

SOVIET SCIENTIST ASSESSES FUTURE OF WORLD FISHERIES

The Deputy Director of the Soviet Federal Fisheries and Oceanography Research Institute, Prof. Peter Moiseev, painted this picture of the future of world fisheries in 'Vodnyi Transport' in mid-1970:

The Ocean's Productivity: Bioproductivity is adequate in only 33% of the total ocean area--mostly in waters of the Continental Shelf and Slope, where over 70% of the oceans' phytoplankton is concentrated. Enough zooplankton is produced to support 300 million metric tons of fish and large invertebrates (squid, crab, and shrimp).

Commercially Exploitable Marine Grounds: Since most organic productivity occurs in water layers penetrated by sunlight, only depths to 600-800 meters can be fished commercially. The Continental Shelf and Slope yield 95% of world catch. Only 11% of ocean is less than 1,000 meters deep. The biological equilibrium between marine genera, families, and species can be disrupted by large-scale commercial fisheries that reduce abundance of stocks.

Maximum Sustainable Yield (MSY): Of ocean's productivity potential of 300 million tons, only 90-100 million tons can be harvested--provided commercial fisheries are regulated, which is imperative. In one hour of trawling, a large stern trawler takes an annual "crop" of 10 square kilometers of the Shelf; one purse-seine haul takes the "crop" of 100-500 square kilometers.

Intensive combined fishing by several nations in relatively small areas has depleted

resources. Moiseev cited halibut off U.S. Pacific coast, flounder off Australia and in European waters, Pacific and Atlantic salmon, and Atlantic Ocean perch.

Expanded World Catch: If commercial fisheries are regulated effectively, total catch can be substantially increased--by expanding saury, horse mackerel, mackerel, anchovy, and squid fisheries. The largest concentrations of these occur 100-500 and more kilometers from shore.

Harvesting New Species: Moiseev recommended maximum commercial exploitation of small crustaceans that feed directly on plankton, especially Antarctic krill. He estimated resource at "many hundred millions of tons," and its MSY greater than today's world fisheries catch.

Fisheries Management and Fish Farming: To increase catches, expanded management, improved fishing techniques and gear, and organized large-scale fish farms are required. Moiseev suggested introduction of marine farms to breed fish, invertebrates, and algae useful to man.

He proposed that countries with major marine and distant-water fisheries combine to "organize a scientifically supported commercial fishery." He also favored an internationally agreed-upon period to study the oceans' biological resources, and the conditions, methods, and techniques for rational utilization and multiplication of marine fauna.

STOP MARINE POLLUTION AT SOURCES, FAO CONFERENCE RECOMMENDS

The only effective way to control pollution of the environment is to strike at the sources, agreed scientists at an FAO conference in Rome in Dec. 1970. The 415 environmentalists recommended ways to maintain the world "in a state in which man can thrive and evolve."

The conference recognized "the urgent need for a coordinated approach to marine pollution control" because this pollution was caused by agents from the atmosphere and the land, through river discharges, and by dumping and other direct contamination of oceans.

Local Action

Pollution can be countered at the source in most cases by "applying restraint, by local action under national jurisdiction, so as to restrict releases to levels and methods accepted as potentially harmless."

The possibility of recycling wastes in some instances was seen as a solution. The conference recommended that "research on waste-recycling techniques in industry should be encouraged as widely as possible."

Global Monitoring Needed

A global system for marine pollution monitoring received major attention. The first objective, the conference agreed, must be to provide data and information on the state and trends of ocean pollution. The purpose is to facilitate management measures and their enforcement.

As a first step, existing national monitoring programs, particularly in areas with a risk of heavy pollution, should be encouraged to cooperate in pilot regional monitoring exercises. These should be similar to those now being organized by International Council for the Exploration of the Sea (ICES) for North and Baltic Seas.

A conference resolution stated: "Such regional projects will provide the world with experience both in necessary techniques and in management of monitoring. They will at the same time facilitate contacts between the relevant laboratories regarding the essential

basic research, the substances to be monitored, the sampling procedures and the analyses of pollutants."

Exploratory Survey Urged

To facilitate establishment of a global monitoring program, the conference urged a prompt preliminary exploratory survey by international cooperation to evaluate ocean pollution.

The survey's aim would be to "establish the levels of various substances--natural and artificially introduced--in the water column, together with their accumulation in the plankton, the benthos (plants and animals at the bottom of the sea), the fish and the sediments." The coastal zone should receive special attention.

The survey should relate to existing and proposed systems for monitoring terrestrial environment and the atmosphere.

"Cooperation among the international agencies responsible for monitoring all three of these components of the biosphere is essential," the conference said. "Their monitoring systems must be developed in close coordination so as to provide the maximum information and understanding through collaboration."

Off-Shore Dumping

Deliberate off-shore dumping in the high seas poses problems: It pollutes. It may produce physical (handling) problems and even dangers to fishermen. It may create international problems if done "extra-territorially."

The conference urged that "deliberate dumping of toxic wastes on recognized fishing and other shallow grounds be prohibited." It noted the accumulation of mercury by aquatic organisms "and the tragic consequences of mercury pollution to human health, particularly as exemplified by the so-called 'Minimate disease' in Japan. Moreover, because of the hazards of mercury poisoning and the banning of contaminated fish, the fishing industry in many parts of the world has suffered severe economic losses."

The conference said technology now is available to virtually eliminate losses caused by mercury. It recommended that governments act to "require advanced techniques for mercury recovery in all factories producing mercurial products or using mercury

or its compounds as catalysts, cathodes or for other purposes in production." It also recommended that "seed-dressings, slimicides and other mercurial compounds be replaced at the earliest possible time by other non-mercurial substitutes."



HALT DESTRUCTION OF CORAL REEFS, SCIENTISTS URGE

Scientists at the FAO Marine Pollution Conference in Rome, Dec. 1970, urged action to halt destruction by pollution of coral reefs. Reefs were described as "the most biologically productive of all natural communities, marine or terrestrial, for which measurements are available."

Dr. R. E. Johannes, Department of Zoology, University of Georgia, declared: "Undoubtedly only a small fraction of the damage man has done to coral reefs has been recognized and an even smaller fraction has been brought to the attention of those who could do something about it."

To anticipate man's impact on coral reefs, Dr. Johannes said, much more study of the environmental tolerances of the organisms comprising coral reef communities is needed. Investigations of corals have shown that these animals are very important. When they are killed, other reef fauna soon migrate or die. This dooms the reef.

Urges Surveys

He urged surveys of reef resources, particularly near populated areas, "just as we do with terrestrial communities." He said economists, biologists, and geologists should be involved in the surveys--because "the courtrooms of societies that respect money

cannot be counted on to be responsive to aesthetic arguments in pollution cases."

Dr. Johannes noted the State of Hawaii survey of pollution effects on coral reefs in Kaneohe Bay. The survey included detailed evaluation of the monetary value. It "thus provides at least a partial measurement of the threat posed by pollution in terms the voter, the politician and the businessman understand."

Extent of Coral Reefs

Lagoons formed by coral reefs are scattered over 190,000,000 square kilometers. They supply high-quality protein food-fish to people living near the sea in the tropics, where terrestrial sources of protein often are inadequate. Also, the reefs are buffers against the ocean. They permit continued existence of about 400 atolls and many other low tropical islands. They preserve thousands of miles of continental coastlines.

"The uniquely peaceful and beautiful vistas that reefs present to the human visitor is a psychological resource to which any coral reef diver will bear witness," Dr. Johannes said. He cited many examples of destruction, or threats of destruction, to coral reefs. These ranged from Great Barrier Reef off Australia to those off Virgin Islands, Jamaica, and Bermuda.



WORLD FISHERIES CATCH DROPPED IN 1969

For the first time since 1948, the world's fisheries catch declined in 1969. The FAO Yearbook of Fishery Statistics for 1969 (published recently) gives 1969 world catch as 63.1 million metric tons; it was 64.3 million tons in 1968.

The strongest decline was in marine-fish catch: from 50 million tons in 1968 to 48.6 million in 1969. Actual landings, however, declined less: from 47.9 million tons to 47.2 million. The main reason appears to be lower production in some major industrial fisheries caused by a decrease of about 1.6 million tons in anchoveta catch, and about 1 million tons in Atlantic herring catch.

The Leaders

Of the 3 nations with catches above 5 million tons, only the Soviet catch increased (6.1 to 6.5 million tons); Peru's declined from 10.5 to 9.2 million; Japan's from 8.7 to 8.6 million.

U.S. catch increased from 2.4 to 2.5 million tons; U.S. won 5th place from Norway (down from 2.8 to 2.5 million tons).

1-Million-Ton Club

Among the "one-million-ton fishing countries", South Africa dropped from 2.2 to 2.13 million tons; India rose from 1.53 to 1.61 million tons; Canada fell from 1.5 to 1.41 million tons; Denmark slipped from 1.47 to 1.28 million tons; Thailand moved up from 1.09 to 1.27 million tons, Indonesia increased from 1.16 to 1.21 million tons; U.K. went up from 1.04 to 1.08 million tons; and Chile declined from 1.38 to 1.08 million tons.

The "one-million-ton fishing countries" account for about 60% of world catch: 37.7 million tons. ('Fishing News', Dec. 18/24, 1970.)



MEETINGS

OCEANEXPO 71 IN FRANCE MARCH 9-14

An international exhibition on the exploitation of the oceans will be held in Bordeaux, southern France, March 9-14. A helicopter shuttle will transport visitors from airport to exhibit center.

The program includes these subjects:

- Exploitation of Ocean Resources
- Industrial Development of the Continental Shelf
- Exploration of the Marine Environment
- Possibilities of Exploiting Ocean Depths
- Industrial Development of the Seacoast
- Marketing Marine Products and Developing Marine Cultivation
- Analyzing and Forecasting Environmental Conditions

WORLD FISHING EXHIBITION IN DUBLIN MARCH 24-30

Dublin, Ireland, is hosting the 5th biennial World Fishing Exhibition, formerly held in London, during March 24-30. The sponsors say 15 or 16 countries will be represented.

Concurrent with the exhibit of many engines will be a display of fish and fish products at new British rail terminal at Dun Laoghaire, not far from main exhibition.

FISHERIES TRADE FAIR IN DENMARK MAY 14-23

The 7th International Fisheries Trade Fair will be held in Frederikshavn, Denmark, May 14-23, 1971. An exhibition area and mooring accommodations are available.

The fair will include "fishing vessels of all constructions," marine engines, deck machines, nets and ropes, navigation and life-saving equipment, and electronic gear.

There are daily sailings between Frederikshavn and Norway and Sweden.



Villagers in Java, Indonesia, set fish in communal fish pond.
(FAO photo: D.G.O. Davies)

ASIA

JAPAN

EXPAND SKIPJACK-TUNA SURVEYS IN SOUTHWESTERN PACIFIC

The Japanese Fisheries Agency and private firms are continuing to expand their skipjack-tuna surveys in southwestern Pacific.

Back in 1968, the Agency's 'Toshitaka Maru' (186 gross tons) traveled to Papua and New Guinea on 3-month survey to help establish Japanese-Australian ventures there. Since then, the vessel has conducted three 2-3 month surveys.

1969 & 1970 Surveys

In 1969, the Shizuoka Prefectural Fisheries Experimental Station sent 'Fuji Maru' (332 gross tons) and 'Suruga Maru' (186 gross tons) to southwestern Pacific. The latter is still investigating there.

In 1969 and 1970, the Fisheries Association of Japan conducted a government-subsidized survey of land facilities in New Guinea area to determine feasibility of establishing foreign-affiliated ventures.

Firms Interested

Based on the Agency's survey data, Japanese firms are keenly interested in developing skipjack resource. Kyokuyo Hogeï joined Australian interests to form Gollin Kyokuyo, now shrimp fishing in Gulf of Carpentaria. Hogeï has been conducting exploratory pole-and-line skipjack fishing off New Ireland Island since March 1970 with 1,000-gross-ton mothership 'Akitsu Maru No. 5' and three 39-gross-ton Okinawan vessels.

Full-Scale Fishing

Catches have been good--4-5 metric tons per vessel per day of fishing--and the joint company will begin full-scale commercial fishing this year. It will build a cold storage in Kavieng, New Ireland.

Other Exploratory Fishing

Two other firms, Hokoku Suisan and Nihon Suisan, are scheduled to start exploratory skipjack fishing from Manus Island off northern New Guinea.

The Japanese Overseas Fishery Company at Penang, Malaysia, will fish in that region from its base at Rabaul, New Britain Island (Bismarck Archipelago). ('Katsuo-maguro Tsushin', Nov. 2; 'Suisan Tsushin', Oct. 31, 1970.)

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SEINER TO FISH TUNA IN E. TROPICAL PACIFIC & ATLANTIC

The 500-gross-ton Japanese purse seiner 'Hakuryu Maru No. 55', owned by Kawajiri Fisheries Co., left Japan Nov. 16, 1970, for eastern tropical Pacific yellowfin tuna regulatory area.

The vessel was scheduled to fish yellowfin tuna from early December 1970 until April 1971, and then proceed via Panama Canal to eastern Atlantic. There, it will fish off Ghana from July to Nov. 1971.

Failed in 1969

In 1969, vessel failed dismally in eastern Pacific yellowfin fishery. Her crew is determined to improve. ('Suisan Keizai Shim-bun', Nov. 17, 1970.)

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VESSEL EXPLORES FOR TUNA IN SOUTHEAST PACIFIC

The Government-chartered, Taiyo-owned 314-gross-ton longliner 'Azuma Maru No. 38', built in 1970, is exploring the tuna resource of southeast Pacific. US\$178,000 was budgeted for fiscal year 1970 (Apr. 1970-Mar. 1971).

Not Much Success

She began exploring southeastern Pacific on Aug. 3, 1970, without much success. In Sept., she caught 55 tons of fish, which included 61% albacore and 35% big-eyed. Her catch in Oct. 1970 totaled only 28 tons (78% big-eyed tuna mixed with albacore, yellowfin, and swordfish). In early Nov. 1970, she explored near 25° S. latitude and 87° W. longitude (off northern Chile).

The vessel will survey south of 40° S. latitude for bluefin tuna. Return to Japan is scheduled for Mar. 1971. ('Katsuo-maguro Tsushin', Nov. 12, 1970.)

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JAPAN (Contd.):

FISH ILLEGALLY FOR KING CRAB
OFF WESTERN KAMCHATKA

The Japanese fear that a king-crab poaching incident may affect Soviet-Japanese 1971 crab negotiations. In late Oct. 1970, the Japanese Maritime Safety Agency (MSA) raided 3 fishing vessels and a warehouse in Miyagi Prefecture and confiscated 25,000 cases (15 kg. each) of king crab.

MSA is pressing charges against 2 Yasukata-based companies for illegally fishing king crab in restricted areas of Okhotsk Sea off western Kamchatka between August and mid-Oct. 1970.

1969 Incident Too

In 1969, another firm was involved in an identical situation. Its vessel had illegally caught king crab in area of Okhotsk Sea where fishing had not been authorized by Japan-USSR Fisheries Agreement. At that time, the Japanese confiscated 2,000 cases and suspended one vessel for a month. ('Japan Times', Oct. 31, 1970.)

25,000 Cases Confiscated

MSA believes 1970's poaching was in part an attempt by firm to compensate for losses resulting from 1969 poaching.

The 25,000 cases confiscated in 1970 were worth US\$280,000--about 14% of Japanese king crab quota off western Kamchatka under USSR-Japan King Crab Agreement.

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LAUNCH STERN TRAWLER & REFRIGERATED TRANSPORTS FOR S. KOREA

A 3,000-gross-ton stern trawler ('Kaeyang') and a 1,650-ton refrigerated transport 'Chilbosan No. 3' ordered by Koryo Fishing Co. of S. Korea were launched at Hayashikane Shipyard in Nagasaki.

Another 1,650-ton carrier, 'Chilbosan No. 5', is being built at a Korean shipyard in Pusan.

The 3,000-ton 'Takyang' was launched at Hayashikane Shipyard in Shimonoseki for Koryo.

To Fish Alaska Pollock

When completed end of 1970, the trawlers will fish Alaska pollock in North Pacific. The fish is popular in Korea, where it brings high price: 80 yen a kilogram (US\$202 a short ton).

Koryo's Marketing Plan

Koryo plans to market fish from distribution point at Pusan. It is building a cold-storage plant there. Before, Koryo had concentrated on tuna fishing for export. Now it is expanding fishing operations to supply Korea.

Koryo's Fleets

Including vessels now under construction, Koryo will have 37 tuna vessels (ten 230-ton longliners, seventeen 350-ton and ten 530-ton vessels, a total of 13,550 gross tons); 2 stern trawlers (total 6,000 gross tons); and four refrigerated transports (total 5,300 gross tons). Combined total: 24,850 gross tons. ('Suisancho Nippo', Nov. 26, 1970.)

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STUDY SHRIMP STOCKS
IN BAY OF BENGAL

Kyokuyo Hogeï is exploring shrimp grounds in northern part of Bay of Bengal. In Sept. 1970, the company began to use a 100-GRT shrimp trawler based at Khulna (East Pakistan). If the 1-year project is successful, Hogeï will establish a joint venture with a local cold-storage company.

First Joint Venture

The plan was attractive to the Japanese fishing industry because there had been no Japanese-Pakistani fishing ventures. Foreign fishing had been restricted by Pakistani claims to a 12-mile territorial sea and a 112-mile conservation zone.

In the past, other Japanese firms attempted to work out a similar plan. They were unsuccessful because the fishing area in northern part of Bay of Bengal is narrow, and shrimp season is closed for 6 months. The peak season is during the winter rains. ('Shin Suisan Sokuho')

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JAPAN (Contd.):

SHRIMP TEAM VISITS THAILAND & INDIA

An 8-man Japanese "shrimp mission" visited Thailand and India for 2 weeks in Nov. 1970. It was sent by the Japanese Fishery Products Importers Assoc.

The team conferred with government and industry leader on: (1) possibilities of developing new shrimp grounds; (2) use of small shrimp and crayfish; (3) more Japanese help in improving quality; (4) establishing export inspection system; (5) measures to reduce Japanese import costs (such as ocean freight); and (6) more cooperation by Thailand and India.

Earlier Mission

Earlier in 1970, Japan had agreed to sell 20 refrigerated trucks, worth about US\$278,000, to Thailand to help solve the land transportation problem. In 1969, Japanese technicians were sent to Thailand and India on a 3-month training program to help improve shrimp quality.

Japan Seeks Larger Supply

The Japanese hope that new shrimp grounds can be developed in India and other southeast Asian countries. These would supply Japan with shrimp she will need in the future. ('Nihon Suisan Shimibun', Nov. 6, 1970.)

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JAPANESE ATE LESS FISHERY PRODUCTS IN 1969

Annual per-capita consumption of fish and shellfish in Japan in 1969 was 30.7 kilograms (67.5 pounds), down 5% from the 32.4 kilograms (71.3 pounds) in 1968. This was reported by the Ministry of Agriculture and Forestry.

First Drop in Decade

From 1960-1968, per capita consumption increased steadily. The 1969 decline was the first in 10 years. ('Suisan Tsushin', Nov. 10, 1970.)

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MECHANICAL TUNA GEAR
PERFECTED FOR COMMERCIAL USE

The mechanical skipjack-tuna poles, developed by Suzuki Ironworks, have been established as practical labor-saving devices. On Nov. 28, 1970, 10 units were installed aboard skipjack vessels and 40 more will be installed. The Fisheries Agency supports the new gear.

Commercial Use

The manufacturer has named the device "Roback K-70". It is the only one ready to be used commercially. Several similar devices are being developed in Japan. The gear's effectiveness in southern waters will be watched closely. ('Suisan Keizai Shimibun', Dec. 7, 1970)

Prototype Modified

The major problem encountered with the first gear was that the tensile strength of the bamboo poles proved uneven. This caused fish to fall off hook. Suzuki will manufacture an improved gear. It will also study use of glass rods to obtain uniform strength.

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JAPAN PROTESTS U.S. BAN ON
IMPORTING WHALE PRODUCTS

The U.S. placement of eight species of whales on the endangered species list--thus barring imports of their products--has stunned the Japanese whaling industry.

In 1969, Japan exported to the U.S. \$2.4 million worth of whale meat and oil. This included 8,700 tons of sperm-whale oil, 87% of Japan's exports of that product. The U.S. action will put sperm-whale oil in short supply in the U.S. and create a surplus in Japan despite growing domestic demand for it.

Japan Protests

In late Nov. 1970, Japan reportedly protested to U.S. State Department. She claimed U.S. action was unjust and urged removal from endangered list of species whose inclusion would hurt Japanese industry. ('Suisan Tsushin', Dec. 4; 'Suisan Keizai Shimibun', Nov. 27, 1970.)

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JAPAN (Contd.):

JAPANESE-PHILIPPINE SHRIMP VENTURE

To increase shrimp purchases from the Philippines, the Nichiro Fishing Co. recently established South Sea Fisheries Research Inc. in partnership with Ramos Co., a local Philippine firm. Ramos contributed 70% and Nichiro 30% of the \$33,000. A small cold-storage plant was leased at Bacolod, Negros Island, and began operations Dec. 1, 1970.

Japanese Purchases Rise

Though shrimp is abundant off the Philippines, much is consumed locally and little is left for export to Japan. In Feb. 1970, to stimulate exports and earn hard currency, the Philippines lowered the exchange rate from 3.9 pesos to 6 pesos per US\$1. This benefited Japanese firms, which began to buy more shrimp.

In 1969, Japan had imported from the Philippines around 100 metric tons of frozen shrimp; by the end of October 1970, imports had increased to 230 tons. Nichiro purchased only about 30 tons, but the joint venture is paving the way toward larger purchases. ('Suisan Keizai Shimibun', Dec. 4, 1970.)

NMFS Comment

Comment by NMFS Division of Foreign Fisheries:

The Japanese began to show an interest in Philippine shrimp in late 1968 when it became obvious that domestic demand would exceed supplies in the coming years. In Oct. 1968, the Government subsidized 75% of 1-month trip of 8-man "shrimp survey team," organized by Japanese Association of Importers of Marine Products, through Southeast Asia; the Philippines was included. Findings were published in Dec. 1968: Japanese traders were warned that quality of shrimp imports from Philippines might be below standard. Shrimp dealers are concentrated in Manila--but shrimp are landed in other ports and transferred to Manila with considerable delay. Supplies were limited and high priced.

In 1969, the Philippines caught about 53,100 metric tons of shrimp (29,600 tons were fresh-water species). This was only 10% above 1968 when 49,000 tons of marine and fresh-water shrimp were landed.

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PLANS JOINT FISHING VENTURE
IN GAMBIA

The fishing firm, Nichiro, and trading firm, Marubeni Iida, have agreed with Gambian Government and local firms to form a joint fishing and processing venture in Gambia in Jan. 1971. Capitalization is US\$240,000: Marubeni Iida, 37%; Nichiro 35%; Gambia 10%; and local private interests 18%.

The Plans

The company will fish for tuna and shrimp, and process and freeze fish. The Japanese partners were requested to construct a 500-ton cold storage plant by May 1971 and to provide trawlers.

Crayfish will be harvested with canoes and nets, processed, and exported mainly to France--but also to other European countries. ('Suisan Tsushin', Dec. 8, 1970.)

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SURVEY COSTA RICAN &
NICARAGUAN FISHERIES

Two experts of the Japanese Fisheries Agency surveyed Costa Rican and Nicaraguan fisheries throughout Nov. 1970. Costa Rica and Nicaragua had requested the surveys to promote their fisheries.

Interested In Skipjack

The team studied the fisheries, including only skipjack among the tunas. It will determine the feasibility of Japanese fishery cooperation. The agency is especially interested in skipjack resource; Costa Rica and Nicaragua want to develop it because U.S. tuna packers import much raw skipjack. ('Katsuo-maguro Tsushin', Nov. 13, 1970.)

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SOUTH KOREA

PLANS TO QUADRUPLE OYSTER PRODUCTION

The Republic of Korea (ROK) Fisheries Office will spend about 2.6 billion won (US\$9.4 million) in a 6-year period to quadruple oyster production. Oyster culture off southern coast will be improved with funds from ROK, local governments, and private interests.

Annual Allocations

Annual allocations: 1970: 300 million won (\$1.1 million); 1971: 488 million won (\$1.8 million); 1972: 488 million won (\$1.8 million); 1973: 300 million won (\$1.1 million), 1974: 677 million won (\$2.5 million); 1975: 300 million won (\$1.1 million). Total: 2,553 million won (\$9.4 million).

35% Rise Yearly Needed

The Director General of Korean Fisheries Agency emphasized need to increase oyster

culture at rate of 35% a year to meet growing demand at home and abroad.

To increase production, 10,000 cho (1 cho equals 2.45 acres) will be developed off southern coast during 6-year period.

1970 Construction

A freezing plant of 600-ton capacity and a cold storage of 150-ton capacity were scheduled to be built in 1970 for 50 million won (\$187,000).

1976 Oyster Output

ROK's oyster production in 1976 would total 24,000 metric tons, of which 14,000 metric tons would be exported: 10,000 tons fresh, 2,000 tons frozen, and 2,000 tons canned. ('Suisan Tsushin')



Sanyung Frozen Sea Food Co. in Pusan, S. Korea. FAO reports that fishing industry provides about 85% of annual protein needs of people--and is a major source of foreign exchange. (FAO photo)

EUROPE

NORWAY

FIRST FACTORY SHIP ON FISHING EXPEDITION OFF AFRICA

The Norwegian factory ship 'Norglobal', with 12 purse seiners, is fishing east of Canary Islands. The vessels plan to return to Norway in summer 1971.

The Norglobal has a 24-hour maximum production capacity of 3,000 tons of raw material. Raw material storage capacity equals 40 hours of continuous operation. The pellet storage facilities can hold about 10,000 metric tons; fish-oil storage capacity is about 2,400 tons.

Independent of Ports

The vessel can load and unload supplies in the open sea and so is independent of ports. The crew numbers 60.

Operating conditions and availability of fish will be decisive factor in determining how long to fish.

The vessel is seeking horse-mackerel.

Its Owners.

The Norglobal, 26,500 deadweight tons, is owned by Sigurd Herlofsen and Co., Oslo, and 7 fishing-boat owners from North Norway. ('Fiskaren', Nov. 19, 1970.)



DENMARK

FAROE ISLAND FISHERY EXPORTS INCREASED 53% DURING 1970

Final figures on 1970 Faroese fishery exports were expected to set a record. During the first 9 months, the value of exports was \$22.8 million--more than 53% above \$14.8 million during 1969 period. Over 95% of these exports were products bought mostly by Italy (saltfish) and the U.S. (frozen fish).

U.S. Agents

To increase exports to North American market, the Faroese Fish Export Central in Thorshavn, "Fóroya Fiskasóla," is coopera-

ting with large Icelandic sales firm in U.S., the Coldwater Seafood Corporation, which will represent Faroese producers.

Coldwater's shareholders are all Icelandic producers who belong to Icelandic Freezing Plants Corp. in Reykjavik; the latter has 60-70 fish filleting factories as members in Iceland. Corporation exports of frozen fishery products are being handled by Coldwater, which has established a strong sales organization during the last 70 years. Exports to the U.S. during 1970 were expected to reach US\$50 million.

To Meet U.S. Demands

Up to now, Faroese producers have only exported filleted cod and haddock in blocks to U.S., but they will begin to ship individual consumer packs in various sizes to meet demand of U.S. housewife at supermarkets. ('Politiken', Dec. 15, 1970.)



UNITED KINGDOM

NEW FISH-LABELING REGULATIONS SCHEDULED FOR 1973

Fish-labeling regulations originally slated for the U.K. in 1970 will not be put into effect until 1973.

Requirements for salmon and tuna are of specific interest to U.S. exporters. The fish must be "appropriately designated" according to species. Only Thunnus and Neothunnus will qualify for labeling as tuna. Other species will have to be named specifically: albacore tuna, skipjack tuna, and bonito tuna.

Labeling Salmon

Similarly, only *Salmo salar* will qualify for straight salmon labeling. Other species will have to be designated as cherry salmon, pink salmon, chinook salmon, sockeye salmon, or as otherwise specified.

The U.S. Embassy in London is looking into the labeling provisions under the Fish and Meat Spreadable Products Regulations 1968 to see how these will affect U.S. exports of flaked and chopped salmon and tuna. (U.S. Embassy, London, Dec. 21, 1970.)

WEST GERMANY

WEST GERMANS DEBATE IMPORT OF HERRING FROM EAST EUROPE

Herring imports from eastern Europe are dividing the W. German fishing industry. Processors want cheaper imports, but fishermen's associations complain about unfair competition. The "war" was being fought in press releases, reported the fishing journal 'Allgemeine Fischwirtschaftszeitung' on Oct. 9, 1970.

The Processors' Association claims it is impossible to operate with herring prices up as much as 15-20%. It criticizes "protective measures" that make it impossible to import "good and cheap herring" from East Europe. Only by "mixed" prices--prices reflecting cheap E. European herring and more expensive domestic herring--will herring consumption in W. Germany remain high.

Alarm About More Imports

The Fishermen's Association provides about half the raw herring needed by German processors each year. It complains about "dumping prices" of Eastern imports. These prevent normal planning. Increases in imports at much low prices might even endanger industry's profitability.

The journal noted that herring imports from East Europe were substandard quality by West German standards. It warned against excessive reliance on "East Bloc" imports that were sensitive to political developments. This referred to Soviet pressure on Iceland in early 1950s, when former refused to buy herring because Iceland had joined NATO; this almost collapsed the entire Icelandic industry.

The W. German industry obtains about 30% of its annual herring catch from Georges Bank (in 1969, 72,000 metric tons of 253,000 tons caught in ICNAF area). If E. European imports depress herring price, it may become prohibitive for W. Germany to fish so far away. Its attention might turn then to North Sea grounds, especially if resources there improve.



USSR

FISHERMEN CLAIM SOVIET-BUILT STERN FACTORY TRAWLERS ARE DEFECTIVE

A new series of trawlers specially designed and built in the Soviet Union for tropical and Antarctic seas is totally inadequate to its task, according to a recent article in 'Pravda'. The article was sparked by a letter from three crew members of the new trawler 'Pioner Latvii'. They complained that on a short trip it was impossible to attain the planned catch quota. They criticized the official who ordered mass production of the series. The design did not correspond to modern requirements and the equipment was defective, they charged.

The Charges

The design was presented by the Lenin-grad firm, MORPROMSUD, which "tried to stuff heavy, untested, and poorly assembled equipment into the hull of an old design." The vessel was put into mass production despite considerable expense, bother, and disputes. The cost overruns on the Pioner Latvii and her successors, 'Volzhanin' and 'Sakelkhard' ran to 50% of original estimates.

Defects

The automatic equipment does not correspond to designers' concepts, fishermen's requirements, nor to Soviet technical standards. The designers under P. Tkachev created an automated, self-refrigerating unit. No specialized enterprise was brought in when these refrigeration units were designed. The Ministry of Shipbuilding entrusted job to Black Sea shipbuilders. They installed units into 3 vessels without tests. "The refrigerators do not freeze the fish. . .they heat them," complained Pravda.





Bags of fish meal stacked outside Peruvian factory. (FAO)

LATIN AMERICA

PERU

FISHMEAL OUTPUT ROSE

Peru produced a record 2.3 million short tons of fishmeal in year ending Sept. 30, 1970. This was increase of 437,000 tons, 23%, over same period 1968-69.

The increase reflected large improvement in average meal extraction rate and expansion of total catch by 6% to record 11.7 million tons.

1969-70 Exports Down

Exports in 1969-70, just over 2 million tons, were down 7%. The volume was equivalent to 125 million bushels of soybean protein, 9 million fewer than in 1968-69. Most of reduction was reflected in smaller movement to U.S.

(1) Total tonnage of landed anchovy has increased every year since 1962-63 by average volume of over 700,000 tons. Annual increases ranged from 200,000 to 1,800,000 tons.

(2) The average meal extraction has been erratic within a range of 17 to 21%. To a large extent, the extraction rate is subject to seasonal variations in uncontrollable fishing conditions.

(3) Upgrading of fish-processing equipment to include evaporators for recovery of fish solubles could, potentially, increase overall extraction rate by at least 10%.

(4) In 1969, the Peruvian industry added 75 new catcher boats. An even larger number was being added in 1970.

(5) Assuming no substantial reduction in 1971 year-class of anchovies, it seems likely that 1970-71 catch will increase somewhat. The widely varying extraction rate may be estimated at slightly above average rates of last 3 years. So production might approximate last season's record volume.

(6) Available exports, including stocks, will rise--perhaps near 2.7 million tons, or 270,000 above year earlier. Estimated increase in supplies would be equivalent to about 18 million bushels of soybean protein.

Fishmeal Production & Exports

Year beginning Oct. 1	Fish Catch	Extraction Rate	Fishmeal Prod.	Fishmeal Exports	Residual
	Million Short Tons	Percent	(Million Short Tons)		
1964-65	8.3	18.6	1.55	1.57	-.02
1965-66	8.8	18.5	1.63	1.30	+.33
1966-67	9.0	17.7	1.59	1.55	+.04
1967-68	10.8	21.0	2.27	2.11	+.16
1968-69	11.0	17.1	1.88	2.28	-.30
1969-70	11.7	19.8	2.32	2.03	+.29
1970-71 ^{1/}	12.0	19.5	2.34	-	-

^{1/}Projected.

These data come from 'Foreign Agriculture', published by U.S. Department of Agriculture, Dec. 21, 1970.

Magazine's Assessment of 1970-71 Outcome

Although it is early to attempt assessment of final 1970-71 outcome, the magazine cautions, it makes these observations: