



International

FOOD AND AGRICULTURE ORGANIZATION

34TH SESSION OF COUNCIL ENDS:

The 34th Session of the Council of the Food and Agriculture Organization which ended early in November 1960 welcomed "with gratification" the resolution adopted by the United Nations General Assembly on provision of food surpluses to food-deficient peoples through the United Nations system.



The Council in its fortnight's session considered, among other subjects, matters relating to the Freedom from Hunger Campaign, the world food and agricultural situation, and the expanded technical assistance program. The Council urged all member governments which had not already established national committees for the Freedom from Hunger Campaign to set up committees broadly representative of all organizations and bodies essential to the proper direction and coordination of national activities for the campaign. About the campaign costs the Council said, "various types of fund raising schemes were being considered in different countries . . . and urged member governments to make such national contributions as soon and as generously as possible, particularly in view of the need for getting the campaign fully established."

In its view of the world food and agriculture situation the Council noted that world agricultural production was estimated to have increased by about 2 percent in 1959/60, an increase "slightly in excess of U. N. estimates of the annual rate of growth of the world's population. A further increase in production was probable in 1960/61, although its magnitude could not yet be estimated." The Council expressed its concern over the fact "that progress in per caput supplies of

foodstuffs, after allowing for exports, imports, changes in stocks and nonfood uses, had been slow during the past decade." The Council's report said "the prices and terms of trade for agricultural products as a whole in world trade had continued to decline in 1959 . . . (and) noted with regret that in 1960 they appeared so far to have varied little from the average level of 1959, and that there was little prospect of any real improvement in 1960/61." The Council also reiterated its concern at the adverse effects of the worsening in the last few years in the ratio of prices of some agricultural products and at the slow growth of markets for agricultural exports to industrial countries.

The Council reviewed the Expanded Technical Assistance Program of FAO and said "the increased resources available for ETAP in 1961 and the growing work by the Organization for the U. N. Special Fund, as well as urgent needs for technical assistance in the newly independent countries of the African continent, would result in a sharp increase of recruitment for experts."

The Council recommended to the FAO Conference "that one more member may be added to the Council's strength of 25 and proposed that the 26th seat should go to the African region in view of the growing number of independent states emerging in the African continent."

The Council also considered matters relating to the budget, constitution, and organization of FAO. It recommended an increase of \$5,700,000 in the budget for the 1962/63 biennium.

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JOINT POLICY COMMITTEE ON OCEANOGRAPHY RECOMMENDED AT 34TH SESSION OF COUNCIL:

The Food and Agriculture Organization (FAO) Council at its 34th Session in the fall of 1960 considered that FAO, in virtue of its

International (Contd.):

being charged with international responsibility in the field of fisheries, had a proper and substantial interest in oceanographic research and its application to fisheries, and felt that it was necessary that adequate machinery should exist to coordinate work in this field, since other International Organizations and Agencies also were concerned with it. Of these Agencies the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and FAO were those primarily and generally concerned, but others also had a considerable, but more specific interest in the matter. The Council further noted that sometimes extensive programs of oceanographic research were being carried out by governments, many of them acting in concert within the framework of regional fishery organizations, such as FAO Fisheries Council and other intergovernmental commissions.

The Council noted with satisfaction the recent decision of the Administrative Committee on Coordination to establish a subcommittee on oceanography, and hoped that this would prove an adequate instrument for coordination of secretariat activities of all the U. N. agencies concerned. The Council considered, however, that at the governmental level and with regard to policy questions effective coordination between FAO and UNESCO was needed, since only these two Organizations have wide responsibilities over much of the whole field of oceanography, and in particular are both concerned with biological as well as with physical and chemical aspects. In this connection the Council was informed that the Inter-Governmental Conference on Oceanographic Research convened by UNESCO in July 1960, had recommended to the General Conference of UNESCO the setting up of an Inter-Governmental Oceanographic Commission to be serviced by an Office of Oceanography to be established by the Director-General of UNESCO, with a director and necessary personnel and with the provision that members of the staff of FAO and other Organizations may be added to this personnel by agreement with these Organizations. The Council did not consider that such an arrangement would fulfill the need for coordination at Government level outlined above. It would moreover present considerable administrative difficulties. The Council therefore decided to recommend that FAO and

UNESCO should follow a procedure successfully adopted in the relations between FAO on the one hand, and UNICEF on the other, namely to set up a Joint Policy Committee of the two Organizations. General provision for such Joint Policy Committees consisting of an equal number of representatives of each Organization already exists in the Agreement between FAO and UNESCO of 1948. The Council accordingly adopted a resolution to implement this recommendation.

Some Council members indicated that their governments had not yet fully considered the question of coordination of oceanographic activities, but in view of the urgency of this matter the Council hoped that these governments would find it possible to define their policy in this matter before the UNESCO General Conference. (United States Embassy in Rome, November 3, 1960.)

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TRAINING PERSONNEL AND ATTRACTING CAPITAL FOR FISHERIES DISCUSSED AT MEETING:

Suggestions for means to attract capital for developing fishery industries and for training personnel to administer credit schemes were advanced at a Food and Agriculture Organization (FAO)-sponsored technical meeting on Credit for Fishery Industries held in Paris in the fall of 1960. Participants represented 31 nations.

The agenda was divided into discussions on objectives of credit policy in developed and developing countries and their implications for the general character of credit assistance; on organizational and operational aspects of fisheries credit schemes; and on coordination, review, and appraisal of credit policies. The special problems of developing countries were discussed separately from those of developed countries.

It soon became apparent from the discussions that policy objectives and the form and structure of credit facilities were closely related to the general state of a country's economic development. The state of evolution of administrative services, in particular their degree of independence from political influence, and personnel policies pursued, were also important. In countries still in the process of developing their economies and their fishery industries, needs are, on the one hand, financial and on the other, educational.

International (Contd.):

Since capital needs could not, under conditions prevailing in most developing countries, be covered from domestic sources, methods of raising capital abroad have to be given careful attention. Participants at the meeting stressed the desirability of interesting international banking institutions in extending credit for fishery development, and in creating conditions within the country which would make investment more attractive. For the latter purpose it was necessary to improve infra-structures and to give private foreign capital an inducement to invest, possibly through tax exemption or reduction and other fiscal devices.

FAO was invited to assist in the task of providing capital by preparing studies of investment opportunities in fisheries in developing countries and studies on development prospects. The meeting felt that the factual information that FAO might be able to assemble would help in persuading international banks to extend or to guarantee fishery credit to developing countries.

Education and training, both of staff to administer credit schemes and of those who were to use the facilities provided with credit assistance, participants agreed, were of at least equal importance as the funds themselves. Here the meeting suggested that FAO, under the Expanded Technical Assistance Program, could provide experts to advise countries in setting up credit services and in holding training centers to educate cadres for credit institutions.

A number of participants were in favor of holding periodic meetings on fishery credit to provide for a continued exchange of experience and views. The consensus was that such meetings should be organized on a regional basis, and FAO was invited to look into the possibility of arranging regional seminars.

Participants expressed a hope that FAO, in addition to preparing a summary of the proceedings of the meeting, would commission a consultant to analyze problems of organization and operation of credit schemes, as described in the 40 working papers prepared for the meeting or mentioned during the discussions.

GENERAL AGREEMENT ON TARIFFS AND TRADE

UNITED STATES SUPPLEMENTARY LIST OF ITEMS FOR TRADE-AGREEMENT NEGOTIATIONS:

On November 22, 1960, the United States Government issued a supplementary list of products (including fishery products) to be considered for possible reduction in duty in exchange for concessions from other countries of benefit to United States export trade. This list supplements the announcement of May 27, 1960, of the intention to participate in the trade agreement negotiations which began at Geneva, Switzerland, in September 1960, under the General Agreement on Tariffs and Trade (GATT).

The list of products was issued to provide an opportunity for all interested persons to submit information on whether or not the United States Government should offer concessions on individual products. Public hearings before the Committee for Reciprocity Information and the U. S. Tariff Commission began on January 5, 1961. In addition to the countries named in the May announcement, the United States may negotiate with Argentina, Cambodia, Ireland, Libya, and Portugal, all negotiating for accession to the GATT, and Turkey which is a contracting party.

The fishery items proposed to be considered for possible reduction in import duty are described in the table.

Under the Trade Agreements Extension Act of 1958, the President is authorized to enter into trade agreements until June 30, 1962. In negotiating such trade agreements, the President may reduce the United States duties existing on July 1, 1958, to the lowest rate calculated by any of three alternative methods: (1) Reducing the rate by not more than 20 percent, provided that no more than a 10-percent reduction may be made effective in any one year; (2) Reducing the rate by not more than 2 percentage points ad valorem (or its ad valorem equivalent in the case of a specific rate or a combination of ad valorem and specific rates). The reduction in any one year under this alternative may not exceed 1 percentage point. (3) Reducing to 50 percent ad valorem or its equivalent any rate which is in excess of that level, provided that not more than one-third of the total reduction may become effective in any one year. The President may also agree to "bind" (continue) existing duties or the duty-free treatment for articles on the free list.

International (Contd.):

United States Tariff Commission public hearings, also began on January 5, in connection with the "peril point" investigation, required by Section 3(a) of the Trade Agreements Extension Act of 1951, as amended.

dividual countries. In January 1961, the contracting parties, including the Common Market, expect to negotiate for an exchange of new concessions. The negotiations in this phase will have as their aim the reduction of tariffs and other charges on imports through the exchange of tariff concessions.

List of Fishery Products to be Considered for Possible U. S. Concession in Duty				
Tariff Par.	SCHEDULE A Stat. Class. (1959)	Brief Description	Duty July 1958	U. S. Imports 1959 (\$1,000)
717(a)		Fish, fresh or frozen, whole or beheaded or eviscerated or both:		
	0047300	Lake trout	$\frac{1}{2}$ ¢ lb.	592
	0048800	Eels	$\frac{1}{2}$ ¢ lb.	128
	0055600	Sturgeon, fresh	$\frac{1}{2}$ ¢ lb.	320
	0055700	Sturgeon, frozen	$\frac{1}{2}$ ¢ lb.	302
718(a)		Fish in oil or in oil and other substances:		
	0063590	Sardines (other than smoked), not skinned or boned valued over 30¢ per lb., including weight or immediate container	15%	462
	0063800	Sardines, skinned or boned, valued over 9¢ per lb., including weight of immediate container	30%	1,894
	0064300	Anchovies, valued over 9¢ per lb., including weight of immediate container	15%	2,176
719		Pickled or salted, weighing, with contents, not over 15 lbs. each:		
	0069200	Cod, haddock, hake, pollock, and cusk, neither skinned or boned (except that vertebral column may be removed) containing more than 43% moisture	1/4¢ lb.	1,793
	0070100	Herring (including sprats, pilchards and anchovies) in immediate containers weighing, with contents, more than 15 lbs. each and containing not over 10 lbs. of herring, net weight	3/8¢ lb.	229
	0072000	Mackerel, in bulk or in containers, weighing with contents more than 15 lbs. each	$\frac{1}{2}$ ¢ lb.	455
	0072200	Mackerel in containers (not airtight) weighing, with contents, not over 15 lbs. each	12½%	129
720(a)(4)	0075500	Cod, haddock, hake, pollock, and cusk, smoked or kippered, whole or beheaded, eviscerated or both	1¢ lb.	152
721(e)	0081100 (part)	Oysters, smoked, in airtight containers	6¢ lb.	1,964

The Geneva GATT conference is being held in two phases. Beginning in September 1960, the contracting parties have been negotiating with the Common Market (officially known as the European Economic Community) concerning a new schedule of tariff concessions for the Common Market as a whole, to replace the present schedules of the in-

The notices issued, respectively, by the Committee for Reciprocity Information, Interdepartmental Committee on Trade Agreements, and the Tariff Commission appeared in the November 22, 1960, Federal Register.

Note: Also see Commercial Fisheries Review, August 1960, pp. 39-41, 75-76.

International (Contd.):

GREAT LAKES FISHERY COMMISSION

INITIAL CHEMICAL TREATMENT OF LAKE SUPERIOR LAMPREY-PRODUCING STREAMS COMPLETED:

On October 31, 1960, the Great Lakes Fishery Commission reported that the Fall River in Baraga County, Mich., had been treated with lampricide. The Fall River operation completes the initial series of chemical treatments of Lake Superior lamprey-producing streams in which many millions of larvae were destroyed. A total of 52 streams in the United States and 20 in Canada have been treated since 1958. Most of the treatments were carried out in 1959. Among the larger streams treated are the Tahquamenon and Ontonagon in the United States and the Kaministikwia, Michipicoten, and Goulais in Canada. A small start was made this year in Georgian Bay, Lake Huron, where four streams were treated, and in Lake Michigan, where seven streams were treated. Treatments are carried out by the staff of the Fisheries Research Board of Canada and the U. S. Bureau of Commercial Fisheries under contract with the Commission.

Positive evidence of a decline in the population of sea lamprey will come from the continued operation of electrical barriers on a number of Lake Superior streams. Numbers of spawning sea lamprey taken in 1961 may be somewhat reduced, but a substantial decrease is not likely because most of those taken at the barriers will have come from stocks which moved to the lake in 1959 before their parent streams were treated. Therefore, the full effects of the chemical program cannot be evident until the adult lamprey spawning run in 1962.

The destruction of young lamprey in streams is expected to reduce lamprey predation on the lake trout that remain in Lake Superior, but the trout population has been so damaged that an immediate recovery cannot be expected. The build-up of trout stocks will be particularly slow in some areas because of the scarcity of spawning fish. Plantings of hatchery-reared trout are needed to aid the recovery of this population.

Steps to restore the lake trout in areas where they have been drastically reduced have been undertaken by federal, state, and provincial agencies cooperating in a joint

program coordinated by the Commission. Hatchery-reared trout have already shown a high rate of survival after planting and they will likely play an important part in the recovery of the fishery.

The Great Lakes Fishery Commission is an international organization established by the United States and Canada in 1955. The formulation and implementation of a program to eradicate or minimize sea lamprey populations in the Great Lakes is one of its major responsibilities.

INDO-PACIFIC FISHERIES COUNCIL

NINTH SESSION HELD IN KARACHI:

The Ninth Session of the Indo-Pacific Fisheries Council was held in Karachi, Pakistan, January 3-23, 1961. Among the subjects presented at the Session were Inland Fisheries; Sea Fisheries; Craft and Gear; Food Technology; Socio-Economics and Statistics; Fish Marketing; and Fish Culture in Rice Fields. (United States Embassy, Bangkok, October 14, 1960.)

INTERNATIONAL NORTH PACIFIC FISHERIES COMMISSION

SEVENTH ANNUAL MEETING HELD IN VANCOUVER:

The 7th Annual Meeting of the International North Pacific Fisheries Commission opened in Vancouver, British Columbia, on November 7, 1960. The delegates, who represented three of the world's greatest fishing nations were addressed at the opening session by the Canadian Minister of Fisheries and the Acting Major of Vancouver.

Under the Commission Chairman, the Deputy Minister of Fisheries of Canada, the meeting reviewed the scientific research and developments in the convention area during the past year and made plans for future investigations.

The International North Pacific Fisheries Commission is composed of representatives of Japan, the United States, and Canada. Its primary concern is with conservation programs for species of joint interest in the North Pacific Ocean. These species are salmon, halibut, herring, and king crab. The Commission was established in 1953, under a treaty between Japan, the United States, and Canada. Under the terms of the treaty, Japan has abstained from fishing salmon, halibut, and herring along the North American

International (Contd.):

coast, and Canada abstains from fishing salmon of United States origin in the Bering Sea. The Commission is required to study conditions relating to these abstentions each year, principally in the light of the affected stocks being fully exploited, under scientific investigation and properly conserved by the countries allowed to continue to fish. The Commission also concerns itself with studies of the location of the dividing line in the Pacific Ocean for salmon fishing. At present, Japan refrains from fishing for salmon east of a line which runs north and south along the 175th west longitude, some 2,000 miles west of Vancouver. An extensive research program has been carried out to discover whether or not this line most equitably divides salmon of Asian and North American origin.

Other important considerations included the question of analyzing and publishing the great volume of research material which has accumulated from the Commission's investigations on the high seas. These investigations have been carried out by each of the member nations under a coordinated program laid down by the Commission. Annually, 12 to 15 research vessels have engaged in these important investigations in North Pacific waters.

The meeting brought together about 100 representatives made up of fisheries officials of Government and industry, and leading fisheries scientists of the three countries. There were a number of observers from other international fisheries organizations attending the meeting and also the U. S. S. R., which sent two observers to the meeting.



Argentina

SHRIMP FISHING INDUSTRY TRENDS, OCTOBER 1960:

The Argentine shrimp fishing industry fishes for two species of shrimp--red shrimp (langostino) and common shrimp (camaron). The red shrimp are by far the more important in quantity and value. The large red shrimp, which are the only species exported, are caught principally off the mouth of the Chubut River located near the city of Rawson in east central Argentina during October-January. The size and condition of the Argentine fishing fleet do not permit fishermen to

follow the shrimp offshore during the remainder of the year. The smaller common shrimp are caught throughout the year by the Mar del Plata coastal fishing fleet.

There are four processing plants devoted exclusively to shrimp. The largest of these plants can freeze one million pounds of shrimp a month. This plant in addition to its freezing unit has a grading machine. It also is equipped to manufacture flaked ice. However, the shrimp are beheaded, peeled, and deveined by hand. The other three plants have a monthly freezing capacity of 200,000 pounds each but have no equipment other than their freezing units. Canneries in the Mar del Plata area can the small common shrimp along with other fishery products, but no canned shrimp exports are made. No shrimp are breaded in Argentina. It is doubtful whether there are currently any plans to increase the level of mechanization in the Argentine shrimp-processing industry because of the present depressed conditions in the industry. The high domestic price of fresh shrimp has made the export of frozen shrimp unprofitable.

The export price in 1958 and 1959 of red shrimp, in counts of 21 to 35 to the pound, was about US\$0.55 per pound f.o.b. Buenos Aires. Smaller sizes sold for US\$0.50 per pound f.o.b. Buenos Aires. The 1960 price has not yet been determined since the season has just begun; however, trade sources expect a price increase and a corresponding decrease in exports.

There are no controls on the export of shrimp and no subsidies. Total export taxes amount to 10.5 percent levied on the exporter's gross proceeds.

Processing plant workers are paid an average of 25 pesos (about 30.3 U. S. cents) an hour. Fishermen are now paid 60 pesos a kilogram (about 33 U. S. cents a pound) for heads-on large shrimp. During the fishing season the fishermen earn an average of 10,000 pesos (about \$121) a month.

Trade sources in Argentina believe that the industry will recover from the present depression within several years. The principal obstacle to larger catches and, consequently, larger exports at lower prices, is the inadequacy of the fishing fleet. If the recent decree lowering import surcharges on new vessels is successful in stimulating

Argentina (Contd.):

an expansion of the fleet, landings will increase. What is needed primarily are vessels capable of following the shrimp when they leave the Rawson area. Scientific studies are also an important prerequisite to larger catches. (United States Embassy report from Buenos Aires, October 24, 1960.)



Australia

SPINY LOBSTER EXPORTS AND INDUSTRY, FISCAL YEAR 1959/60:

Australia's spiny lobster exports earned US\$8.5 million in the 1959/60 fiscal year that ended on June 30, 1960. This amount was about 21 percent more than the earnings for the preceding fiscal year. Spiny lobster tail exports of 7,701,322 pounds and boiled whole spiny lobster exports of 620,839 pounds

Table 1 - Australian Exports of Spiny Lobsters (Tails and Whole Cooked) by Country of Destination, 1958/59¹ and 1959/60

Country of Destination	1959/60		1958/59	
	Tails	Whole	Tails	Whole
	(1,000 Lbs.)			
United States	7,299	529	7,149	493
Singapore	11	54	11	89
Canada	115	5	13	3
Hawaii	261	2/	226	2/
United Kingdom	2/	-	2/	6
Pacific Islands	2	4	1	5
Persian Gulf	8	3	8	-
Other	6	26	1	5
Total	7,702	621	7,409	601

¹Fiscal Year, July-June. ²Less than 1,000 pounds.

in 1959/60 both exceeded the 1958/59 figures by 291,909 pounds and 19,967 pounds, respectively. The United States (including Hawaii) was once again the principal market, taking 97.2 percent of the total Australian exports.

In estimating total dollar earnings, a price of 9 shillings 10 pence (about US\$1.11) a pound, the average for Western Australia, was applied to all shipments. However, as lots of South Australian tails normally bring higher prices, the estimated price may be too low, and final figures could show that export earnings have exceeded the estimate.

In Western Australia, spiny lobster gradings followed closely the previous year's pattern, with some small improvement in quality. The medium grade, the most popular size on the United States market, increased from 19.5 percent of the total state exports for 1958/59 to 20.5 percent for 1959/60. Midget and small grades showed little change, accounting together for 57.8 percent in 1959/60 against 57.5 percent the previous year. Large and jumbo grades showed a slight decrease.

In South Australia, small and midget tails together made up a much smaller proportion of that state's total than they did in Western Australia. Large and jumbo grades made up 50 percent of South Australia's total. In Western Australia the same two grades provided only 22 percent of that state's total exports.

The difference in percentages of grades exported from Western Australia and South Australia is largely due to the species of spiny lobster exploited. The southern spiny lobster (*Jasus lalandii*), which predominates in South Australian, Victorian, and Tasmanian waters, is larger than the spiny lobster (*Panulirus longipes*) which makes up the greater part of the Western Australia landings.

All States, except South Australia, increased their spiny lobster landings, and total Australian landings rose by over 2 million pounds. Western Australia produced

Table 2 - Australian Exports of Spiny Lobsters by States, 5-Year Average 1951/52-1955/56 and 1956/57-1959/60

Fiscal Years		Quantity				Value
		Tasmania	South Australia	Australia	Total	
		(1,000 Lbs.)				US\$1,000
1959/60	Tails	231	938	6,532	7,701	} 8,482
	Whole	47	98	476	621	
1958/59	Tails	177	1,150	6,081	7,408	} 6,930
	Whole	110	271	220	601	
1957/58	Tails	174	1,048	4,614	5,836	} 5,900
	Whole	110	88	550	748	
1956/57	Tails	167	1,034	3,428	4,629	} 5,100
	Whole	65	184	73	322	
5-Year Average 1951/52-1955/56	Tails	64	865	3,241	4,170	} 3,569
	Whole	28	44	61	133	

Australia (Contd.):

69.5 percent of the Australian total, increasing its catch from 17.5 million pounds in 1958/59 to 19.5 million pounds in 1959/60.

Western Australia owes its continued upward trend to intensified fishing on all known grounds (particularly in the area south of the Turtle Dove Shoals), favorable weather, and an increase in the number of freezer boats.

Table 3 - Australian Spiny Lobster Landings, 1953/54 to 1958/59

Year	New South Wales	Victoria	Tasmania	South Australia	Western Australia	Total
	(1,000 Lbs. (Live Weight))					
1959-60	488	924	3,658	3,500	19,513	28,083
1958-59	461	749	3,045	4,250	17,517	26,022
1957-58	525	635	2,985	4,460	1,332	21,932
1956-57	473	689	2,579	4,385	10,763	18,889
1955-56	438	614	2,802	4,000	10,530	18,384
1954-55	510	832	3,256	4,294	10,907	19,799
1953-54	576	1,163	2,527	3,850	9,224	17,340

In South Australia, 185 vessels, employing 380 fishermen, worked either full or part time during the season, but landings fell from about 4.3 million pounds in 1958/59 (final figure) to an estimated 3.5 million pounds. The South Australia Director of Fisheries and Game says:

"The continuing downswing in South Australian cray production is causing much concern and serious consideration is being given to means of halting this decline. It is generally agreed that far too many vessels are engaged in this fishery and in certain areas far too many pots are being used.

"At the end of the season, meetings were held at all crayfishing ports to discuss the industry and its future. Fishermen unanimously agreed that strong measures must be taken if the industry were to be maintained at a reasonable level. However, there was no unanimity of opinion as to all of the means to be adopted.

"It is generally agreed that the present female closed season should be extended to include June, that pot limits should be introduced, and that some restriction should be placed on the entry of new boats into the industry.

"There is also a very strong move to increase the present minimum size to that in Victoria and Tasmania. However, a strong minority considers that a size less than that in Victoria, but larger than the present size in South Australia, would be suitable. All of the fishermen's recommendations are currently being considered."

New South Wales, following a bad year in 1958/59, reported a return to almost normal production with better fishing conditions.

In Tasmania, the increase in production is accounted for by favorable weather on the west coast, which was heavily fished during the 12 months, and by the opening up of several new areas.

Victoria's increase in production of 25 percent was due entirely to increased landings in the western areas. South Australian boats entered the fishery in these areas and were partly responsible for the increased catch. But a significant increase in the catch per boat is also reported. (*Australian Fisheries Newsletter*, October 1960.)

Note: Also see *Commercial Fisheries Review*, Feb. 1960 p. 67.



Brazil

FISH MEAL AND OIL INDUSTRY:

As of September 1960, there were 16 fish-meal plants in Brazil, all of which use waste from fish canning, salting, and filleting as their raw material. Because of the high price, whole fish are used only occasionally to increase the protein content, and only by about 5 plants.

The reduction plants are mainly centered around Rio de Janeiro (9 plants) and the salting, freezing, and canning industry of Rio Grande do Sul (5 plants).

The reduction capacity is small. Total capacity for the entire country is estimated to be less than 550 metric tons of raw material per day.

Most reduction equipment is of Danish origin, using direct heat for drying. Six plants are reported to have equipment utilizing stickwater either as solubles or for introducing it into the meal. However, not all

Brazil (Contd.):

of the plants with stickwater equipment are utilizing the stickwater.

In 1948 Brazil produced 2,649 metric tons of fish meal as compared with 3,892 tons in 1959. It is estimated that oil production was less than 500 tons in 1959. As of September 1960, production of meal and oil appeared to be at about the 1959 level.



Approximately five of the plants produced meal with 60 percent protein. The others are reported to have a protein yield between 35 and 50 percent. The meal is used in the growing animal-feed industry. Practically all oil goes to tanneries. Solubles production is small and sold to local feed manufacturers.

The price paid for fish waste varied from nothing to US\$5.25 in Rio de Janeiro, to US\$7.90 per metric ton at Rio Grande.

In the Rio de Janeiro region most fish waste comes from sardine canneries, while some is from fresh fish and some from salted-pressed sardines, *Sardinella aurita*. The price the canneries pay for the whole fish varies from US\$7.50 to US\$45 per ton.

In Rio Grande, fish meal of 60-percent protein sells for US\$116 to US\$121 a ton. Fish oil sells for US\$289 to US\$295 a ton. On the other hand, in Rio de Janeiro, 60-percent protein meal sold for US\$147 a ton; solubles at US\$90 a ton; clarified fish oil at US\$316 a ton, and dark oil at US\$158 a ton.

There are no Brazilian government restrictions on the production or sale of fish meal and oil, nor is specific aid granted to these industries.

Import and export duties and exchange controls are in effect. Import duties on fish meal are two percent of the c.i.f. value; 30 percent of the c.i.f. value on crude fish oil and 50 percent of the c.i.f. value on refined or purified fish oil. The export tax on fish meal and fish oil is four percent of the f.o.b. value.

Exports of fish meal and fish oil require a prior license, which probably would be denied since there is a shortage of those products in Brazil.

There were no imports or exports of fish meal and oil during 1959 nor during the first six months of 1960. However, imports of 3,000 tons of Peruvian meal are anticipated, with freight, import duty, and exchange controls adding about US\$42 a ton to the cost or 57 percent of the f.o.b. price Peruvian port. Brazil's fish-meal imports will probably increase but not fish-oil imports.

In addition to sardine (*Sardinella*), several species of thread herring (*Opisthonema* and *Harengula*) and the menhaden (*Brevoortia*) occur in the waters of Brazil. The sardine is the only species being fished to any extent.

Brazil's fish-meal production is not expected to expand in the near future, even though the domestic market for fish meal is increasing. Current production is no longer able to meet increasing demand of the mixed feed industry. Scientific poultry raising is just getting started in Brazil and all indications are that it should flourish. (United States Embassy, Mexico City, November 14, 1960.)



British Honduras

SHRIMP FISHING INDUSTRY UNDEVELOPED:

There is very little shrimp exported from British Honduras and only small quantities enter the local market. From time to time rather haphazard attempts have been made to determine whether shrimp exist in commercial quantities in British Honduras waters and a more thorough investigation is now being made by a United States-owned company engaged in exporting spiny lobsters.

The extent of knowledge of the shrimp fishing possibilities in British Honduras is described in a report (Fish in British Honduras) by the Government of British Honduras Fisheries Officer in 1952. The "abundant supply" mentioned in the report is abundant only in relation to the size of the local market (United States Consulate at Belize, October 21, 1960).

An abstract of the report follows:

Twelve experimental trips were made from August 1951-December 1952. These experiments lasted about 5 days on each trip. On the first trip in August 1951, the 15-foot beam trawl refused to sink due to the dryness of the bobbins. These bobbins were replaced by a piece of chain and the net then worked better. Most of these drags yielded shrimp, but only on one occasion in June 1952 were there any signs of shrimp in commercial quantities. This drag was made in 20 fathoms midway between Snake Caye and Manawick Point about 10 miles east of Punta Gorda. Trawling had to be discontinued in the area due to heavy winds.

In July 1952, the M/V Antillas (owned by a United States shipbuilding corporation, and operated in cooperation with the U. S. Fish and Wildlife Service) made a brief visit to the Colony to explore for shrimp. The Fishery Officer accompanied this vessel and work was carried out in all the areas south of Belize, but these explorations yielded only a few shrimp per drag and no commercial quantities were found.

In 1953, a shrimp trawler (the United States privately-owned Celeste Joan) made a brief trip and carried out trawling experiments in the southern areas of the Colony but again, although shrimp were caught, none were found in commercial quantities. Later

in the year in November and December and in January 1954, the Freedom, belonging to a British Honduras fisheries firm, carried out experiments and found shrimp in commercial quantities. Later in 1954 work was discontinued as after several more trials no shrimp were found.

The shrimp are similar to those found in the Campeche Banks and elsewhere. Shrimp were found with ripe roe in March 1952 off Sittee, Stann Creek, and Punta Gorda. In the Punta Gorda area the shrimp move inshore in June and July after heavy rains and can be found in large quantities at the mouth of all the rivers. From September to January these shrimp have reached their full size of up to 8 inches in length and in February they go into deeper water. During the period when shrimp are found inshore, the fishermen of the Punta Gorda area catch them with cast nets for bait. As there is always an abundant supply, a small industry could probably be started. Ice would have to be transported from Belize to Punta Gorda where the shrimp could be packed in lightweight boxes and shipped to Belize where there is a very good market. (United States Consulate, Belize, October 21, 1960.)



Burma

NEW JOINT JAPANESE-BURMESE FISHING COMPANY PROPOSED:

A Japanese fishing company and a group of Burmese fish dealers are completing plans for a joint-venture fishing enterprise. Ac-



Burma (Contd.):

cording to a Burmese press report (confirmed by an officer of the Japanese Embassy), the venture will use a fleet of 33 ships, including a 5,000-ton mothership with facilities for canning and drying the catch and for manufacturing fish paste, two 60-ton trawlers, and 30 trawlers of 20 and 50 tons. Capital is reported at about US\$3,150,000, with the Burmese group investing about US\$1,890,000 and the Japanese firm putting up the balance. (United States Embassy, Rangoon, October 27, 1960.)



Canada

BRITISH COLUMBIA CANNED SALMON PACK DROPS SHARPLY IN 1960:

The 1960 canned salmon pack by British Columbia canneries of 632,089 standard



A British Columbia purse seiner unloads its salmon catch onto a cannery fish scow. The salmon are iced to preserve them in prime condition until they are delivered to the cannery for canning.

cases (48 1-lb. cans) dropped sharply (41.3 percent) from the 1,077,097 cases packed in 1959, and was also sharply lower (54.4 percent) than the 1955-59 average annual pack of 1,385,153 cases. The packs of all major salmon species (sockeye, silver, pink, and chum) was down in 1960 as compared with 1959 and the preceding five years (see table).

Note: Also see Commercial Fisheries Review, February 1960 p. 69.

BRITISH COLUMBIA FISHERY TRENDS, 1960:

With the 1960 salmon catch one of the lowest on record, the year was one of the worst both for fishermen and canners. Moreover, halibut prices declined and the herring and whaling operations were terminated since their continued operation was deemed uneconomic.

Salmon: Salmon, British Columbia's principal dollar earner, experienced its third worst year on record. All salmon species, except Fraser River sockeye (Chilco River run) and Bella Coola pinks, were well below expectations. Particularly hard hit were coho and pink.

Fishing sources are not clear as to the precise reasons for the poor catch. Unsatisfactory environmental conditions for the salmon fry and poor ocean survival are the generally attributed causes.

At the beginning of the 1960 salmon season there was no carry over of significance from the 1959 pack. Probably 500,000 cases of the 632,089 case pack will be sold in Canada. The remainder of the pack will be sold in the United Kingdom, Belgium, France, and other countries. During the 1958 record catch, a large amount of the pack was sold to the United Kingdom. This coincided with the British lifting of restrictions on the im-

Pack of British Columbia Canned Salmon, 1955-60

Species	1960	1959 ¹	1958	1957	1956	1955
(Standard Cases--48-1-Lb. Cans)						
Sockeye (red) . . .	226,905	256,170	1,074,305	228,452	320,096	244,821
Spring (king) . . .	5,913	15,230	10,550	10,481	11,671	17,853
Steelhead	500	867	1,205	1,126	1,254	1,590
Blueback	23,456	10,114	11,103	12,147	10,549	10,544
Coho (silver) . . .	68,891	202,991	120,424	180,911	207,366	175,179
Pink	219,624	458,597	451,802	751,608	363,633	831,253
Chum (keta)	86,800	133,128	230,636	239,539	203,710	124,860
Total	632,089	1,077,097	1,900,025	1,424,264	1,118,279	1,406,100

¹/Revised.

Canada (Contd.):

portation of canned salmon. Such a large quantity was bought that in 1959 it is understood that the British still had a considerable surplus from the previous year. With hopes that the 1960 year would have been better than realized, fishery representatives were sent to the United Kingdom in order to stimulate sales. However, the small 1960 catch will probably leave little for export. Some interest is being expressed in the United Kingdom for the importation of frozen salmon and halibut. However, the catch of those salmon species subject to shipment in the frozen state was disappointing.

The 1960 Fraser River sockeye run resulted in a catch of approximately 2,445,000 fish by United States and Canadian fishermen which, with the possible exception of 1936 (escapement unknown), represented the largest run on this four-year cycle since 1912. The preseason predicted catch by the International Pacific Salmon Fisheries Commission staff was 2,000,000 minimum and 2,400,000 maximum.

The catch between the two countries was divided as follows: United States 1,190,000 and Canada 1,255,000 fish--a difference in favor of Canada of 65,000 fish. In the preceding cycle (1956), the United States had 907,000 and Canada had 895,000--a difference in favor of the United States of 12,000 fish.

The bulk of the catch was provided by the run to Chilko Lake which appeared in the fishery on time but was spread over a considerable period of time raising a question in the early part of the season as to its exact size. The actual timing of the peak of the run in the fishery was 8 days later than anticipated, which in all probability was caused by variable oceanographic conditions. The prediction of timing and path of inshore migration of Fraser River sockeye from the ocean and the size of the fish must await rather widespread oceanographic studies being carried out by other agencies for a period of several years.

A number of changes were made in the regulations established prior to the commencement of the fishing season. Two days were added to the United States fishery over the fishing days originally provided for to enable the United States catch to approach

equality with that of the Canadian fishery. There was no change in the number of fishing days in Canadian Convention waters in the Strait of Juan de Fuca in spite of the fact that the predicted number of units of fishing gear was substantially exceeded. In the Fraser River area of Canadian Convention waters 8 days of fishing time was removed to provide for escapement and division of the catch between the United States and Canadian fishermen.

The escapement to Chilko Lake is not as yet definitely known, but appears to be about the number considered most satisfactory for providing for a maximum run in 1964. In the other spawning areas considered of minor importance on this cycle the escapement exceeded that of the brood year in certain instances and was below that of the brood year in other instances. In general it may be stated that the Fraser River sockeye run was the only run of that species in British Columbia that approached normality in numbers. All other runs of any importance were generally reported to be below expectations.

This being an even year no pink run returned to the Fraser River.

Halibut: Despite increased landings of halibut, it appears that most fishermen will receive lower earnings because of lower prices. Some Canadian halibut boats sold their catch in Seattle where prices were higher. For example, chicken halibut, which was selling at 12 cents a pound ex-vessel in Vancouver, sold at 17 cents a pound ex-vessel in Seattle. Canadian vessels landed 28,359,200 pounds of halibut at Canadian and American ports up to July 21. At the same time in 1959, landings had totaled 26,140,000 pounds, representing a 2,000,000-pound increase.

Whaling and Herring Closures: The herring fishery did not operate with the exception of fishermen belonging to the Prince Rupert Cooperative. In view of the poor salmon season and growing pressure from fishermen to capitalize in some way on the herring fishery, the companies approached the Union in an effort to negotiate a lower ex-vessel price for herring.

The companies offered to resume the fishery at a somewhat reduced price for herring provided the fishermen delivered the catch to the cannery. This would eliminate the companies' expenses for collector boats.

Canada (Contd.):

The dispute between fishermen and the plants was settled late in November and fishing for herring was resumed. The settlement was on the basis of \$8.80 a ton ex-vessel, a reduction from the \$13 a ton paid previously. But under the settlement, the collector boats or tendermen were eliminated and fishermen will now deliver directly to the plants.

Another casualty of depressed world prices for oils and protein meals was British Columbia's whaling industry. The one firm, which managed to keep the near-marginal whaling industry operating for the last ten years, concluded that the combination of markets and costs necessitated their decision not to operate in 1960. It is estimated that the close of this operation means the loss of annual payments of over C\$600,000, with 150 seamen and plant employees out of work.

Tuna: Four British Columbian purse seiners fished off Oregon and Washington coasts in September 1960 for tuna with no spectacular success. This was the first attempt in many years by British Columbia fishermen to fish for tuna. About 70 tons in all were taken by the four boats using improvised gear. The fish averaged 17.8 pounds and brought a price of about C\$300 a ton. The four boats left port after almost a month of negotiations on crew shares between the Vessel Owners' Association and the United Fishermen and Allied Workers' Union. The final agreement was made on a one-trip basis and has now expired. Nevertheless, other owners of large seiners faced with the herring closure and the poor salmon catch were considering venturing into the tuna fishery. Other smaller boats fished tuna for a total British Columbia tuna catch of about 250,000 pounds. In previous years the tuna catch was nonexistent or negligible.

Dogfish Control: This is the third year of the Federal dogfish control program. During the first year the Federal Government set up a combined program under which Federal funds were provided for the purchase of dogfish livers coupled with the Government chartering boats to actually catch the predatory fish. In the second year C\$250,000 was provided to purchase dogfish. Of this amount only C\$150,000 was used. In 1960, the Federal Government appropriated

C\$150,000 to purchase dogfish. The Federal Government pays 12 Canadian cents a pound for dogfish livers. Because of the poor fishing year which has resulted in more fishermen turning their attention to fishing for dogfish, it is expected that for the first time the entire appropriation will be used.

At present Vancouver packers are paying 14½¢ a pound for dogfish livers. This is 2½¢ above the Government subsidy of 12¢ a pound. The United Fishermen and Allied Workers' Union is pressing for a return to the fishermen of 15¢ a pound. They contend that this is the minimum amount required to induce fishermen to catch dogfish and still make a fair earning over expenses.

The companies, on the other hand, claim that they still have 80 percent of the dogfish-liver oil processed last year. They would prefer to process livers for the Government, with the Government buying the livers and selling the oil directly. Company spokesmen also have stated that dogfish liver oil in poultry feed has now been superseded by dry vitamin A but that they are experimenting with new uses for dogfish liver.

The current Government subsidy program will continue until March 31, 1961, or until the fund is exhausted, whichever is sooner. (United States Consulate, November 2, 1960.)

FISHERY COOPERATIVES, 1959:

Interesting facts on fishery cooperatives are contained in Cooperation in Canada - 1959 published by the Economics Division, Canada Department of Agriculture, Ottawa, Canada.

The value of the business conducted by Canadian fishermen's cooperatives increased by C\$3.5 million to reach C\$25.3 million in 1959. The value of fish sold was C\$21 million and fish supplies sold was C\$4 million. Fish and supply sales on a percentage basis are as follows: British Columbia 31, Ontario 15, and Quebec 15. The Maritime Provinces accounted for 37 percent including the business of United Maritime Fishermen, an interprovincial cooperative.

Assets of fishermen's cooperatives increased by C\$2.3 million in 1959. Members' equity increased by C\$970,000 to reach C\$6.5 million during the same year.

Canada (Contd.):

The figures reported were tabulated from the returns of 77 associations with a membership of 10,968. Total assets were C\$11.6 million, liabilities to the public C\$5.1 million, and liabilities to the members C\$3.2 million.

* * * * *

ONTARIO'S SEA LAMPREY FISHERY:

Ontario's lamprey fishery is a small one. It keeps two men busy for about a month and a half each year. Lampreys are usually not considered edible. But in some parts of the world, they are a delicacy. There are in Ontario enough Canadians from the Baltic countries, where lampreys are eaten, to make lamprey fishing profitable.

Methods learned in Latvia are used by one of the men to harvest some of the lampreys of Lake Huron. The lampreys are trapped in the spring of the year when they ascend the Saugeen River to spawn. A weir is constructed across the river and willow baskets are set either upstream or downstream from the gaps in the weir through which the water flows. Where they are set depends upon the velocity of the water. The lampreys are trapped in these baskets as they attempt to leap through the gaps. During a night as many as 900 may be trapped by this method. In a season, 10,000 lampreys have been caught.

Each morning the night's catch is brought to the cooking tent, where the lampreys are decapitated and roasted on both sides to a golden brown. After roasting they are sprinkled with brine and pressed between two blocks of wood. They are then either packed in bowls or put into cans. So far, the market for lampreys has not been saturated and what is produced is sold in Toronto.

It is interesting to note that the lamprey was a prominent dish of the medieval banquet table. It contains 32 percent oil and 567,000 units of vitamin A per pound. (Canadian Trade News, October 1960.)

* * * * *

WEST COAST DOGFISH LIVER SUBSIDY:

The Canadian Government is again providing a subsidy on dogfish livers in an effort to control the dogfish in British Colum-

bia waters. The Fisheries Minister announced on October 7, 1960, that \$150,000 has been earmarked to cover special payments at the rate of 12 cents a pound for dogfish livers delivered to liver-oil plants and collecting stations. This is an increase of two cents a pound over the subsidy paid in 1959. The program, which became effective in October 1960, will continue to the limit of the funds available to March 31, 1961.

It is hoped that the increased financial assistance will induce fishermen to wage a concentrated attack on dogfish populations which have been increasing steadily in British Columbia waters for the past 10 to 15 years. The increase developed following a decline in commercial fishing for the species after the price of liver oil dropped sharply as the wartime demand disappeared and synthetic vitamin A entered the market.

Dogfish causes considerable damage to fishing gear. In some areas they have become so numerous that commercial fishing has been seriously curtailed. Dogfish also interfere with the tidal water sportfishing, which has developed into a very valuable tourist resource in British Columbia.

This current dogfish subsidy program is a follow-up to that which had been carried on by the federal Government in the previous two years. (Trade News, October 1960.)



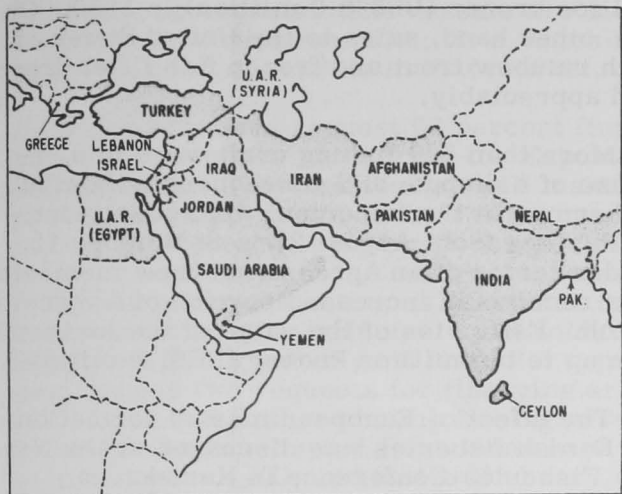
Ceylon

FISHING ENTERPRISE PLANS TO EXPAND:

A joint Ceylonese-Japanese fishing enterprise was incorporated in March 1955 with an authorized capital of 5 million rupees (about US\$1,054,000) of which Rs. 600,000 (\$126,500) was paid in, 45 percent by the Japanese interests and the balance by the Ceylonese share-holders. The capital investment is in ships and equipment. It is an "approved industry" and has the benefit of a "development rebate" of 40 percent in addition to a flat concession of 66 $\frac{2}{3}$ percent depreciation write-off.

The enterprise started operations in August 1955 to catch and market tuna, marlin and sailfish. Landings in 1959 totaled 2.5 million pounds valued at a little over 2 million rupees (\$421,800), of which Rs. 600,000 was reinvested. The company is currently

Ceylon (Contd.):



negotiating for a loan of two million rupees from the Bank of Ceylon to construct a freezing plant and to buy more boats to increase its production and to export frozentuna, spiny lobster tails, and shrimp. It also plans a canning factory with a capacity to can 10,000 pounds per day. The total investment is estimated at Rs. 3 million (\$632,600), the land and buildings to cost Rs. 325,000 (\$68,500). (United States Embassy, Colombo, October 24, 1960.)

Note: Values converted at rate of US\$1 equals 4.742 rupees.



Cuba

GOVERNMENT AIDS FISHING INDUSTRY TO EXPAND:

Recent activities of the Cuban Fishery Department were reported in the October 5, 1960, issue of the Cuban newspaper El Mundo (October 6, 1960) as follows:

Fishing Vessel Construction and Shipyards: 1,500 men are working in the 15 shipyards located from Pinar del Rio to Oriente, building "Sigma" fishing vessels of 33, 50, 60, 75, and 110 feet in length. Some 900 workers, qualified as shipwrights, helpers, mechanics, painters, and day laborers, work directly in the building of vessels while the rest work in the manufacture of nautical accessories, such as propellers, sanitary services, fishing tackle, etc., which articles are no longer imported.

The 15 shipyards now active are the following: Arroyo de Mantua, Puerto Esperanza,

La Coloma, in Pinar del Rio; Batabano, in Habana; Cardenas, in Matanzas; Caibarien, Isabela de Sagua, and Cienfuegos, in Las Villas; Nuevitas and Santa Clara del Sur, in Camaguey; and Puerto Padre, Gibara, Santiago de Cuba Niquero, and Manzanillo in Oriente.

New Fish Plants: Fishermen cooperatives of Antilla, Guatemala (formerly Preston, at Nipe Bay), and Gibara, have new buildings constructed by Cuba's Fishing Department. These buildings consist of offices, fish landing and sorting equipment, cold storage for 35,000 pounds, and functional wharf. The buildings of the Carahatas cooperatives at Las Villas and Matanzas will be built at an early date.

Fish Markets: The cooperative of Fishermen of Surgidero de Batabano has opened six People's Fish Markets for selling fish and shellfish at low prices. These fish markets have been installed at La Salud, Quivicán, San Antonio de las Vegas, Batabano, Surgidero de Batabano, and Bejucal.

Fish Box Manufacture: The shop for manufacturing boxes for packing fish and shellfish installed on the banks of the Almendares River has already delivered more than 1,000 boxes to the cooperatives.

The carpenter shop, however, continues to work at a speedy rate in order to provide all the cooperatives with a sufficient number of boxes, thus putting an end to the difficulties of transporting fish to the distributing and consumption centers. (United States Embassy, Habana, October 28, 1960.)

* * * * *

WHOLESALE AND RETAIL FISH PRICES REGULATED FOR CERTAIN SPECIES:

According to articles which appeared in the Cuban newspapers Revolucion and Infor-

Species	New Prices		Former Prices	
	Wholesale	Retail	Wholesale	Retail
. . . (Centavos or U. S. Cents Per Lb.) . . .				
Sliced Grouper (Cherna en Ruedas) .	32	37	31	39
Grouper Fillets (Filete de Cherna) . .	44	49	45	50
Tail & Swordfish (Agujaya Emperador) .	38	42	33	36
Sliced Snapper (Parque en Ruedas) . .	55	60	50	55
. . . (Centavos or U. S. Cents Per Unit) . . .				
Color Minute Steak (Minuta Color) . . .	7	8	5	6
White Minute Steak (Minuta Blanca) . . .	6	7	(No indication)	

Cuba (Contd.):

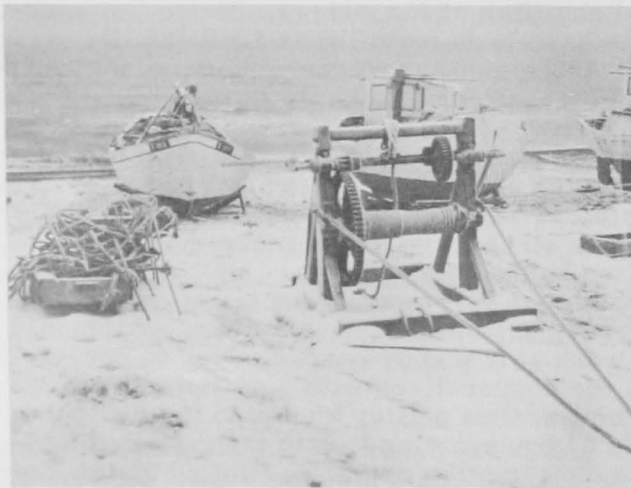
macion, September 24 and 23, 1960, respectively, the Ministry of Commerce issued Resolution 408 to regulate prices for different types of fish for local consumption (see table). (United States Embassy, Habana, November 7, 1960.)



Denmark

FISHERIES TRENDS,
THIRD QUARTER 1960:

Reports from the principal Danish fish auctions indicate that the decline in the quantity and value of the Danish catch of industrial fish continued during the third quarter of 1960. Herring meal exports dropped from



Beach landing craft used for inshore fishing in Denmark. Note portable roller used for beaching the boats.

41,000 metric tons during January-August 1959 to only 18,000 tons in the first eight months of 1960; the decline in value was even greater, from 52 to 17 million kroner (US\$7.5 to \$2.5 million). Exports of fish oils were halved.

The Danes maintain that the depletion of North Sea herring results not from Danish overfishing but rather from English activity in the breeding grounds in the English channel. A Soviet herring fleet is now active near the Faroes, but Soviet requests for reloading rights in the Faroes have been refused.

Shipments of most varieties of food fish showed a general increase with the January-

August totals rising from a value of 182 million kroner (US\$26.4 million) in 1959 to 199 million kroner (US\$28.9 million) in 1960. On the other hand, sales to the United States of both rainbow trout and frozen fish fillet dropped appreciably.

More than 500 fishing craft were idle because of a dispute and consequent lockout of fishermen at the important west coast port of Esbjerg from August 22 to September 15. Under terms of an agreement, crew members now receive an increased portion of a vessel's catch. Estimates of the value of the lost catch run up to ten million kroner (US\$1.5 million).

The effect of European market formations on Danish fisheries was discussed at the Nordic Fisheries Conference in Karlskrona, Sweden. Denmark can expect increased imports of canned fish, the only fish item on which a Danish duty is imposed at present. (United States Embassy report from Copenhagen, dated October 13, 1960.)



El Salvador

SHRIMP INDUSTRY TRENDS,
THIRD QUARTER 1960:

The expanding shrimp industry of El Salvador, which exports most of its catch to the United States, continued to show signs of rapid growth during the third quarter of 1960. Present export levels indicate that exports to the United States this year may exceed US\$4 million in value, representing a sharp increase since shipments began in the latter part of 1957. Several firms are now seeking additional fishing craft, largely in the United States market. An unexplained series of accidents at the end of September beached two new United States vessels of one firm.

With shrimp now the country's third major export after coffee and cotton, fishing interests remain sensitive to any possibility of United States import controls or tariffs on their product. (U. S. Embassy in San Salvador, October 10, 1960.)

* * * * *

TWO FIRMS SEEK U. S. FUNDS
TO BUILD SHRIMP VESSELS:

Requests from two Salvadoran fishing firms have been received by the Export-Import Bank for financing of United States-

El Salvador (Contd.):

built shrimp vessels. The vessels are to be sold by a St. Augustine, Fla., firm which has sold a number of vessels in that market.

Both companies request 68 percent financing of the purchase price from the Export-Import Bank. They themselves will make 20 percent down payments to the selling company, which in turn will put up 12 percent of the price in each instance. A well-established El Salvador bank is acting as guarantor in both instances. The principal stockholders in the two firms are of good financial reputation. These two requests for financing are in addition to 12 other shrimp fishing vessels for which Export-Import Bank loans have been requested. (United States Embassy, San Salvador, October 17, 1960.)



Egypt

FISHERIES TRENDS, OCTOBER 1960:

Canned Fish: Although there was no production of canned fish in Egypt during 1959, sardine canning began in October 1960 in a new sardine and shrimp canning factory just completed at Damietta with Japanese technical assistance under the Five-Year Plan. Shrimp canning was expected to begin in November 1960. According to the General Organization for Executing the Five-Year Industrial Plan, this plant will have a capacity of 9,600 cans of shrimp and 32,000 cans of sardines for each 8-hour work day, and is expected to employ some 200 workers when in full operation. According to press reports, the estimated value of the annual output of canned fishery products will be about US\$738,000.

Cost of the plant is estimated at about US\$511,000, including an expenditure of \$131,230 (f.o.b. Yokohama) for the Japanese machinery and equipment. Payment arrangements were as follows: 15 percent of the \$131,230 on signing of the contract; the balance of 85 percent payable in yearly installments of 8.5 percent at an interest rate of 4.5 percent. The Japanese guarantee operation of the plant for 18 months, and are providing Japanese technicians to supervise initial operations at Damietta. This is the first factory of its kind to be erected in Egypt.

The General Five-Year Plan Organization announced in October 1960 that a decision had been made in principle to establish a plant at Suez for canning tuna and other similar fish caught in the Red Sea. No decision has yet been made as to which country or firm is going to supply the machinery, and it is not expected that the whole project will be in operation for another two years. The planned capacity of the plant is about 900 metric tons of fish per year. Alexandria trade sources state that the plant will probably be built at El Khargada on the Red Sea just below the Gulf of Suez at an estimated cost of about \$426,000.

Shrimp Industry: Continuing a steady upward trend since its inception in 1953, the shrimp-freezing and processing industry increased its output in 1959 to more than 884 metric tons, valued at \$1,158,000, and it is estimated that 1960 production will exceed that of 1959. The Egyptian Region produced and exported 525 metric tons of frozen shellfish in 1958 and 350 metric tons in 1957. Most of the Egyptian frozen shellfish production is exported.

There are five shrimp-freezing plants currently in operation in the United Arab Republic; three in Alexandria and two in Port Said. Estimated maximum capacity of the five plants is approximately 2,000 metric tons of frozen shrimp per year.

An announcement was made early in October of the formation of a new firm, which is planning to erect a new \$57,000 freezing plant in the Gabbary industrial area of Alexandria. The plant, which will be equipped exclusively with United States freezing machinery, is scheduled for completion in February 1961 and will have a maximum capacity of up to eight metric tons of frozen shrimp and fish per 12-hour work day. In addition to shrimp, the new company plans to freeze and export sole, crabs, eels, and octopus to the United States and Europe.

The General Manager of a trading company which markets all the shrimp frozen by one of the Alexandria shrimp-processing companies, is negotiating with an Italian shipping firm for the purchase of a large shrimp trawler (150 gross tons) at a cost of about \$113,000. Equipment will include a freezer capable of freezing three tons of shrimp per day. This firm is now seeking Government approval for the purchase as well as for the necessary lira foreign exchange.

Egypt (Contd.):

The problem of increasing the supply of exportable shrimp is the major one facing the Egyptian shrimp-freezing industry which has a capacity in excess of the present supply, or at least in excess of the supply continuously available through current distribution channels.

For every ton of processed headless frozen shrimp, the industry must have a 40-percent average in weight of raw shrimp to account for heading and other shrinkage to produce 2,000 metric tons of processed frozen shrimp. The bulk of the shrimp is processed during the period October to May (peak of the shrimp fishing season), and competition becomes particularly intense among the five plants for the landings during this 8-months period.

The balance of the current shrimp catch not processed for export is consumed locally, with the City of Alexandria itself reportedly the highest per capita consumer of the product in Egypt.

Spiny Lobsters: The Chairman of the Board of General Warehouses of Egypt, following a trip to the United States, stated that he had signed a five-year contract with a New York City firm for the export of frozen spiny lobster tails from the Red Sea. General Warehouses is currently the major shrimp freezing plant in Egypt, producing about one-half of the total supply in 1959. Under terms of the contract, the New York City firm will provide needed technical assistance and processing equipment for the plant upon request. The Egyptian firm hopes to have the plant in operation in 1961. A major problem is to complete satisfactory arrangements for catching the spiny lobsters in the Red Sea and for transport to the processing plant in Alexandria. The fishing area for spiny lobsters is some distance from an adequate road net. The supply has been verified by two research expeditions.

Government Aid: To increase Egypt's over-all fish supply, the Government has allocated funds under the Five-Year Plan to increase the size and improve the equipment of its fishing fleet through cooperatives. In addition, each shrimp freezing firm is studying how to increase and guarantee its own supply of shrimp by such means as direct contracts with fishing fleets and even by contracts with foreign fleets.

Dried and Salted Fish: Although statistics are not available, the Egyptian Region produced a sizable quantity of dried and salted fish in 1959, the bulk of which was consumed domestically. Made up of many small enterprises, the cured fish industry's principal fish dried and salted are lake-caught mullet and sardines. Official Egyptian foreign trade statistics group together both fresh fish and salted, dried, or smoked fish exports. Egypt exported 598 metric tons of fresh, salted, dried or smoked fish, crustaceans and molluscs in 1959. These exports were valued at about \$298,000. In 1958 exports totaled 684 metric tons. The decrease in exports in 1959 (1) may be an indication of inaccurate statistics as the over-all commercial catch in 1959 exceeded the 1958 catch by 9 percent; (2) it may reflect increased domestic consumption; or (3) it may indicate the market situation had become less favorable for Egyptian exports of those products. (United States Embassy, Alexandria, October 12, 1960.)



Finland

FISHERIES TRENDS, 1959-60:

According to a country-wide study by Finland's Fisheries Research Section of the Board of Agriculture, the landings of fishery products in 1959 totaled 65,869 metric tons and were valued at Fmk 5,166 million (about US\$16.1 million). Coastal and open-sea fishing contributed 46,871 tons (valued at Fmk 2,962 million or about \$9.3 million) and lake fishing 18,998 tons (valued at Fmk 2,204 million or about \$6.9 million). Of the coastal and open-sea catch, 35,000 tons (75 percent) was Baltic herring; this was 52 percent of the total catch of fish in Finland. Herring fishing by Finnish vessels in Icelandic waters (1,427 tons) and fishing of the small Baltic herring in central parts of the Baltic Sea at the level of Gotland Island (372 tons) are not included in the above figures. During the first 10 months of 1960 landings were smaller than in 1959 in both Finnish and Icelandic waters.

Fishing licenses were held in 1959 by 3,144 professional fishermen in coastal areas and 484 in inland areas. Part-time fishermen numbered 6,144 and 9,163, respectively, and persons fishing for their own household consumption totaled 42,523 and 182,807, respectively.

Finland (Contd.):

Mechanization of fishing vessels has continued and there now are about 85 large trawlers engaged in coastal and Baltic Sea fishing, some 100 small trawlers in coastal archipelagoes, and a few in inland lakes. They have largely been purchased second hand from Sweden and Denmark due to lack of funds for new equipment. There is some interest in increasing the number of large trawlers and extending fishing to the southern parts of the Baltic Sea. The problem of disposal of the surplus of lean Baltic herring (spring-catch) has now been eased somewhat by the installation of freezing equipment on some 30 mink farms. The fur-animal industry consumes about 8,000 tons of Baltic herring yearly.

Under a special fishing agreement signed on February 21, 1959, with the Soviet Union, Finnish fishermen near the new Finnish Russian border on the Gulf of Finland are permitted to carry on fishing in a small area of their former coastal fishing waters in the territory ceded in 1944. Winter fishing by 42 fishermen in February-April 1960 gave a catch valued at Fmk 6 million (US\$18,738) and considerably eased the local employment situation. Summer fishing in July 1-October 31 by 15 fishermen yielded a poor catch. A boat shed and life-saving equipment, including one motorboat and two rowboats, have been fitted by the Finnish fishermen on the main island in the permitted fishing area, the United States Embassy in Helsinki reported on November 4, 1960.



German Federal Republic

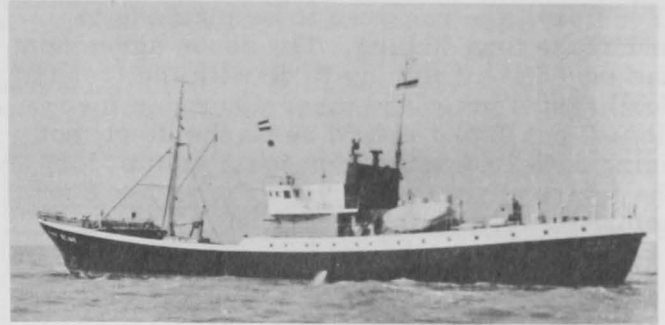
FISHING FLEET LOOKS FOR
NEW FISHING GROUNDS:

While Norwegian fishermen prepare for an experimental fishery off West Africa with the assistance of the research vessel Johan Hjort, West German fishermen have similar plans for fishing off the coasts of Central America and West Africa. The question of sending a number of large trawlers and stern trawlers to those waters is being explored at this time by the West German Department of Fisheries in the Federal Ministry for Food, Agriculture, and Forestry, according to Fiskaren (September 28, 1960), a Norwegian fishery trade periodical. The Fisheries Department head considers that in this

connection it is of importance that the fleets of the various private West German trawler companies cooperate more than in the past.

In West German fishery circles there is skepticism about recommendations for initiating a large new fishery in Antarctica. Preferably one might utilize the abundance of krill (small shrimp-like organisms) in the polar seas.

One can conclude that the West German fisheries are in a process of change which can result in some surprises.



Modern German trawler.

At the same time the fishery division in Hamburg is considering the purely economic question as to whether it will profit the West German trawler fleet to expand its fishing area from the North Sea, the northern polar seas, Iceland, and Greenland to tropical fishing in the Equatorial Zone. The prospects for tuna fishing by trawlers off West Africa and Central America will be examined. The possibilities for sardine and anchovy fishing on the Pacific Coast of the United States also are being discussed.



Ghana

UNITED STATES TUNA PACKER
SIGNS FISHERY AGREEMENT:

A Japanese representative stationed at Accra, Ghana, Africa, reported early in November 1960 that one of the largest United States tuna packers with headquarters in California concluded a 35-year fishery agreement with Ghana.

In mid-October 1960, Ghana's Minister of Agriculture signed the agreement with the United States packer giving the latter the right to process and export tuna from Ghana.

Ghana (Contd.):

The agreement stipulates that the packer is privileged to build a tuna-packing plant in Ghana, if he is interested, in addition to freezing facilities. The California firm intends to supply its cannery in Puerto Rico with raw tuna for canning.

A Japanese Fisheries Agency spokesman recently made the following statement:

"Recently, Southeast Asiatic countries, Ceylon, Pakistan, Thailand, and Taiwan (Formosa) are rumored to be planning to undertake tuna fishing. The above agreement has essentially nothing to do with the trend in Southeast Asiatic and other countries mentioned, but Japan should be on the alert, not being satisfied with the present status, for the future of its industry." (Fisheries Economic News, November 7, 1960.)



Greece

STERN TRAWLER FACTORYSHIP
TO FISH IN NORTH ATLANTIC:

The Greek stern trawler and freezer factoryship Evangelistria IV is being outfitted in Piraeus (the seaport of Athens) for a trip to the fishing banks in the North Atlantic, according to the October issue of the Greek periodical Alieia as reported in Fiskets Gang (October 27, 1960), a Norwegian fishery trade periodical. This will mark the first visit of a Greek fishing vessel to those distant waters which, until now, have not been utilized by the Greek fishing industry. The projected trip of the Evangelistria IV, a new and very modern vessel, implies that Greece will join the International Commission for the Northwest Atlantic Fisheries as the organization's 14th member.



Greenland

FISHING INDUSTRY, 1960:

Shipments of Greenland products to Denmark and to foreign destinations were valued at a record 35 million kroner (US\$5.1 million) during the 1960 season, according to estimates by the Royal Greenland Trade Organization. Fish and fish products com-

prised about 90 percent of the shipments. This compared with shipments valued at 30 million kroner (\$4.4 million) during 1959 and only 23 million kroner (\$3.3 million) in 1958. About half of the total sales receipts went to primary producers--fishermen, hunters, and herds-men--with the other half being spent on manufacture, transportation, and other costs. Royal Greenland Trade, with its virtual monopoly of the Island's trade, realizes no profit.

Production of frozen fish fillets or blocks (mainly cod) increased by 50 percent in 1960, with about 900 metric tons shipped from Sukkertoppen and 250 tons from Narssaq, mostly to the United States. In addition, the factory-ship Svaerdfisken produced about 360 tons of fillets at Egedesminde during the summer.

The cod catch reached 1,000 tons at Angmagssalik, where fisheries were established only two years ago. Some 6,000 tons of salt fish (largely cod) were sold to Southern European buyers, but Greenland Trade took a loss on those sales and it plans to switch most of this production into filleting. Twenty tons of salmon were caught, the product of spawn placed in Greenland rivers a few years ago; they were mainly frozen and shipped to Denmark.

The new shrimp-canning plant at Christianskaab doubled output in 1960 to 2 million 80-gram (3.5-oz.) cans. An additional one million cans were turned out at Narssaq. Work is scheduled to begin in the summer of 1961 on a new and larger shrimp plant at Jakobshavn.

In spite of increased domestic production, fear continued to be expressed that the livelihood of Greenland fishermen was being endangered by too intensive fishing by foreign fishing vessels in West Greenland coastal waters. It was estimated that not more than ten percent of the 1960 catch in those waters was taken by Greenlanders, and once again the question was raised of establishing a 12-mile fishing limit.

Royal Greenland Trade is still considering plans for promoting a Joint Danish-Faroesee-Greenlander enterprise, possibly privately-owned, for enlarging West Coast fish-processing facilities. The plans reportedly envisage establishment of a large, modern filleting plant, probably at Godthaab. (United States Embassy in Copenhagen, November 17, 1960.)

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Honduras

FOREIGN TRADE IN FISHERY PRODUCTS, 1959:

In 1959, Honduras exported 450,500 pounds of fishery products valued at US\$237,600. Exports of shrimp to the United States comprised the bulk of this trade (see table 1).

Table 1 - Honduran Exports of Fishery Products, 1959

Product and Destination	Quantity	Value
	1,000 Lbs.	US\$1,000
Fresh Fish:		
United States	4.2	2.8
Fish, Salted, Dried, and Smoked:		
El Salvador	41.7	6.3
Shrimp, Fresh and Frozen:		
United States	404.6	228.5
Total	450.5	237.6

Honduran imports of fishery products amounted to 959,200 pounds valued at US\$177,900. Most of the imports from the United States were canned sardines (see table 2)--United States Embassy, Tegucigalpa, September 13, 1960.

Table 2 - Honduran Imports of Fishery Products, 1959

Product and Origin	Quantity	Value
	1,000 Lbs.	US\$1,000
Fish, Fresh, or Frozen:		
El Salvador	43.7	5.8
Others	1.8	0.6
Total	45.5	6.4
Cod, Dried, Salted, or Smoked:		
United Kingdom	3.0	0.5
Others	3.0	0.9
Total	6.0	1.4
All Other Fish, Dried, Salted, or Smoked	2.5	0.8
Crustaceans, Fresh, or Frozen:		
El Salvador	79.2	20.9
Others	0.6	0.4
Total	79.8	21.3
Crustaceans and Mollusks, Dried, Salted, Smoked, or in Brine	1.7	1.1
Sardines, Canned:		
United States	623.8	94.8
Canada	134.6	23.8
French Morocco	13.2	4.1
Madeira Is.	3.6	0.9
Others	5.1	2.2
Total	780.3	125.8
Cod, Canned	0.1	1/
Salmon, Canned:		
United States	21.1	9.5
Others	1.9	0.6
Total	23.0	10.1
Anchovies and Pastes, Canned	2.1	1.0
Crustaceans and Mollusks, Canned:		
United States	4.8	3.2
Others	2.0	0.6
Total	6.8	3.8
Caviar and Fish Eggs, Canned	0.2	0.1
Fish Soup, Canned	0.3	0.1
Misc. Fish and Crustacean Preparations, Canned:		
United States	5.6	3.2
Japan	2.8	1.2
Others	2.5	1.6
Total	10.9	6.0
Grand Total	959.2	177.9
1/ Less than US\$100.		

* * * * *

SHRIMP FISHERY:

As of November 1960, Honduras had three shrimp processing and freezing plants located at the Caribbean ports of Puerto Cortes, Caratasca, and in Guanaja in the Bay Islands. These three plants clean, sort, and pack shrimp for shipment to the United States, principally to Miami.

The varieties of shrimp prepared include: large white shrimp (*Penaeus stylirostris*); striped shrimp (*Trachypenaeus byrdi*); "pink" shrimp (*Xiphopenaeus kroyeri*); and white shrimp (*Protrachypene precipia*).

According to the Direccion General de Recursos Naturales, the total annual landings of shrimp during the past two years were: 1958, 943,319 pounds; and 1959, 1,547,327 pounds. Bad weather conditions adversely affected the catch in 1960.

According to the same source, the November 1960 export prices for heads-off frozen shrimp, varying according to size and type, were US\$0.42, \$0.47, \$0.60, and \$0.75 a pound.

Exports of shrimp, by quantity and value, are not available in detail. Table 1 includes exports of shrimp, crabs, conchs, oysters, clams, and spiny lobsters.

Table 1 - Honduras' Exports of Shellfish, 1957-59

Year	Destination	Quantity	Value
		1,000 Lbs.	US\$1,000
1959	United States	399	225
	Panama	5	4
1958	United States	982	576
1957	United States	25	5

Applicants for a fishing concession must deposit 10 percent of the total investment as a provisional guarantee; the Ministry of Natural Resources requires 1 percent to be deposited in the Central Bank of Honduras at the time of making application. In case the concession is not approved by the National Congress, the guarantee is returned to the interested party. Once the concession is approved by the National Congress the balance, or 9 percent of the total value of the proposed investment, must be deposited. Once operations get under way, the 10-percent guarantee is returned.

The Law of Fishing establishes as a primary requirement that the concessionaires, in order to enjoy the concession granted, must begin the installation of freezing plants, warehouses, etc., within six months from the approval date of the concession by the National Congress. The government agencies that cooperate in controlling the catches are the Ministries of Natural Resources and of Economy and Finance.

Export duties on fish products are 5 percent of the invoice value (the base-price established at US\$0.75 a pound was the price applied to shrimp exports in 1958 and 1959). In 1960 this was modified as follows: US\$0.50 per gross metric ton, plus 10 percent ad valorem established on a basic price of \$0.40 per pound at the port of embarkation.

According to the Office of Hunting and Fishing of the Direccion General de Recursos Naturales, workers in one of the plants in the North are being paid \$1.50 for a twelve-hour day, for heading shrimp. Fishermen are paid by the trip or catch.

The estimated maximum potential shrimp catch for Honduras is between 1-3 million pounds of shrimp tails a year. However, the present prospects are not favorable for an increased catch in 1961 due to the restrictions of the 1959 Fishing Law. A shrimp firm in Guanaja, which has been inactive, is reported to be in Europe purchasing equipment to improve and expand its plant. Data are not available on their plans or regarding the equipment they plan to import.

Honduras (Contd.):

One of the important fishing operations has tentative plans to set up a freezer during 1961, either at Trujillo or Cabo Camaron. (United States Embassy, Tegucigalpa, Nov. 15, 1960.)



Iceland

PRODUCTION OF PROCESSED FISHERY PRODUCTS, 1958-59:

Icelandic production of processed fishery products increased from 245,200 metric tons in 1958 to 274,200 tons in 1959. Frozen fillet production led in volume, but declined by 70 tons in 1959. Fish meal production, which ranked second in volume, showed an increase of 21.8 tons in 1959. Salted herring production decreased slightly in 1959 and ranked third. (Aegir, June 1, 1960.)

Icelandic Production of Processed Fishery Products, 1958-59		
Product	1959	1958
	.. (Metric Tons) ..	
Salt fish, wet	19,000	22,000
Salt fish, dried	7,300	7,800
Stockfish	6,600	7,100
Cod wings, frozen	300	600
Cod wings, salted	500	1,900
Fillets, frozen	67,900	74,900
Offal, frozen	2,400	600
Landings abroad of fresh fish	13,800	10,000
Canned fish	300	400
Fish meal	25,900	21,800
Ocean perch (redfish) meal	16,900	15,000
Herring meal	22,100	6,900
Ocean perch (redfish) body oil	4,900	4,500
Herring body oil	21,600	5,900
Cod-liver oil	10,200	9,800
Herring, frozen	14,700	15,900
Herring, salted	33,800	35,600
Roes, frozen	1,200	900
Roes, salted	4,600	3,600
Shrimp and lobster, frozen	200	-
Total	274,200	245,200

Note: Does not include whole products and fish for domestic consumption.

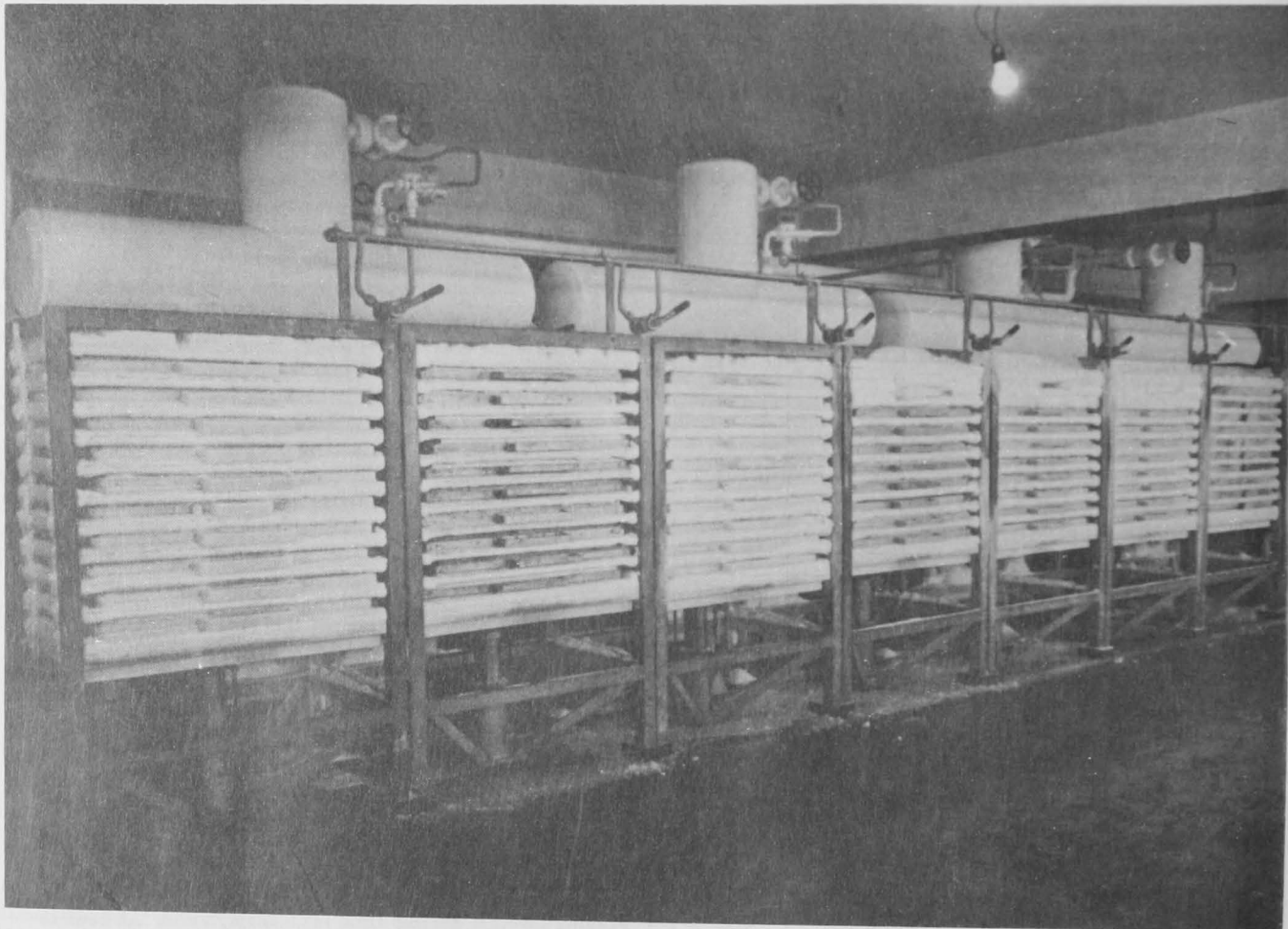


Plate-freezing equipment in a modern Icelandic fillet plant.



India

FAO BIOLOGIST SURVEYS PEARL-OYSTER BEDS:

An Italian marine biologist and diver has until February 1961 to find and chart pearl beds along an 80-mile coastal area in India's Gulf of Manaar before his duties as a biologist at the Rome Zoological Gardens and at the University of Rome bring him back to Italy.

It will be the Italian expert's second trip to the Manaar pearl beds as a Food and Agriculture Organization (FAO) marine biologist and at the invitation of the Indian government. During his first trip he determined what equipment would be best suited for diving in the Gulf of Manaar and trained Indians in its use; he taught the Indians how to collect chemical, physical, and biological data underwater; they charted the pearl beds and drew up a program for future periodical inspection.

"This time, we will do a survey to find out where the best oyster beds are," said the biologist, "and to see if we overlooked any beds. We will also check the old beds to see if they are producing as well as they should. An echo-sounder will be used and if it indicates a pearl bank, we will dive to find out."

The pearl industry currently is not one of India's more important industries for, during the last century, the demand for natural pearls has been replaced by trade in cultured pearls. Now the demand for natural pearls, for their color rather than for their size, is returning, said the Italian expert, and the pearl industry could again be important in India. Coupled with the rising demand for natural pearls is the increase in fishable pearl oysters off India, from causes still unknown.

The Italian biologist and his Indian associates will also chart and investigate chank or conch beds, which yield a large white spiral shell, sacred to the Hindu religion. This shell is used for rings and other jewelry by women in the State of Bengal. It is also found in the beadbands worn for protection by the sacred Hindu cows.

"Nearly one million chank shells are brought up each year during November,

December, and January," states the FAO biologist. "They are sold directly to the government for 8 annas (about 10.6 U. S. cents) per shell. Shells with a reverse spiral are particularly valued."

The chank are sought during the three months when the water is not calm enough to search for oysters. The chank, unlike oysters, are widely scattered, and the divers let their canoes drift while they seek a new spot for each dive. Age seems not to be a factor limiting diving for chank, as men 84 years old still dive for them.

The oyster season opens in February for a brief three months before the monsoon tides and winds arrive. The pearl-oyster diver's catch may be between 600 and 2,000 oysters. He may retain one-third of his catch to sell as he chooses, while turning over the remaining two-thirds to the Government which provides most of the facilities for pearl diving as well as operates the pearl camps.

"The pearl camps," the biologist states, "have a flavor all their own, for nature, not man, is used to open the reluctant oysters. The oysters, purchased unopened at government auction by merchants who flock to the camps, are placed in large sacks in the open air for several days. As the oyster expires, his shell opens, and the pearl camp is easily recognized from several miles away."

The oysters are then washed in tanks, the shells discarded to be later cooked down for lime, and the mollusks themselves searched for pearls. The oysters are not the delicacy savored by gourmets; they are bitter, like unripened fruit.

The 80-mile long area of pearl and chank beds in the Gulf of Manaar has been divided into three sectors. Each year, in the brief time when tide and time permits, the biologist hopes it will be possible to check one sector, thereby keeping a continuing check on all. The results will be more pearls for India.

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NEW ICE AND COLD-STORAGE PLANT COMPLETED NEAR BOMBAY:

A new ice and cold-storage plant, built with United States Technical Cooperation Mission (TCM) assistance, was inaugurated

India (Contd.):

on October 24, 1960, at Versova, a suburb of Bombay (about 15 miles north of the city), India. The plant, which has a production capacity of 11 long tons of ice per day and provides cold-storage space for 30 tons of ice and 30 tons of fish, was established by the Versova Fishermen Multipurpose Cooperative Society Limited. Organized in 1948, this cooperative is considered to be one of the best industrial cooperatives in Maharashtra State.

Machinery valued at Rs. 148,000 (US\$31,080) was provided by the TCM under one of its aid programs for the development of fisheries in India. The buildings costing approximately Rs. 150,000 (\$31,500) were constructed by the cooperative from its own funds and from subsidies and loans received from the Maharashtra Government.

The Bombay City area fishermen will be benefited in two ways from the operation of the plant. They can obtain supplies of ice at relatively cheap prices instead of depending on ice manufacturers in Bombay who allegedly charge excessively high prices during summer months. In addition, they can store the surplus catch in cold storage to help stabilize fish prices.

The members of the Versova cooperative own and operate 450 fishing vessels and 250 "tonies." About 150 of the boats are fitted with marine Diesel engines, of which about one-third was supplied by the TCM. The cooperative owns 11 trucks to transport fish from Versova to the markets in Bombay. It also owns two retail stores which sell Diesel oil and fishing accessories, the United States Consul in Bombay reported on October 28, 1960.

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SHRIMP-PRODUCING AND EXPORTING FIRM SEEKS CAPITAL FOR EXPANSION:

A shrimp-producing and exporting firm located in Kottayam, Kerala State, India, is seeking United States financial collaboration to establish a company to catch, freeze, and export shrimp from the Malabar Coast of South India. The firm is prepared to invest rupees equivalent to approximately US\$300,000 in the enterprise. In addition an equal amount of dollar investment is required to purchase one or two trawlers and

a few fishing nets and accessories. The firm is prepared to grant equity participation to the United States collaborator in proportion to his share of the capital of the company.

The firm believes that the large quantity of quality shrimp in the Arabian Sea off the Kerala coast should command a good market in the United States and other countries.

The firm proposes that its authorized capital be equivalent to \$1 million with the paid-in capital equivalent to \$600,000. An annual turnover of \$2,000,000 is expected. (United Consulate, Madras, November 1, 1960.)



Japan

EXPORTERS CONSIDER 1961 CANNED TUNA TRADING AGREEMENT:

Japan Canned Foods Exporters Association held a meeting of its canned tuna division towards the latter part of October 1960 and discussed the trading agreement for 1961 with the tuna packers. As a result, the exporters' side generally agreed that the trading method would be the same as in 1960.

Of the 1960 agreed export quantity of 2,200,000 cases of canned tuna in brine for export to the United States, a total of 1,870,000 cases had been shipped by October 1960--870,000 cases of white meat and 1,000,000 cases of light meat. Since the 1960 United States lower-duty quota for canned tuna in brine was almost filled, the remaining 330,000 cases will be included with the 1961 quota. The amount to be exported to the United States in 1961 has not been agreed upon.

The Japanese export prices for canned tuna in brine in October 1960 were \$9.15 on white meat and \$6.80 a case on light meat, both f.o.b. Japan. These are said to be the lowest prices at which packers can make a profit and if prices drop lower, the packers' side will have no alternative but to stop packing. But the exporters are pessimistic about receiving orders at the October prices and expect a hard time selling canned tuna in brine in 1961. (Fisheries Economic News, October 31, 1960.)

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Japan (Contd.):

EXPORTS OF CANNED TUNA IN OIL, APRIL-AUGUST 1960:

Japan exported a total of 385,606 cases of canned tuna in oil during April-August 1960, considerably less than the 642,333 cases ex-

Japanese Exports of Canned Tuna in Oil by Country of Destination, April-August 1959-1960		
Destination	April-August	
	1960	1959
	. . . (Cases)	
West Germany	134,411	197,516
Canada	79,826	68,577
Netherlands	29,321	40,353
Switzerland	28,907	18,026
Belgium	26,641	46,777
Lebanon	17,584	54,098
Great Britain	12,850	43,049

ported in the same period of 1959, according to the tuna packers association. The decline was attributed to the shortage of skipjack in 1960. (Suisan Tsushin, November 15, 1960.)

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FIRM NEGOTIATING EXPORT OF FROZEN TUNA TO SOVIET UNION:

A Japanese fishery firm in November 1960 was reported negotiating with the Soviet Union through Japanese exporters for the export of a large quantity of frozen tuna to Russia. Heretofore, exports of frozen tuna have been made mainly to the United States, Italy, Yugoslavia, and others. The firm is inviting four other Japanese firms engaged in the tuna industry to participate.

As a start, an export target of 6,000-10,000 metric tons is envisaged, and it is believed that the Soviet Union could become as big a market as the United States. Exports to the Soviet Union are expected to give Japan an opportunity to regain its position with overseas markets. When the President of the Japanese fishery firm visited the Soviet Union as a member of an inspection team in the summer of 1960 and had an interview with the Soviet Fishery Minister, he proposed the Soviet's import of frozen Japanese tuna. The Minister's enthusiastic attitude at that time caused the Japanese firm to make an effort to export frozen tuna to Russia through a Japanese exporting firm.

Russia is trying to increase food production for its population of some 200,000,000 under a seven-year plan, but has only two tuna vessels. Demand for tuna in the Soviet

Union is reported increasing rapidly. (Fisheries Economic News, November 14, 1960.)

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EASTERN PACIFIC TUNA FISHING FORECAST FOR DECEMBER 1960:

Kanagawa Prefecture Fisheries Experimental Station in Japan released its forecast of Eastern Pacific tuna fishing in December 1960 as follows (tonnage indicates catch per 1,800 hooks):

East Pacific, the first fishing ground (north of 20° N. latitude, east of 150° W. longitude): Big-eyed fishing in the sea area, 28°-32° N. latitude, 140°-150° W. longitude, is expected to be good at the rate of 2.6 metric tons. No catch of striped marlin is expected.

East Pacific, the second fishing ground (5°-20° N. latitude, east of 150° W. longitude): Yellowfin fishing in the sea area, 5°-12° N. latitude, 110°-150° W. longitude, will be poor at 0.9 ton. Good fishing period will still prevail for big-eyed but catch will be on the decrease in the western region of the area and fishing rate in December will be 3 tons on the west side of 130° W. longitude and 6 tons on its eastern side.

East Pacific, the third fishing ground (5° N. latitude -10° S. latitude, east of 150° W. longitude): Poor fishing is expected for both yellowfin and big-eyed in the area, the equator-5° N. latitude, 110°-150° W. longitude, at a rate of 1.4-1.8 tons. A good fishing period for big-eyed is expected at 5-7 tons. (Japanese periodical, November 9, 1960.)

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TUNA EXPLORATIONS IN INDIAN OCEAN:

Tuna fishing grounds around Madagascar and the Indian Ocean are being explored by the Japanese guidance ship Taisei Maru. The Mie Prefecture Fishery Experimental Station late in October 1960 received a report on the vessel's 11th trip as follows:

The first experimental operation was carried out south southeast of Madagascar but failed to yield results. The second operation in the south southwest sea area of the Island revealed that the water temperature was 17.7° C. (63.9° F.) in the 328-foot layer at 28° south latitude, 51° east longitude and condition of the layers seemed comparatively

Japan (Contd.):

stabilized. As a result of 10 experimental operations, 1 south southeast of Madagascar and 9 in the southwest sea area, catch ratios were found to be 5.74 percent and 9.35 percent, respectively. In the southeast area 88 percent of the catch was albacore, 7.4 percent yellowfin, and 4.6 percent big-eyed mixed. In the southwest area species caught were numerous with yellowfin conspicuously more than others, followed by swordfish. The reason why yellowfin were found more was that the water temperature was 2°-4° C. higher than in the southeast area. Also, the branch stream running southward through the Mozambique Channel along the African coast had an effect on fishing in the southeast area and the fish caught were large-sized, comparatively speaking.

More than 30 vessels were operating in the Madagascar sea area in October 1960 with albacore as their objective generally. Fishing seemed better in the southern area. A considerable number of fishing vessels were operating north and in the central part south of the Mozambique Channel. These fishing grounds were entirely undeveloped up to a year ago. In waters around the Chagos Islands, there were some 10 vessels fishing for yellowfin and big-eyed, but fishing was only "fair." (Fisheries Economic News, October 28, 1960.)

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TUNA FISHING POOR IN ATLANTIC:

Japanese reported tuna fishing in the Atlantic was poor in the fall of 1960. The same condition was reported in 1959. Vessels in 1960 experienced extremely poor yellowfin fishing and catches were 5-7 metric tons a day on the average for each vessel. Export shipments for Europe were from 1 month to 1½ months behind schedule. It is not unusual that the catch ratio of yellowfin declines every year after October, but in 1960 even albacore fishing was below expectations.

The market price of Atlantic tuna in the fall of 1960 ranged around US\$245 a metric ton for November shipment and \$250-255 for December shipment to Italy. The Japanese exporters associations' conference rate for January 1961 was \$260 a ton. The price of albacore for shipment to the United States delivered in Africa was \$255-260. (Suisan Tsushin, November 7, 1960.)

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RECENTLY-PURCHASED BRITISH WHALING FLEET TO OPERATE IN ANTARCTIC:

A Japanese whaling company recently purchased the 15,715 gross ton Balaena, a whaling factoryship, along with a refrigerator ship, and seven catcher boats from a British whaling company, the United States Consul at Yokohama reported on October 24, 1960. This purchase, at a reported price of 3 billion yen (about US\$8,300,000), gives Japan her seventh whaling fleet and makes the country second in the number of whaling fleets to Norway. The Balaena arrived at Yokohama on September 29, 1960, for engine overhaul and minor structural modifications. It left on November 1, 1960, to join the catcher boats at Cape Town, South Africa, before proceeding to the Antarctic. The Balaena was constructed in 1946 and has refrigeration equipment.

One third of the purchase price of the whaling fleet was paid in cash with the remainder to be paid in the next five years with no interest. The Japanese whaling firm's other whaling fleet was also purchased in toto in 1956 from a Panamanian company.

LibyaFISHERIES TRENDS, JULY-SEPTEMBER 1960:

The tuna fishing season in the Tripolitania area of Libya ended early in the July-September 1960 quarter and the catch was disappointing. Most of the canning factories closed down earlier than usual.

Despite excellent weather, local fishing operations were limited as skilled labor was unavailable. Many of the Maltese fishermen, long resident in Tripoli, have turned to other much more remunerative occupations and are either engaged by offshore petroleum geophysical survey organizations or have given up fishing for stevedoring or other employment.

There were at least 36 licensed Greek sponge fishermen operating in Cyrenaican waters during the quarter. Although there was no Greek sponge fishing activity in Tripolitania this season, the Cyrenaican sponge beds, which have lain practically undisturbed for two years, were providing a good yield. By mid-August (about mid-season) the season was providentially free of fatal accidents

Libya (Contd.):

and the fishermen indulged in optimistic forecasts, predicting a yield equal to the high levels of 1955 and 1956. (United States Embassy, Tripoli, October 31, 1960.)



Malaya

SHRIMP FISHING INDUSTRY:

The trade statistics of the Federation of Malaya do not list a classification for shrimp. Exports of shrimp, according to an official of the Malayan Statistics Department, are included in the category of Crustacea. This same source indicates, however, that there have never been any exports of fresh or frozen shrimp from the Federation and only minimal quantities of salted shrimp.

There are no vessels exclusively engaged in fishing for shrimp. Fishing is done on a cooperative basis by coastal village fishermen in small sail or motorboats. Most of the shrimp catch is made in Indonesian waters. Shrimp landings that are not consumed locally are salted and exported either to Singapore or Hong Kong. Shipments to Singapore are believed to be re-exported to Indonesia and Borneo. The official of the Statistics Department expressed the belief that no shrimp have ever been exported to the United States, and there is no likelihood of such exports in the near future.

In 1959, exports from the Federation of "crustacea, salted, dried, or simply cooked" (believed to consist largely of shrimp) amounted to 292 tons valued at about US\$205,316. Except for 3.6 tons shipped to Hong Kong, all was destined for Singapore. (U. S. Embassy in Kuala Lumpur, October 28, 1960.)



Morocco

FISHERY TRENDS, JULY 1960:

Although exact figures are not available for the entire country, fishery landings in Morocco during 1960 were good. Sardine landings were heavy, and the major port reports a record catch. Since the beginning of the season on May 8, up to September 10, 1960, 65,000 metric tons of sardines were

landed in Safi. The previous annual record was 61,000 tons. In September 1960 good catches were still being made. During June and July, 250,000 cases of canned sardines were exported from Morocco, an amount exceeded only twice in the past ten years.

Product	Quantity			Value		
	January-July			January-July		
	1960	1959	1958	1960	1959	1958
Fresh fish	(Metric Tons)			(US\$1,000/)		
Fresh fish	7,655	6,965	4,770	1,638	1,406	861
Fish meal	3,370	7,474	11,686	361	840	1,024
Canned Fish:						
Sardines	14,174	13,975	12,526	7,672	6,346	5,381
Tuna	1,095	1,508	1,504	750	892	1,020
Other	2,348	1,245	542	601	222	116
Total	28,642	31,167	31,028	11,022	9,706	8,402

1/US\$1 equals 5.06 dirhams.

Fish exports during the first seven months of 1960 do not show as good a picture for the entire industry. Total exports dropped off in volume, but increased more in value than the 20-percent devaluation of the Moroccan franc in October 1959. The fish-meal industry was in trouble, as world prices made the Moroccan product noncompetitive. Tuna exports also suffered as the supplies of that fish did not hold up. The improvement in other types of canned fish exports reflects sales of mackerel. Sardine exports have been good since the devaluation of the Moroccan franc, and stocks were not being built up as they were before devaluation. The export of fresh fish, particularly sardines, is still being restricted for fear that they will be canned and put in competition with the Moroccan canning industry. In conjunction with this, the "Operation Fish" campaign has been re-instituted to increase fish consumption. Fresh sardines at low prices are being made available to the entire population in the Casablanca area. (United States Embassy, Rabat, October 14, 1960.)



New Zealand

TUNA FISHERY PROPOSED:

According to New Zealand press reports in November 1960, a fishery firm expected to initiate tuna fishing off the north coast of the North Island. Initially, operations were to be quite limited, but the company has asked for Government financial assistance to expand operations.

The Wellington Evening Post of November 3, 1960, reports:

New Zealand (Contd.):

"A depot at Awanui had been built to hold about 20 to 25 tons of frozen tuna, and the freezing plant was now being installed. The depot would be a holding place, and the fish brought by refrigerated truck to Hikurangi for processing.

"The company would supply Watties canneries if requested, and there was a United States market for headed and cleaned tuna," the Managing Director of the company said. The decision to go ahead, he added, had been made as the result of research work by two fishing boats on the far north coast over five weeks, which had just finished.

"We are now certain that tuna can be caught off Northland coasts in quite large quantities," the Managing Director said. "Unfortunately, our boats are too small, the fish were too fast for them, and the fishermen have had no previous experience of tuna fishing."

The newspaper article continued: "Through the company's representative in Australia tuna fishing had been investigated there. It was reported back that South Australia had developed a booming tuna fishing industry which this season doubled its output for the fourth successive year." This report has been sent by the firm's Managing Director to the Minister of Marine to support the request for aid in setting up the New Zealand industry. The Managing Director said there were fishermen available to go from North Island to Australia to learn about the technique of tuna fishing. He himself hoped to go to inquire personally into the industry. (United States Embassy in Wellington, Nov. 4, 1960.)



Norway

EXPEDITION FISHES FOR TUNA OFF WEST AFRICA:

With the catch of cod and herring on Norwegian banks getting smaller each year, Norwegian fishermen were fishing for tuna off the coast of West Africa as of November 1960. A ten-vessel experimental expedition, directed by marine biologists aboard the ocean research vessel Johan Hjort, operated out of the port of Dakar. Equipped with special gear for catching tuna, the vessels were

accompanied by the 1,200 ton deep-freezing ship Cariba. The frozen catch was scheduled to be transported to Puerto Rico in 500-ton refrigerated ships. A United States tuna canning company contracted to buy up to 6,000 tons of Norwegian tuna, at prevailing prices.

The Directorate of Fisheries, a branch of the Norwegian Ministry of Fisheries, made the ocean research vessel Johan Hjort available free of charge. The Norwegian Fishing Industry's Research Fund pledged Kr. 75,000 (US\$10,504) to each participating vessel as a guaranty against operating losses incurred during the first two months. After that period, vessels were free to operate at their own risk. Moreover, the firm which owns and operates the refrigerated vessels engaged in the Norwegian fishing venture received a state guaranty of Kr. 1.5 million (US\$210,084).

Note: Also see Commercial Fisheries Review, November 1960 P. 80.

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FISHERMEN FEAR DEPLETION OF FISH STOCKS:

In the course of a ministerial interpellation, a Member of the Norwegian Storting recently stated that 70 to 80 percent of the fish caught by trawl off the coast of Finnmark County are undersize. He expressed a fear on behalf of the fishermen of that area that if the present excessive catches in the North Atlantic waters are allowed to continue, the Norwegian coastal and spawning cod fisheries would soon be brought to a stop.

The Minister of Fisheries replied he had reason to believe that the International Convention for the Regulation of the Measure of Fishing Nets and the Size Limits of Fish--to which most European nations, including the U. S. S. R. adhere--would take action in the matter in 1961, and intimated that the member states may adopt a regulation requiring the widening of the cod-end mesh in trawl nets to 13 centimeters (about 5.1 inches).

* * * * *

QUOTA SET FOR 1960/61 ANTARCTIC WHALING SEASON:

According to a Norwegian press report which has been confirmed by the Ministry of Foreign Affairs, the Norwegian Government has set the whale quota for the Norwegian whaling expeditions taking part in

Norway (Contd.):

the 1960/61 Antarctic season at 5,800 blue-whale units, the quota which was fixed for the 1959/60 season. The Government however reserved the right to revise the quota in the event that any of the other whaling nations raise their quotas above those of last year. A spokesman for the whaling industry is reported to have stated to the press that since it now appears Japan will increase its quota, the Norwegian quota can be expected to increase correspondingly.

The Norwegian quota is based on the actual catch in the 1958/59 season. Due to a combination of bad weather, the use of fewer catching boats, and perhaps a decline in the whale stocks, the Norwegian catch in 1959/60 season amounted to only 4,565 blue-whale units. It is expected that Norway will again send 8 factoryships to the Antarctic, but a greater number of whale-catching boats will be used this season. The division of the quota among the individual Norwegian expeditions will be the same as in 1959/60.

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SALT-FISH EXPORT PROSPECTS TO BRAZILIAN MARKET IMPROVE:

The marketing prospects in Brazil for Norwegian klipfish (salt fish) have become somewhat brighter following Brazil's decision to make an unlimited amount of foreign currency available for klipfish purchases, according to Norwegian press reports. Consequently, the Norwegian kroner has become cheaper in relation to the Brazilian cruzeiro with the result that Norwegian klipfish prices in Brazil also have gone down by about 20 percent. The reports caution, however, that the long-term outlook for exports of klipfish to Brazil will continue to be uncertain. Due to a falling off in sales, fairly sizable stocks of unsold klipfish have accumulated in Norwegian warehouses.

* * * * *

SHRIMP INDUSTRY:

General Description of Industry: The Norwegian shrimp is the small deep-water type (*Pandalus borealis*) found in the eastern North Atlantic Ocean. Shrimp are caught by shrimp trawls along most parts of the Norwegian coast and on the banks just off the coast. It is generally an all-year-round fishery but catches are low between December and March. The shrimp must be at least 6 centimeters (2.36 inches) long from the front edge of the eyes to the end of the tail. It is estimated that there are about 250 heads-on shrimp per kilogram or about 115 per pound. About 60 shrimp (headless and peeled) are packed in a quarter "Dingley" can which has a net weight of $3\frac{3}{4}$ ounces.

There are approximately 60 processing plants in Norway which handle shrimp either for freezing or canning. Most of the plants handle a variety of fish products and only a very few small plants work solely with shrimp. Peeling is done nearly entirely by hand. Only one peeling machine is in use in Norway and this is mainly for experimental purposes. There are no plans for further mechanization in the foreseeable future. No breaded shrimp is produced.

About 35 percent of the shrimp catch is sold for fresh consumption and about 65 percent for freezing or canning; the larger of the shrimp caught are used for the former, and the smaller for the latter. Between 90 and 95 percent of the entire catch is exported.

Landings: Norwegian shrimp landings have been increasing steadily as shown in table 1.

Table 1 - Norway's Landings of Whole Shrimp, 1956-60

Year	Quantity 1,000 Lbs.	Ex-vessel Value	
		1,000 Kroner ^{1/}	US\$ 1,000
1960 ^{2/} . . .	22,046	33,000	4,620
1959	21,453	31,800	4,452
1958	16,027	22,575	3,161
1957	15,589	20,877	2,923
1956	13,926	18,785	2,630

^{1/}US\$1 equals 7.1428 kroner. ^{2/}Estimated.

Vessel Operations: About 1,000 fishing vessels take part in the shrimp fishery, most of which engage in other fisheries as well. The vessels are generally from 30 to 50 feet in length and are powered by 20- to 40-horsepower engines. They are all under Norwegian ownership. Foreign vessels

Table 2 - Norway's Exports of Fresh, Frozen, and Canned Shrimp, 1956-59 and January-June 1960

Year - Destination	Fresh & Frozen		Canned	
	Quantity 1,000 Lbs.	Value US\$ 1,000	Quantity 1,000 Lbs.	Value US\$ 1,000
Jan.-June 1960:				
United Kingdom . . .	2,255	1,419	743	492
Sweden	1,158	642	26	17
United States	-	-	64	43
Other	280	200	150	112
Total	3,693	2,261	983	664
1959:				
United Kingdom . . .	4,383	2,852	2,579	1,787
Sweden	1,054	730	44	32
United States	-	-	203	134
Other	139	105	959	661
Total	5,576	3,687	3,785	2,614
1958:				
United Kingdom . . .	3,258	2,073	1,742	1,107
Sweden	1,367	894	104	69
United States	7	4	174	108
Other	114	71	692	455
Total	4,746	3,042	2,712	1,739
1957:				
United Kingdom . . .	3,688	2,080	1,836	1,131
Sweden	1,089	643	161	117
United States	26	19	161	98
Other	73	51	860	534
Total	4,876	2,793	3,018	1,880
1956:				
United Kingdom . . .	3,589	1,713	1,409	866
Sweden	1,010	602	161	113
United States	-	-	229	142
Other	99	54	1,077	673
Total	4,698	2,369	2,876	1,794

Norway (Contd.):

Table 3 - Export Prices for Norwegian Processed Shrimp, 1957-59

Year	Fresh 1/		Frozen 1/		Canned 1/	
	Kr. per Kilo	US\$ per Lb.	Kr. per Kilo	US\$ per Lb.	Kr. per Kilo	US\$ per Lb.
1960 (Jan. -June)	6.46	41.0	13.49	85.7	10.69	67.9
1959	6.95	44.1	13.69	86.9	10.88	69.1
1958	2/	2/	2/	2/	10.10	64.1
1957	2/	2/	2/	2/	9.81	62.3

1/Headless and peeled

2/Unavailable.

can and do land shrimp in Norway, but the quantities involved are relatively small.

Quantity and Value of Exports. The quantity and value of Norwegian shrimp exports by type and country of destination are shown in table 2.

Export Prices: Computed from the total quantity and value of shrimp exports. the average export prices are shown in table 3.

The United Kingdom and Sweden are the principal markets for Norwegian shrimp. In terms of value, sales of shrimp to the United States during the years 1956-59 accounted for about 2 to 3 percent of Norway's total exports of shrimp. Norway is now exporting only canned shrimp to the United States. The frozen shrimp are said to be too high in price for the American market.

Current Export Controls: There are no controls, subsidies, or taxes on the export of shrimp from Norway.

Wage Rates for Processing: Male workers in the shrimp processing industry are generally paid on an hourly basis. Their wages vary between 4.70 and 5.00 kroner (65.8-70.0 U.S. cents) per hour, or considerably below the average of 6.30 kroner (88.2 U.S. cents) per hour for all male workers in industry. Most of the female workers are paid on a piece-work basis. Their earnings are somewhat higher than for the women who are paid by the hour. The latter earn from 3.00 to 3.30 kroner (42.0-46.2 U.S. cents) per hour as compared to the average for all female industrial workers of about 4.25 kroner (59.5 U.S. cents) per hour.

Basis of Payment to Fishermen: The shrimp fishermen sell their catches to their regional cooperative sales organizations, which in turn sell the shrimp to Norwegian shrimp processors and exporters. The prices received by the fishermen are determined by the prices obtained by the sales organizations. The organizations retain 4 percent of the net selling price to cover their operating expenses. The minimum export prices, which are established by the industry and approved by the Government, are very seldom utilized. Actual market prices usually run from 10 to 20 percent above the minimum prices.

The Norwegian shrimp fisherman's income is among the highest in the fishing industry and is somewhat above the average for industrial workers. The number of fishermen engaging solely in shrimp fishing is steadily increasing. The fishermen usually own their boats and frequently the family operates the boat as a unit.

Possibility of Expanding: There is considerable searching for new shrimp fishing grounds and workable areas are located from time to time. Provided the market exists, it is expected that the annual Norwegian shrimp catch will continue to increase slowly over the next few years. (United States Embassy in Oslo, November 8, 1960.)



Poland

AIDS IN DEVELOPMENT OF GUINEA'S FISHING INDUSTRY:

An agreement has been signed for the formation of a mixed Polish-Guinean fishing company, scheduled to begin operations on March 1, 1961. Poland is to supply trawlers, four of which--manned by Polish crews--will sail shortly from Gdynia. The Guinean Government is to provide a base of operations with a refrigeration plant, fish-meal production plant, and warehouses. About 50 Guinean specialists and fishermen will be trained in Poland. The Polish research vessel *Birkut* will sail shortly for the West African fishing grounds, according to an October 20, 1960, dispatch from the United States Embassy in Warsaw.



Portugal

EXPORT OF SEaweEDS PROHIBITED:

A ministerial order published in the Portuguese *Official Gazette (Diario do Governo, I Serie, No. 251)* of October 28, 1960, prohibits the exportation of seaweed except in cases when the Regulatory Committee on Chemicals and Pharmaceuticals, the export control agency of the Portuguese Government, finds that exports of seaweed are justified and in no way harmful to the economy of the country.

According to this legislative measure, the prohibition is to last until such time as the study which is now being carried out by a commission appointed early in 1960 is completed. This study will clarify the methods and/or conditions under which seaweed is to be gathered and sold, states a November 9,

Portugal (Contd.):

1960, dispatch from the United States Embassy in Lisbon.

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**FISHERY TRENDS AS OF
THIRD QUARTER 1960:**

At the end of the third quarter of 1960, prospects for the Portuguese cod and sardine fisheries were good, and the catch of other fish was at a very satisfactory level. Landings (exclusive of cod) for the first five months of 1960 amounted to 60,417 metric tons (15,393 tons of sardines) as compared with 59,567 tons (11,994 tons of sardines) landed in the same period of 1959.

Landings by the trawl fishery during January-May were down about 8 percent from 1959, but prices were appreciably higher and the value of the May 1960 catch was greater than that of May 1959. Prices paid for other catches, including sardines, also ranged higher, according to an October 25, 1960, dispatch from Lisbon.

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**COD-FISHING FLEET ENDS
SEASON WITH BETTER CATCH:**

The Portuguese cod fleet left the Newfoundland and Greenland fishing grounds in late October 1960. Among the vessels already home was the hospital and support vessel *Gil Eannes*, states a November 16 dispatch from the United States Embassy in Lisbon. Only one vessel was lost this season, a 77-gross-ton hand-line schooner.

The catch for the 1960/61 season is estimated at about 64,000 metric tons of wet-salted cod, not a large catch, but much more satisfactory than the catches of the 1958/59 and 1959/60 seasons, when 53,344 tons and 59,826 tons, respectively, were landed.

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**PRICE CONTROLS ON
FRESH FISH SALES EXTENDED:**

A Portuguese ministerial order of October 15, 1960, extended Government control measures over fresh fish distribution, in order to help assure that an adequate supply of fresh fish at low prices would be available until development plans for the fishing industry are implemented.

The order of the Ministry of the Navy and the Secretariat of State for Commerce establishes maximum profit margins for wholesalers and retailers, confirms current maximum auction prices at the wholesale fish markets, limits the number of middlemen between fishermen and consumer, and otherwise establishes regulations to enforce distribution at the planned prices. As in the past, prices of a number of the most popular commercial species remain uncontrolled.

A news release accompanying the order pointed out that fish catches have been increasing and that many measures to improve the fresh-fish supply are planned, or being carried out. But it will be sometime before there is a marked change and it is hoped that the order will help improve the supply immediately. As a complementary measure, the National Fish Supply Service is to sell fish direct to the public at posted prices from specially-equipped trucks on a trial basis. At the present time there are in Lisbon a number of retail fish outlets operated by the Trawl Fishing Shipowners Guild where fresh fish of the less expensive varieties are sold at controlled prices. However, the supply available is frequently less than the demand, the fish are available only in the morning and lines frequently form in front of the stores before they open.

Sardines are not dealt with in the order because, as the order states, a special commission was appointed in August to make a study of sardine fishing and marketing for the canning industry, and the results of that study must first be considered. The Commission has representatives of both industry and government.

The dried cod supply situation during the third quarter of 1960 was adequate, and a statement issued by the Office of the Secretary of State for Commerce indicated that with a satisfactory catch anticipated for the 1960/61 cod season, no critical shortage was feared in the next year. However, the statement said, ceiling prices might have to be revised at some time in the future as production costs have risen substantially since those prices were established. (United States Embassy, Lisbon, October 25 and 27, 1960.)

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SHRIMP FISHERY UNDEVELOPED:

Portugal has no shrimp fishery or vessels that fish exclusively for shrimp. Small quan-

Portugal (Contd.):

tities of shrimp are hand-netted on a casual basis by individual fishermen for sale fresh in retail markets. One or two freezing plants primarily concerned with other fishery products handle some shrimp, but the quantity is negligible.

Shrimp landings (mostly small shrimp) in Portugal during 1959 amounted to 120.3 metric tons as compared with 75.5 tons in 1958 and 48.8 tons in 1956.

Shrimp, particularly the larger species, are imported from Spain into Portugal, and it is possible that the Portuguese Government may attempt in the future to expand the shrimp fishery, but at present there are no such plans, the United States Embassy in Lisbon reported on October 28, 1960.

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TUNA PRODUCTION AND FOREIGN TRADE, 1958-59:

Portuguese fishing companies operating the fixed tuna traps or nets in the southern Province of Algarve complained that the tuna catch was poor in 1959. However, tuna catches by the two modern high-seas vessels (table 1), and the fleet of small boats in Madeira and the Azores were reported to have been better in 1959 than in 1958.

Vessel Name and Country of Landing	1959			1958		
	Quantity	Value		Quantity	Value	
	Metric Tons	1,000 Escudos	US\$ 1,000	Metric Tons	1,000 Escudos	US\$ 1,000
"Rio Agueda":						
Italy	371	3,271	114	-	-	-
Portugal	321	2,154	74	282	1,802	63
Total	692	5,425	188	282	1,802	63
"Rio Vouga":						
Italy	356	3,293	114	598	4,336	150
Portugal	265	1,746	61	-	-	-
Total	621	5,039	175	598	4,336	150

Note: Dollar values computed at rate of one escudo equals US\$0.0347.

The fleet of small boats operating off the Azores landed about 5,239 metric tons of albacore tuna, valued at 9,980,000 escudos (US\$346,306), in 1959. This compares with 2,620 tons, valued at 5,179,000 escudos (US\$179,711) in 1958, and 5,470 tons, valued at 12,743,000 escudos (US\$442,182), in 1957. The ex-vessel price for tuna in Portugal is often set before the catch has been made, and consequently varies considerably de-

pending on location. Canneries in the Azores purchased tuna at the average price of 1.90 escudos a kilogram (US\$60 a short ton), while canneries in Algarve paid 6.71 escudos a kilogram (US\$211 a short ton) to the tuna clippers.

The pack of canned tuna on the Portuguese mainland declined from 2,626 metric tons in 1958 to 1,863 tons in 1959; however, canned tuna production in 1959 increased in Madeira and the Azores (table 2).

Type	Portugal (Mainland)		Madeira		Azores		Total	
	1959	1958	1959	1958	1959	1958	1959	1958
	(Metric Tons)							
Tuna & Tunalike:								
Oil or sauce	1,845	2,589	473	187	2,177	1,212	4,495	3,988
In brine	18	37	70	11	-	-	88	48
Total	1,863	2,626	543	198	2,177	1,212	4,583	4,036

Portugal's total exports of canned tuna in oil, sauce, or brine increased from 3,072 tons valued at US\$2.1 million in 1958 to 4,012 tons valued at US\$2.8 million in 1959. In 1959 Italy received the bulk of Portugal's canned tuna in oil or sauce and the United States received the second largest amount (see table 3).

Country and Type	1959		
	Quantity 1/	Value	
	Metric Tons	1,000 Escudos	US\$ 1,000
In Oil or Sauce:			
United States	1,007	20,251	703
West Germany	14	300	10
Italy	2,273	45,724	1,586
United Kingdom	7	140	5
Belgium-Luxembourg	96	1,941	67
France	19	382	13
Switzerland	72	1,447	50
British East Africa	4	88	3
Netherlands	1	20	1
Belgian Congo	22	444	15
Greece	2	38	1
Portuguese Overseas	26	528	18
Sweden	1	21	1
Mexico	16	316	11
Venezuela	304	6,076	211
Australia	6	132	5
Canada	8	166	6
Jordan	1	19	1
Other	63	1,259	44
Total	3,942	79,292	2,751
In Brine Total	70	1,401	48
Grand Total	4,012	80,693	2,799

1/Net weight excluding cans and containers.
Note: Dollar values converted at rate of one escudo equals US\$0.0347.

In 1958, Portugal's imports of tuna (fresh, frozen, slightly salted, and in brine) amounted

Portugal (Contd.):

to 1,929 tons valued at US\$446,000--this compared with 1.234 tons valued at US\$274,000 in 1959, according to a June 7, 1960, U. S. Embassy, Lisbon, report.

Type & Country of Origin	1959			1958		
	Quantity Metric Tons	Value		Quantity Metric Tons	Value	
		1,000 Escudos	US\$ 1,000		1,000 Escudos	US\$ 1,000
Tuna, Fresh or Frozen 1/:						
Angola	-	-	-	32	165	6
Cape Verde Is.	168	534	19	133	475	16
Total	168	534	19	165	640	22
Tuna, Simply Salted:						
Morocco	265	1,670	58	853	5,342	185
Tangier	543	3,282	114	543	3,224	112
Portuguese Overseas	130	950	33	134	623	22
Other Countries	4	24	1	-	-	-
Total	942	5,926	206	1,530	9,189	319
Tuna, Salted in Brine:						
Portuguese Overseas	100	1,347	46	222	3,007	104
Spain	28	117	4	12	25	1
Total	128	1,464	50	234	3,032	105
Grand Total	1,238	7,924	275	1,929	12,861	446

1/September through January landings.



Senegal

TUNA INDUSTRY PROSPECTS AND PLANS FOR 1960/61 SEASON:

Representatives of the Senegalese Government, the tuna industry, and French Government and industry people held discussions September-October 1960 to determine the role of France in the 1960/61 Senegal tuna season. The discussions ended in mid-October.

In effect, the requests made by the Senegalese upon the French have been granted. France has agreed to purchase 10,000 metric tons of canned tuna and 5,000 tons of frozen tuna this coming year--3,500 tons more than last year. France has also agreed to limit her fleet to 55 clippers and 16 freezer-ships. Of the clippers, 5 or 6 will remain after the others return to France and perhaps transfer registration to Senegal. In addition, Senegal hopes to be able to purchase about 5 clippers during the coming season.

The 1960/61 season will run from November 15, 1960, to July 15, 1961. However, this lengthened period will apply only to Senegalese clippers, as the French fleet will return to France at the usual time, around the end of April 1961.

The Dakar cannery has accepted the idea of reducing both costs and profits to increase export sales. They have also readily submitted to the plan of selling ten-fourteenths of their canned tuna to France at a guaranteed French price under the condition that four-fourteenths is sold to non-French markets at the world price.

The only factor not yet settled is the attitude of the fishermen themselves on the matter of selling four-fourteenths of their fresh catch at world price levels. Apparently they have not yet agreed to cooperate.

This drive to lower costs would result in expected sales of 4,000 tons of canned tuna to the export market, consisting mostly of the United States and the Common Market countries of Europe; 6,000 tons of frozen tuna are also being exported, the greater part to the United States by prior agreement with a California tuna canning firm.

Meanwhile, long-range plans remain as they are. The fishing pier in the port of Dakar is a certainty, and the construction of a California-type cannery thereon is still expected, though the money for the construction has not been received to date.

Activity on the part of the Senegalese Fisheries Service and the local tuna industry (which catches what the French call "albacore" but is really "yellowfin" tuna) has picked up considerably.

Plans for the tuna industry in Senegal are made with the idea of creating an industry independent of France and her financial support, and not complementary to that country's tuna industry. However, it is well realized that the primary restraining factor is the high local cost of production, averaging 7 CFA francs a kilo (1.3 U. S. cents a pound) more than other markets, notably the United States, are willing to pay.

Thus, the objective of the 1960/61 season is to become competitive on the world market. The specific plan drawn up for this purpose contains the following features:

1. The tuna season will be extended beyond the 4 or 5 months of the past to around 8 months.
2. As the previous seasons had been determined by the French clippers which came here only during the off-season in France to catch a previously determined amount, reliance will be placed upon increasing the number of local clippers, which will be chartered in Europe and manned to a greater extent than before by Africans. These will remain in local waters after the French clippers, having fulfilled their contracts, return to France.
3. The local industry will be called upon to cut costs and profit to a minimum.
4. Special efforts will be made to increase sales to the export market, which will receive tuna specially labeled and canned for export, particularly for the United States. This, as well as point 3 above, will be brought about by compelling local industry to sell abroad--in other words, for each local producer to be allocated a part of the guaranteed French market, he will have to export a certain quantity to another country. This has been done in the past, but not with the desired success.

The new drive for the export market currently envisions 10,000 additional metric tons destined for outlets other than France--4,000 tons canned and 6,000 frozen. Thus the total catch for the coming season would be approximately 25,000 tons, or 7,500 tons more than last year. It should be noted that the local tuna canning industry is operating below capacity--its six canneries are equipped to process 30,000 tons, but in effect will be canning only 14,000 tons in the 1960/61 season. (United States Embassy, Dakar, October 14 and September 8, 1960.)



Spain

MARKET FOR CANNED ALBACORE TUNA IN UNITED STATES SLOW:

As canning activity in the Spanish fish-canning industry reached its annual peak in September 1960, the canners were faced with a critical situation in marketing canned albacore in the United States. In 1959, exports of albacore authorized from the Northwest zone of Spain to the United States totaled about 3 million pounds with a value of US\$1,063,546. The exact amount of exports of canned albacore tuna to the United States for 1959 for all of Spain is not known. However, the total for the Northwest Zone represented more than 8 percent of the total volume of Spanish canned fish exports in 1959 and more than 10 percent of the total value. In 1960 it was evident that the orders for canned albacore were not forthcoming as they were in 1959. The 1960 lack of orders for Spanish canned albacore was in sharp contrast to the situation in 1959 and to the expectations of the canners prior to the start of the 1960 season, when predictions of doubling 1959 albacore exports to the United States were not uncommon.

The principal obstacle preventing acceptance of the Spanish canned albacore was reportedly the abundance and low price of Japanese tuna available in the United States market. According to a local source, Japanese tuna was being offered in 1960 c.i.f. New York at US\$19.00 (and sometimes less) per case of 12 66-oz. cans. The lowest price (including freight only) quoted in October 1960 for the Spanish product was \$20.25 and found no buyers. Spanish canners claim they can offer no lower price without losing money. There are, however, indications that further offers will be made at lower prices, although it is doubtful that they will be able to meet the Japanese price. One Spanish producer stated that he had an offer from an American importer for all the albacore he could produce at \$18.00 per case of 12 66-oz. cans, but that there can be no question of selling at such a price.

The high cost of Spanish tuna production, which caused Spain's inability to compete in the United States market in 1960, results from the high cost of the fresh fish and inefficiency in production and marketing. Albacore sold during July 1960 in Vigo, ex-vessel, at an average price of 17.12 pesetas per kilo (about US\$259 a short ton) as compared with 13.92 pesetas per kilo (US\$210 a short ton) in July 1959. In 1959, canners informally agreed to refuse to pay excessive prices for albacore and were able, for a period at least, to hold prices down. In 1960, the relative scarcity of albacore in comparison with the intense demand created by the anticipation of high exports to the United States held prices up for an extended period, and prevented any possibility of an informal agreement among canners, such as was reached in 1959.

Production costs are further elevated by antiquated machinery and frequently inadequate cold storage and sanitation methods—a situation which necessitates special and costly handling of fish to be processed for export to the United States. As for marketing, it is a matter of every producer for himself. There is no attempt to cooperate either in the establishment and development of markets or in the promotion of the Spanish product. A recent query by the National Fish Syndicate on how the sale of Spanish exports to the United States might be increased resulted in the suggestion that the industry form a marketing cooperative. According to suggestions, published by the canners' trade journal *Industrias Conserveras*, the cooperative marketing organization should promote one brand name for all Spanish tuna in the United States and would have the advantage of making low-interest credit more readily available to the industry and of securing cheaper freight rates. Furthermore, it would facilitate the importation of machinery, equipment, and raw materials, etc., at lower prices than presently available to the individual producer. Lastly, funds raised by the organization from among the individual members would permit extensive and effective promotion of Spanish canned fish in the United States market.

For 1960, it seemed likely that the canners would continue to hold back, waiting for a break in the United States market, and if this did not materialize, the canners would probably lower their prices by degrees until at least some of their stocks move. The special export operation for the Northwest Zone reports that an effort was being made in October 1960 in conjunction with the Cantabrian Zone to come to an agreement on a lower price for albacore exports. The results of this effort are not known.

In addition to the problem of the United States market, Spanish canned goods are reportedly meeting severe competition in Europe from Morocco and Portugal. Furthermore, present difficulties in Cuba have virtually dried up purchases by that country, traditionally one of Spain's best customers. Although hopeful that "something will turn up," local canners are fearful that 1960 may be as unfavorable an export year as 1959 was favorable. (United States Consul in Vigo, October 10, 1960.)

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VIGO FISHERIES TRENDS,
JULY-SEPTEMBER 1960:

Fish Exchange: A total of 20,425 metric tons of fish were landed during the third quarter of 1960, over 45 percent more than the 13,923 tons of the previous quarter and about 5 percent less than the 21,636 tons of the third quarter of

Table 1 - Landings of Principal Species at Vigo, Spain, July-September 1960 with Comparative Data

Species	1960						1959		
	July-September			April-June			July-September		
	Qty.	Av. Price		Qty.	Av. Price		Qty.	Av. Price	
	Metric Tons	Pesetas Per Kilo	US\$ Per Lb.	Metric Tons	Pesetas Per Kilo	US\$ Per Lb.	Metric Tons	Pesetas Per Kilo	US\$ Per Lb.
Sardines	3,619	4.39	.03	1,482	7.07	.05	5,574	4.84	.04
Albacore	3,351	17.30	.13	754	17.41	.13	4,230	14.52	.11
Horse mackerel ...	2,779	3.72	.03	2,457	3.56	.03	2,725	3.69	.03
Small hake	2,531	23.19	.18	1,694	21.22	.16	2,151	24.26	.18
Large hake	203	61.76	.47	234	43.75	.33	296	56.72	.43

Note: Values converted at rate of one peseta equals US\$0.01666.

Spain (Contd.):

1959. The respective values were 221,342,972 pesetas (US\$3,689,049); 131,425,626 pesetas (US\$2,190,427); and 223,376,888 pesetas (US\$3,723,000).

Canning: Fish canning moved into peak activity during the third quarter of 1960 as large supplies of sardines and albacore tuna provided raw material for the two principal products of the Galician canning industry. Albacore tuna was less plentiful than in 1959, which had been a poorer year than 1958; prices at first sale during the quarter averaged more than 17 pesetas per kilo (US\$0.13 per pound), substantially above the third quarter of 1959. Sardines, while plentiful, were very small, with large quantities reportedly smaller than the legal minimum of 11 centimeters (approximately 4 inches). However, canners bought them for lack of larger sizes and at a price that compared favorably with the prices paid in 1959.



Unloading sardines from the hold of a Spanish sardine auxiliary craft.

Canners purchased 5,085 tons of fish during the third quarter of 1960 as compared with 6,575 tons during the same quarter of 1959. This represents about 25 percent of the total catch for the quarter as compared with about 30 percent in 1959.

In addition to the increased price of albacore, the canners encountered higher costs for olive oil and tinsplate. Domestically-produced tinsplate increased in price by 15 percent from August 1959 and up 56 percent from 1957. Canners attributed these increases to the excessive protection provided by the new duties promulgated in June. Duties on imported tinsplate do not affect canning production for export since the canners enjoy the system of temporary admissions for tinsplate to be re-exported. Production for export accounts for approximately 30 percent of national production.

Olive oil prices which were at 22.50 pesetas per liter (38 U.S. cents for about 1.1 gals.) last year are currently at 25 pesetas a liter (42 U.S. cents). Approximately 75 percent of all fish canned in Spain are packed in oil and the price therefore is of considerable importance in production costs.

Exports: The Galician fish canning industry is encountering unforeseen difficulties in exporting its production of canned fish. The most difficult situation is in the export of canned albacore tuna to the United States. Spanish canners find themselves unable to meet Japanese competition. The increased cost of albacore at the Vigo exchange is regarded as the principal factor in raising costs over last year. However, inefficient fishing methods and inadequate cold-storage facilities also have resulted in noncompetitive production costs for export to the United States.

Exports to European markets are also reported to be meeting severe competition from Portuguese and Moroccan products, while exports to Cuba have virtually dried up.



Thailand

DUTY LOWERED ON FISH MEAL:

Fish meal is included in a list of 14 items on which duties have been lowered by Thailand in order to promote industrial and agricultural enterprises. Fish meal (Item No. 23.01) for animal consumption can now be imported into Thailand at a duty rate of 10 percent ad valorem as compared with the old rate of 27.5 percent. (Foreign Commerce Weekly, November 14, 1960).



Union of South Africa

FISHERY PRODUCTS EXPORTS NOT AFFECTED BY BOYCOTTS:

The official boycotts of South African goods by Ghana and Malaya have not had a noticeable effect on the export of canned fish from the Union of South Africa. An unprecedented demand from the Philippines and higher sales to the United Kingdom have more than compensated for the losses. Available statistics show that the value of canned pilchards or sardines and other fish exported in the first five months of 1960 was £2,996,551 (US\$8,378,000) as compared with £1,804,116 (\$4,431,000) in the same period last year. Dried and cured fish exports also rose in volume and value, although the Ghana market for dried shark is lost (\$56,000-70,000). The Congo market for over £300,000 (\$839,000) annually of dried hake is uncertain.

The depressed state of world fish-meal prices by Peruvian competition can be seen in the fact that, while the Union's volume of fish meal and solubles exported in the January 1-May 30 period rose by 33 percent over the 1959 period, the value of the goods rose only 12.8 percent. (United States Embassy in Pretoria, October 18, 1960.)

* * * * *

FISHING FIRM TRIES LONG-LINING FOR TUNA:

The encouraging results of long-line tuna-fishing tests made by the South African Division of Fisheries Research vessel Kunene and a privately-owned motor trawler Cape Point aroused considerable interest in the fishing industry and at least one fishing firm was expected to try this method of tuna fishing in September 1960.

Union of South Africa (Contd.):

According to an official of the company, Japanese long-line gear had been acquired and was to be tried on a new 69½-foot long motor fishing vessel Brazil. With a factory on the St. Helena Bay coast equipped for drying and freezing, the firm hopes to process the catch in an attempt to start a commercial tuna fishery. The new vessel is one of the largest boats in the pelagic shoal fishery. She is powered by a 290-hp. Diesel engine. (South African Shipping News and Fishing Industry Review, September 1960.)

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PELAGIC FISHING SEASON ENDED
IN JULY WITH RECORD LANDINGS:

The Union of South Africa's Cape west coast pelagic fish landings at the end of July 1960, when the season closed, totaled 350,361 short tons of pilchards, 45,800 tons of maasbanker, and 27,363 tons of mackerel. The total pelagic landings were a record 423,520 tons and the pilchard-maasbanker total was 396,161 tons. In 1959 landings of pilchards and maasbanker over the same period were 323,499 tons; in 1958 the total was 271,323 tons.

In the 1960 season, the Union's west coast fishing industry produced 90,204 short tons of fish meal, 6,080,281 gallons of fish-body oil, and 29,984,227 pounds of canned fish, including 5,997,363 pounds of canned pilchards, 15,911,580 pounds of maasbanker, and 8,075,284 pounds of mackerel.

The July 1960 landings were 85,695 tons of pilchards, 883 tons of maasbanker, and 10 tons of mackerel, totaling 86,588 tons. These figures compare with 65,175 tons of pilchards, 104 tons of maasbanker, and 48 tons of mackerel in July 1959; and with 25,613 tons of pilchards, 1,109 tons of maasbanker, and 1,151 tons of mackerel in July 1958. The July 1960 landings yielded 20,392 tons of fish meal, 549,434 gallons of fish-body oil, 3,062,365 pounds of canned pilchards, and 279,115 pounds of canned maasbanker.

The South-West African Walvis Bay pelagic fish catch to the end of July totaled 203,952 short tons.

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TUNA RESEARCH AND
COMMERCIAL POSSIBILITIES:

Exploratory fishing for tuna has been conducted along the coasts of the Union of South Africa since November 1959 and is continuing. The research is being undertaken by the South African Museum and the Department of Commerce and Industries' Division of Fisheries. Results as of mid-November 1960, according to those conducting the research, were "very promising." Three commercial fishing companies have indicated varying degrees of interest. One of the three, at least, will attempt in 1961 to enter the United States market with shipments of frozen tuna to canneries.

Tuna fishing at present in South Africa is confined to rod-and-line fishing for sport. Some 20 privately-owned tuna boats operate out of the Cape Peninsula area. No tuna is canned commercially. The numbers of tuna caught in the last two seasons, and the excellent catches as of November 1960 have aroused the interest of the Division of Fisheries of the Department of Commerce and Industries, as well as others.

In November 1959, the Division of Fisheries began systematic exploratory fishing for tuna from Cape Columbine, on the Atlantic Coast about 80 miles north of Cape Town, to Cape Point. The vessel used, the Kunene, is a fisheries research vessel similar in design to the usual wooden pilchard boats. In addition to locating the tuna, the intention has been to work out methods whereby the pilchard boats could be used in the pilchard off-season, and to train pilchard fishermen to use the Japanese long-line gear which has been used throughout the search.

The Director of the Division of Fisheries states that the average rate of fish caught per 100 hooks per day during the winter months (June, July, August) has been between 20 and 30. (It is understood that, according to Japanese long-line experts, a catch rate of 7 per 100 per day is considered good, i.e., commercially-profitable within their cost structure.) While the Director also stated that daily catches as high as 90 fish per 100 hooks had been recorded during this period, he added he did not believe that "one swallow makes a summer" and he intends to pursue the search "indefinitely." He is optimistic about establishing tuna as part of the fishing industry, at least to employ craft outside of the pilchard season.

In February 1960 a large South African fishery firm placed one of its trawlers, the Cape Point, at the disposal of the South African Museum for the study of tuna migratory movements from Cape Columbine to East London. The boat is loaned for 10 days each month until August 1961. As the Division of Fisheries is already covering part of this area, the Museum has made its major effort in the area due west of the Cape Peninsula, as far as 100 miles out into the Atlantic. (As the waters from Cape Point to East London are considered too poor to yield much, that area is covered only quarterly.) In the Cape Peninsula area, the chief of the Museum project states, the average summer daily catch rate was 8 fish per 100 hooks and the average winter daily rate was 20 fish per 100 hooks. With the gear used, 100 hooks covers 5 miles, at depths from 17 to 70 fathoms.

One South African fishery firm from Stompneus Bay, Cape Province, announced to the press in late October 1960 that it was assigning a pilchard boat to catching tuna full time because of the results obtained by the Division of Fisheries. The company announced hopes of edging into the foreign market, especially by selling frozen tuna to Italy. Other companies report this effort has been unsuccessful to date; the firm reportedly tried to sell its tuna catch to a large Cape wholesale fish merchant.

A second larger commercial fishing and canning organization intended to bring three pilchard boats down from South-West Africa in January 1961 to fish for tuna below Cape Columbine. The company has already approached the Farrell Lines about refrigeration space to the United States and was negotiating with United States canners.

Union of South Africa (Contd.):

Another large South African fishery firm, according to information received from sources outside the company, intends to export frozen tuna, and most probably will sell to United States canners. According to these reports the company is only waiting until a satisfactory marketing arrangement can be effected. A company spokesman, on the other hand, stated it would be at least a year before the company would decide what to do about the results of the Museum's current research. He disparaged the idea of using wooden pilchard boats for tuna because of their lack of range, refrigeration facilities, and seaworthiness, and compared them unfavorably with the specialized and expensive Japanese boats which have visited Cape Town. (United States Consulate, Cape Town, November 15, 1960.)



U. S. S. R.

EXPERIMENTS ON TRANSPLANTING
PACIFIC SALMON IN ATLANTIC
OCEAN SUCCESSFUL:

Norwegian fishermen in the Varanger area of Northern Norway adjacent to Russia have recently been catching pink salmon (popularly called "Russian" salmon), according to Fiskets Gang (October 5, 1960), a Norwegian fishery trade periodical. (Original source was the Russian newspapers Sovjetskaja Rossia for July 5 and Sovjetskij Flot for August 26).

Along the Kola Peninsula and in adjacent ocean areas, including the Norwegian coast, there now have been 30,000 instances of salmon (Oncorhynchus gorbuscha), taken by fishing gear. As long ago as in the 30's the first attempts were made to plant Pacific salmon in the Murmansk fjord after Soviet researchers had determined that the hydrological conditions in the Barents Sea and the White Sea were similar to those in far eastern waters. The first attempt failed. In 1956, however, the attempts succeeded. At that time 2.4 million fertilized eggs of pink salmon (Oncorhynchus gorbuscha) and chum salmon (Oncorhynchus keta) from the Sakhalin (Siberia) area were transferred but it proved insufficient. In the Murmansk district the special hatcheries were expanded. In 1957, 13 million eggs were transferred; in 1958, 19 million; and in 1959, 21.6 million. For the first time in history, a species of salmon was transplanted successfully from one ocean to another^{1/}. Conditions in the Barents

^{1/}Editorial Note: Striped bass and shad were transplanted successfully from the United States Atlantic Coast to the Pacific Coast many years ago.

Sea and the White Sea proved to be especially favorable for these salmon. The length of the mature pink salmon caught along the Kola Peninsula is from 30 to 52 centimeters (11.8-20.5 inches) and weight is over 1.5 kilos (3.3 pounds). In the Pacific Ocean they seldom weigh over 1.2 to 1.3 kilos (2.6-2.9 pounds).

In the fall of 1960 an additional 35 million pink and chum salmon eggs were transported by plane from Sakhalin and Kamchatka. At the same time the industry in Murmansk expected to handle eggs from the existing local species.

A portion of the eggs will be hatched out in hatcheries which are on rivers on the Kola Peninsula; the remainder will be handled in hatcheries on rivers which flow into the White Sea. The purpose of this test is to determine where these new salmon species thrive best.

The chairman of the economic council for the Murmansk region, who signed the article in Sovjetskaja Rossia, concluded that the time was not distant when Pacific Ocean salmon would be the object of a fishery in the Murmansk area.

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HERRING TRANSPLANTED FROM
BALTIC TO ARAL SEA:

The successful transplantation of herring was reported by the Russians at the recent meeting of the International Council for the Exploration of the Sea held in Moscow, according to a report in Fiskaren (October 5, 1960), a Norwegian fishery trade periodical. The roe of herring was transferred from the Baltic Sea to the inland Aral Sea which has a salt content similar to that of the Baltic Sea. There is now a fishery for herring in the Aral Sea that has developed from the transplanted eggs.

* * * * *

SEAWEED PROCESSING PLANT
PLANNED FOR WHITE SEA AREA:

The Soviet Union's plans for constructing a large factory at Belomorsk for utilizing the seaweed resources along the Karelian coast of the White Sea were reported in Vodnyj Transport (October 22, 1960), a Soviet periodical, according to the November 10 Fiskets Gang, a Norwegian fishery trade periodical. The plant will be one of the Soviet Union's largest in this area with a raw material ca-

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

capacity of 3,000 metric tons annually. It will manufacture products for the textile and oil industries, animal fodder, and padding for the furniture industry.

In addition, there are plans to build a special vessel for mechanical cutting and collecting of the marine algae from the sea to a depth of four meters (about 13 feet). Both the vessel and the factory are still on the drawing boards.

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WOMAN SERVES AS CAPTAIN ON LARGE FISHING TRAWLER:

The large Soviet factory trawler Novikov Priboj was in a shipyard in Kiel, West Germany, in October 1960 for overhauling, according to Dansk Fiskeri Tidende (October 14, 1960), a Danish fishery periodical. The vessel is one of a series of 24 trawlers of the Pushkin class (2,450 gross tons) which the shipyard constructed four years ago for Sudoimport in Moscow.

The vessel's captain is a 45-year-old woman. She is from Western Siberia and originally intended to become a ship construction engineer. During her studies at the University in Leningrad she worked on a ship and from 1939 to 1947 went through prescribed courses for education as a seaman. The female captain started on a sailing vessel as a regular "ship's boy." When she was 33 she received her license as captain. Since then she has commanded ships successfully, including whale catchers. She has taken excellent catches on the factory trawler, which has a crew of 100.



United Kingdom

FISHERY LOANS INTEREST RATES REVISED:

The British White Fish Authority announced effective October 10, 1960, as a result of changes in the rates of interest charged to them by Her Majesty's Treasury, that rates of interest on loans made will be as follows:

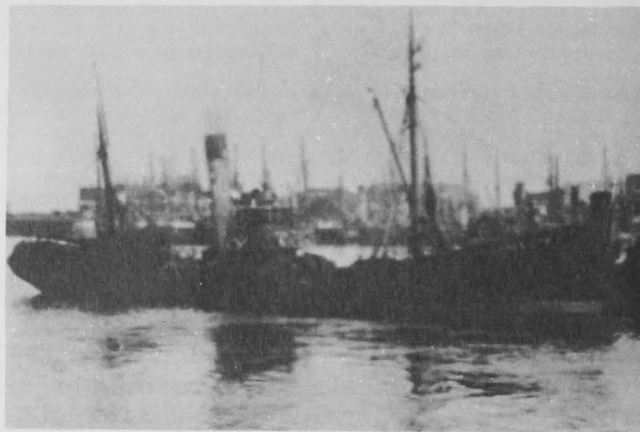
For fishing vessels of not more than 140 feet, new engines, nets, and gear:

On loans for not more than five years-- $6\frac{1}{2}$ percent (decrease $\frac{1}{4}$ percent).

On loans for more than five years but not more than 10 years-- $6\frac{5}{8}$ percent (decrease $\frac{1}{8}$ percent).

On loans for more than 10 years but not more than 15 years-- $6\frac{5}{8}$ percent (no change).

On loans for more than 15 years-- $6\frac{3}{4}$ percent (no change).



British "middle water" trawler or lugger approaching dock at Grimsby, England.

For processing plants:

On loans for not more than 20 years--7 percent (no change).

The rates on loans made before October 10, 1960, remain unchanged (Fish Trades Gazette, October 22, 1960.)

Note: See Commercial Fisheries Review, October 1960 p. 88.

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IMPORTS OF CANNED SALMON FROM RUSSIA INCREASED:

More than £1,000,000 (US\$2,809,000) are involved in new quotas and licenses for Russian canned salmon imports to Britain. Half the amount, £550,000 (US\$1,545,000), is included in the quotas for consumer goods to be traded between Britain and Russia in the year ending June 30, 1961.

Licenses for a further £550,000 worth of canned salmon will also be issued under arrangements made outside the Consumer Goods Agreement. In addition, canned crab meat will be imported from Russia to the value of £440,000 (US\$1,236,000).

United Kingdom (Contd.):

The salmon and crab meat quotas under the agreement, totaling £1,540,000 (US\$4,326,000), are each the biggest ones for Russian goods.

White fish to the value of £550,000 is to be exported by Britain to Russia, also £175,000 (US\$492,000) worth of herring--the largest quota of British goods for export to Russia.

The quotas for all products to be traded between the two countries total £2,850,000 (US\$8,006,000) f.o.b. in each direction. The Soviet quotas have been raised by 10 percent to give the c.i.f. equivalents. They were arranged in accordance with the Anglo-Soviet Trade Agreement of 1959.

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SHRIMP INDUSTRY
AND FOREIGN TRADE:

In the United Kingdom, shrimp are fished by fishermen-owned vessels, each working in an individual pattern, which includes other forms of fishing as an alternative.

Two species of shrimp are caught in commercial quantities in England and Wales, the pink shrimp (*Pandalus montagui*, Leach) and the brown shrimp (*Crangon vulgaris*). The normal method of fishing is by beam trawl from inshore vessels--mainly 20-40 feet in length. A small amount of shrimp fishing is done by push net. The shrimp are boiled in salt water on board the vessel and sold either to the fresh market or processing firms.

Sorting of shrimp may take place either where there are group sorting facilities, or in outworkers' premises, provided these are registered under Food Hygiene Regulations.

The principal shrimp grounds are located in the Wash and Thames Estuary on the east

Table 1 - Shrimp Landings in England and Wales, 1956-59^{1/}

Year	Quantity 1,000 Lbs.	Value	
		£1,000	US\$1,000
1959	4,033	166	467
1958	4,460	196	551
1957	5,043	213	597
1956	4,623	190	533

^{1/}Heads-on shrimp landed by British flag vessels.

Note: Currency converted at rate of one pound equals US\$2.8094.

coast and in Morecambe Bay on the north-west coast of England. The season for pink shrimp normally lasts from April to December, while brown shrimp can be caught all year round.

Four firms have special equipment for processing shrimp, mainly for freezing, canning, and paste manufacture. Only one firm possesses a peeling machine. The industry is on a small scale and greater mechanization is not anticipated.

The total annual landings of shrimp for the years 1956-59 (England and Wales) are shown in table 1.

There is little or no new construction for vessels which only pursue shrimp trawling. It was reported on September 16, 1960, that bad weather and a shortage of marine food two years ago was the cause of the worst season for Harwich shrimp vessels. The Harwich fleet, once the largest on the East Coast, has dwindled to a handful of vessels and a further reduction is anticipated in 1961. Total catches in a full working day in 1960 have been down to 20 Imperial gallons and the shop shrimps have reached the record price of 1s. 9d. (24.5 U. S. cents) a pint.

Table 2 - United Kingdom's Shell Fish^{1/} Exports, 1955-58

Year	Quantity	Value	
	1,000 Lbs.	£1,000	US\$1,000
1958	678	287	2,212
1957	681	322	903
1956	589	291	818
1955	584	240	674

^{1/}Presumably includes shrimp.

Table 3 - United Kingdom's Shellfish Imports, 1955-58

Product & Origin	Year	Quantity	Value	
		1,000 Lbs.	£1,000	US\$1,000
Shellfish, fresh (not in airtight containers) ^{1/} incl. edible snails-- chiefly from Nether- lands, Denmark, & Germany.	1958	9,833	194	546
	1957	10,683	215	603
	1956	10,464	211	595
	1955	13,080	184	517
Shellfish, frozen ^{1/} -- chiefly from Norway, China, Japan, and Iceland	1958	3,281	921	2,587
	1957	1,983	484	1,360
	1956	1,391	339	951
	1955	1,012	252	707
Fish (including shell- fish) in airtight con- tainers--prawns & shrimp, canned ^{1/} chiefly from Norway, some from China.	1958	1,222	473	1,328
	1957	1,169	434	1,219
Fish & fish preparations, in airtight containers or not: fish (including shellfish) in airtight containers--fish pastes.	1958	145	43	121
	1957	139	37	103
	1956	445	113	317
	1955	275	81	227

^{1/}This category did not exist prior to 1957.

United Kingdom (Contd.):

Payment to the vessels is on a share basis--the division of shares varying from port to port. Earnings of fishermen range between £400 to £900 annually (US\$1,124 to \$2,528).

Total exports of shellfish (including mollusks) from 1955 through 1958 are shown in table 2. The actual export of shrimp is believed to be small.

The United Kingdom's shrimp industry receives no direct governmental subsidy and is free of export controls. There are no export taxes.

No significant permanent expansion of the annual catch is likely, as the grounds are limited and the volume of the catch fluctuates. Many shrimp fishermen pursue other types of inshore fishing when they prove to be more remunerative. (United States Embassy in London, November 21, 1960.)



WHICH SIDE UP?

Grimm, the prolific writer of fairytales so dear to the hearts of children a couple of generations ago, told of a talking flounder, but what has been said of flounders wearing dark undersides as well as top sides?

This question prodded fisherman G. A. Wright to bring to the Virginia Fisheries Laboratory at Gloucester Point an oddly colored flounder recently caught in York River near Sarah's Creek. Scientists at the Laboratory viewed with interest his freakish flatfish, which was colored equally dark on both the upper and lower sides, except for the head region on the blind side.

Numerous ambicolorate (colored on both sides) fish have been caught over a period of years, and although scientists have been fascinated by this departure from the normal, and have studied such unusual conditions, no one has satisfactorily explained how such an abnormality may come about.

J. R. Norman suggested in his history of fishes that flatfishes evolved from symmetrical fishes of the sea-perch kind, and almost invariably, fishes exhibiting dark coloration on the under sides are also different from normal fish in other respects. Often their parts are more nearly like their perch-like ancestors than are the ordinary run of flounders.

Norman relates two legends about flatfishes. The Arabs account for the dark-colored upper side and light "blind" side saying that Moses was once engaged in cooking a flatfish, and that when one side was brown the oil he was cooking it in gave out. This annoyed him and he threw the fish back into the sea. Although it was half cooked, it immediately came to life and its descendants have all been born browned on one side.

A Russian legend has it that the Virgin Mary heard the tidings of the Resurrection while eating a fish. Doubting the truth of the message, she flung the uneaten half of the fish into the water, bidding it, if the message were true, to come back to life whole. This, it immediately did, starting a breed of flatfish!

Many interesting experiments on color changes in flounder have been performed, and some investigators declare that it may change color in response to varied backgrounds in a manner that would put a chameleon to shame. This, however, does not account for the peculiar coloration of Wright's fish, for only the colored side of a normal fish may become darker or lighter with its surroundings. (Virginia Fisheries Laboratory, Gloucester Point, Virginia, News Release No. 224, June 24, 1958.)