

Program	Proposed FY 1971 Budget	FY 1970 Budget
	(US\$1	,000)
Fishing ports improvement	75,917	60,105
Fishing industry disaster compensation system Fishermen disaster compensation system	4,530 4,423	6,411 4,409
Deep-sea fisheries development	3,490	2,275
Fishery products marketing program	2,083	1,062
International fisheries biological research	816	700
North Pacific fisheries enforcement	778	592
Distant-water fisheries enforcement	552	511
Fish culture center	479	435
Fishing ground pollution control	267	
Marine resources conservation	235	201
Fish culture experimental projects	145	187
Coastal/offshore fisheries forecasting	84	83
Other	45,201	35,429
Total	139,000	112,400

below 1970 peak-season catch, some vessels were hauling in close to 10 metric tons a day.

European Price Drop

The Japanese firms hope to export squid to Europe at US\$400/metric ton (cost, insurance, freight). However, the European price will almost definitely decline to \$300/ton level, about half the 1969 price. The Japanese fear they may not be able to make any profit.

Butterfish & Argentine

Prior to squid, the trawlers concentrated on butterfish and argentine. In early Jan. 1971, 1,800 tons of East Coast catch (1,400 tons butterfish, 400 tons ocean perch and argentines) arrived in Japan. There the butterfish packed in 44-lb. boxes brought 5,800 yen (\$16.11) a box wholesale. ('Minato Shimbun', Jan. 14, 1971.)

NMFS Comment: The Japanese wholesale price for butterfish was \$0.37 a pound. Recent U.S. prices were:

wholesale Baltimore US\$0.35 wholesale New York US\$0.35-40 retail Baltimore (Dec. 1970) US\$0.69-0.79.

REPORT ON SHRIMP INDUSTRY TRENDS

* * *

About 70 Japanese shrimp trawlers were fishing in the Caribbean Sea off the Guianas (South America) in Jan. 1971. The trawlers began organized fishing 4 years ago. They lost money because their crews were not familiar with the grounds.

Over the years, however, crew skill improved steadily, mechanical refrigeration was installed. Now most trawlers are operating profitably.

1970 Catch

In 1970, their combined shrimp catch off the Guianas was 5,768,190 pounds--about 5% above 1969 catch of about 5.5 million pounds.

The catch, mostly pink and brown shrimp, is exported to the U.S. and Japan. ('Suisan Keizai Shimbun', Jan. 27, 1971.)

Prices Firm in Japan

Frozen shrimp wholesale prices in Japan generally are holding firm. Prices for large sizes, in short supply, continue high due to strong institutional demand. But the plentiful smaller sizes, particularly 31-40 counts, are steady. ('Suisan Tsushin', Feb. 3, 1971.)

* * *

IMPORTS OF FROZEN SHRIMP FROM AFRICA ARE INCREASING

In 1970, Japanese imports of frozen shrimp from Africa, especially from Nigeria and Senegal, increased. During 1969, Japan imported 530 metric tons from Nigeria, 286 tons from Senegal, 104 tons from Tanzania, and 47 tons from Mozambique.

Liberia, Ivory Coast, Gabon, and Cameroun also supplied shrimp in 1970. Although the quantities were small, Japan expects shipments to increase because of Japanese exploratory fishing off Gabon and Cameroun.

Senegal Largest Supplier

In 1970, Senegal was the largest west African supplier of shrimp to Japan: 238 tons in Jan.-July. In 1967, Tomen, a Japanese trading firm, began to import frozen shrimp from Senegal; by Sept. 1970, it had reached 50 tons. Tomen believes that only significant catch improvement will make it profitable for Japanese to fish off Senegal.

Shrimp from Senegal are mainly white with a predominant count of 26 to 30 and 41 to 50, heads on, per pound. The Japanese market for these is good. Shrimp with a count of 50 or over, heads on, are exported to Europe. ('Suisan Keizai')

<u>NMFS Comment</u>: Imports of shrimp from Africa are small part of Japanese shrimp imports: 3.1% in 1969. Total 1969 Japanese imports of shrimp were 48,885.7 metric tons worth US\$121,747,500. In 1970, these fell to 45,187.4 MT worth US\$106,835,833 (Africa 3.4%).

But imports from Africa are increasing rapidly. In 1969, six African countries exported 1,734 metric tons worth US\$3.7 million. According to Japan, Madagascar led

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with 760 tons, followed by Nigeria, 530 tons; Senegal, 286; Tanzania, 104; and Mozambique, 47. Somalia exported negligible amount.

During first 9 months of 1970, significant changes occurred. Five countries joined the 6 that exported in 1969: Ivory Coast, 137 tons; Liberia, 36 tons; Gabon, 27; Cameroun, 8; Angola, 1. Madagascar remains chief supplier, 790 tons, but imports from Nigeria have decreased significantly, to 212 tons. This contradicts information supplied by 'Suisan Tsushin'. Imports from Senegal fell to 272 tons in first 3 quarters of 1970.

It appears that the Japanese, to maintain African shrimp supplies for ever-increasing domestic demand, are rapidly establishing joint ventures in most coastal African countries.

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HIROSHIMA OYSTER GROWERS WORRY ABOUT S. KOREAN IMPORTS

In Jan. 1971, when oyster harvest was at its peak, the Hiroshima oyster growers worried about imports from Republic of Korea (ROK) by a Japanese firm.

For about a year, the San-ei Suisan, Hiroshima's largest wholesaler of oysters, had been culturing oysters in Korea, with ROK support, in waters much cleaner than Hiroshima's.

S. Korean Oysters

In 1970, the wholesaler had imported from ROK 30 metric tons in the shell and shucked them (yield 4 tons of meats). A small part was sent to Tokyo Fish Market. It sold fresh at 11,000 yen per 20 kilograms (US\$1.53/kilo), below market price of Hiroshima oysters. The Korean oysters harvested more than a week earlier (twice time allowed Hiroshima oysters destined for fresh consumption) were not best quality. They were used mostly for canning.

Origin of Oysters Troublesome

The 4 tons are negligible compared with Hiroshima's annual shucking of 32,000 tons. However, even if Korean oysters are frozen or canned, they are likely to be regarded as Hiroshima oysters because importer is Hiroshima's largest. (It handles nearly 20% of city's oyster sales.) Some oyster growers in Hiroshima tried to eliminate San-ei Suisan, but they failed because of company's long association with oyster growers. ('Minato Shimbun', Jan. 7, 1971.)

* * *

NICHIRO IS PURSE SEINING

OFF WEST AFRICA

The Nichiro Company's purse-seine fleet caught 4,500 to 4,700 metric tons of tuna during July-Dec. 1970 in the eastern Atlantic off West Africa. This almost equals fleet's catch target of 4,800 tons. Although more skipjack and fewer yellowfin were taken than anticipated, the trip is expected to show a profit.

1970 Fleet Reorganization

Previously, Nichiro had lost money each year inpurse seining off West Africa. In 1970, the fleet was reorganized and reduced from 6 pair-boat seiners and 2 motherships to 3 pair-boat seiners (9 vessels, including 3 skiffs) supported by 3,600-gross-ton mothership 'Hiroshima Maru'.

1971 Fleet Plans

The fleet fished until end of Jan. 1971. The mothership returned to Japan and will head back for West Africa in May. During that period, the seiners will be docked in an east Atlantic port. ('Minato Shimbun', Jan. 15, 1971.)

* * *

RECORD MOTHERSHIP-TYPE BOTTOM-FISH CATCH IN BERING SEA IN 1970

The 1970 Bering Sea bottomfish catch by 10 Japanese mothership fleets reached record 1,184,000 metric tons. This surpassed by 38% previous high of 855,000 metric tons in 1969.

The large gain was attributed to increase in Alaska pollock landings-over 87% of catch. These landings have been increasing yearly since fleets began producing "surimi" (minced fish meat). ('Minato Shimbun', Jan. 22, 1971.)

Bottomfi	sh Catch in Bering Se	a	
	1970	1969	
	(Metric Tons)		
Alaska pollock Flatfishes Cod Herring Sablefish Pacific Ocean perch Shrimp Other species	1,031,000 89,000 47,000 9,000 3,000 2,000 2,000 1,000	$\begin{array}{c} 678,000\\ 106,000 \underline{1}/\\ 39,000\\ 11,000\\ 4,000\\ 11,000\\ 4,000\\ 2,000\\ \end{array}$	
Total	1, 184, 000	855,0002/	
1/Includes 96, 800 tons of toothed halibut. 2/The 1969 figures are ro	flounders and 9,500 ounded off. Catch wa	0 tons of arrow- as 854, 600 tons.	

* * *

TOKAI UNIVERSITY CULTURES TUNA SPECIES AND DOLPHIN

A 3-year study of the culture of tuna, skipjack, and dolphin is being conducted by Tokai University's College of Marine Science and Technology. The study is part of a Fisheries Agency program of marine culture of commercially important fish species begun in 1970.

The college has been rearing about 200 tuna, skipjack, and dolphin since Aug. 12 and reports that commercial culture of tuna and skipjack is promising.

Tuna, Skipjack, Dolphin

Tuna and skipjack, which normally swim straight, are extremely difficult to rear in a small tank. The rearing of one bluefin tuna for 2 months by Nagasaki Prefectural Fisheries Experimental Station is the longest.

On Aug. 12, 1970, at Mera Bay, the researchers began rearing bluefin tuna, skipjack, and dolphin in a seawater pen 10 meters long, 10 meters wide, and 1.5 meters deep-and in a tank 3.5 meters long, 3.5 meters wide, and 1.5 meters deep. Experiments also were carried out in a training pool 5 meters in diameter and 2.5 meters deep.

Several fish have died, but 200 (including dolphin) now can be seen swimming in groups. The experiment has passed its most difficult

stage, the fish are feeding well, and survival should be good.

What's Ahead

Prof. Motoo Inoue, in charge of experiment, foresees no serious problems during winter.

The next objective will be to rear them to maturity and to spawn them artificially. Inoue also wants to fertilize skipjack eggs artificially aboard a vessel in waters around Bonin and Mariana Islands, and yellowfin and bigeyed around Truk Island. He plans to catch young tuna with lights and to rear them. He will collect tuna eggs with a net and hatch them in laboratory. ('Suisan Keizai')

* * *

UNDERWATER HABITAT NEARS COMPLETION

A nearly \$1-million submarine habitat begunina Kanagawa Prefecture shipyard in 1969 was scheduled to be completed in February 1971.

The Japanese Science and Technology Agency (STAA) is building the habitat, known as "Undersea Operation Base". It will be installed on seabed 30 meters deep off Ito, Shizuoka Prefecture. The habitat consists of a main 65-ton compartment with workshops and living-quarters, an elevator, and surface buoys. The compartment is cylindrical and measures 10.9 meters long and 6.5 meters high. It is designed to withstand pressures at a depth of 110 meters. Inside are a bedroom for four, a kitchen-dinette with hot running water, laboratories, and the central control office. STAA said it was designed to accommodate four persons comfortably for one month.

Experiment in Nov. 1971

Four aquanauts will occupy it in Nov. 1971. They will breathe artificial air--95% helium and 5% oxygen. Because helium extracts heat from human body, room temperature will have to be kept at 28° C. to 32° C. (82.4°-89.6° F.) with electric heater.

Another disadvantage is dietary. The aquanauts may only eat frozen food thawed in hot water. Flame is forbidden in the artificial air. Four-manteams will take turns living in the

craft for 5 days. They will photograph marine life, sample soil from seabed, and examine effects of high underwater pressures.

If first experiment is successful, the craft will be lowered to 60 meters for another experiment in 1972, and to 100 meters in 1973.

24 Being Trained

Twenty-four youths, including graduate students and employes of ocean-oriented companies, are undergoing intensive training.

STAA officials say Japan is 5 to 8 years behind France and the U.S. in this field. There, successful experiments with similar craft have been conducted in depths ranging from 130 to 186 meters. ('Japan Times', Jan. 1, 1971.)

* * *

PHASES OUT FISHING IN NEW ZEALAND WATERS

The 3-year Japan-New Zealand fishery agreement, concluded in October 1967, expired on Dec. 31, 1970. It had allowed the Japanese to fish within New Zealand's 12mile fishery limit up to 6 miles from the coast. Japan was limited to 17 vessels, total tonnage 6,000 GRT, and had to furnish a list of vessels fishing in the area each month.

New Zealanders Want Fish

The Japanese are hoping to extend the agreement, but their extensive mothership operations and large catches, mostly sea bream, have been eye-openers to New Zeaanders, who will try to catch the fish themselves. But their coastal vessels are small and not equipped for large, efficient fishing.

New Zealanders reported that Japanese violated agreement many times by coming closer than 6 miles and will now violate New Zealand's 12-mile fishery limits. (From 'Asahi Evening News', Jan. 1, 1971.)

<u>NMFS Comment</u>: Japanese officials have been soft on companies that violated the agreement; penalties have been mostly administrative not financial. Japanese had hoped to form several joint ventures to ex-

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ploit fishery resources within 12-mile limit. However, findings of 1969 survey team discourage this scheme. Nevertheless, Taiyo established joint venture with A.G. Wicelams Co. in Sept. 1967--capitalization US\$368,000, 27.4% contributed by Taiyo (\$100,800).

* * *

LARGE PURSE SEINER LAUNCHED

The 99-GRT purse seiner 'Nippon Maru', first Japanese-built seiner of its size, is scheduled for delivery to its owners, the Overseas Purse Seine Fishing Co., in early April 1971.

Its Vital Statistics

The vessel is modeled after U.S. tuna seiners. It will be equipped with U.S. power block and use four U.S. 65-hp., 45-knot speed boats. Main specifications are: overall length 59.05 meters (193.7 feet), width 11.8 meters (38.7 feet), depth 7.68 meters (25.2 feet), main engine 3,500 hp., speed 16 knots, crew 17. Total construction costs, including speed boats, will reach 620 million yen (US\$1.72 million).

Hopes on New Seiner

The Japanese are pinning much hope on the Nippon Maru in their contest with U.S. seiners. It will be sent to eastern Pacific yellowfin and skipjack grounds around May 1971. Two-thirds of the operating costs will be subsidized by the government, which has designated it to explore for new fishing grounds. ('Minato Shimbun', Jan. 31, 1971.)

The seiner will have a brine-freezing unit (minimum temperature -0.4° F.). It will fish for 4 years without returning to Japan; crew replacements will be flown out periodically.

<u>NMFS</u> Comment: The Overseas Purse Seine Fishing Co., established in June 1970, sent representatives in Sept. 1970 to San Diego, Calif., to hire a U.S. trawl master for its new purse seiner. In Oct. 1970, 7 U.S. tuna fishermen were hired to give technical advice and to help crew the vessel. The ship's master and the chief engineer, however, will be Japanese.

Since the vessel will not be ready until April 1971, after closure of regulatory yellowfin season, skipjack tuna will be fished instead.

TAIWAN

1970 FISH PRODUCTION INCREASED 9.3% OVER 1969

Taiwan's fish production in 1970 totalled 613,044 m.t., an increase of 9.3% over the 560,783 m.t. of 1969. The 1970 production of each fishery category compared with 1969 was:

		1969 (m.t.)	Increase	
and spin and	1970 (m.t.)		m.t.	%
Total	613,044	560,783	52,261	9.3
Deep-sea	277,955	255,057	22,898	9.0
Inshore	234,704	221,646	13,058	5.9
Coastal	27,690	27,010	674	2.5
Fish culture	72,695	57,064	15,631	27.4

The production target set for 1971 is 665,000 m.t. with the following breakdown: Deep-sea fisheries, 329,000 m.t.; inshore fisheries, 241,000 m.t.; coastal fisheries, 25,000 m.t.; and fish culture, 70,000 m.t.

Fish Export

The export of fishery products in 1970 totalled US\$66.7 million compared with US\$44.7 million in 1969. Most of the fish exported are frozen tuna and marlin transshipped from overseas ports. Shrimp is the next important export item.

Artificial Propagation of Mullet

Continuing the experiment of the 1969-1970 season, the Tungkang Marine Laboratory succeeded in rearing the hatchlings of the grey mullet to stocking size. From a fish stripped on Dec. 21, 1970, 6,000 fingerlings survived and grew to 2.2 cm in length as of Jan. 31, 1971. It is expected that the Laboratory will be able to produce 20,000 to 25,000 mullet fingerlings this winter to a size suitable for stocking.

The Laboratory also succeeded in breeding for the first time a pond-reared mullet of about $3\frac{1}{2}$ years in age on January 17th. Several thousand hatchlings have survived and were in healthy condition at the time of this report, Feb. 5, 1970.

> T. P. Chen Chief, Fisheries Division Joint Commission on Rural Reconstruction, Taiwan

PLANS TO BUILD TUNA LONGLINERS

The Taiwanese have scheduled construction of forty 250-GRT tuna longliners. Government approved, the vessels will be financed by a US\$10 million loan from Asian Development Bank (70%), and private Taiwanese capital (30%).

* * *

Tuna-Mercury Problem

The tuna-mercury problem encountered in the U.S. in Dec. 1970 had generated arguments against building tuna vessels, but the Taiwan Fisheries Bureau decided to go ahead. The Bureau reportedly said its future efforts will be directed toward building large purse seiners. ('Katsuo-maguro Tsushin', Jan. 26 1971.)



EUROPE

USSR

BUYS FISH-MEAL PLANTS FROM DENMARK

After years of negotiations in Moscow and Copenhagen, the Danish firm Atlas has secured a Soviet order for 20 million DKr. (US\$2.66 million) to deliver 8 fish-meal plants for 2 factoryships. The combined daily production capacity of each vessel, 1,200 metric tons of raw fish, will yield about 400 tons of meal.

New-Type Vessels

The vessels are 2 new types built at a Soviet shipyard. They will be equipped too with freezing and filleting equipment.

Atlas previously had delivered smaller fish-meal plants for Soviet vessels. Several were built at Burmeister & Wain Shipyard in Copenhagen. (U.S. Embassy, Copenhagen.)

'FROST-PROOF' RESERVOIRS FOR LIVE CARP IN LITHUANIA

A reservoir for live fish has been built on the Neman River downstream from hydroelectric power station feeding Kaunas, Lithuania. The reservoir is filled with warmer water from power station and does not freeze over in winter.

Carp Available Longer Period

Already, 40 metric tons of carp raised in local hatcheries have been placed into the 400-ton-capacity reservoir. Kaunas stores will be supplied with live carp through March. In the past, live carp was marketed only during a short period in autumn. ('Pravda', Dec. 16, 1970.)

ICELAND

1970 CATCH WAS SLIGHTLY ABOVE 1969

Iceland's 1970 fishery catch is estimated at 720,000 metric tons, compared to 689,400 in 1969. Herring continued poor: only 45,000 tons were landed. While this was a slight drop from 1969's 56,900 tons, it was only a fraction of the 461,500 tons caught in 1967.

The groundfish catch of 469,000 tons was up slightly from the 390,100 tons in 1969, but it was less than expected. Lobster, scallop, and shrimp catches reportedly rose.

Board Raises Prices

As 1971 began, the Iceland Fisheries Pricing Board raised the average landed price of fish by 25%--including 35% for haddock (in short supply) and 27% for cod. Retailers reacted with 15% increases.

Vessel owners and fishermen negotiated contracts for 1971 during the last days of 1970. By mid-January, unions had ratified most, but not all, agreements. Owners and officers still had not agreed. The officers went on strike as their vessels returned to port. (U.S. Embassy, Reykjavik, Jan. 13, 1971.)



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DENMARK

REPORT ON GREENLAND'S COD FISHERIES

Greenland's 1970 catch of cod was about 17,000 metric tons (gutted weight), a 28% decline from 1969; and the latter was 44% below 1962 record. Poor catches may be expected for several years because there is no evidence of improvement in recruitment.

Most of the current fishery is based on the 1963-65 year-classes. The year-classes since then have been relatively small, so the cod stock is expected to be low until 1974. Hope lies with the 1965 year-class now entering the fishery.

Catch by All Nations

The cod catch by all nations fishing off West Greenland was 230,000 tons in 1969, the lowest since 1959. A decrease in effort since 1967 is one reason for the decline. Efforts were directed toward Labrador and the northeast Arctic, where conditions were somewhat more profitable.

In 1969 and 1970, an enormous ice field hampered fishing. Simultaneously, large amounts of cold polar water arrived. Temperatures at West Greenland fishing banks were unusually low.

Large Stern Trawlers Ordered

Most cod now are taken in inshore waters by small boats. Four large longliners fish on offshore banks, where foreign fleets have caught about 90% of annual total. To remedy uncertainties of inshore fishing, and to ensure steadier fillet-plant operation, the Royal Greenland Trade Department (RGTD) contracted for large new stern trawlers. The first entered fishery in May 1969. Another, the 'Nuk', landed 1,618 metric tons of cod (gutted weight) during 1969, and about 2,700 tons in 1970.

Two larger stern-trawlers, nearing completion, will start fishing this summer. These vessels are 58 meters long, 11 meters wide, and have a hold capacity of about 550 cubic meters. The Nuk had only 280. They are equipped with double trawl rigs and reinforced hulls. The trawl winches will be located aft of bridge on boat deck. This is believed to be especially advantageous in waters heavy with drifting ice. Crew quarters include 24 one-man rooms.

Since the need was great to obtain offshore fishing capacity this year, a Norwegian trawler was chartered and it fished from Sukkertoppen.

The Danish Ministry for Greenland has contracted for two 700-gross-ton stern trawlers to be ready in 1972 and 1973. These will be 58.6 meters long and cost US\$8.2 million each. In 1973, RGTD plans call for a 7vessel trawler fleet.

U.S. Big Market

Sixty percent of catch now is used to produce frozen fillets and blocks. Practically the entire production is exported to the United States. (Reg. Fisheries Attaché, Copenhagen, Jan. 14.)



LATIN AMERICA

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MINISTER OF FISHERIES REPORTS 1970 WAS GOOD YEAR

On the first anniversary of the Ministry of Fisheries, the Minister, General Javier Fantalean V., reported on the status of Peru's ishing industry.

Over 200 companies are fishing. These employ about 32,000 fishermen: 20,000 for anchoveta, 12,000 for other fishing.

As of Nov. 9, 1970, exports had generated \$320 million of foreign exchange; the industry is paying \$32 million in taxes to the government. Foreign-exchange earnings were about \$100 million greater in 1970 than in e. 1969--and \$50 million more than estimates for the sector contemplated in the National Plan for Economic Development. This paves way for improvements in industry efficiency and commercialization.

1970/71 Fish Catch

Regarding 1970/71 season catch, Tantalean said it would be reduced by about 500,000 metric tons on recommendations of Peruvian Marine Institute. Total fish catch permitted for 1970/71 season has been fixed at 10 million metric tons; catch was 10.6 million metrictons in period 1969/70. This measure had been adopted, he said, to assure normal growth and preservation of the species, and to assure jobs for fishermen and their families. The Minister regarded fish catch of nearly 4.5 million metric tons in second-half 1970 as "a very good semester.

Closed Season

The Minister stated that closed season for both fish and shrimp catch will be January and February of each year. It will be rigidly enforced.

His Ministry is thinking of planting trout and troutlike fish in lakes and rivers throughout Peru during 1971 to improve fish production for home consumption.



Fig. 1 - Peruvian "anchovetera" with hold and decks tull of fist unloading at Chimbote.



Fig. 2 - A typical small purse-seiner of the anchoveta fleet waiting to unload.

He believes the industry is in good shape. It is improving steadily as a foreign-exchange earner.

New Law Awaited

In an earlier statement, the Minister had said that the new Fisheries Law would be published "before the end of the present year" (1970). All attention is centered on whether the new law will contain provisions creating "fishing communities" similar to the "industrial communities" recently decreed for the industries. If it does, and the betting is that it will, the question is what such a determination will mean in terms of new investments and orderly growth for this important sector of Peru's economy. (U.S. Embassy, Lima, Dec. 24, 1970.)