International

CENTRAL AMERICA

REGIONAL FISHERIES DEVELOPMENT:

Guatemala, El Salvador, Honduras, Nicaragua, and Costa Rica have been considering joint development of the marine fisheries of their region. One plan would involve a United Nations Special Fund project. If this approach were decided upon and if a request by those countries were to receive the approval of the Special Fund, the Food and Agriculture Organization (FAO) would presumably be called upon to be the executing agency for the project.

FISH MEAL

PRODUCTION AND EXPORTS FOR SELECTED COUNTRIES, FEBRUARY 1963:

Member countries of the Fish Meal Exporters' Organization (FEO) account for about 90 percent of world exports of fish meal. The FEO countries are Angola, Iceland, Norway, Peru, and South Africa/South-West Africa. Exports of fish meal by FEO countries during January-February 1963 were up 12.6 percent while their total production was up 6.8 percent from that in the same period of the previous year.

During the first 2 months of 1963, Peru accounted for 83.0 percent of total fish-meal exports by FEO countries, followed by Iceland with 5.4 percent, South Africa with 5.[illegible] percent, Norway with 4.5 percent, and Angola with 1.9 percent. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, May 8, 1963.)

Table 1 - Exports of Fish Meal by Member Countries of the FEO, February 1963

Country	February		Jan.-Feb.	
	1963	1962	1963	1962
	(1,000 Metric Tons)			
Angola	2.8	2.8	5.7	6.4
Iceland	7.3	6.1	16.4	15.1
Norway	5.5	4.9	13.7	14.9
Peru	104.1	86.4	251.3	211.0
South Africa (incl. S. W. Africa)	8.9	12.9	15.7	36.2
Total	128.6	113.1	302.8	283.6

Table 2 - Production of Fish Meal by Member Countries of the FEO, February 1963

Country	February		Jan.-Feb.	
	1963	1962	1963	1962
	(1,000 Metric Tons)			
Angola	2.9	2.4	5.5	5.7
Iceland	6.6	5.8	16.1	7.2
Norway	3.0	3.7	6.7	7.8
Peru	45.9	77.0	191.5	156.0
South Africa (incl. S. W. Africa)	15.9	26.9	25.7	41.4
Total	74.3	115.8	245.5	218.1

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WORLD PRODUCTION:

March 1963: World production of fish meal in March 1963 was up 10.3 percent from that in the same month of 1962, according to preliminary data from the International Association of Fish Meal Manufacturers.

Most of the principal countries producing fish meal submit data to the Association monthly (table).

World Fish Meal Production by Countries, March 1963

Country	March		Jan.-Mar.	
	1963	1962	1963	1962
	(Metric Tons)			
Canada	4,848	6,554	25,613	31,0[illegible]
Denmark	5,499	8,180	18,611	15,8[illegible]
France	1,100	1,100	3,300	3,3[illegible]
German Federal Republic	8,110	8,240	19,872	19,8[illegible]
Netherlands	1/	500	1/	1,3[illegible]
Spain	2/	2,672	2/3,616	6,4[illegible]
Sweden	324	322	1,207	1,3[illegible]
United Kingdom	7,080	6,930	20,003	17,5[illegible]
United States	2,420	3,851	7,075	8,3[illegible]
Angola	1,648	2,819	7,553	8,4[illegible]
Iceland	5,441	6,054	21,470	13,9[illegible]
Norway	3,664	4,959	10,370	12,7[illegible]
Peru	122,030	83,062	313,537	239,0[illegible]
South Africa (including South-West Africa)	21,459	31,300	48,089	72,9[illegible]
Total	183,623	166,543	500,316	451,1[illegible]

1/Data not available.
2/Data available only for January-February 1963.
Note: Belgium, Chile, Japan, and Morocco do not report their fish meal production to the International Association of Fish Meal Manufacturers at present.

The increase in fish meal production in March 1963 was due mainly to greater output in Peru which accounted for 66.5 percent of world production during the month. In January-March 1963, Peru accounted for 62.7 percent of total fish meal production.

World fish meal production during the first 3 months of 1963 was 10.9 percent greater than in the same period of the previous year. Production in early 1963 was boosted by record landings of anchoveta in Peru and record landings of he

International (Contd.):

ng in Iceland. The increase was partly offset by a sharp op in production in South Africa.

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February 1963: World production of fish meal in February 1963 was 23.3 percent below that in the same month in 1962, according to preliminary data from the International Association of Fish Meal Manufacturers.

Most of the principal countries producing fish meal submit data to the Association monthly (table).

World Fish Meal Production by Countries, February 1963

Country	February		Jan.-Feb.	
	1963	1962	1963	1962
	(Metric Tons)			
Canada	13,249	10,098	20,765	24,540
Denmark	6,994	4,445	13,112	7,670
France	1,100	1,100	2,200	2,200
German Federal Republic	5,787	5,968	11,762	11,579
Netherlands	1/	600	1/	600
Spain	1,531	1,883	3,616	3,797
Sweden	439	368	883	1,066
United Kingdom	6,480	4,834	12,923	10,585
United States	2,583	1,874	4,655	4,352
Angola	2,949	2,355	5,905	5,633
Iceland	6,553	5,754	16,029	7,175
Norway	3,047	3,738	6,706	7,819
Peru	45,848	76,975	191,507	155,954
South Africa (including South-West Africa)	16,108	26,950	26,630	41,650
Total	112,668	146,942	316,693	284,620

1/Data not available.
Note: Belgium, Chile, Japan, and Morocco do not report their fish meal production to the International Association of Fish Meal Manufacturers at present.

The decline in world fish meal production in February 1963 was due mainly to a drop in output in South Africa and Peru. Although Peruvian reduction plants were handicapped by tax and labor problems, Peru still accounted for 40.7 percent of world production this February. In January-February 1963, Peru accounted for 60.5 percent of total fish meal production.

World fish meal production during the first 2 months of 1963 was 11.3 percent greater than in the same period of the previous year. Production in early 1963 was boosted by record landings of anchoveta in Peru, record landings of herring in Iceland, and increased landings of industrial fish in Denmark. The increase was partly offset by a sharp drop in production in South Africa.

FOOD AND AGRICULTURE ORGANIZATION

SECOND WORLD FISHING GEAR CONGRESS

FISHING-FLEET OPERATIONS DESCRIBED BY JAPANESE EXPERTS:

In 1962, eleven Japanese fleets, including some 400 catcher vessels, sailed after salmon; about 45 fleets, including 2,000 catcher vessels, went long-lining for tuna.

What are fleet operations? How many vessels are involved? What differences are there between this kind of fishing and normal commercial fishing? These and many other questions were discussed at the Food and Agriculture Organization's (FAO) Second World Fishing Gear Congress, held in London, May 27-31, 1963.

Fleet operations by the Japanese and other nations are a relatively new phase of commercial fishing. They have come about through crowding of the home seas and consequent expansion into distant waters.

Japan was the first of the major fishing nations to experience such economic pressure and to venture farther afield because her inshore waters are strictly regulated and heavily fished. The Japanese now fish for tuna throughout the tropical seas of the world. They use drift nets for salmon, bottom long-lines for food fish, tangle nets and pots for crab, and trawls for a number of species throughout the North Pacific.

The Japanese have had the longest experience in this new field. It is for this reason that five Japanese papers on various aspects of fleet operations were presented at the Congress.

Japanese fleets consist of 1 or 2 motherships (anywhere from 4,000-8,000 tons). Such motherships act as headquarters for the catcher vessels and, in some cases, carry them aboard. They are also used as factoryships in which the catch is processed to the final marketable product. The ships are equipped for canning and quick-freezing and sometimes include a reduction plant in which fish waste is processed into fish meal and fish oil, so that the catch is fully used.

The catcher vessels, anywhere from 20 to 100 in number, are either large enough to make long voyages under their own power, or are carried "piggy-back" aboard the mothership.

The fleet is serviced by several larger supply-transport vessels, which bring water, fuel, and provisions to the fleet and carry the catch back to the home port. Such a supply service is essential, for the fleets are sometimes away from their home port for several months at a time.

International (Contd.):

One of the big differences in technique between fleet operations and ordinary commercial fishing is that with the former the catch has to be frequently transferred, often daily, from the catcher vessel to the mothership; and also transferred in processed form from the mothership to transport vessels. This is achieved in a number of ways, either hauling up baskets of fish by winches when the vessels are alongside each other in fair weather, or using special containers dragged through the sea from one vessel to another in rough weather.

Sometimes the cod end (detachable end of the trawl) is attached to a floating buoy which emits a radio signal to guide the mothership to the catch.

Another way in which fleet operations differ from ordinary commercial fishing is the system of fleet searching, in which all the various units of the fleet collect information on oceanographic, meteorological and fishing conditions, and report back to the mothership. Acting on this information, catcher vessels are then sent out on assignment to promising fishing grounds.

Fleet operations by the Japanese are a complex form of commercial fishing. The fleets are given tonnage and time deadlines and are bound by numerous restrictions. For example, they are sent into specific areas which are predetermined by international agreement, availability of fleet vessels, and fishing potential, largely based on previous fishing experience. Scouting vessels move ahead of the fleet and report back, allowing some mobility within this predetermined area.

One paper presented at the Congress by the Japanese described bottom long-lining for cod and sablefish on the continental slopes of the Bering Sea. Some 30 catcher boats are used, all equipped with radio direction finders, echo-sounders, and radiotelephones.

Fleet fishing for king crab (weighing as much as 10 pounds, and measuring 4 feet across) in the North Pacific is described in a second Japanese paper. Motherships accompanied by 4 clipper vessels and 10 "kawasaki" vessels, carried about on the mothership, search for schools of crab during the spawning and feeding migration s sons. They use tangle nets of nylon, whi are set and hauled up after 3 or 4 days, t catch being then transferred to the moth ship for quick freezing. More than 500 m make up the crews of such a fleet.

A third Japanese paper described sal fishing in the North Pacific, which is su to many national and international regul tions. Motherships equipped for canning quick-freezing, and waste reduction, are companied by about 36 catcher vessels. These catcher vessels range over some square miles daily, after which they unl their catch into the mothership. Scoutin vessels explore outside the fleet territ provided other fleets are not operating i these adjacent waters, and steer the flee toward more promising fishing. The net used by the catcher vessels are mainly c nylon twine, but these are sometimes int spersed with "invisible" monofilament ne into which the fish stray. In the off-seas those vessels are used to transport carg or frozen fish.

Fleet-trawling operations in the North Pacific and the Bering Sea was the subje of a fourth Japanese paper. It described such a fleet in some detail, as well as tr fer of catch at sea. Factoryships equipp for freezing, canning, filleting, or the pr duction of fish meal or oil, are accompan by some 25 Danish seiners. Sometimes t are accompanied by some 20 bull trawle and 10 Danish seiners. The fleet operat last five months. If the seas are rough, a 40-meter (131 feet) long connection wir used between the catcher vessels and th mothership for use in running baskets c taining the daily catch.

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PROSPECTIVE DEVELOPMENTS IN THE HARVESTING OF MARINE FISHES

Two possible developments in world f ing which were discussed at the Food and Agriculture Organization's (FAO) Second World Fishing Gear Congress held in Lo don are (1) floating plastic logs which se cretly detect and report on schools of fis congregated around them, and (2) unmann sonar stations which identify passing fish schools using an "electronic library."

Such developments were brought out i one of the papers entitled "Prospective D

International (Contd.):

velopments in the Harvesting of Marine Fishes," which stated that recent developments in the industrial, military and space fields have brought many such ideas much closer to practical application, and that they can help to improve the harvesting of the world's fishery resources.

Developments in space technology are only one example of continually accelerating technological progress. Many of the experiments described at FAO's first Congress only six years ago have since proved themselves and have been integrated into commercial fishing. Possibilities discussed at this Second Congress may be production-line items at the next.

Striking progress has been made in the last 30 years in man's efforts to harvest proteins from the sea. Such progress must continue for the oceans of the world contain the greatest supply of animal protein available to mankind, and offer a tremendous potential in providing adequate food for the presently undernourished half of the world's population.

Rapid strides made in the development of electronic and acoustical devices have given fishermen better navigational and fish-detection methods. Radar, widely adopted by fishing fleets after the war, has increased the capability of inshore navigation and allowed greater safety in around-the-clock operations. Adoption of acoustical devices and sonar for fisheries has yielded a wide assortment of echo-sounders and ASDIC which are now almost universally used in major fisheries.

A startling picture of what fishing in the future might be like may be described as follows.

An array of chattering teletype machines disgorge an unending mass of hydrological data. Fisheries programmers feed this statistical information to computers, and from it process regular biological, oceanographic, and meteorological reports. These reports, transmitted to the world's fishing centers form the basis for planning, detecting, harvesting, and processing operations. This basic information arrives through a satellite communications system link-up between the teletype machines at "hydro-central" and a pattern of unmanned buoys spread throughout the fishing grounds. These buoys are linked in turn to instruments located at various depths within the sea itself.

Often these statistical reports would require further on-the-spot investigation through automatic contact with the buoys closest to the schools of fish. It could be through aircraft equipped with laserscopes for visually probing the depths, or through hydrofoil research craft equipped with high-speed, self-propelled submersible television vehicles. Once the order has gone out to concentrate on a specific area, aircraft might scatter chemical pellets to attract the fish by odor and taste towards the main fishing fleet. The fleet itself might be equipped with remote-controlled underwater vehicles capable of producing electrical, sonic, or bubble barriers to guide the fish toward the fleet.

INTERNATIONAL WHALING COMMISSION

NEW COMMISSIONER APPOINTED BY CANADA:

The appointment of Dr. W. M. Sprules, of Ottawa, Special Assistant to the Deputy Minister of Fisheries, as Canadian Commissioner to the 18-nation International Whaling Commission has been announced by the Canadian Government. The annual meeting of the Commission was scheduled to begin July 1, 1963, in London. The new Commissioner replaces the late George R. Clark, former Deputy Minister, who died last February. Dr. Sprules is also a Canadian member of the International Pacific Halibut Commission and the International North Pacific Fur Seal Commission.

NORTH PACIFIC FISHERIES COMMISSION

FORMER COMMISSION ASSOCIATE ELECTED NEW CHAIRMAN:

Dr. A. W. H. Needler of Canada has been elected chairman of the International North Pacific Fisheries Commission. He is also the newly-appointed Deputy Minister of Fisheries for Canada, and will fill the unexpired portion of the term of the late chairman, George R. Clark, who died suddenly during a Commission meeting in Tokyo on February 13, 1963.

The new chairman, who was Director of the Biological Station of the Fisheries Research Board of Canada at Nanaimo, B. C., until he became Deputy Minister in April, has long been associated with the work of the Commission. He has represented Cana-

International (Contd.):

da as a scientist-member of the Commission's Committee on Biology and Research since its establishment in 1954 and has continuously directed Canada's participation in the Commission's high seas research programs. As chairman, he will preside over Commission activities until the conclusion of the Commission's annual meeting, to be held in Vancouver in October-November 1963.

NORTH PACIFIC FISHERIES CONVENTION

NEGOTIATIONS REVIEWED BY JAPANESE NEWSPAPER:

A Japanese newspaper, Yomiuri, looking forward to the Japan-United States-Canada Fisheries Negotiations for revision of the North Pacific Fisheries Convention which began at Washington, D. C., on June 6, 1963, predicted a hard battle. On May 15, the paper viewed the negotiations as follows:

"Negotiations for revising the Japan-United States-Canada Fisheries Treaty will be started on June 6, 1963. The negotiations will be focused on the question of how to settle the confrontation between Japan. Japan wishes to have the unequal treaty, forced upon her during the Occupation, finally revised to an equal treaty by some means or other. The United States and Canada, on the other hand, wish to continue the ban on Japan's fishing for salmon, salmon-trout, halibut and herring in the area east of longitude 175 degrees west which comprises about half of the north Pacific area. Both sides at present are taking the stand of not recognizing the other side's views, and the outcome of the negotiations cannot be predicted at this time. However, Japan, the United States and Canada are agreed on the point that a non-treaty state following the breakdown of negotiations should not be permitted. It is expected therefore that they will manage to reach some compromise or other even if the negotiations have hard sailing.

"The reasons why the Japan-United States-Canada Fisheries Treaty is unequal can be boiled down to the following two points: First, the United States and Canada, though they are fishing for salmon, salmon-trout, halibut and herring in their own territorial waters, still deny to Japan the right to fish for these fish in the high seas of the north Pacific area east of 175 degrees West Longitude. Second, Japan alone is placed under an obligation to punish violating boats. It is a principle recognized under the International Law of the Sea that all countries have equal right of fishing in the high seas. In the Japan-United States-Canada Fisheries Treaty, however, 'freedom of the high seas' is made completely meaningless on the strength of the 'principle of voluntary abstention.'

"According to the 'principle of voluntary abstention,' a country having had no fishing record in the past even in the case of high seas must voluntarily abstain from fishing when the following three conditions exist: (1) scientific surveys clarify that the resources of a specific fish will be decreased if fishing operations are increased; (2) the country in question is taking effective measures for the preservation of resources; and (3) the fish in question is a subject for extensive scientific research for the maintenance of resources. This principle, however, is maintained only by America and Canada, and is only a minority opinion always rejected at International Conferences on the Law of the Sea. Therefore, of the numerous International Fisheries Treaties, the Japan-United States-Canada Fisheries Treaty is the only treaty adopting the principle of voluntary abstention. In this sense, too, it can be said that the treaty is very unequal toward Japan. With regard to the punishment of violating boats, too, control for the protection of resources is significant only when fishermen of the controlling country receive benefits and it is nothing but inequality for them to be punished in order to protect the fishing benefits monopolized by America and Canada.

"There may arise this question: 'Wasn't it strange to conclude such an unequal treaty to begin with?' Looking back the circumstances at the time the Treaty was concluded, however, there are many factors which made it inevitable, considering the relationship between the victorious country and the defeated country. The first conference for Japan-United States-Canada fisheries negotiations was held in Tokyo in November 1951. At that time, American and Canadian fishermen strongly insisted on shutting out Japanese fisheries, there was an increasing tendency in the United States and Canada to 'oppose an early conclusion of the Peace Treaty with Japan unless Japanese fisheries were restricted by a fisheries treaty.' Japan had to choose between a peace treaty and her fisheries in the north Pacific, and ultimately sacrificed the latter to some extent for the sake of the Peace Treaty. Thus, with American and Canadian assertions accepted, the Japan-United States-Canada Fisheries Treaty (formally the International Treaty Concerning Fisheries on the High Seas of the North Pacific) was signed in May 1952, and took effect on June 12, 1953.

"Thereafter, the annual conference held once a year discussed the question of 'whether or not the three conditions for voluntary abstention still exist.' As a result, Japanese assertions have been recognized to some extent, and most of the herring fishing and halibut fishing in the east Bering Sea have been freed from the aforesaid conditions. However, America and Canada showed no signs of yielding to Japan on salmon and salmon-trout which are of the highest value in the fisheries. Even this year, when the period for revising the Treaty after ten years in effect, which is provided for by the treaty itself, has come, these countries have shown on every occasion the attitude of continuing the Treaty based on the 'principle of voluntary abstention.'

"Japan, on the other hand, cannot yield an inch because if she again accedes to the unfair 'voluntary abstention principle' at this time when she can negotiate on an equal footing, the Soviet Union will also, as a matter of course, try to revise the Japan-Soviet Fisheries Treaty three years hence by similarly incorporating into it the 'voluntary abstention principle' in order to shut out Japan from salmon and salmon-trout fisheries. However, if Japan should announce abrogation of the Treaty with the confrontation between the two sides unremoved, and if they should have no treaty any longer as a consequence, America would very likely take the retaliatory step of banning imports of frozen and canned tuna. In either case, Japan would no doubt be driven into a difficult position.

"Such being the circumstances, the Japanese side intends to send to the negotiations a delegate who has considerable political ability. It seems that Agriculture-Forestry Minister Shigemasa is considering Agriculture-Forestry Vice Minister Ito, who is well known among American and Canadian officials in charge of fisheries affairs, as he was formerly the Director General of the Fisheries Agency. Especially at this time when there is a worldwide tendency for each country to restrict other countries fishing on the high seas adjacent to its territorial waters, as is clear from the conflict between Brazil and France over the fishing of lobsters, it may be said that the result of the forthcoming negotiations will be watched with keen interest throughout the world." (United States Embassy, Tokyo, May 23, 1963.

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MEETING BEGAN JUNE 6, 1963:

Delegations of Canada, Japan, and the United States met in Washington, D. C., on June 6, 1963, to discuss the International Convention for the High Seas Fisheries of the North Pacific Ocean. The meeting was expected to last 2 or 3 weeks.

International (Contd.):

Former Senator Benjamin A. Smith of Gloucester, Mass., headed the United States Delegation with the rank of Ambassador. The Delegation included advisers from the United States Congress, as well as from Government and industry.

The tripartite treaty, which was the subject of discussion, entered into force in 1953. Its objective was to ensure the maximum sustained productivity of the fishery resources of the North Pacific Ocean. The treaty has a minimum duration of 10 years, which elapsed on June 12, 1963. Following that date, any one of the three Governments may terminate the treaty upon one year's notice. The June meeting originated from a request by the Japanese Government for such discussions.

NORTHWEST ATLANTIC FISHERIES COMMISSION

CANADA APPOINTS NEW COMMISSIONERS:

The appointment of two new Commissioners, and the reappointment of a third, to represent Canada on the International Commission for the Northwest Atlantic Fisheries (ICNAF) was announced on May 31, 1963, by the Canadian Fisheries Minister. The new Commissioners are W. C. MacKenzie, Director of Economics Service, Department of Fisheries of Canada, Ottawa, and Paul P. Russell, who is associated with a cold-storage firm in St. John's, Newfoundland. J. Howard MacKichan of Halifax, Nova Scotia, was reappointed as a Commissioner. (Information Service, Canadian Department of Fisheries, Ottawa, May 31, 1963.)

SOUTH AMERICAN PACIFIC COAST

FISHERIES LANDINGS AND EXPORTS UP SHARPLY IN RECENT YEARS:

Fifteen years ago the annual fish catch of all western South America was less than one-third that of tiny Iceland. In those days the fishermen of that long seaboard country caught just 130,000 tons of fish a year--less than one percent of the world total.

Now that is all changed. The waters off Colombia, Ecuador, Peru, and Chile yield six million tons a year and the catch is rising rapidly. Only Asia and Europe have a bigger catch and one nation of this South American group, Peru, is now the world's second greatest fishing nation.

In 1961, the latest year for which world figures are available, those 4 countries landed 5.8 million tons of fisheries products, 1.84 million tons above their 1960 catch, and more than double the 1959 catch.

Increased fish landings from the South American Pacific Ocean is even more impressive when it comes to exports. In 1948, that zone exported only 7,300 tons of fisheries products with a value barely reaching $2 million. Thirteen years later exports were up sharply--in 1961 exports reached 925,000 tons valued at $82.5 million.

Starting practically from scratch, western South America, in just 15 years, has come a long way in developing its fisheries.

Before World War II, fishing along South America's western seaboard was limited to the unhurried and small-scale activities of local fishermen, to whaling in the waters off Chile's southern coast, and to a slow and irregular exchange of fisheries products between neighboring countries.

Now the scene is different. El Callao, a few miles west of Lima, Peru, has become the most active fishing port in the world and the governments of all 4 countries are accelerating expansion of their fisheries and making a scientific evaluation of their marine resources.

Peru's spectacular jump as a fishing nation can almost be summed up in one word--anchoveta. This small sardinelike fish teems in huge schools only a few miles off the country's coast, following the Humboldt Current. Anchoveta fishing began in the early 1950's. Until then this small fish was only a food for the pelicans and gulls that produce South America's famous guano. By the 1950's, however, the world demand for fish meal for animal feed had increased sharply and United States and Canadian fish meal manufacturers decided to team up with Peruvians to fish for anchoveta for reduction into fish meal.

That's what gave the Peruvian fishing industry its impetus. Since 1948, the landings of anchoveta have multiplied yearly. The landings in 1948 were about 47,700 tons. By 1950, landings had jumped to 70,500 tons and by 1955 they were 213,300 tons. In 1960, 3.5 million tons were landed and in 1961 they were up to 5.2 million tons, a total exceeded

International (Contd.):

only by Japan which was the traditional leader among the world's fishing nations.

With the increases in landings, Peru's fisheries exports also began to go skyward. In 1948, Peruvian fisheries exports were only 6,400 tons worth $2.8 million. By 1961, exports had increased to 865,000 tons valued at $71.5 million.

Although Peru's rise as a fishing power provides the most dramatic chapter in the story of fishing along South America's western coast, the other three nations with Pacific shorelines have also made notable progress.

Chile in 1948 had landings of 64,600 tons, only 900 tons of which are exported. Chile's fisheries export earnings that year were less than $500,000.

Ten years later those totals were up to 225,800 tons in landings with exports at 12,100 tons valued at $2.5 million. In 1960, landings reached 339,700 tons and exports 30,300 tons valued at $3.5 million. By 1961, landings amounted to 429,800 tons and exports reached 51,100 tons with a value of $6 million.

Chile's fisheries development has been achieved despite the losses and dislocations brought about by the disastrous earthquakes of 1960.

Further north, Ecuador has experienced a gradual but significant expansion of her fisheries. In 1948, landings were only 3,400 tons with negligible exports. By 1958, landings were up to 31,100 tons and 3,800 tons valued at $2.1 million were exported. In 1961, the Ecuadoran landings almost doubled to 60,200 tons and exports rose to 8,200 tons valued at $3.5 million.

A major portion of Ecuador's fishery exports are shrimp. Since these bring a high price per ton, it is to that country's advantage to develop further her shrimp fisheries. Therefore, the continued and increased export of shrimp figures prominently in Ecuador's planning.

Colombia had no fisheries exports of any significance in 1948. That country's total landings in 1948 were only 15,000 tons and remained at that level until 1956 when they rose to 21,200 tons. Since 1956, Colombia's progress has been irregular and unspectacular as compared to Peru. The tendency, however, has been toward a gradual expansion which is clearly shown in the nation's fisheries statistics.

In 1960, Colombia's landings rose to 29,700 tons and in 1961 hit 47,500 tons. Most Colombian fish production is consumed within the country, but in the last few years a modest beginning has been made in developing an export trade in fisheries products. In 1961, Colombia exported 1,000 tons of shrimp to the United States, valued at $1.4 million.

With two coasts--Pacific Ocean and Caribbean Sea--the Colombians believe that with time they too can establish a fishing industry of some proportion.

WORLD FISHERIES

FISH PRODUCTION COMPARES FAVORABLY WITH MEAT:

Since World War II and especially after 1950, world fishery production has more than doubled to reach a total of million metric tons (90.8 billion pounds) in 1961. With the great emphasis on fishery expansion by developed and developing countries, experts are of the opinion that this production will continue to increase and may further double within the next several decades. The fisheries have a significant role in feeding the expanding populations of many regions of the world, and contributing to the battle against protein deficiency, a malady that affects an estimated two-thirds of the world's peoples.

Estimated World Production of Aquatic and Land Animals, 1956 and 1960

Commodity	1960	19
	1,000 Metric T	
Aquatic animals 1/:		
Fish	34,210	26
Shellfish	3,190	2
Aquatic mammals (except whales)	100	
Total aquatic animals	37,500	29
Land animals:		
Beef and veal 2/	31,125	29
Pork 2/	30,900	24
Mutton and lamb 2/	6,775	5
Poultry 3/	5,900	5
Offal, edible 4/	2,650	2
Meat, other 5/	550	
Total land animals	77,900	67
Grand Total	115,400	97

1/Data are in live weight. Fish for fish meal and other industrial uses included.
2/As far as could be ascertained, refers to production in terms of carcass weight, excluding lard, tallow, and waste.
3/Generally given in terms of dressed weight.
4/Includes hearts, livers, etc.
5/Includes horse, rabbit, game, reindeer, camel, etc.
Note: Data for some countries estimated from other years. Data on fishery products include estimated production of Mainland China; data on other commodities do not.
Sources: FAO Yearbook of Fishery Statistics, Vol. XIV, 1961; and FAO Production Yearbook, Vol. 14, 1960; and Vol. 15, 1961.

International (Contd.):

The role of aquatic and land animals in the world's production of meat protein is available for 1956 and 1960. During that period, production of aquatic animals (fish, shellfish, and aquatic mammals, excluding whales) increased 27.2 percent, whereas production of land animals increased 14.6 percent. In relation to the various categories of land animals, production of aquatic animals leads the category of beef and veal by over 6 million metric tons and pork by about 6.6 million tons.

Australia

CALIFORNIA FROZEN SQUID SUCCESSFULLY INTRODUCED:

A buyer for a fishery firm in Melbourne, Australia, toured North and South America in 1962, in search of new fishery products to market. In California, he saw a method of packing and freezing squid in white waxed cartons after it had been bleached. The Melbourne fishery firm has since introduced California-produced squid to the Australian immigrant trade where it has become very popular. (Australian Fish Trades Review, March 1963.)

Belgium-Luxembourg

MARINE OIL STOCKS AND FOREIGN TRADE, 1962:

Stocks of marine oils in Belgium and Luxembourg on December 31, 1962, amounted to 5,695 metric tons as compared to the 9,061 tons on hand 1 year earlier.

Imports of marine oils by Belgium-Luxembourg during 1962 amounted to 20,627 tons, down 13.7 percent from imports of 23,908 tons in 1961. The principal suppliers were the Netherlands, Japan, the United States, and Peru.

Exports of marine oils by Belgium-Luxembourg in 1962 totaled 822 tons as compared to 982 tons in the previous year. The main buyers were Spain, Germany, the Netherlands, Italy, and France. (United States Embassy, Brussels, April 25, 1963.)

British West Indies

BARBADOS FISHING INDUSTRY TRENDS, 1962:

Estimated fishery landings in Barbados during 1962, amounted to 5 million pounds, a drop of 1 million pounds from the estimated catch in the previous year. There was some fluctuation during 1962 in the price and availability of flying fish, a staple food in Barbados, but it remained in generally good supply as a result of price control measures and the marketing of frozen stocks when landings were light. (United States Consulate, Barbados, May 9, 1963.)

Note: See Commercial Fisheries Review, July 1962 p. 57.

Canada

BRITISH COLUMBIA FISHERIES ASSOCIATION HOLDS SEMINAR ON WATER POLLUTION:

The dangers of water pollution, a matter of vital interest to the Canadian fishing industry, were highlighted in a seminar sponsored by the British Columbia Fisheries Association. In both the introductory speech of a British Columbian conservationist, who is a writer and sports fisherman of international repute, and in the panel discussion, the need for improved controls and laws, both Federal and Provincial, which cover the discharge of waste material, and for a system of stiffer penalties for offenders was emphasized.

The panel, while decrying the dangers of pollution, highly complimented some sections of industry for their efforts to decrease those dangers at great expense to themselves. The forest industry of British Columbia and the logging industry, which have gone to great lengths to eliminate obnoxious substances from waste material, were specifically commended.

At the seminar, it was brought out that when dealing with specific pollution problems, the pollution authorities themselves, since there is an absence of common standards, were not in complete agreement. However, to determine what constitutes a toxic degree of pollution, the panelists concluded, is not the principal problem, since it can often be answered only when damage has already been done. The only solution to the problem of pollution is the prevention of contamination

Canada (Contd.):

since no polluted stream has ever been restored to its original condition. The pollution, therefore, which exists now will always exist.

The degree of water pollution, the seminar was reminded, is already critical in some parts of the world where major streams have been ruined for all time. A similar situation, the panel insisted, could be repeated in British Columbia if proper precautions are not immediately implemented.

Realizing the vulnerability of its resources to pollution, the fishing industry has a real interest in this problem. It has, moreover, a definite responsibility to ensure that adequate safeguards exist to protect the streams of British Columbia. (Fisheries Association of British Columbia, Facts on Fish, April 1963.)

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LEGISLATION INTRODUCED TO EXTEND FISHING LIMITS:

On May 20, 1963, an act to amend Canada's Coastal Fisheries Protection Act received its first reading in the House of Commons.

Specifically the act provides that subsection 2(b) of the Act, which at present reads as follows:

"(b) 'Canadian territorial waters' means any waters designated by any Act of the Parliament of Canada or by the Governor in Council as the territorial waters of Canada, or any waters not so designated being within three marine miles of any of the coasts, bays, creeks, or harbours of Canada, and includes the inland waters of Canada;"

be repealed and the following substituted for it:

"(b) 'Canadian territorial waters' means a fishing zone extending seaward to a limit twelve nautical miles from the baseline from which the breadth of the territorial seas of Canada are measured headland to headland and includes inland waters of Canada;"

The proposed legislation also provides for new paragraph 2(b) to come into force on July 1, 1964. An explanatory note attached to the draft legislation states that this date was chosen "To allow time for international negotiation which may result in agreement on national fishing limits. . . ." (United Sta Embassy, Ottawa, May 28, 1963.)

* * * * *

NATIONAL FISHERIES DEVELOPMENT POLICY PROPOSED:

The Canadian Government has taken the initial step to bring about a national fisheries development policy. The Fisheries Minister has written the 10 provincial ministe concerned with fisheries asking their cooperation in formulating a fisheries development program which would satisfy the nee of all regions.

The provinces have been asked to sugge items for inclusion in such a program. Th suggestions from the provinces are to be considered by senior officers of the Depart ment of Fisheries of Canada, and incorporated into a draft program. This draft program will be reviewed at a Federal-Provin cial ministerial conference, which the Fish eries Minister says he will call as soon as the necessary preparatory work is complet

In his letter to the provinces, the Minist said that he believed a national developmen program to be effective must take into account needs for resource development, for modernization of fishing methods and processing, and for the expansion of better domestic and export markets. He said "it wi of course, include provincial as well as Fe eral responsibilities, making thorough discussion between our governments essentia (Department of Fisheries, Information Ser ice, May 23, 1963.)

* * * * *

NEW FISH-PROCESSING PLANT PLANNED FOR NOVA SCOTIA:

A Halifax, Nova Scotia, newspaper announced on May 2 1963, the signing of a contract for construction of a C$5.5 million fish-processing plant at Lunenburg, Nova Scotia.

The firm involved is one of the largest fish-processing companies in the Maritime Provinces and has 7 subsidiary companies. The new plant will produce frozen ground fish and ocean perch fillets in one- and five-pound packages under its 7 brand names. Fish will also be frozen, cooked, smoked, salted, and delivered fresh. A small amount will be canned. No shellfish will be processed except scallops. There will be some production of fish meal and oil. About 80 percent of the production will be destined for the United States market, the other 20 percent going to other destination points.

The new plant, on which work was scheduled to get underway immediately, is expected to be operating in March 1964 and to be capable of producing when running at full capacity 80 million pounds of fish a year. That capacity is twice the capacity of the existing plant which it will both supplant and supplement.

Canada (Contd.):

The location of the new plant is one mile from the present plant, which is considered unexpandable. It is situated in the same harbor and will consist of two buildings under a single 250,000 square-foot roof, occupying an area of 11/2 acres. Its facilities will include 2 wharves capable of unloading 4 fishing vessels at a time, cold-storage facilities with a capacity of 6 million pounds of fish, the latest automatic ice-handling equipment, and a streamlined, one-floor operations arrangement. There will be no general automation and most methods will remain basically the same as at the existing plant.

To supply the plant with fish, the firm has 7 trawlers under construction and plans to continue buying all the fish it can from independent fishermen.

Population growth, supplying additional future markets for fish, and a hoped-for increase in per capita consumption of the products are expected to make the plant a good investment, especially since at this plant fish will be prepared to be more attractive to the housewife and easier to put on the table.

The effect on the Lunenburg economy is expected to be tremendous requiring not only the extra staff for the plant, but also such services as the providing and maintenance of vessels. It is expected that from 500 to 600 employees will be engaged for the new plant. The present plant currently employs 300. About 85 percent of the personnel at the present plant will be moved to the new one, the other 15 percent being left for operations which will still be carried on there. Some of the work force will be obtained from outside the Lunenburg area and some from young people who will be entering the labor market. It will be a year-round operation depending upon the weather and the size of the catches. The project will add C$4.5 million a year to the economy of the area. (United States Consul, Halifax, May 28, 1963.)

* * * * *

TRAWL MESH REGULATIONS SAVE SMALL COD:

The Fisheries Research Board of Canada has been studying how much the waste of small fish (caught, then discarded) has been cut down by using a larger mesh size. The findings have been reported by a biologist of the St. Andrews Biological Station.

Outlining the problem before a change in regulations, the author points out that the otter trawl equipped with a 3-inch mesh was quite destructive in that many fish too small to market were caught, then discarded. In 1957, Canada instituted a new regulation whereby meshes in otter trawls are not allowed to be less than $4\frac{1}{2}$ inches (manila equivalent). Member countries of the International Commission for the Northwest Atlantic Fisheries (ICNAF) agreed to use this larger mesh size.

In citing statistics showing the effectiveness of the larger mesh size, the author noted that northern New Brunswick draggers in 1956 were discarding 25 out of every 100 cod caught. In 1961, this figure dropped to 6 out of every 100. Statistics also revealed that a difference existed in the size of cod landed by fishermen using large mesh nets between 1957 and 1961. Total landings of smaller fish (up to 2 pounds) were greater in 1961 than in 1957. Large cod over $5\frac{1}{2}$ pounds, were less common in 1961 than in 1957--the reason being that they have been nearly fished out by the large fleet of otter trawlers.

As a result, average cod landings of a Gloucester-type dragger dropped from 26,000 pounds per week in 1957 to 16,000 pounds in 1961. With large fish scarce, fishermen and fish buyers marketed small fish in 1961 which used to be discarded when larger fish were more readily caught.

Between 1956 and 1961, the report states there was a saving of about $1\frac{1}{2}$ million fish by the Northern New Brunswick dragger fleet alone. Discards by all other otter trawlers fishing in the southwest Gulf and along the Cape Breton coast were about 7 million fish in 1956. In 1961, the total discards amounted to about 1 million fish--a saving of about 6 million fish. The author concludes that this large mesh net plays an important role towards the better use of cod stocks in that many of the small fish that have escaped through the large mesh will be caught again after they have grown larger. (Canadian Fisherman, April 1963.)

Chile

NORWEGIAN FISHING AND FISH MEAL VENTURE PROVES SUCCESSFUL:

Four or five Norwegian fish-processing companies are reported to have advanced plans for establishing subsidiary companies in Peru and Chile. Most of them have ample facilities and knowledge for anchovy fishing and processing, but the present state of their own country's herring fishery is not permitting them to make economical use of these assets.

One Norwegian company has already set up a subsidiary in Chile. It is a long established Bergen company of fishing vessel owners, herring processors, and exporters. The firm's chairman and managing director visited Chile in 1959, and held discussions

Chile (Contd.):

with the Chilean authorities and the leaders of their semi-official agency, Corfo (Corporacion de Fomento de la Prodduccion) which is concerned with the development of the Chilean fishing industry.

As a result of the discussions, the Norwegian firm received financial guarantees from Corfo, and was allotted land at Pisagua, a small, almost extinct port, north of Iquique, for building a reduction plant. Under the agreement, the Norwegian firm was to supply its own fishing vessels.

By January 1962, work had advanced to the stage where all the lighter machinery parts could be loaded on the flagship of the company's fleet, the Senior, one of the most well-equipped and biggest Norwegian purse seiners. She is 144 feet over-all, powered by a 800-hp. Diesel, and commanded by one of West Norway's best known herring fishermen.

The new plant began operations in August 1962, and up to the middle of February of this year had produced 7,100 tons of fish meal. The plant is not yet complete and its present intake of 1,000 tons of fish per day will be tripled when machinery installations are completed.

Labor was one of the biggest problems facing the new company. Northern Chile has considerable, almost untapped, resources of manpower, some of which together with Norwegian key personnel have been employed by the Norwegian company. But due to a lack of experience in factory work the Chileans proved somewhat irresponsible and unreliable. This was found to be partly due to local living conditions and has been alleviated somewhat by a house-building program set up by the Norwegian company with the support of the Chilean authorities.

Since the Senior began operations in Chilean waters, 2 more Norwegian purse seiners, the Geco (105 feet) and the Megrund (110 feet), have joined her, together with 4 local vessels fishing under contract. The company has also ordered 3 new vessels, each of 100 tons capacity, from the shipyard at Iquique.

The Senior began her Chilean career with scouting operations and delivery to other reduction plants. The vessel was fitted with a hydraulic pump with an 8-inch fish hose for bailing out the fish from the seine. The Norwegian skipper was not at first convinced of the efficiency of this method over the traditional Norwegian "dipper bag" and winch method. He was won over by the fact that the hose could take the stunned and dead fish which gather at the bottom of the net threatening to burst it. The Senior is now fitted with a 12 inch hose.

Norwegian purse seiners usually have their engines aft and shoot and haul the gear over a power-driven side roller. The Senior's two boats, specially built at a cost of US$42,000, have their engines mounted forward and shoot the net over an aft ramp. The net is hauled by a power block mounted aft of the engine compartment. This method has proved to be a great timesaver and is particularly useful in anchoveta purse seining, as there is often considerable difficulty in bringing the fish to the surface. The Norwegian fishermen have also commented that the fish are extremely heavy to haul.

The Senior was received with some skepticism by the Chileans. They had no experience of ASDIC, and the Norwegian captain soon acquired the reputation of being a magician when he was seen to shoot on what appeared to be nothing and then made a bumper haul.

It was forecast that the Senior would land 25,000 tons of anchoveta a year, but in six months' fishing she landed over 21,000 tons. By the middle of February the anchoveta season was in full swing, and on 16 consecutive days the vessel landed more than 300 tons each day.

With a coastline extending over 37 latitude Chile's marine resources include almost every type of fish and shellfish. It does not seem overoptimistic to assume that it may one day become a great center for the processing of every type of fish product. (World Fishing, May 1963.)

Denmark

FISHERIES TRENDS, FIRST QUARTER 196

Landings: In spite of the severe weather, landings in Denmark by Danish vessels during January-March 1963 were slightly above those in the same period of the record year 1962. Ice-bound waters slowed the flatfish and cod fishery this year, but the decline was offset by heavier landings of industrial fish from the North Sea. Landings in Da

Denmark (Contd.):

Table 1 - Danish Fisheries Landings, January-March 1963 and 1962

Species	Jan.-Mar. 1/1963	Jan.-Mar. 1962
	(Metric Tons)	
Landings in Denmark by Danish vessels:		
Flatfish	7,833	10,234
Cod	20,412	24,475
Herring	54,709	53,737
Brisling	1,419	1,324
Mackerel	191	439
Other salt-water fish 2/.	65,886	53,534
Eels	49	87
Pond trout	1,570	1,575
Other fresh-water fish	316	501
Mussels	578	4,574
Starfish	10	866
Shrimp, lobsters, and other shellfish	800	1,064
Total	153,773	152,410
Landings in Denmark by foreign vessels	41,240	22,251
Danish landings in foreign ports of United Kingdom, Sweden, and the Netherlands.	290	285

1/Preliminary.
2/Mainly industrial fish.
Source: Danish Ministry of Fisheries.

ish ports by foreign vessels (mainly Swedish) almost doubled as ice blocked Swedish ports.

Exports to All Countries: First quarter 1963 exports to the more than 100 countries which Denmark supplies with fisheries products continued at a record pace. Compared with the first quarter of 1962, fishery exports in January-March 1963 were up 15 percent in quantity and 9 percent in value. All major categories benefited except fish meal.

Exports to the United States: Fishery exports to the United States in the first quarter of 1963 were down 12 percent in quantity and 5 percent in value from those in January-March 1962. United States shipments of canned brisling and sardines dropped sharply as the Maine sardine industry's large 1962 pack regained its United States markets. Lobster exports were also down. But there were substantial gains in exports of pond trout and cod fillets to the United States. (United States Embassy, Copenhagen, May 15, 1963.)

Table 2 - Danish Exports of Fishery Products, January-March 1963

Products	January-March 1/1963 Qty. (Metric Tons)	January-March 1/1963 Value (US$ 1,000)	January-March 1962 Qty. (Metric Tons)	January-March 1962 Value (US$ 1,000)	Calendar Year 1962 Qty. (Metric Tons)	Calendar Year 1962 Value (US$ 1,000)
To all countries:						
Fresh fish	58,500	11,138	47,700	9,922	179,500	45,190
Frozen fish	11,600	4,808	7,800	3,983	39,600	19,191
Processed fish	5,100	2,911	5,200	2,781	19,500	10,646
Fish meal & solubles 2/.	9,300	1,246	12,800	1,767	63,900	9,617
Total exports to all countries	84,500	20,103	73,500	18,453	302,500	84,644
To United States:						
Fresh & frozen products:						
Fillets:						
Cod	1,884	869	1,535	671	7,903	3,549
Other fillets	111	63	27	16	634	330
Pond trout	313	362	182	202	969	1,069
Lobsters	24	76	62	172	322	969
Other fresh & froz. prod.	14	11	5	9	285	329
Cured products	15	5	32	8	123	40
Canned products:						
Herring & brisling	176	134	1,039	524	1,569	905
Other canned products.	64	73	73	74	265	293
Semi-preserved prod.	2	4	4	6	17	26
Fish solubles	-	-	-	-	100	11
Total exports to U. S.	2,603	1,597	2,959	1,682	12,187	7,521

1/Preliminary.
2/Does not include marine oils.
Note: Values reported in Danish kroner and converted to U. S. dollars using the factor: Kr. 6,908 equals US$1.00
Source: Danish Ministry of Fisheries.

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FOREIGN TRADE IN INDUSTRIAL PRODUCTS, 1962:

Fish Meal: The Danish supply of fish meal in 1962 was greater than in the previous year due to an increase in the total annual domestic production which reached 85,500 metric tons. This was a gain of about 49 percent over the 1961 production. Fishmeal imports which totaled 15,520 metric tons in 1962 were down somewhat from those in the previous year. Iceland and Norway were Denmark's leading foreign suppliers of fish meal in 1962.

The domestic demand for fish meal for animal feed showed little change in 1962 so the increase in supply was sold on the export market. The principal buyers were the United Kingdom, Finland, West Germany, and Poland.

Marine Oils: Refined oils from Peru made up the bulk of Denmark's marine oil imports

Table 1 - Danish Imports of Marine Oils, 1962

Commodity and Country of Origin	Quantity (Metric Tons)
Whale oil, crude:	
Norway	2.1
Sperm oil, crude:	
Total all countries	54.8
Seal oil, crude:	
Norway	17.8
Herring oil, crude:	
Iceland	507.0
Norway	139.8
West Germany	1,214.3
Total	1,861.1
Other marine oils, crude:	
Total all countries	26.4
Marine oils, refined:	
Norway	298.7
Peru	17,271.4
Other countries	38.8
Total	17,608.9
Marine oils and other animal oils, hardened:	
Norway	582.6
Sweden	2,812.1
Other countries	1.9
Total	3,396.6

Denmark (Contd.):

Table 2 - Danish Exports of Marine Oils, 1962

Commodity and Country of Origin	Quantity
	Metric Tons
Whale oil, crude:	
West Germany	12.6
Seal oil, crude:	
Total all countries	79.4
Herring oil, crude:	
Finland	813.3
Norway	4,299.1
Sweden	1,508.3
Czechoslovakia	434.8
United Kingdom	4,058.7
West Germany	1,870.5
East Germany	99.8
Total	13,084.5
Other marine oils, crude:	
Czechoslovakia	1,073.6
West Germany	738.7
Other countries	288.9
Total	2,101.2
Marine oils, refined:	
Total all countries	50.2
Marine oils and other animal oils, hardened:	
Colombia	2,850.0
United Kingdom	544.0
Other countries	1,109.0
Total	4,503.0

in 1962, while crude herring oil accounted for a large part of Danish exports of marine oils. (United States Embassy, Copenhagen, April 19, 1963.)

Egypt

PLAN FOR FOOD-PROCESSING PLANTS INCLUDES FISHERY PRODUCTS:

Cairo newspapers report that a plan has been drawn up by the Chairman of the General Egyptian Organization for Foodstuffs Industries for the establishment of 23 food-processing factories. The principal reason for the plan, according to the press accounts, is to increase exports of processed food to Arab and African countries. The factories are to be built in various parts of the country, and include a tuna and sardine canning plant and three frozen shrimp plants. (United States Embassy, Cairo, May 17, 1963.)

France

SPINY LOBSTERS AND OTHER SHELLFISH IMPORTED FROM CUBA:

Included in French imports from Cuba during February and March this year were sp lobster tails and unclassified prepared sh fish. In February, prepared shellfish valu at US$50,000 were imported, and in Marc spiny lobster tails valued at $57,000 and classified prepared shellfish valued at $8 were imported. (United States Embassy, Paris, May 16, 1963.)

German Federal Republic

ELECTROCUTION DEVICE MAY IMPROVE QUALITY OF CATCH:

The use of electric impulses to attract and simplify capture has received a good d of publicity in recent years--much of it s o what premature. While the technique is an important one which may soon be more wid used, another application, though less dram ic, has reached a stage at which it can play useful and practical part in certain fisheri especially in relation to improving quality.

A West German company has developed an electrocution device to a point at which is practical and relatively inexpensive, and tests and operating experience in the sardi herring, and tuna fisheries have shown that the reduction in fish damage and the impr quality of fish meat can result in better pri for the catch.

In pelagic fishing, especially by purse seine and ring net, the "Fulda Electrocuto is brought into action when the fish are con centrated in the bag of the net. By dipping the probe of the "electrocutor" among the fish, and passing current several times, th fish are killed within a few seconds. This means that the desperate struggles to escap and later the final death struggle, are avoid There is, therefore, no excessive loss of scales and no deterioration of the fish mus cle. This improvement is reflected in the appearance (and also the market price), in the storage life in the vessel's fishroom, an in the quality of the product when canned.

In the case of tuna, the application is es-pecially effective in pole fishing, when the fish can be killed at the moment it takes the hook, so eliminating muscle deterioration

German Federal Republic (Contd.):

from escape struggles and simplifying the often dangerous business of getting the fish aboard. The actual application of the killing current in this instance can be manually operated by pressbutton or by an automatic switch operated by the jerk of the line as the fish takes the hook. As many as 30 hooks can be served from one power source, and at the same time, the generator can operate a 500-watt floodlamp.

The equipment comprises a special generator having a maximum capacity of 35 kv.-a. and driven by belts from the main engine. It is excited by the vessel's batteries, requiring 24 v. at 30-35 amps. The current is a.c., 65-70 v. at 170-200 amps., 50 cycles at 1,500 generator r.p.m. and 60 cycles at 1,800 r.p.m. The engine must deliver at least 60 b. hp.

The following figures, supplied by the West German company, are of interest. Out of 100 sardines landed without using the "electrocutor," 15 are badly damaged and some 25 will have lost most of their scales, reducing 40 percent of the catch to second grade. Out of 100 electrocuted sardines, about 10 are slightly damaged, but would still pass as first grade. One unit of this equipment is now in service commercially in the French sardine fishery. (World Fishing, April 1963.)

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OCEANOGRAPHIC RESEARCH:

Prior to World War II, German research played an important part in the development of oceanography. The Meteor Expedition (1925-1927) laid the basis for methodic research and a German scientist invented the Echolot (echo sounder).

According to Nordsee Zeitung, an extensive modernization program is planned for the German Institute of Oceanography in 1963. Emphasis will be given to setting up 2 main oceanographic centers, (1 in Hamburg with 46 scientists and 59 technicians, and 1 in Kiel with 46 scientists and 63 technical assistants). Research in oceanography will be concentrated in five divisions in Kiel, the largest being the Kiel University Institute of Oceanography which has 24 scientists, and 42 technical assistants. Its sphere of activity will include marine botany, chemistry, physics, planktology, and fishing biology. In collaboration with the Institute for Applied Physics, technical equipment will be highly modernized. Research in marine geology will be carried out by the Geological-Paleontological Institute of Kiel University.

Certain other organizations which have engaged in oceanogrpahic research are also to be expanded including the Hannover Federal Establishment for Soil Research, the Bremerhaven Institute for Oceanography which devotes its activity primarily to bacteriology and mycology, and the Senckenberg am Meer Establishment for research in marine geology and biology.

On completion of the program, Germany will have available for oceanographic research 95 scientists, 130 technical assistants, and a fleet consisting of one modern fishery research ship (Anton Dohrn), one survey-research ship (Gauss), and three other vessels. (Newsletter, National Oceanographic Data Center, April 30, 1963.)

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SUBSIDY FAILS TO FILL GAP BETWEEN PROFIT AND LOSS FOR DISTANT-WATER TRAWLERS:

The 158 trawlers of the German distant-water fleet had a somewhat better financial year in 1962 than in 1961, when producers incurred a loss of 30 million DM (US$7 million). A subsidy was introduced in 1962, and although the detailed figures are not yet available, it seems likely that the loss for the year will be about 15 million DM (US$3.5 million). This amount of subsidy has been no real improvement in the industry's situation.

Over the past five years, during which there has been an intensive scrapping program of old ships and a building program of large freezer stern trawlers, production has decreased. Until 1950, herring predominated in German landings, but it is now imported in large quantities and more cheaply from Scandinavia, so that its decline in importance to the trawler fleet has been dramatic. This species now accounts for 11 percent of all trawler landings. Ocean perch (or gold sea bream, as it is sold to the consumer) accounts for 42 percent, with cod not far behind. But the West German consumers' reluctance to accept distant-water frozen fish has meant that some of the 23,000 metric tons produced in 1962 was difficult to sell, and only a 3,000-ton consignment of frozen fish to East Germany, which they needed in a hurry, prevented more trouble in 1962.

German Federal Republic (Contd.):

What is the German trawler owner to do? In many ways, his problems are very similar to those of the British distant-water operator. He faces continually rising costs with increased competition on the northern fishing grounds, especially from the U.S.S.R. and Japan, a not particularly strong home market, and the distinct possibility of a cessation or reduction of the subsidy which has only just been given. German fishing firms are now carefully considering trips to the South Atlantic, and the general feeling is that a trawler must be made a more flexible production tool than at present, carrying not only bottom trawls but also mid-water trawls to take advantage of differing conditions on one trip.

At present, there is very little trawler building, although most owners acknowledge there is a need to build again soon and to continue the scrapping program. There is still (as in Britain) considerable discussion as to the right type of vessel for the future, but most owners agree that on economic grounds filleting machinery is an essential, arguing that because of the extra time taken to fill a hold with fillets, the extra amount of fishing time in a year thus justifies the cost per day at sea of a big stern trawler. There is some freezing in the round, and at least one of the bigger companies has a number of vessels of both types in operation.

On one point all are agreed--the sooner German and British owners form part of an association devoted to dealing with the political and economic problems of European fishing, the better it will be for everybody. (World Fishing, March 1963.)

Greece

FISHERIES TRENDS, JANUARY-MARCH 1963:

The owners of the 17 vessels of the Greek Atlantic Ocean fishing fleet have agreed in principle to form a marketing pool to reduce costs and competition. Experiments with raising trout and other fresh-water fish have proved successful and expansion of the present facilities is planned. Another survey of the possibilities for a fish-processing plant in Kavalla is under way. (United States Embassy, Athens, May 7, 1963.)

Greenland

FISHING LIMIT OF 12 MILES ESTABLISHED:

A decree placing a 12-mile fishing limit in effect off Greenland as of June 1, 1963, was enacted by the Danish Parliament May 15, 1963. (United States Embassy, Copenhagen, May 22, 1963.)

Haiti

NEW FISHING FIRM ESTABLISHED:

A fishing corporation with US$5,000 capital and an office in Port-au-Prince has been established by United States citizens of West Palm Beach, Fla., according to the legal notice appearing in Haiti's Moniteur-No. 27, March 18, 1963. It was observed only that the new firm would engage in "fishing operations." (United States Embassy, Port-au-Prince, May 22, 1963.)

Iceland

FISHERY LANDINGS BY PRINCIPAL SPECIES, 1961-62:

Species	1962	1961
	. . . (Metric Tons) . . .	
Cod	178,759	198,936
Haddock	43,421	41,088
Saithe	10,775	11,847
Ling	5,659	5,180
Wolffish (catfish)	12,031	11,793
Cusk	4,755	5,069
Ocean perch	21,048	26,963
Halibut	1,417	1,700
Herring	478,127	325,911
Shrimp	699	1,385
Lobster	2,474	1,490
Other	9,049	9,634
Total	768,214	640,996

Note: Except for herring which are landed round, all fish are drawn weight.

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FISHERY EXPORTS TO THE SOVIET BLOC, 1962:

Iceland's barter trade with the Soviet Bloc showed a modest increase in 1962, after declining for several years (the Bloc's share of total Icelandic exports was 18.5 percent in 1962; 14.2 percent in 1961; 23.1 percent in 1960; and 33.7 percent in 1959). In 1962, fishery products accounted for 98.8 percent of the quantity and 94.4 percent of the value of Iceland's exports to the Soviet Bloc.

Iceland (Contd.):

Icelandic Fishery Exports to Soviet Bloc, 1962

Country of Destination and Commodity	Quantity	F.O.B. Value	
	Metric Tons	IKr. 1,000	US$1,000
Czechoslovakia:			
Frozen herring	2,658.4	27,705	643
Frozen fish fillets	1,557.3	26,341	612
Canned fish	143.6	7,333	170
Fish meal	620.2	4,220	98
Herring meal	2,124.4	14,228	330
Cod-liver oil	1,409.9	14,010	325
Total	8,514.1	93,837	2,178
East Germany:			
Frozen herring	3,858.2	22,785	529
Salt herring	1,183.4	10,048	233
Total	5,041.6	32,833	762
Bulgaria:			
Cod-liver oil	90.0	766	18
Hungary:			
Canned fish	2.5	388	9
Fish meal	100.1	651	15
Total	102.6	1,039	24
Poland:			
Frozen herring	2,036.1	12,026	279
Salt herring	2,000.0	17,437	405
Fish meal	858.7	5,557	129
Herring meal	1,430.0	9,742	226
Cod-liver oil	150.1	1,463	34
Total	6,474.9	46,225	1,073
Rumania:			
Frozen herring	1,949.1	11,102	258
Salt herring	500.1	3,577	83
Total	2,449.2	14,679	341
U.S.S.R.:			
Frozen herring	5,000.0	22,415	520
Frozen fish fillets	17,984.7	280,264	6,508
Salt herring	14,175.9	131,720	3,058
Canned fish	209.1	10,023	233
Total	37,369.7	444,422	10,319
China:			
Cod-liver oil	2.0	17	1/
Grand total	60,044.1	633,818	14,715

1/Less than US$500.
Note: Icelandic kronur 43.06 equals US$1.00.

The current pattern of trade with the U.S.S.R. will probably be maintained under the 1963-1965 Protocol to the Icelandic-Soviet Trade Agreement. The U.S.S.R. supplies Iceland with a few basic commodities such as lumber, petroleum products, iron, and steel at world market prices.

Other leading trade partners of the Soviet Bloc have usually supplied Iceland with manufactured goods. Future trading prospects with those countries will depend to a large extent on the prices offered, and the quality of their products which are meeting keen competition from the commodities of the United States and Western Europe. (United States Embassy, Reykjavik, May 24, 1963.)

Note: See Commercial Fisheries Review, April 1963 p. 54, June 1961 p. 62.

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UTILIZATION OF FISHERY LANDINGS, 1961-62:

How Utilized	1962	1961
	. . . (Metric Tons) . . .	
Herring1/ for:		
Oil and meal	361,295	225,673
Freezing	34,888	25,259
Salting	69,621	68,069
Fresh on ice	11,988	6,797
Canning	336	114
Groundfish2/ for:		
Fresh on ice	30,379	33,115
Freezing and filleting	135,918	144,789
Salting	70,541	74,625
Stockfish (dried unsalted)	36,077	47,583
Home consumption	10,802	8,389
Oil and meal	3,196	3,708
Shellfish for:		
Freezing: Lobster	2,474	1,490
Shrimp	561	1,062
Canning (shrimp)	138	323
Total production	768,214	640,996

1/Whole fish.
2/Drawn fish.

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NEW HERRING PROCESSING FACILITY PLANNED FOR WESTMAN ISLANDS:

A new herring processing plant is planned in the Westman Islands on a site beside the Westman Islands freezing plant. There will also be a large trough able to hold 30 to 40 thousand barrels of herring and a herring oil tank. (United States Embassy, Reykjavik, May 9, 1963.)

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PROPOSED FISHING CONFERENCE BY BRITISH STIRS DEBATE:

The announcement by the British that they will terminate the North Sea Fishing Agreement and that fishing rights in the North Atlantic will be renegotiated at a 16-nation conference to be held in London in September this year, has provoked Icelandic reactions. An Icelandic newspaper infers that the British action is motivated by the limitations placed on fishing rights in territorial waters by Iceland and the Faroe Islands and that now the British will use the conference to try to get further special rights for British trawlers from Iceland and Denmark. The Icelandic Government has received an official invitation to the London conference. The Minister of Justice, in an interview granted to the press, stated that the Cabinet has not yet discussed the invitation, but that the Government will remain firm and will not grant any further fishing rights to the British. (United States Embassy, Reykjavik, May 9, 1963.)

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Iceland (Contd.):

RECORD EXPANSION OF FISHING FLEET IN 1963 PLANNED:

A total of 45 fishing vessels with a combined tonnage of 8,000 gross registered tons (g.r.t.) has been ordered by the Icelandic fishing industry from foreign shipyards for delivery in 1963. The vessels will include 34 of steel construction and all are expected to have the most modern fishing equipment.

During the entire 3-year period from 1960 through 1962, Iceland's fishing vessel imports consisted of only 73 vessels with a combined tonnage of 8,415 g.r.t. (United States Embassy, Reykjavik, May 16, 1963.)

India

INDIAN OCEAN BIOLOGICAL CENTER ESTABLISHED:

An Indian Ocean Biological Center (IOBC) has been established at Cochin, India, by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and the Government of India, with the assistance of the United States National Science Foundation.

The IOBC will serve as a sorting center to process the standard plankton hauls taken by the oceanographic vessels of the International Indian Ocean Expedition (IIOE). The plankton hauls will be made daily with a #3 mesh net in a vertical tow from 200 meters (656 feet).

A Danish scientist employed by UNESCO will be in charge of the scientific program of the IOBC, but its staff will be composed principally of Indian scientists and technicians. (Newsletter, National Oceanographic Data Center, April 30, 1963.)

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INDO-NORWEGIAN COMMUNITY FISHERIES PROJECT SUCCESSFUL:

A chapter in the history of the Indo-Norwegian Project was closed April 1, 1963, when Norwegian specialists withdrew from the villages of Sakthikulangara and Neendakara where the fisheries community development project was started over 10 years ago. On the same day, the Fisheries Director of Kerala took over the boatyard, engineering workshop, fresh ice factory, and fish-freezing plant in the original project area. The Norwegian personnel, headed by the director, will move to the new project operations at Cannanore, in northern Kerala, Karwar in Mysore and Madapam in Madras, with administrative headquarters at Cochin.

On April 18, the Kerala Prime Minister presided at a memorable farewell party in Sakthikulangara, at which he presented a gold-lettered address of appreciation to the Norwegian personnel. Expressing the population's gratitude for Norway's contribution to the Indo-Norwegian Project, the Premier said the joint venture has helped to create respect for the dignity of labor and to make fishing a respected occupation in Kerala.

The boatyard in the original project area now can turn out 60 fishing boats a year. The ice factory, run by a fishermen's cooperative society, produces 25 tons of fresh ice a day. The cooperative also plans to take over the deep-freezing plant, so far leased to private firms exporting frozen giant shrimp. (News of Norway, May 23, 1963.)

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JOINT INDO-JAPANESE FISHING VENTURE PROPOSED:

India is reported to have offered a proposal to Japan for a joint fishing venture in Mysore, India. The venture is to be established with capital equivalent to 226.8 million yen (US$630,000), with India contributing 58 percent and Japan 42 percent. Proposed base facilities include cold-storage and ice-making plants. The joint company will undertake investigation of fishing grounds off the Mysore coast in southern India, as well as processing and marketing of the catches. Initially, the base is to be operated under a 3-year agreement, and profits from the enterprise are to be distributed in proportion to the amount of investment.

One of the Japanese fishing companies is interested in this venture. The president of that company planned a trip to India about mid-May 1963, to conduct detailed discussions of the proposed venture. (Suisan Keizai Shimbun, May 10; Suisan Tsushin, May 13, 1963.)

Iran

FISHING RIGHTS IN THE PERSIAN GULF:
On April 29, 1963, the Government-owned National Iranian Fisheries Company (Shilat-Iran) concluded an agreement which opened the Persian Gulf to the fishermen of Pakistan, according to Tehran newspaper reports. The agreement was said to be identical to the one negotiated with Kuwait in 1962, which means that the Shilat-Iran will receive 30 percent of the Pakistani catch in the Persian Gulf. Pakistan was reported to have consented to making a deposit of £60,000 (US$168,000) to guarantee fulfillment of the contract by her fishermen. (United States Embassy, Tehran, May 7, 1963.)

Japan

VESSELS REPORT LOWER CATCH RATIO FOR ALBACORE AT AMERICAN SAMOA:
Reports from tuna fishing vessels operating around American Samoa indicate that fishing conditions in that area are changing and that the Japanese are following developments with keen interest.

Reports from the area can be summarized as follows:

1. The catch ratio of albacore has been reduced recently from more than 90 percent to about 70 percent with a higher percentage of miscellaneous species. Also, the percentage of second grade and rejected tuna is increasing.

2. The difference in landings between the more efficient and less efficient vessels is becoming greater--particularly unsatisfactory are landings by vessels that have recently joined the fleet. These conditions are a cause for worry to vessel owners planning to go to Samoan waters. If this trend continues, Samoa, which has acquired a reputation for being a very profitable overseas base, may decline in importance. (Suisan Tsushin, April 22, 1963.)

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MARKET TRENDS FOR ALBACORE TUNA, MAY 1963:
In early May 1963, a large United States west coast packer was reported to be buying Japanese summer albacore tuna for US$400 per short ton, f.o.b. Japan. This transaction drew attention in Japan since it was in sharp contrast with the market situation prevailing in California where United States packers had ceased to purchase Japanese frozen tuna. Japanese frozen tuna exporters surmise that this move was made by the United States packer in anticipation of an early recovery of the tuna market. They claim that the price offered by the United States packer was not at all high compared to ex-vessel prices paid for albacore in Japan.

Ex-vessel prices at Yaizu and Shimizu between May 20-22 were ranging from $345-$428 per short ton for pole-caught albacore and $360-$489 a short ton for long-line-caught albacore. (Suisan Tsushin, May 17, and Suisan Keizai Shimbun, May 21, 22, and 23, 1963.)

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CANNED TUNA IN BRINE PRICE INCREASED FOR MAY-JUNE EXPORTS:
At a meeting between the Japan Canned Foods Exporters Association and the Japan Tuna Packers Association, the Exporters Association agreed to accept the price increase sought by the packers for canned tuna packed in brine for export to the United States. As a result, prices of tuna packed in brine offered for sale starting in May were raised 10 cents a case for canned white meat tuna from $10.40 to $10.50 (7-oz. 48 cans/cs.), f.o.b. Japan; and 5 cents a case for canned light meat tuna from $7.60 to $7.65 per case, f.o.b. Japan.

A total of 250,000 cases of canned tuna in brine (140,000 cases of white meat tuna and 110,000 cases of light meat tuna) were offered for sale during May and June this year. (Minato Shimbun, May 8 1963.)

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ATLANTIC OCEAN TUNA FISHERY TRENDS, APRIL 1963:
Exports of Japanese Atlantic-caught tuna in late April 1963 were tending toward the European market and away from the United States, due to a sharp drop in frozen tuna prices resulting from an unsettled market in the United States.

Due to the weakening of the export market, Japanese exporters are advocating that in order to maintain the frozen tuna export mar-

Japan (Contd.):

ket, it is necessary to develop new markets in Spain and Portugal to which exports of Atlantic tuna have been prohibited.

At present, only direct shipments of Japanese frozen tuna are permitted to be exported to Spain and only within the 2,000-ton annual quota which includes landings of Atlantic tuna at Las Palmas, Canary Islands. This regulation, however, according to the exporters, is not logical and sooner or later some revisions can be expected. Also, the exporters are of the opinion that if frozen tuna exports to the Spanish mainland are permitted, some 5,000 tons a year would easily be attained.

Tuna vessels operating in the Atlantic Ocean in April 1963 numbered 110, as compared with 68 in April 1962 and 65 in April 1961, which established a new record. Since a number of the carried-on-deck catcher-type boats are included in the 110 vessels, they have a catch capacity of more than 130 vessels.

The Atlantic tuna catch in April this year was stabilized and consisted of about 80 percent yellowfin. The vessels working some new fishing grounds reported good fishing for large-sized bluefin in that area.

With declining ratios of catch to export and increased distance to the fishing grounds, large-sized vessels (carried-on-deck catcher-type), of more than 1,000 tons, having a greater capacity to carry fuel oil, seem to be more successful in the Atlantic and this type of operation is increasing. (Suisan Tsushin, April 23, 1963.)

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ATLANTIC-CAUGHT FROZEN TUNA EXPORTS TO ITALY INCREASED:

A Japanese trade periodical reports that Japanese frozen tuna exporters, who have turned to the European market to offset the slow market for frozen tuna to the United States, have been supplying large quantities of tuna to Italy in recent months. Shipments of Atlantic-caught tuna totaling 19,000 metric tons were contracted for delivery to Italy during the three months of April (5,000 tons), May (9,000 tons), and June (5,000 tons). The periodical adds that such concentrated shipments may disrupt frozen tuna prices in the Italian market and possibly weaken export prices for other European countries.

Prices of frozen tuna contracted for shipment to Italy were quoted at $400 per metric ton, c.i.f. Italy, for albacore and yellowfin (dressed). (Nihon Suisan Shimbun, May 13, 1963.)

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EXPORT TARGETS FOR ATLANTIC-CAUGHT FROZEN TUNA REVISED:

The Japan Frozen Foods Exporters Association on May 29, 1963, held a meeting of its Atlantic Ocean Committee to discuss the problem of handling Atlantic-caught tuna. The Committee also discussed the frozen tuna producers' proposal of contracting tuna packing in the United States and storing the product in that country, but ruled out this idea as unfeasible due to strong objections reportedly raised by United States packers. Consequently, the Committee decided to recommend to the producers that all Atlantic-caught tuna produced in excess of supply requirements in the United States and European markets be shipped back to Japan.

Anticipated Exports of Japanese Atlantic Tuna During June-September 1963

Country of Destination	Estimated Quantity	Original Target
	(Short Tons)	
Italy	13,300	19,235
Yugoslavia	3,000	5,780
Las Palmas (Spanish poss.)	700	1,200
Spain and Portugal	1,200	1,890
Czechoslovakia and Tunisia	1,500	3,680
United States	3,500	7,250

At that meeting, the Committee members prepared an estimate of the quantities of Atlantic tuna expected to be contracted for export to the United States and to European countries during the months of June-September 1963, and on this basis, estimated the quantity of tuna that may possibly have to be brought back to Japan. The estimated export for this period, as shown above, were determined on the basis of export targets originally set by the exporting firms and on actual shipments delivered in the past. (Suisan Tsushin, May 31, 1963.)

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TUNA FISHERY TRENDS, APRIL-MAY 1963:

As a service to coastal fishermen, the Japanese Fisheries Agency's field station at the tuna port of Yaizu, Shizuoka Prefecture, publishes at five-day intervals a tuna fishing condition chart during the summer albacore fishing season. Included in that chart are the principal albacore and skipjack fishing grou

Japan (Contd.):

off Japan, sea surface temperature isotherms, length frequency histograms, and a summary of ocean and fishing conditions. Also included in that chart are daily landings and ex-vessel prices.

Data published by the Agency's Yaizu field station show that for the period April 26 to May 15, 1963, a total of 2,559 short tons of albacore and 1,656 short tons of skipjack was landed at Yaizu. Ex-vessel prices paid for albacore during that period ranged from a low of 115 yen per kilogram (US$290 per short ton) paid on April 18 to a high of 210 yen per kilogram ($529 per short ton) paid on May 8. For the five-day period May 11-15, ex-vessel albacore prices ranged generally from a low of 130 yen per kilogram ($328 per short ton) to a high of 150 yen per kilogram ($378 per short ton), although a small quantity (85 short tons) landed on May 15 brought 170 yen per kilogram ($428 per short ton).

Available data indicate that the Japanese summer albacore fishing vessels are concentrated mainly in the area bound by 30°-32° N. latitude and 139°-142° E. longitude. Fish in the southern latitudes within that area range in size from 20-40 pounds, while those in the more northerly latitudes range in size from 20-24 pounds. In addition, good catches of 15- to 20-pound albacore were reported close inshore in the vicinity of 33°3' N. latitude-137° E. longitude, 50 miles east southeast of Cape Shionomisaki, Wakayama Prefecture. The smaller Japanese albacore vessels were reported to be converging on that area. (Japanese Fisheries Agency Fishing Condition Charts.)

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TUNA PRODUCERS AND SALES ASSOCIATIONS CONSIDER CANNING TUNA IN U. S.:

To cope with the sluggish frozen tuna market in the United States as well as the possible end of any further frozen tuna sales to Italy and Yugoslavia until the summer months, the Japanese Frozen Tuna Producers Association and the Tuna Sales Company held a general meeting on May 21, 1963, to discuss measures to prevent further price declines. At this meeting, the president of one of the large Japanese fishing companies suggested the idea of either holding Atlantic-caught tuna in cold storage in Africa or packing Atlantic tuna in the United States under contract with a United States packer and stocking the production in that country.

The idea of packing and stocking tuna in the United States on a contract basis is rapidly gaining support among Japanese frozen tuna producers who foresee a prolonged depression in sales, which may take well over six months to recover. If this idea materializes, Atlantic-caught tuna would initially be used. Views are being expressed by the Japanese that the proposed United States packer should be one with packing facilities on the Atlantic seaboard. The question that arises is whether such an offer would be accepted by a United States packer. (Suisan Tsushin, May 22 and 24, 1963.)

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CRAB FACTORYSHIP FISHERY IN OLYUTORSK SEA CONSIDERED:

One of the large Japanese fishing companies is planning to produce 20,000 cases of canned crab from a fishing fleet expedition to the Olyutorsk Sea area (about 170° E. long. and 60° N. lat.). As soon as preparations are made, an application will be submitted to the Japanese Fisheries Agency. The company has its Yoko Maru fleet trawling off West Kamchatka and when it completes its operation in August 1963, the fleet will send the factoryship directly to the Olyutorsk Sea area to engage in crab fishing until October. There are possibilities that the Fisheries Agency will permit a crab fishing fleet in that area. If that should develop, the Yoko Maru fleet will be the first Japanese fleet to operate in that area since 1956. (Fisheries Economics News, April 24, 1963.)

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EXPERIMENTAL KING CRAB FISHERY IN KODIAK ISLAND AREA PLANNED:

Although the name of the mothership has not been determined by the Japanese fishing companies concerned, a test fishery for king crab in the southern part of the Gulf of Alaska is likely to be conducted jointly by a combination of three fishing companies this summer. The Japanese Fisheries Agency has given a preliminary notice regarding a formal license to those companies, and preparations were made for a fleet to sail on June 10, 1963. The license is said to be for 400 metric tons of frozen crab. Some observers doubt the success of this venture but others report the success of one of the joint firms' experiments

Japan (Contd.):

with crab pots in the Hokkaido and Hokuriku districts. The companies concerned with the venture believe that the quota of 400 tons is too small to meet payment of the operating costs--a 500-ton quota is considered more realistic as a minimum. (Japanese newspaper, April 19, 1963.)

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EXPORTS OF CANNED FISH TO PHILIPPINES MAY INCREASE:

The Philippines' decision to boycott the products of the Republic of South Africa is expected to be helpful to Japanese canners of sardine, mackerel-pike, horse-mackerel, and common mackerel. The Philippines import about 3 million cases of canned fish annually, 80 percent of which comes from the Republic of South Africa. Japanese canned products in the past have been subjected to pressure from those low-priced African products. If the Philippines refuse to import canned fish from South Africa, Japan will become the first supplier, and there is a possibility of exporting about 2 million cases of canned fish per year to the Philippines. (Suisan Tsushin, April 20, 1963.)

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EXPORT TARGETS FOR FISHERY PRODUCTS, FISCAL YEAR 1963:

The Japanese Government on May 14, 1963, called a meeting of the Supreme Export Trade Council, the highest Government-industry advisory group on export trade, to establish FY 1963 (April 1, 1963-March 31, 1964) export targets and to formulate export trade promotional measures. At this meeting, the Council established export targets totaling US$5,401 million for FY 1963. Export targets for fishery products were set at close to $328 million.

Export Targets Established for Fiscal Year 1963

Product	Value	
	FY 1963	FY 1962
	. . . (US$1,000) . . .	
Frozen fish and other marine products	1/139,514	1/124,927
Canned fishery products	160,333	171,147
Fish and whale oil	28,045	20,205
Total	327,892	316,279

1/Includes cultured pearls and dried fishery products.

The Council also agreed to add fresh tuna, frozen salmon, frozen herring, and frozen shrimp to the list of fishery products under export control.1/ (Shin Suisan Shimbun, M 20, 1963.)

1/Fishery products presently under export control are: canned tuna in brine, other canned tuna, frozen tuna, frozen swor fish, canned sardine, canned saury, fish-liver oil, agar-a (natural), agar-agar (industrial), canned crab, canned sa canned jack mackerel, and whale oil.

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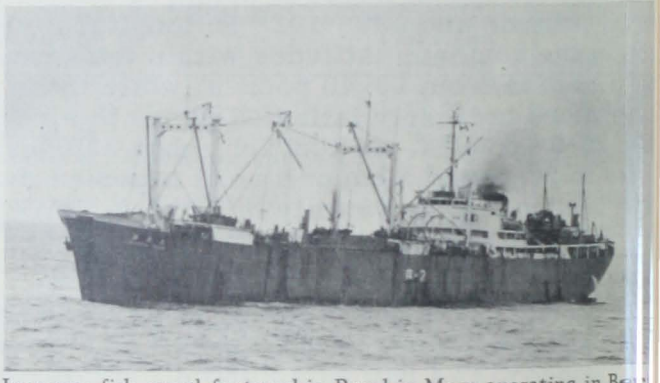
JOINT FISH-MEAL PROCESSING VENTURE IN CHILE CONSIDERED:

A Japanese fishing company is reporte planning to participate in a proposed joint fish-meal processing venture in Chile wit United States and Chilean interests. The Japanese firm's president was scheduled depart Japan for Chile on May 17, 1963, t discuss detailed arrangements with Chilea fish-meal processors and may conclude a agreement to conduct offshore meal opera tions in Chile if prospects are good. The Japanese firm, which terminated its fish-meal operations in the Eastern Bering Sea 1962, plans to operate its meal factoryshi Renshin Maru (14,094 gross tons) in the C ean offshore meal operations on a year-ro basis.



Japanese fish-meal factoryship Renshin Maru operating in Be Sea.

This firm is also reported to be negoti with Chilean fish-meal processors for the of its meal factoryship Kinyo Maru (9,373 gross tons). (Suisan Tsushin, May 2, 196

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FIRM PLANS JOINT FISH MEAL VENTURE IN PERU:

A Japanese export-import firm plans t embark on a joint fish-meal venture with Peruvian firm. Investment in this propos venture was recently approved by the Japa nese Overseas Investment Liaison Council so the Japanese firm is said to be proceed with plans to start operations in late 1963.

Japan (Contd.):

The joint company is to be established with a capital of US$140,000, of which the Japanese firm will contribute 65 percent, the Peruvian firm 30 percent, and a Peruvian legal advisor for the joint company 5 percent. The plant will be located in the outskirts of Lima and fish-meal processing machines of local manufacture will be set up in roofless buildings since it seldom rains in Lima. Two Japanese representatives will be sent to Peru to manage the joint enterprise and to handle marketing, while the Peruvian firm will supply raw material (anchoveta) to the plant as well as handle production.

Annual production is expected to total 20,000 metric tons of fish meal, worth about US$2 million, which will be exported to Europe and to the United States. None of the fish meal will be exported to Japan. (Suisan Keizai Shimbun, May 18, 1963.)

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FISH MEAL VENTURE OFF NORTH COAST PROPOSED:

The Japanese National Federation of Fisheries Cooperative Associations (ZENGYOREN) plans to conduct fish-meal operations off the coast of northern Japan in the fall of 1963. For this venture, the group has offered to charter the fish-meal factoryship Gyokuei Maru (12,100 gross tons). If the offer is accepted, plans call for the operation of the Gyokuei Maru for one month from October to November to process 20,000 metric tons of saury for fish meal.

The Japanese Fisheries Agency is reported to be supporting the plan since this venture would help adjust the supply and demand of saury in the Japanese domestic market. (Suisan Keizai Shimbun, May 21, 1963.)

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PLANS FOR NORTHWEST ATLANTIC TRAWLING PROJECT:

According to a Japanese periodical, the Japanese fishing company planning to convert the tuna mothership Taiyo Maru No. 3 to a stern trawler for fishing in the northwest Atlantic Ocean was due to apply for a fishing license.

Investigations conducted by two of the Japanese firm's experts on fishing grounds, marketing of the catch, and selection of an overseas base, plus a study of the Atlantic Ocean cod fishery have influenced the company to carry out the project. At present, plans call for establishing a base at Hamburg or Mechlen, West Germany. The firm anticipates a catch of about 20,000 tons in 2 or 3 voyages a year and hopes to export 6,000 tons of cod fillets to the United States annually.

The periodical also stated that the trawler Aoi Maru No. 2, now operating in the northwest Atlantic, is unsuitable for operations in that area. The Japanese firm making plans for the Taiyo Maru No. 3 believes that the trawling methods used by Japanese vessels fishing off the northwest coast of Africa are unsuitable for the deep waters of the northwest Atlantic. This firm is studying the methods used for deep-sea trawling. (Fisheries Economic News, April 22, 1963.)

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PLAN FOR NORTHWEST ATLANTIC TRAWLING PROJECT DELAYED:

The Japanese fishing company, which had planned to dispatch its large converted trawler Tenyo Maru No. 3 (3,500 gross tons) to the northwest Atlantic trawl fishing grounds off Greenland in early July 1963, is reported to have postponed the operation until early September. The company plans to send the vessel, which is being converted from a tuna mothership, to the eastern Bering Sea on fishing trials before dispatching her to the northwest Atlantic Ocean. (Suisan Keizai Shimbun, May 22, 1963.)

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ANOTHER LARGE TRAWLER TO FISH OFF SOUTH AFRICA:

The trawler Taiyo Maru No. 62 (1,481 gross tons) departed Japan on May 16, 1963, for the South African trawl fishing grounds. The trawler, which will be based at Cape Town, South Africa, will fish primarily for sea bream for about one and a half years, and is scheduled to return to Shomonoseki in August 1964.

The operators of Taiyo Maru No. 62 will have 10 trawlers operating on the African fishing grounds. (Minato Shimbun, May 17, 1963.)

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PRODUCTION AND FOREIGN TRADE IN MARINE OILS, 1962:

Japanese production of edible marine oils is expected to show a small decline in 1963 due to a drop in whale oil output.

Japan (Contd.):

Table 1 - Japanese Production of Edible Marine Oils, 1961-1963

Commodity	1/ 1963	1962	2/ 1961
	(Metric Tons)		
Cod-liver oil	9,000	8,500	6,743
Shark-liver oil	2,800	2,500	2,247
Other fish-liver oil	4,500	4,300	4,624
Fish oil	36,000	35,640	27,791
Whale oil	125,600	130,460	115,439
Total	177,900	181,400	156,844

1/Forecast.
2/Revised.

Imports accounted for only a small fraction of Japan's supply of marine oils in 1962.

Table 2 - Japanese Imports of Marine Oils, 1961-1962

Commodity and Country of Origin	1962	1961
	(Metric Tons)	
Edible Marine Oils:		
Whale oil:		
Ryukyu Islands	60	438
Shark-liver oil:		
Republic of China	110	97
Other countries	157	145
Total shark-liver oil	267	242
Cod-liver oil:		
Republic of Korea	83	143
Norway	-	14
Total cod-liver oil	83	157
Other fish-liver oil:		
Republic of Korea	18	73
Other countries	69	48
Total other fish-liver oil	87	121
Fish oil:		
Peru	30	-
Angola	640	-
Total fish oil	670	-
Total edible marine oils	1,167	958
Inedible Marine Oils:		
Sperm oil:		
Ryukyu Islands	-	4
Total edible & inedible marine oils	1,167	962

Japanese total exports of edible and inedible marine oils in 1962 were 18.4 percent greater than in 1961, with the gain due to a fourfold increase in shipments of inedible sperm oil. The United States was Japan's leading buyer of sperm oil. Edible whale oil

Table 3 - Japanese Exports of Marine Oils, 1961-1962

Commodity and Country of Destination	1962	1961
	(Metric Tons)	
Edible Marine Oils:		
Whale oil:		
Netherlands	44,644	74,534
United Kingdom	24,872	9,148
West Germany	16,325	6,096
United States	730	2,658
Sweden	3,302	5,080
Communist China	1,016	-
Republic of Korea	544	-
France	-	3,556
Philippines	6	-
Total whale oil	91,439	101,072

Table continued in next column.

Table 3 - Japanese Exports of Marine Oils, 1961-1962 (Contd.)

Commodity and Country of Destination	1962	1961
	(Metric Tons)	
Shark-liver oil:		
United States	47	9
Canada	48	-
Belgium	17	85
Other countries	28	21
Total shark-liver oil	110	115
Cod-liver oil:		
United States	744	661
Canada	139	9
Other countries	80	35
Total cod-liver oil	963	705
Other fish-liver oils:		
United States	334	692
France	106	137
Netherlands	120	87
United Kingdom	124	140
Sweden	126	36
Other countries	326	320
Total other fish-liver oils	1,136	1,412
Fish oil:		
United States	518	-
Other countries	152	193
Total fish oil	670	193
Total edible marine oils	94,318	103,497
Inedible Marine Oil:		
Sperm oil:		
United States	14,381	9,823
West Germany	8,407	-
Belgium	3,302	-
Netherlands	4,573	-
United Kingdom	9,779	-
Other countries	56	506
Total sperm oil	40,498	10,329
Total edible and inedible marine oils	134,816	113,826

continued to account for the bulk of Japan's marine oil shipments. The Netherlands was Japan's most important market for whale oil, followed by the United Kingdom and West Germany. (United States Embassy, Tokyo, April 23, 1963.)

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ACTIVITIES OF OVERSEAS FISHERIES ASSOCIATION FOR FY 1963:

The Japanese Overseas Fisheries Cooperative Association, a Government-sponsored organization, held a general meeting on May 27, 1963, to elect new directors and to discuss business plans for FY 1963 (April 1963-March 1964).

Principal activities of the Association are:

1. Preliminary review of foreign offers for joint fishing venture: Reviews offers for joint ventures received from foreign countries and refers proposals with good possibilities to Association members.

2. Technical assistance service: Reviews requests for technical assistance received

Japan (Contd.):

from foreign countries and dispatches qualified technicians to those countries. As one of the technical assistance projects to be undertaken this year, the Association will dispatch trawl fishery and refrigeration experts to Rumania.

3. Preliminary investigation for overseas investment: The Association is scheduled to conduct investigations in East Africa, primarily Tanganyika, Zanzibar, and Mozambique, with funds provided by the Overseas Investment Basic Research Fund. It plans to dispatch 5 or 6 investigators to those countries on a 40-day trip.

4. Consultant service: Organizes and dispatches qualified groups of consultants to foreign countries upon request by those countries. (Suisan Tsushin, May 28, 1963.)

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EXPORT OF FISHING VESSELS SUBJECT OF STUDY:

The Japanese Fisheries Agency has begun to review the policy governing exports and leases of Japanese fishing vessels to foreign countries. In the past several years, many foreign countries have sought to purchase Japanese fishing vessels. Several joint enterprises between Japanese and foreign firms have also been formed abroad with the result that more and more unlicensed Japanese fishing vessels are leaving Japan to engage in fishing activities in foreign countries. The Fisheries Agency foresees a situation in vessel exports which is likely to create a complicated relationship with Japanese fisheries. The study recently launched by the Agency is evoking much attention in view of the effect it would have on the future Government policy governing Japanese overseas fishing activities, particularly joint enterprises.

Exports of Japanese fishing vessels have rapidly increased in recent years, due to good Japanese shipbuilding technique and the growing desire among foreign fishing countries to expand their underdeveloped fisheries. In 1962, a total of 66 Japanese fishing vessels, consisting primarily of tuna vessels and trawlers, were exported principally to South Korea, Ryukyu Islands (Okinawa), Hong Kong, Ivory Coast, South Vietnam, and the Philippines. As of April 30, 1963, the Japanese Government had already approved the export of 27 fishing vessels.

Establishment of joint fishing ventures in Africa, southeast Asia, and South America, by leading Japanese fishing firms has been a notable trend, and this is likely to be accompanied by a parallel increase in the export or lease of Japanese fishing vessels. The Japanese Government holds that, while it agrees that exports and leases of Japanese fishing vessels are to be welcomed from the standpoint of trade liberalization, trade promotion, and assistance to under developed countries, an unregulated outflow of vessels from Japan could conceivably undermine the interests of the Japanese fishing industry. In other words, the Government feels that assistance in the development of foreign fisheries will serve to intensify competition in fishing and fish marketing activities and thus adversely affect the Japanese fisheries. Good examples of such possibilities are the export of 5 tuna vessels to South Korea in late 1962 and the proposed export of fish-meal factoryships to the Soviet Union.

Views held are that employment of Japanese fishing vessels at overseas joint companies will eventually create complicated problems. There would be no problem if those bases were operated primarily by Japanese firms with fishing vessels licensed by the Japanese Government, but the employment of unlicensed vessels at these bases conflicts with the vessel licensing system applicable to Japanese domestic fisheries. So far, the Japanese Government has been regulating vessel operations at overseas bases essentially by requiring employment of licensed vessels. Actually, there is no legal basis to enforce that regulation. In the export of fishing vessels, the related Government departments, such as the Ministry of Agriculture and Forestry, Ministry of International Trade and Industry, and the Ministry of Transportation, approve the application on an individual basis.

The study launched by the Fisheries Agency is expected to take several months since the problem of fishing vessel export involves broader problems of international diplomacy and economics. The Japanese fishing industry is closely watching this study which apparently is intended to establish some sort of regulation to control the export of fishing vessels to foreign countries. (Nihon Suisan Shimbun, May 13, 1963.)

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LICENSING OF TUNA MOTHERSHIPS WITH PORTABLE CATCHER-VESSELS UNDER STUDY:

The Japanese distant-water tuna vessel owners are reported to have submitted applications to the Fisheries Agency for permission to operate 69 distant-water fishing vessels over 100 gross tons as portable catcher-vessel tuna motherships. If the Agency approves the applications, it would mean that vessels under 400 tons gross would be used for that purpose.

Due to the hazards in using such small vessels for mothership-type operations, as well as the possibility that such vessels might exceed their authorized crew-carrying capacity since they would be carrying additional crew to man the portable vessels, the Fisheries Agency is said to be restudying current licensing requirements for mothership-type operations, with a view toward restricting size limits for portable vessels and motherships.

At present, there are in operation 25 portable catcher-vessel tuna motherships with a total of 77 portable vessels, and 12 semi-portable catcher-vessel motherships licensed in late 1962 and which are allowed to carry one portable vessel each. The smallest semi-portable catcher-vessel ship is 409 gross tons. Vessels carried by the smaller motherships are commonly referred to as "semi-portable vessels" since they are not carried on the deck but are suspended on the stern of the mothership. Normally, those vessels, upon departing from port, lower the portable vessel into the water and either tow it to the fishing grounds or the portable vessel travels to the fishing grounds under its own power.

Since the semi-portable vessel is said to have an operating efficiency equal to 80 percent of a regular tuna catcher vessel, operation of that type of vessel as a fishing vessel contradicts the Agency's vessel licensing policy whereby no new licenses are granted to fishing vessels entering the tuna fishery. Owners of regular portable catcher-vessel tuna motherships are said to be voicing criticism about the operation of semi-portable vessels, which they claim are taking advantage of a loophole in the law. The Fisheries Agency is reported to be aware of this situation, but is apparently faced with difficulties in determining the minimum size limits that would ensure safe operation of tuna motherships. (Shin Suisan Shimbun Sokuho, May 28, 1963.)

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Japan (Contd.):

SOVIETS CONTRACT TO PURCHASE FIVE TUNA FACTORYSHIPS:

The Soviet Union is reported to have signed a contract to purchase five 5,000-ton tuna factoryships from Japan. The contract, which was signed in Moscow between the Soviet Government agency and a Japanese shipbuilding company, is said to be the first purchase agreement concluded under the second Japan-Soviet trade agreement.

The 5 factoryships, to be equipped with freezing and processing facilities, are to be built at a total cost of 6.3 billion yen (US$17.5 million). Under the terms of the contract, the Soviet Union will initially advance 30 percent of the total purchase price and pay the balance in installments over a 5-year period at an interest rate of 4 percent per year. The first vessel is to be delivered to the Soviet Union within 13 months after the contract goes into effect, and the remaining 4 vessels at 3-month intervals thereafter. (Minato Shimbun, May 21; Nihon Keizai Shimbun, May 11, 1963.)

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USE OF MONOFILAMENT NETS INCREASES:

The Japanese mothership fishing fleets operating in the northern waters (Okhotsk Sea, Bering Sea, and the North Pacific Ocean) are said to be using more and more monofilament nets each year, due to the remarkable improvements being made in that type of gear. In 1962, the Japanese fleets reportedly fished with 40 percent monofilament nets, totaling approximately 22,000 "tans" (unit of Japanese gear approximately 150 feet long). This year about the same number of monofilament nets are being used. (Nihon Suisan Shimbun, May 17, 1963.)

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FISHING VESSELS ORDERED FROM JAPAN:

A Korean fishing firm is reported to have ordered eleven 130-ton fishing vessels from Japan through a Japanese trading firm. Negotiations for the vessel purchase were started in 1962, but due to difficulties in obtaining the necessary funds, the Korean firm was unable to conclude the purchase contract until recently. (Suisan Keizai Shimbun, May 3, 1963.)

Libya

SURVEY OF FISHERIES RECOMMENDS MODERN FLEET AND SHORE FACILITIES:

A fisheries expert, financed by Nationalist China, made a survey of Libyan fisheries during the latter months of 1962, and has completed a report which for the first time brings together data on the fishing industry. Following a summary of existing data on fishing areas, fish catch, prices, exports, number of vessels and ports, storage and transport facilities, the expert made 26 suggestions for reorganization of the Ministry of Industry Fisheries Department, improvement of fishing methods, equipment and types of vessels needed, marketing, storage and processing facilities, training, etc.

The final section of the report proposes the expert's own Five-Year Plan, based on a tentative Government of Libya outline. The plan calls for an increase in the annual fish catch from 2,500 to 15,000 tons, providing 3.3 percent of the protein needs of Libya's population. The 5-year cost would be LŁ1,100,000 (US$3,080,000) measured against an annual value of increased catch of LŁ300,000 ($3,640,000), making this a priority project in the over-all Plan from an economic point of view.

The expert's plan would include construction of 20 new vessels in the 30- to 50-ton class, replacing 30 obsolete small private vessels with 20 all-purpose craft, putting engines in 50 small coastal boats, improving the tuna fishery with modern methods and gear, and general improvement of fishing ports, boatyards, canning, refrigeration, and marketing facilities. There are also sections covering sponge and pond fish culture.

In 1958, a Food and Agriculture Organization (FAO) technician wrote a report on Libya's fisheries, and in 1959, a United States Fishery Advisor, made a brief survey of fishing in Cyrenaica. In 1961, a German marine biologist spent two months in Libya and made recommendations. Recently, an FAO fisheries advisor to the Ministry of Industry completed a summary of recommendations in these and the Chinese expert's reports. The Libyan Ministry of Industry is preparing to initiate some of the projects agreed upon. Germany has also provided $100,000 in fishing gear and one-year services of a fishing captain to train Libyans.

Libya (Contd.):

In May this year, the Ministry of Industry was seeking engineering services to design a fishing complex in Benghazi, including port, repair, freezing, processing, and marketing facilities in a single location, as a start on the then unapproved Five-Year Plan. (United States Agency for International Development, Tripoli, May 16, 1963.)

On May 20, 1963, Libyan newspapers reported that the Ministry of Industry had purchased a fishing boat to train Libyan fishermen, and that a fishermen's cooperative had been established in Sabratha and another would soon be established in Misurata. It was also reported that Libya would participate in a fish exhibition to be held in Italy during June 1963. (United States Embassy, Benghazi, May 31, 1963.)

Malaya

JOINT MALAYAN-JAPANESE TUNA COMPANY EXPANDING:

A tuna packing company located in Penang and jointly operated by Japanese and Malayan interests, is reported to have placed its operations on a profitable basis and to have started a program to expand its canning and freezing facilities. The company did not expect an immediate increase in its canned fish production quota for export to the United States. But since that quota has never been filled, there is room for expansion within existing limits. On the other hand, the management of the Penang tuna plant was optimistic over increasing their quota of frozen tuna for transshipment to the United States. (United States Consulate, Penang, May 1, 1963.)

Editor's Note: The jointly-operated firm originally was authorized to pack only canned tuna in oil for export to Europe. In December 1961, the Japanese Fisheries Agency authorized that company to annually export to the United States 36,000 cases of canned tuna in brine. However, due to the unprofitable nature of the operation, the Malayan cannery temporarily suspended packing tuna in brine until November 1962. In April 1962, the Fisheries Agency authorized a Japanese fishing company to land 6,000 short tons of fresh tuna at Penang for freezing and transshipment to the United States. At the same time, the Agency designated both Penang and Singapore as transshipment ports and authorized a combined frozen tuna transshipment quota of 4,000 tons for those two ports.

Note: See Commercial Fisheries Review, February 1963 p. 80.

Morocco

FISHERIES TRENDS, FIRST QUARTER 1963:

Moroccan fisheries during the first quarter of 1963 were seasonally slow. Commercial fishing for the canneries had about ended for the 1962/63 season, while catches for the fresh fish market were down because of heavier than usual winter storms.

The export trade in canned fish, however, set a new record, with exports of 2,185,000 cases by the end of the first nine months (ending February 1963) of the 1962/1963 season (June 1, 1962-May 31, 1963). Increases in exports of canned tuna were primarily responsible for this new record. Sardines also rose slightly to 1,692,000 cases from 1,677,000 cases. Increased exports to the Soviet Union, Cuba, and Czechoslovakia were responsible for the increase.

The Canners Association, meeting on March 22, 1963, in Rabat with the Government, forecast a production goal of 2,150,000 cases of canned sardines for the 1963/64 season beginning June 1, 1963, with a carryover of 250,000 cases from the previous season. The carryover is a considerable reduction from the season ending May 31, 1962.

The Association also recommended Government assistance in developing a tuna fishing fleet because it appears to offer the only possibility of expansion by the fishing industry. (United States Embassy, Rabat, May 17, 1963.)

Norway

ANTARCTIC WHALING SEASON FAILURE SPURS DEMAND FOR LOWER QUOTA:

The whale catch by Norway in the 1962/63 Antarctic pelagic whaling season was the poorest on record (1,380 blue whale units), only 32.8 percent of the Norwegian quota under the international agreement. The total yield was

Norway (Contd.):

183,345 barrels of whale oil and 41,300 barrels of sperm oil. Norway had only 4 expeditions in the Antarctic during the 1962/63 season as compared with 7 in the previous season.

There have been some predictions in the Norwegian press that with the catch so drastically reduced, Norway's once lucrative whaling industry may have to suspend operations entirely. However, Government sources indicate that to protect its existing investment, Norway will continue to send expeditions into the Antarctic and will probably accede to a lower quota agreement to prevent further depletion of the Antarctic whale stocks. Japan was the only whaling country that succeeded in filling its quota this past season.

A Norwegian delegation left on April 28, 1963, for international negotiations in Moscow on inspection of Antarctic whaling expeditions. Norway has been pressing for an inspection agreement, and the Soviet Union's sudden decision to reopen the negotiations is regarded as a promising indication that agreement on inspection may be in sight. Not having filled their own quota this past season, the Soviets may now find it to their advantage to make sure that the other participating countries are not exceeding their quotas. (United States Embassy, Oslo, April 30, 1963.)

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CANNED FISH EXPORT TRENDS, 1962 AND FIRST QUARTER 1963:

Smoked small sild sardines in oil was Norway's most important canned fish export in 1962, accounting for 40.4 percent of the quantity and 34.2 percent of the value of total exports of canned fishery products. Combined exports of smoked small sild sardines in oil, smoked brisling in oil and kippered herring accounted for 72.7 percent of the quantity and 70.4 percent of the value of Norway's exports of canned fishery products in 1962.

Exports to the United States accounted for 45.2 percent of the quantity and 49.9 percent of the value of Norway's total exports of canned fish in 1962.

Table 1 - Norwegian Exports of Canned Fishery Products by Type, January-December 1962

Product	December			Jan.-Dec.		
	Qty.	Value		Qty.	Value	
	Metric Tons	Kroner 1,000	US$ 1,000	Metric Tons	Kroner 1,000	US$ 1,000
Smoked brisling in oil	277	1,849	259	5,480	36,821	5,150
Smoked brisling in tomato	55	312	44	808	4,635	648
Smoked small sild in oil	692	2,906	406	12,185	52,300	7,315
Smoked small sild in tomato	44	157	22	1,157	4,102	574
Unsmoked small sild in oil	44	196	27	782	2,589	362
Unsmoked small sild in tomato	4	14	2	117	442	62
Kippered herring (Kippers)	186	772	108	4,242	18,362	2,568
Unsmoked herring in tomato	8	18	2	110	270	38
Mackerel	41	194	27	685	3,219	450
Roe, unclassified	19	82	11	1,232	4,476	625
Soft herring roe	10	45	6	797	3,413	477
Fish balls	36	87	12	572	1,515	212
Other canned fish	11	85	12	129	946	132
Shellfish	90	918	128	1,839	19,681	2,753
Total	1,517	7,635	1,066	30,135	152,771	21,366

Table 2 - Norwegian Exports of Canned Fishery Products 1/ by Country of Destination, January-December 1962

Country of Destination	December			Jan.-Dec.		
	Qty.	Value		Qty.	Value	
	Metric Tons	Kroner 1,000	US$ 1,000	Metric Tons	Kroner 1,000	US$ 1,000
Finland	2	13	2	143	881	123
Sweden	18	123	17	421	1,984	277
Belgium-Luxembourg	45	220	31	682	3,229	452
Ireland	27	86	12	314	1,137	159
France	24	103	14	398	1,616	226
Netherlands	24	107	15	195	844	118
United Kingdom	174	903	126	5,412	24,802	3,469
Czechoslovakia	13	39	5	770	2,552	357
West Germany	47	222	31	673	2,654	371
East Germany	-	-	-	1,478	5,072	709
South Africa Republic	214	877	123	1,112	4,647	650
Iraq	-	-	-	102	384	54
Canada	37	225	31	1,192	6,920	968
United States	547	2,903	406	13,234	68,765	9,617
Australia	201	826	116	1,746	7,106	994
New Zealand	40	165	23	251	1,022	143
Other Countries	79	323	45	1,105	4,279	598
Total 2/	1,492	7,135	997	29,228	137,894	19,285

1/Does not include exports of canned shellfish.
2/Totals are slightly larger than the combined exports of canned fish (excluding shellfish) shown in table 1.
Note: Norwegian kroner 7.15 equals US$1.00.

According to preliminary data for the first part of 1963, Norwegian exports of canned fishery products up to February 16 amounted to 3,063 metric tons, down 15.6 percent from the 3,628 tons shipped out during the same period of 1962. The decline was due mainly to a drop in exports of smoked small sild sardines and kippered herring, but it was offset partly by a modest increase in shipments of smoked brisling.

The 1963 Norwegian canning season for kippered herring which began around the first of March was disappointing. To March 16, only 70,862 cases had been packed as compared with a pack of 163,386 cases in the comparable period of the previous year. (Norwegian Canners Export Journal, April 1963.)

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INDUSTRY VIEWS ON EFTA TARIFF REDUCTIONS:

The President of the Norwegian Federation of Industries, in an address at the Federation's general meeting, took sharp issue with new proposals for reducing European Free Trade Association (EFTA) internal tariffs. In his opinion, it was wrong to concentrate efforts almost exclusively on liquidation of tariffs among the Outer Seven. Many other measures are required to make the EFTA cooperation effective, but the political will to take such steps is lacking.

The industry leader noted that Norway has been obliged to alter its timetable for tariff reductions 3 times since the EFTA agreement went into effect 3 years ago. Now, Norway

Norway (Contd.):

faced with the prospect of an entirely new and greatly accelerated schedule for the remainder of the transitional period. Most of the Norwegian home industries, which cater mainly to the domestic market, have vigorously protested any move to shorten the original timetable, and the Federation of Industries has repeatedly expressed its concern about the dangers involved for the Norwegian economy.

It is quite obvious, the Federation head declared, that large sections of Norwegian industry need more time to adjust their operations before they can benefit from the removal of customs barriers in the other EFTA countries. Too speedy elimination of tariffs, he asserted, would make it impossible to offset the loss suffered in the domestic market with gains from exports to other EFTA countries. (News of Norway, May 9, 1963.)

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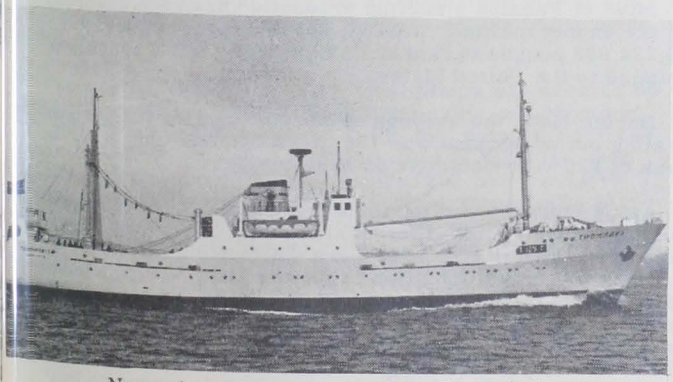
NEWEST STERN TRAWLER PLANS SHORT TRIPS:

Evidence that the Norwegian fisherman's reluctance to adopt trawl fishing has finally disappeared was seen recently when it was revealed that for 21 jobs available on Norway's latest stern trawler, the Tromsøy I, no fewer than 273 applications had been received.



Norway's newest stern trawler, Tromsøy I.

The new vessel will operate on the North Norwegian and Barents Sea grounds, landing at Tromsø to three fillet freezing plants, the owners of which are the main shareholders in the new vessel. The vessel is planned to make 6-10 day trips, but she has fuel capacity for 30 days' operation.

Her main dimensions are: length overall 190 feet (160 feet 9 inches between perpendiculars), breadth molded 32 feet 1 inch, depth molded to shelterdeck 20 feet 10 inches, depth molded to main deck 13 feet 5½ inches. The main hold has a capacity of 465 cubic meters, and on trials a speed of slightly more than 14 knots was attained.

The Tromsøy I's main engine is a supercharged Diesel, developing 1,250 hp. at 280 r.p.m., and directly coupled to a controllable pitch propeller. A direct current shaft generator with an output of 225 kilowatts at 330 volts drives the trawl winch. Two auxiliary Diesels, each developing 120 hp., are also part of the vessel's equipment.

The fish-processing equipment on the main deck includes an automatic fish-washing machine from which the fish is taken by conveyor to the fish hold. The fish hold may be cooled to minus 2° C. (28.4° F.)

The crew of 28 will be accommodated in the fo'c'sle and on the main deck. (World Fishing, March 1963.)

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PRODUCTION, SUPPLY, AND DISPOSITION OF MARINE OILS, 1961-63:

Norway's production of marine oils in 1963 is expected to be substantially below that of 1962 and will amount to less than half the 1961 production. The yield from the 1962/63 whaling season in the Antarctic was about 30,000 metric tons of whale oil--some 55,000 tons below the 1961/1962 season--and 12,000 tons of sperm oil--about the same as in the 1961/1962 season. The winter herring season, which in one year (1956) produced raw material for more than 100,000 tons of herring oil, this year yielded less than one day's catch in 1956, and only about 250 tons were delivered to the herring oil industry. The 1963 production of herring oil

Table 1 - Norway's Production of Marine Oils, 1961-1962, and Forecast for 1963

Items	Forecast 1963	1962	1961
	(Metric Tons)		
Cold cleared cod-liver oil	1/ 5,000	7,000	12,100
Other fish-liver oils	1/ 2,400	2,400	2,500
Herring oil	2/45,000	60,000	59,000
Total fish oils	52,400	69,400	73,600
Seal oil	2,700	2,800	2,400
Sperm oil:			
Antarctic	3/12,000	12,020	12,668
Shore stations	550	687	560
Total sperm oil	12,550	12,707	13,228
Whale oil:			
Antarctic	3/30,000	85,015	113,765
Shore stations	850	847	950
Total whale oil	30,850	85,862	114,715
Total marine oils	98,500	170,769	203,943

1/The main 1963 cod fishing season was ended by April with substantially smaller quantities landed than in 1962.
2/Depends largely on supplies of herring from Iceland in the summer of 1963; this figure is therefore very uncertain.
3/Final figures are not expected to show much variation from forecast.

Norway (Contd.):

will depend therefore to a large extent on raw material caught off the coast of Iceland during the summer.

Table 2 - Norway's Supply and Distribution of Crude Whale and Herring Oil, 1961-1962, and Forecast for 1963

Items	Forecast 1963	1962	1961
	(Metric Tons)		
Supply:			
Stocks, January 1	71,336	54,163	67,929
Production:			
Whale oil	31,000	85,864	114,715
Herring oil	45,000	60,000	59,000
Total production	76,000	145,864	173,715
Imports:			
Whale oil	-	1,674	79
Herring oil	-	51,858	33,677
Total imports	-	53,532	33,756
Total supply	-	253,559	275,400
Disposition:			
Exports:			
Whale oil	-	65,948	67,656
Herring oil	-	125	398
Total exports	-	66,073	68,054

The entire 1962/63 season for whale oil production has been sold at prices substantially above 1961/1962 prices. The last price reported (20,000 tons of whale oil) was £65 (US$182.00) as compared with £36 ($100.80) received for the last 5,000 tons of whale oil of the 1961/62 production sold in October 1962.

The supply and distribution of crude whale and herring oil in 1962 was about 8 percent below that for 1961. As of late April this year, Norway's stocks on hand as of January 1, 1963, plus an anticipated supply (exclusive of imports), will be only about 52.1 percent of the supply exclusive of imports available in 1962.

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SEMINAR ON FISHERY ECONOMICS HELD IN BERGEN:

A Research Seminar on Fishery Economics was held in Bergen, Norway, January 28-February 22, 1963, under the direction of the Institute of Fisheries Economics of the Norwegian School of Economics and Business Administration. The first week was devoted to the Role of Economics in Fisheries, the second to the Economy of the Fishing Enterprises, the third to Fish Processing and Marketing Economics, and the last week to Over-all Aspects and Research Projects. Attendance was intentionally limited, with the participants changing from week to week with the change in the major topics under discussion. Participants and lecturers were present from every segment of the fishing industry. Attendance averaged 30 or more at the various sessions. The countries represented, in addition to Norway, included West Germany, the Netherlands, the United Kingdom, France, Iceland, Denmark, Italy (FAO), and the United States. (Regional Fisheries Attache, United States Embassy, Copenhagen, May 15, 1963.)

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PROPOSED INCREASE IN SUBSIDIES TO COD AND HERRING FISHERIES:

The Norwegian Parliament has been asked to vote an additional Kr.20 million (US$2,797,000) for state subsidies to the Norwegian cod and herring fisheries. This would raise the total 1963 fisheries subsidy to Kr. million ($11,608,000). The proposal grew out of a recent agreement between the Government and the Fishermen's Union. (News of Norway, May 30, 1963.)

Panama

FISHERIES TRENDS, 1962:

Panama's commercial fishing industry continues to be devoted almost entirely to shrimp operations. There has been a decline in the size of Panama's fishing fleet, but more modern vessels and improved processing facilities resulted in a record shrimp catch in 1962 which was 9.8 percent greater than in the previous year. Pink shrimp landings were much heavier in 1962 due in large part to the activities of a new United States-French firm in Chiriqui Province. Intensive shrimp fishing was conducted along the entire Pacific Coast of Panama, with the possible exception of the Chiriqui region.

Most of Panama's shrimp production has been absorbed by the export market. In 1962, shrimp exports totaled 10,224,982 pounds valued at US$7,941,140, all of which was shipped to the United States.

During 1962, the average number of shrimp vessels operating out of Panama was 158, down considerably from the peak of 220 vessels active in 1959.

Aside from the shrimp industry, the fisheries of Panama have little commercial significance. Spiny lobster landings in Panama during 1962 were estimated at about 100,000 pounds. Panama's lone fish reduction plant, which is located at Puerto Caimito, produced 1,887 short tons of fish meal from thread herring and anchoveta in 1962, as compared with production of 1,371 tons in the previous year. There are as yet no fishing trawlers operating out of Panama. A certain amount of marketable fish is landed by Pan-

Panama's Shrimp Landings, 1/1960-1962

Year	Landings by Variety				Total Landings
	White	Pink	"Titi"	Tiger	All Species
	(1,000 Lbs.)				
1962	4,570.5	3,359.6	4,864.1	510.3	13,304
1961	4,624.9	2,585.6	4,444.4	461.0	12,115
1960	4,068.1	1,845.3	4,364.7	324.1	10,602

1/Heads-off weight.
Source: Department of Fisheries and Related Industries; Ministry of Agriculture, Commerce, and Industry; Republic of Panama.

Panama (Contd.):

ima's shrimp vessels, but such supplies are variable and ncertain.

In the provinces, efforts have been made to stimulate the se of the seemingly abundant fish resources of the Pacific oast. The United States Agency for International Develop- ent (AID) and the Cooperative for American Relief Every- here (CARE) have helped to establish a fishing cooperative t Farrillon. AID was to provide a cold-storage, freezing, d drying plant. CARE has provided a refrigerated truck d has helped the villagers to build 12 fishing dories. Out- oard motors for the boats were donated by a United States anufacturer. The project was designed to provide the cleus for a provincial fishing industry and to supplement e protein-deficient diet of the residents of the interior. nited States Embassy, Panama, May 3, 1963.)

te: See Commercial Fisheries Review, October 1960 p. 81, March 1960 p. 75.

Peru

INVESTMENT OPPORTUNITIES PRESENTED BY FISH MEAL INDUSTRY:

The growth of the fish-meal industry in Peru, particularly during the last six years, can only be described as spectacular. For this reason, the United States Embassy in Lima undertook a brief study of the needs of the industry for equipment and services; the present sources of those items; and how United States suppliers might capture a larger share of the market.

The results of the survey indicate there is a good demand for financial and service institutions to provide for the needs of the Peruvian fish-meal industry. Although the possibilities for increased United States exports of processing and other equipment is limited, considerable opportunity exists for increased private dollar investment in the industry itself. The fishing industry in Peru has stimulated the establishment and expansion of other industries producing equipment and supplies of all kinds for fisheries installations on land and sea. Except for marine motors and electronic equipment, practically all machines and equipment used for fishing operations and processing are being made in Peru.

Practically all Peruvian fish-meal plants are erected by local companies. Three of those companies, all substantially Peruvian-owned, have built the majority of the present installations. While most equipment is manufactured locally, there is an increasing demand for more modern equipment to process certain byproducts, principally stickwater (waste product from the pressing process) and blood. Specific opportunities for the sale of United States products to Peruvian fish meal plant suppliers include the following:

Equipment for Recovery of Protein from Stickwater and Blood: Increasing interest is developing for a more economical recovery of byproducts from fish meal plant operations. One United States company is now installing equipment to process stickwater. Additional opportunity exists in this field and the related field of recovering valuable fractions from the large quantity of blood lost in fish meal operations in Peru.

Electrical Motors and Pumps: At least one large builder of fish meal plants has expressed interest in entering into a licensing and joint venture agreement to produce small electrical motors and pumps for use in the fish meal and other industries in Peru. The company currently is dealing with European interests regarding this plan, but has expressed interest in discussing the project with American parties as well.

Controls and Gauges: At the present time, there is a complete lack of standardization of control mechanisms and gauges used in the industry. Opportunity exists for a manufacturer to study local conditions with a view to designing such equipment for new plants and to replace existing equipment in plants already in operation.

Surplus Equipment: Infrequent requests are made regarding the possibility of acquiring used fish meal equipment in the United States.

The construction of vessels for anchovy fishing is an important industry. During 1962, nearly 500 vessels were built, almost all purse seiners with an average capacity of 90-100 tons of fish. About 25 percent were of steel construction. Production in 1963 will be even higher and it is expected that the percentage of steel vessels will increase. Progressively larger vessels with increased range and speed are being built to help cut costs for fish-meal producers. Several groups have expressed interest in converting surplus LST's to factoryships and one group currently is negotiating in Japan for the construction of a large factoryship.

Vessel construction in Peru is accomplished in about 40 small yards, mostly located in the area of Callao. Marine hardware and motors are imported. The United States share of such equipment has been high and should remain so. English marine engines are favored by several of the larger boatyards.

About 70 percent of the vessels engaged in the fishing industry are privately-owned and operate under contract with various fish-meal plants. The remaining vessels are owned by the plants themselves and are operated in plant fleets. A recent law requiring all new plants to provide vessels adequate to meet individual plant needs will increase the number of vessels to be sold directly to fish-meal plant owners.

Among the potential opportunities for United States interests in supplying the needs of Peru's fishing fleet are:

(1) The sale of used United States purse seiners in the 200-ton category to fish-meal plant operators. In most instances, some arrangement for financing would be necessary.

(2) It is estimated that only 3 or 4 of the 40 boatyards now operating in Peru have competent engineering advisers. With growing emphasis on steel vessels of larger dimensions, the possibility exists for licensing arrangements and hiring of competent naval architects.

(3) The increasing size of fishing vessels will require the use of heavier and more powerful marine motors.

(4) With the construction of larger vessels, there will be more demand for mechanical equipment to handle nets, unloading, and other operations. This field conceivably could offer opportunity for a licensing or joint-venture operation.

(5) In 1962, over US$2 million were spent by the local industry in replacing Manila purse lines. Considerable opportunity exists for the sale of a satisfactory synthetic substitute (Manila lines have an estimated life of only 2-3 months). It is understood that at least one United States firm is now working on this problem.

Increased use of aircraft is being made by the industry to assist fishing operations. Since the majority of boats are owned by private operators and since many of the small companies are unable to afford the purchase of in-

Peru (Contd.):

dividual aircraft, some opportunity exists for the formation of companies to provide this service to the industry on a contract basis. Outright sale of aircraft also is feasible, although the market is not a large one.

In addition to the licensing and joint venture proposals outlined above, continuing opportunity exists for investment and joint-venture opportunities in the fish-meal industry itself.

Philippine Republic

FISHERIES EXPANSION PROJECTS:

A bill creating a Fisheries Commission to absorb the Bureau of Fisheries was signed by the President of the Philippines in March 1963. The new law also provided for the establishment of a central fish market as well as regional piers for the distribution and marketing of fish. In addition, it gave policing powers to the Fisheries Commission. Enforcement of fisheries regulations was previously divided between the Bureau of Customs, the Navy, and the Philippine Constabulary.

The Philippine Emergency Employment Administration and the Fisheries Commission have started a P15 million (about US$3.8 million at the free rate of exchange) project which calls for the construction of 16 fishing ports, 13 refrigeration plants, 51 fresh-water fish farms, and 20 brackish-water fish nurseries. The project also involves the training of fishermen. The EEA has also allotted P50,000 ($12,788) for the development of oyster farms in Sorsogon Province. (United States Embassy, Manila, May 17, 1963.)

On April 28, 1963, the United States Agency for International Development (AID) announced it had approved a local currency "Cooley" loan to help establish a fish cannery in the Philippines. The loan to a new company owned jointly by United States and Philippine interests amounted to P 5,500,000 ($1,410,000).

The cannery, which will be built in San Jose, Mindoro, will employ from 250 to 350 shore workers and 400 to 500 fishermen. Expected to be completed in early 1964, the cannery will be equipped for annual production of about 1,250,000 cases of fish--mainly sardines, mackerel, and anchovies. The new plant will also produce fish meal.

A representative of AID stated that a particular need exists for this type of development in the Philippines since the fishing industry has been falling far short of meeting the potential consumption of the country's growing population. The new plant will increase the Philippine fish-canning capacity by about 150 percent. The loan will carry an annual interest rate of 7½ percent and will be repaid in Philippine pesos in 10 years, including an 18-month grace period. This is the first "Cooley" loan that AID has negotiated in the Philippines. (United States Agency for International Development, April 28, 1963.)

Note: See Commercial Fisheries Review, February 1963 p. 85, January 1963 p. 112.

Poland

LANDINGS BY DISTANT-WATER FLEET HIGHER DURING JANUARY-APRIL 1963:

Landings by the Polish distant-water fleet are reported to be improving following discouraging landings in 1962. Landings during the first 4 months of this year were about 31 percent higher than for the same period in 1962, and results in May were termed generally favorable. The most important distant-water fishing is during the July-October period. However, it was admitted that repairs and other preparations for this peak period are badly behind schedule.

During the discussion preceding passage by the Polish Sejm of a new law on sea fishing, the lack of development and the resulting minor role of fish in the total food supply and as a source of protein in livestock feed were cited. (Trybuna Ludu, May 21, 22, and 23, 1963.)

Note: See Commercial Fisheries Review, May 1963 p. 83.

Portugal

REJECTION OF CANNED SARDINES BY ITALY AND WEST GERMANY SUBJECT OF INQUIRY:

The Portuguese Minister of Economy on April 25, 1963, ordered a full inquiry into the causes of the rejection of Portuguese canned sardines by West Germany and Italy.

In connection with the problem, the Matosinhos branch of the Portuguese Guild of the Industry of Fish Canning sent a telegram to the Minister of Economy asking that it be

Portugal (Contd.):

heard during the investigation as it had suffered most from the rejection of canned fish. (United States Embassy, Lisbon, May 10, 1963.)

Singapore

FISHERMEN PROTEST FISHERIES EXPANSION POLICY:

On April 19, 1963, the Marine Products Workers' Union charged that the livelihood of 5,000 Singapore fishermen was endangered because the Government was permitting Formosan fishing vessels to sell their catches in Singapore.

In rebuttal, the Government said that Singapore-based fishermen supplied only 25 percent of the 40,000 metric tons of fish landed in Singapore each year. Because of the need to increase the supply of fish, improve fishing techniques, and expand fishing areas, local fishing companies with Government support had undertaken to improve methods, equipment, and techniques with the help of experts from Hong Kong, and Taiwan. The Taiwanese vessel referred to by the Union had been exploring the fishing grounds in international waters in Singapore's behalf. The vessel had on board some 60 tons of fish, but landed only 25 tons to test consumer preference. Since more fish were needed and Singapore fishermen did not supply them, the Union had no basis for complaint. (United States Consul, Singapore, April 26, 1963.)

South Africa Republic

PILCHARD-MAASBANKER FISHERY, JANUARY 1963:

The fish catch off the Cape west coast of South Africa Republic in January 1963 was 44,611 short tons of pilchards, 165 tons maasbanker, and 4,278 tons mackerel. The total catch was 49,054 short tons. This compares with 64,388 tons of pilchards, 1,216 tons maasbanker, and 6,046 tons mackerel landed in January last year; and with 69,879 tons of pilchards, 6,745 tons maasbanker, and 3,821 tons mackerel in January 1961.

The January 1963 catch yielded 11,487 short tons of fish meal, 587,726 Imperial gallons of fish body oil, 279,864 pounds of canned pilchards, and 905,280 pounds of canned mackerel.

The January 1962 catch yielded 16,163 short tons of fish meal, 967,432 Imperial gallons of fish body oil, 1,052,448 pounds canned pilchards, 585,168 pounds canned maasbanker, and 1,776,264 pounds canned mackerel. (The South African Shipping News and Fishing Industry Review, March 1963.)

South-West Africa

CANNED FISH MARKETING TRENDS, MAY 1963:

Walvis Bay fish-canning plants ended the 1962 season with an inventory of about 2 million cases of canned fish. In addition, marketing problems in 1963 will be compounded by the decision of the Philippine Government to bar the sale of canned fish produced in South-West Africa. One of the six firms processing fish in the Walvis Bay area, in order to boost exports, plans to pack a new product--quick frozen, boneless pilchard fillets. (United States Consul, Capetown, May 7, 1963.)

Surinam

FOREIGN TRADE IN FISHERY PRODUCTS, 1961-1962:

Imports: Surinam's total imports of fishery products were valued at US$776,000 in 1962 and $617,000 in 1961.

Exports: Shrimp is Surinam's only important fishery export item. In 1962, Surinam exported 486 metric tons of shrimp valued at $629,000, up sharply from 1961 when 216 tons of shrimp valued at $233,000 were exported. The United States is the principal buyer of shrimp from Surinam. (United States Consulate, Paramaribo, May 11, 1963.)

Notes: (1) Surinam guilder 1.87 equals US$1.00.
(2) See Commercial Fisheries Review, May 1962 p. 70.

Togo

FISHERIES TRENDS, 1962:

The only significant development in the Togolese fishing industry was the recent ar-

Togo (Contd.):

rival of a United States Peace Corps fishing team of 7 volunteers. With a lack of adequate facilities for docking and maintenance of vessels, it is difficult for the Togolese fishing industry to operate motor trawlers to compete with Soviet, Italian, and Ghanaian trawlers operating off the West African coast. The Societe Togolaise des Pecheries Maritimes did operate three chartered Italian trawlers out of Lome in 1958-60, but in 1961 based the vessels in the Ivory Coast port of Abidjan because of difficulties in operating trawlers off Togo without a harbor.

The Government of West Germany is reported to be ready to give aid funds for the purchase of two 35-38 foot vessels as well as to provide experts in the catching and preserving of fish. (United States Embassy, Lome, May 10, 1963.)

U.S.S.R.

FISHERIES TRENDS, MARCH-APRIL 1963:

Soviet Fleet in North Pacific and Bering Sea: It was estimated that in late April 1963, a total of 180 to 200 fishing vessels were operating in the Bering Sea and North Pacific Ocean, including the Gulf of Alaska. Of that number, it was estimated that 130 to 140 craft were in the Gulf of Alaska. This was the largest Soviet fishing effort ever reported in the Gulf of Alaska.

Soviet Far Eastern Fishery Catch, January-March 1963: Soviet Far Eastern fishermen caught over 220,000 metric tons of fish and shellfish in the first quarter of 1963, an increase of 7 percent over their catch for the same period in 1962. The gain was made in spite of unusually severe winter weather and heavy ice conditions which hampered offshore and Bering Sea operations.

Soviets Expanding Northwest Atlantic Fisheries: The Soviet Union is making a major effort to develop new fishing grounds in Davis Strait, which is west of Greenland, and off the Labrador coast. Three large refrigerated factory trawlers and two research vessels operated in the area in February and March 1963.

Soviet Tuna Research in Indian Ocean: In mid-April 1963, the Fifth Soviet Tuna Research Expedition returned to Vladivostok from four months of exploration off the Cha g Archipelago in the western Indian Ocean. So viet vessels were expected to begin comme r cial fishing operations in that area this sum mer for tuna, mackerel, and swordfish. (So viet press and unpublished sources.)

United Kingdom

DISTANT-WATER TRAWLING GROUP PROPOSES RESTRICTION ON LANDINGS AND IMPORTS:

The British Trawlers' Federation (the di tant-water section of the fishing industry) ha asked the Government to consider a plan fo restrictions on British-caught and imports o foreign-caught fish which would allow the price of fish at the "quay-side" to rise to "more economic levels."

The essence of the plan is that landings i Britain of British-caught and imported fish supplies should be limited to about 750,000 short tons, compared with average landings of just over 775,000 tons in the years 1960-6

The president of the Federation said in London on May 9 that the Federation would agree to the introduction of a statutory sche for achieving this coordination of landings from British trawlers over 80-foot long if:

(1) The proportion of total supplies provided by imports should not in the future b allowed to rise more than 2.1 percent from the present average of 17.9 percent. In effect, they should not exceed 20 percent of to tal supplies, or 150,000 tons at present.

(2) Landings from British vessels of less than 80-foot length should be held to about their present proportion of British-caught supplies. Ships of this size, in fact, are inshore or near-water vessels.

A statutory plan would be administered b a Fish Supplies Board consisting of membe appointed by the trawling industry in Englan Wales, and Scotland, the unions, the Britis White Fish Authority, and the Ministry of Agriculture, Fisheries and Food.

Also, it is suggested, a system of bonus on scrapping would be introduced for a limi period (a year to 18 months) in order to ra tionalize capacity, together with a system o

United Kingdom (Contd.):

vessel licensing and statutory minimum prices to support the plan.

In a memorandum presented on May 8 to members of the Joint Parliamentary Fisheries Committees at the House of Commons, the Federation says that "first-hand" prices of fish in 1962 were lower than those in 1960, despite the unchanged level of supplies and, as a result, the incomes of producers fell by £2½ million (US$7 million) in the face of a continued rise in costs.

"Over the same period the retail prices of fish went on rising so that the consumer did not obtain the benefit of the fall in first-hand prices," the memoradum stated.

Inadequate ex-vessel prices, the memorandum said, "are a feature of all producing sections of the white fish industry in the United Kingdom and, indeed, of all fishing industries in Western Europe." The French industry perhaps provided an exception but only because imports were stringently restricted to ensure a very high price level.

At a press conference on May 8, the Federation's President said a rise in "first hand" prices of 1d. per pound (about 1.17 U. S. cents a pound) at the most would be all that was needed "to see us out of the red." The cost to the consumer of the proposals, he suggested, could not be more than 1s. 6d (about 21 U. S. cents) per head per annum.

Answering questions about the possible effect of restricted entry of fish to the United Kingdom market on prices in the retail fish stores he added, however, "We cannot speak for the retail end." He revealed also that inshore fishermen "because they were difficult to contact" had not been consulted about the scheme.

The Parliamentary Committees were told on May 8 that, in the context of the forthcoming European fishery conference which is being suggested for this autumn by the British Government, "trade in fish should be examined as a counterpart to fishing rights and expanded outlets provided, within a regulated framework, for participants to any agreements reached."

At the May 8 press conference there was noticeable surprise among members of the Federation team at a suggestion from one of its members that fish caught and frozen at sea could be landed in Britain over and above the 750,000-ton limit. (United States Embassy, London, May 10, 1963.)

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INTENTION TO WITHDRAW FROM CERTAIN INTERNATIONAL FISHERY AGREEMENTS ANNOUNCED:

In order to regain its freedom of action regarding the extent of fishing limits, the British Government gave notice on April 26, 1963, of its intention to withdraw from the following international fishery agreements: (1) The North Sea Fisheries Convention of 1882 (withdrawal effective May 15, 1964); (2) The Fisheries Regulations of 1843, made under the Anglo-French Convention of 1839 (withdrawal effective June 24, 1964). The decision was announced in the House of Commons on April 29, 1963, by the Lord Privy Seal.

At the same time, the British Government invited those countries concerned with the Northeastern Atlantic area (members of the European Free Trade Association and the European Economic Community as well as Iceland, the Irish Republic, and Spain) to a conference in the fall of 1963. The conference will be asked to consider questions of trade in fish and access to fishing grounds. It was hoped that the proposed conference can arrive at an equitable settlement on an international basis which will take into account the interests of all sections of the fishing industry. During the discussions, the interests of Commonwealth countries will be borne in mind by Britain and they will be consulted when they are affected.

Fishing limits have been a difficult problem in Britain for some time. At the United Nations Conference on the Law of the Sea which was held in Geneva during 1960, Britain supported the unsuccessful proposal to extend territorial waters up to 6 miles and fishing limits up to 12 miles, with nations which had historically fished in individual areas being allowed to fish up to the 6-mile limit. Britain later signed an agreement with Denmark applying this formula in Faroese waters.

In 1961, an agreement was concluded with Iceland whereby Britain recognized a 12-mile fishing zone around Iceland. For a transitional period of 3 years, the Icelandic Government agreed to allow British vessels to fish in the greater part of the zone between 6 and 12 miles off Iceland at certain seasons of the year.

The Soviet Union terminated in March 1962 the Anglo-Soviet Fisheries Agreement which had enabled British trawlers to fish up to three miles off the Soviet coast in certain areas of the Barents Sea. During 1961, after the Anglo-Norwegian Fishery Agreement, Norwegian fishery limits were extended from 4 to 6 miles, while in 4 limited areas within the 6-12 mile zone, foreign trawling was prohibited during certain periods. By 1970, British trawlers will have to observe a 12-mile fishing limit around Norway. In addition, Denmark is planning to extend the fishing limits around the Faroe Islands from 6 to 12 miles. Those changes mean the exclusion of the British distant-water fleet and also some middle-water vessels from areas they have fished for many years. The British fishermen's unions have threatened to ban landings from Faroese trawlers in Britain if Faroese fishing limits are extended.

On the other hand, large numbers of Russian and Polish factory-trawlers are said to fish constantly off the Scottish coast, particularly for herring. French and Belgian vessels are reported to be fishing for shellfish in the English Channel to the detriment of British inshore fishermen. Moreover, it is claimed that foreign vessels do not respect the net mesh sizes agreed on under the Fisheries Convention of 1946.

United Kingdom (Contd.):

In the light of those difficulties, the Government announcement was warmly welcomed by the press and British inshore fishermen. But some British distant-water fishermen expressed a concern that any unilateral action by Britain might imperil the chances of a satisfactory international agreement.(United States Embassy, London, May 4, 1963.)

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NEW OCEANOGRAPHIC RESEARCH VESSEL LEAVES FOR INDIAN OCEAN:

The newest British oceanographic research vessel, the Discovery, owned by the National Institute of Oceanography, ran trials in March this year. The vessel, 261 feet long over-all and of 3,000 tons displacement, was due to leave England in mid-May to participate in the International Indian Ocean Expedition.

Built in Aberdeen, Scotland, the vessel is powered by Diesel electric engines, has eight air-conditioned laboratories, and ice-strengthened hull. She carries equipment for biologists, chemists, bacteriologists, photographers, and electronic engineers. (South African Shipping News and Fishing Industry Review, March 1963.)

* * * * *

SMALL STERN TRAWLER DESIGNED FOR USE IN TROPICS:

A British shipyard has prepared plans for an advanced type of small stern trawler. It is designed to set and retrieve its otter trawl with the aid of a hydraulic stern gantry and to freeze its catch into 70-75 pound blocks which would be held in a refrigerated hold.

The proposed vessel is intended for use in tropical waters, and the pitch pine on oak hull would be "Cascover" resin sheathed against marine borers, the fishroom insulated, and the electrical systems protected against damage in tropical climates.

The deck arrangement would include metal-sheathed stern ramp, a hydraulic trawl winch, hydraulically-operated stern gantry and a light alloy wheelhouse located forward. This would also contain the accommodation for the skipper. Main propulsion would be by a 160 b.hp. Diesel at 900 r.p.m. and driving a fixed or controllable pitch propeller through a 2:1 reduction gear. Also in the engine-room would be the two refrigeration compressors, driven by a 20-hp. and 12½-hp. Diesels. A 4½-kw. generator set would charge the ship's 24-volt batteries and also drive the bilge pump.

The freezer would be a 6-station plate freezer, loading at the top and discharging at the side, and would produce fish blocks of 70-75 pounds and have a capacity of 2,520 pounds of dressed fish, every 24 hours. The fish-room would have a capacity of about 750 cubic feet and would be held at 20 degrees F. (-7 degrees C.).

Accommodations for a crew of four are forward, with galley in the deckhouse. Aft would be two 500-gallon fuel tanks and fresh water capacity would be 200 gallons. A 6-man life raft would be fitted, and radiotelephone and radar provided if required.

Dimensions of the vessel would be: length over-all, 55 feet; length water line, 52 feet 9 inches; beam moulded, 16 feet; depth moulded, 8 feet; draft 5 feet 9 inches; and speed, 9 knots. (World Fishing, April 1963.)

Venezuela

TUNA FISHING BASE FOR JAPANESE VESSELS PLANNED:

According to information received by the Japanese Foreign Ministry, the Venezuelan Government is planning to establish a fishing base in an attempt to attract Japanese fishing vessels operating in the Atlantic Ocean or to invite Japanese participation in a joint fishing venture. This plan is based on the Venezuela Government's policy of expanding that country's tuna fishery by employing efficient Japanese fishing techniques. (Suisan Keizai Shimbun, May 8, 1963.)

Viet-Nam

LANDINGS OF FISHERY PRODUCTS SLIGHTLY HIGHER IN 1962:

Landings of fishery products in Viet-Nam during 1962 amounted to 255,000 metric tons as compared with 250,000 tons in 1961. The Fisheries Directorate attributes the slight increase in landings to the fact that the motorized fleet added only 100 units in 1962, bringing the total number of motorized junks up to 3,600. For the 1959-61 period, landings and

Viet-Nam (Contd.):

motorization of the fleet had proceeded at a much higher rate.

Exports of fishery products in 1962 earned about US$500,000 and exceeded imports for the second consecutive year, but still represented only about 0.3 percent of the total landings. Exports of fresh and frozen shrimp accounted for most of the increase in 1962. Future prospects are for adequate supplies for local consumption and increased exports. (United States Embassy, Saigon, May 2, 1963.)

COMMON NAMES OF FISH

Comments published by the Missouri Conservation Commission on January 14, 1963, illustrate some of the problems associated with common names of fish. The Missouri Conservation Commission reclassified a fish called Pilodictis as a game fish on January 1 and set the limits on this fish at 5 daily and 10 in possession. So far, there was no quarrel. But to make the matter clear to fishermen, the commission wrote into the regulation certain common names for old Pilodictis, and there is nothing that will start a problem among anglers quicker than common names of fish.

"Pilodictis, incidentally, is what is commonly called flathead catfish. Of course, some places it might be known as goujon, yellow cat, or river cat, unless it is called mudcat. That is, where the mudcat is not a bullhead, as it is in many places. . . .

"This is not the first time common names have wrought confusion in fishing regulations and elsewhere. . . . Take channel catfish, for instance. Everybody knows what a channel cat is--maybe. Other common names for Ictalurus (depending mostly on geography) are blue cat, Fulton cat, white cat, fiddler cat and forktail. The confusion arises because many people think they are speaking of different species when they mention those common names.

"Or take the walleye. Often called walleyed pike, it is not a pike at all. It is really a perch, but certainly not a walleyed perch. And if it is a perch, it cannot be a jack salmon or any other kind of salmon. Some call it sauger, but to avoid confusion others refer to saugers as sand pike. We could call it by its proper name, Stizostedion, but who can pronounce it? . . .

"For some reason, rainbow trout have not adopted this confusing array of aliases. That is, unless you consider that steelheads and Kamloops are essentially the same fish. Cypress trout, on the other hand, are nothing at all like rainbows. These fish are also known as lake lawyers, cotton fish, scaled ling, dogfish, mudfish, grindle, and bowfin."