



International

NORTH PACIFIC FISHERIES CONVENTION

PARTIES TO THE CONVENTION RESUMED TALKS IN OTTAWA:

The third round in a series of talks between Canada, Japan, and the United States on the International Convention for the High Seas Fisheries of the North Pacific Ocean opened in Ottawa September 9, 1964.

When ratified in 1953, the Convention had a guaranteed minimum life of 10 years and, thereafter, until 1 year from the date on which any member should give notice of termination. Such notice has been given, but last year, at the request of Japan, two rounds of negotiations took place among the contracting parties. The first round was held in Washington in August and the second in Tokyo during September and October.

During those meetings the Convention was reviewed to find a basis for resolving the different views developed as a result of the experience gained since 1953. Japan submitted a new draft convention which also was given consideration during the meetings.

Progress towards an agreement was made during the first two rounds of talks, but a further meeting was considered necessary which, at Canada's invitation, was held in Ottawa.

The United States Delegation to the Ottawa meeting was headed by Ambassador Benjamin A. Smith, and included Commissioner Clarence F. Pautzke, U. S. Fish and Wildlife Service; William C. Herrington, Special Assistant for Fisheries and Wildlife to the Under Secretary of State, and Director Field L. McKernan, Bureau of Commercial Fisheries, U. S. Department of the Interior, as well as Congressional and other advisers. On September 14, 1964, the U. S. Senate's President pro tempore appointed Senators Bartlett and Long to attend the meeting.

President Johnson from the White House on September 4, issued this statement regarding the negotiations of the Convention to the International Convention for the High Seas Fisheries of the North Pacific Ocean:

The third round of negotiations with Canada and Japan on the North Pacific fisheries problems is scheduled to begin in Ottawa on September 9. I have just received a report on the issues involved from Ambassador Benjamin A. Smith II, who heads the United States Delegation in these negotiations. The major problem with which the negotiations will deal is the revision of the existing international arrangements for the conservation and rational utilization of the fishery resources in the north Pacific Ocean.

Two earlier rounds of negotiations were held in Washington and Tokyo last year. They made substantial progress toward a full agreement. I hope the negotiations can be completed during the new round of discussions.

The primary objective of the United States in these negotiations is to protect the interests of Alaska and the Pacific Northwest in the North Pacific fisheries, which consist principally of salmon and halibut. The economy of these regions is heavily dependent upon the U. S. fisheries supported by their resources. The interests of the United States in these

fishery stocks have been advanced by the International Convention for the High Seas Fisheries of the North Pacific Ocean. Basic to that Convention is the concept that in special situations, such as those exemplified by the North American salmon and halibut fisheries, where the countries participating in the fisheries have built up and maintained the resources through major research and regulatory programs, other countries should exercise restraints on their fishing of the type provided for in that Convention. This concept provides the incentives necessary to the establishment and continuation of the conservation measures essential to the attainment, both now and in the future, of the maximum harvest of food for mankind. This will insure the conservation of important marine resources and prevent irreparable damage to them through over-exploitation. This is in the common interest of Japan, Canada, and the United States.

"Over the years we have made major contributions to the restoration and maintenance of the salmon and halibut fisheries. For this reason, we have a special interest in them. We are determined to protect that interest, while giving every consideration to the legitimate interests of the other parties to the convention. I am confident that Ambassador Smith, who was the United States representative during the earlier discussions, will effectively present our point of view.

"I urge that the three delegations work out a solution that will permit the conservation of these resources for future generations, taking into account the unique circumstances surrounding the Convention and the interests of all parties to it."

Note: See Commercial Fisheries Review, November 1963 p. 54; June 1963 p. 57.

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JAPANESE FISHING INDUSTRY POSITION ON NEGOTIATIONS:

The Japan-United States-Canada Special Committee of the Japan Fisheries Society, at a meeting on August 2, 1964, in Tokyo, formulated the Japanese fishing industry's position on the North Pacific Fisheries Convention renegotiation talks in Ottawa. The talks began September 9, 1964. Gist of the industry's recommendations submitted to the Japanese Fisheries Agency Director is as follows:

(1) To maximize utilization of the fishery resources of the high seas, the resources (placed under abstention) should be released, and the obligation for joint conservation of such resources should be assumed on an equal footing.

(2) Any arrangement which would result in the exclusive utilization of fishery resources by the coastal country in form or in fact must be absolutely opposed.

International (Contd.):

(3) Industry's consistent desire is to abolish the abstention principle in fact and not merely to eliminate it as an expression of term in the text of the Treaty.

The meeting was attended by over 20 persons (Shin Suisan Shimbun Sokuho, September 3, 1964.)

The Japanese Fisheries Agency Director at a press conference on September 1, told reporters that he anticipated difficulties in the Ottawa talks to renegotiate the North Pacific Fisheries Convention. He stated that so long as the contracting parties stand opposed on the interpretation of resources, progress cannot be achieved. He pointed out the importance of guiding the discussions on a practical basis, and for this purpose felt that all parties should submit their substitute proposals (Minato Shimbun, September 2, 1964.)

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JAPANESE PRESS REACTION TO TALKS:

The following are reactions printed by the Japanese press to the third round in a series of talks between Canada, Japan, and the United States on the International Convention for the High Seas Fisheries of the North Pacific Ocean. The talks opened in Ottawa, September 9, 1964.

(1) Discriminatory treatment forced upon Japan during the period of occupation must be eliminated. The North Pacific Fishery Treaty and the United States-Japan Aviation Agreement were cited as discriminatory. Attention was being focused on the Ottawa meeting because of similarity in nature to the United States-Japan aviation talks which ended in deadlock when the United States was unwilling to give up special rights and interests obtained during the period of occupation.

(2) Japan should not agree to the principle of historic fishing rights advocated by the United States at the Tokyo meeting in 1963, which is tantamount to monopolistic division of fishery resources by specific countries, i.e., the United States and Canada. The historic rights principle is more objectionable than the principle of abstention because it closes the door indefinitely to Japanese fishermen whereas under the abstention principle the possibility does exist to fish underutilized stocks of fish.

(3) Japan should not approve United States demands for unilateral self-restraint in the fisheries of the Northeastern Pacific.

(4) Unwillingness on the part of the United States to compromise its stand on vested fishery rights, together with the President's announcement to protect United States interest in the North Pacific fisheries, places unnecessary strain on friendly relations between Japan and the United States.

INTERNATIONAL COUNCIL FOR
THE EXPLORATION OF THE SEANEW CONVENTION APPROVED AT
CONFERENCE IN COPENHAGEN:

A new Convention for the International Council for the Exploration of the Sea (ICES) was considered and agreed upon by representatives of member Governments of that organization at a conference in Copenhagen, September 7-12, 1964. The Governments represented at the Conference were Belgium, Denmark, Finland, France, the Federal Republic of Germany, Iceland, Ireland, Italy, the Netherlands, Norway, Poland, Spain, Sweden, the U.S.S.R., and the United Kingdom.

Neither ICES nor its personnel have had the usual international status of an organization of its type. The new Convention is intended to correct those problems; it describes the purpose of ICES and outlines organizational and financial procedures.

The new Convention shall be open until December 31, 1964, for signature on behalf of the Governments of all States which participate in the work of ICES. The new Convention shall enter into force on July 22 next following the deposit of instruments of ratification or approval by all signatory Governments. Under certain conditions, the new Convention may also be placed in force if at least three-fourths of the signatory Governments deposit instruments of ratification or approval by January 1, 1968.

Following is the text of the new Convention as agreed upon September 12, 1964:

Convention for the International Council
for the Exploration of the Sea

PREAMBLE.

The Governments of the States Parties to this Convention

Having participated in the work of the International Council for the Exploration of the Sea, which was estab-

International (Contd.):

held at Copenhagen in 1902 as a result of conferences held in Stockholm in 1899 and in Christiania in 1901 and entrusted with the task of carrying out a program of international investigation of the sea

Desiring to provide a new constitution for the aforesaid Council with a view to facilitating the implementation of its program

Have agreed as follows:

ARTICLE 1

It shall be the duty of the International Council for the Exploration of the Sea, hereinafter referred to as the "Council,"

- (a) to promote and encourage research and investigations for the study of the sea particularly those related to the living resources thereof;
- (b) to draw up programs required for this purpose and to organize in agreement with the Contracting Parties, such research and investigation as may appear necessary;
- (c) to publish or otherwise disseminate the results of research and investigations carried out under its auspices or to encourage the publication thereof.

ARTICLE 2

The Council shall be concerned with the Atlantic Ocean and its adjacent seas and primarily concerned with the North Atlantic.

ARTICLE 3

- (1) The Council shall be maintained in accordance with the provisions of this Convention.
- (2) The seat of the Council shall remain at Copenhagen.

ARTICLE 4

The Council shall seek to establish and maintain working arrangements with other international organizations which have related objectives and cooperate, as far as possible, with them, in particular in the supply of scientific information requested.

ARTICLE 5

The Contracting Parties undertake to furnish to the Council information which will contribute to the purposes of this Convention and can reasonably be made available and, wherever possible, to assist in carrying out the programs of research coordinated by the Council.

ARTICLE 6

- (1) Each Contracting Party shall be represented at the Council by not more than two delegates.
- (2) A delegate who is not present at a meeting of the Council may be replaced by a substitute who shall have the powers of the delegate for that meeting.

(3) Each Contracting Party may appoint such experts and advisers as it may determine to assist in the work of the Council.

ARTICLE 7

(1) The Council shall meet in ordinary session once a year. This session shall be held in Copenhagen, unless the Council decides otherwise.

(2) Extraordinary sessions of the Council may be called by the Bureau at such place and time as it may determine and shall be so called on the request of at least one-third of the Contracting Parties.

ARTICLE 8

(1) Each Contracting Party shall have one vote in the Council.

(2) Decisions of the Council shall, except where otherwise in this Convention specially provided, be taken by a simple majority of the votes cast for or against. If there is an even division of votes on any matter which is subject to a simple majority decision, the proposal shall be regarded as rejected.

ARTICLE 9

(1) Subject to the provisions of this Convention, the Council shall draw up its own Rules of Procedure which shall be adopted by a two-thirds majority of the Contracting Parties.

(2) English and French shall be the working languages of the Council.

ARTICLE 10

(1) The Council shall elect from among the delegates its President, a first Vice-President, and a further 5 Vice Presidents. This last number may be augmented by a decision taken by the Council by a two-thirds majority.

(2) The President and the Vice-Presidents shall assume office on the first day of November next following their election, for a term of three years. They are eligible for reelection according to the Rules of Procedure.

(3) On assuming office the President shall cease forthwith to be a delegate.

ARTICLE 11

(1) The President and Vice-Presidents shall together constitute the Bureau of the Council.

(2) The Bureau shall be the Executive Committee of the Council and shall carry out the decisions of the Council, draw up its agenda, and convene its meetings. It shall also prepare the budget. It shall invest the reserve funds and carry out the tasks entrusted to it by the Council. It shall account to the Council for its activities.

ARTICLE 12

There shall be a Consultative Committee, a Finance Committee, and such other committees as the Council may deem necessary for the discharge of its functions with the duties respectively assigned to them in the Rules of Procedure.

International (Contd.):

ARTICLE 13

(1) The Council shall appoint a General Secretary on such terms and to perform such duties as it may determine.

(2) Subject to any general directions of the Council, the Bureau shall appoint such other staff as may be required for the purposes of the Council on such terms and to perform such duties as it may determine.

ARTICLE 14

(1) Each Contracting Party shall pay the expenses of the delegates, experts, and advisers appointed by it, except in so far as the Council may otherwise determine.

(2) The Council shall approve an annual budget of the proposed expenditure of the Council.

(3) In the first and second financial years after this Convention enters into force in accordance with Article 16 of this Convention, the Contracting Parties shall contribute to the expenses of the Council such sums as they respectively contributed or undertook to contribute, in respect of the year preceding the entering into force of this Convention.

(4) In respect of the third and subsequent financial years, the Contracting Parties shall contribute sums calculated in accordance with a scheme to be prepared by the Council and accepted by all the Contracting Parties. This scheme may be modified by the Council with the agreement of all Contracting Parties.

(5) A Government acceding to this Convention shall contribute to the expenses of the Council such sum as may be agreed between that Government and the Council in respect of each financial year until the scheme under paragraph 4 provides for contributions from that Government.

(6) A Contracting Party which has not paid its contribution for two consecutive years shall not enjoy any rights under this Convention until it has fulfilled its financial obligations.

ARTICLE 15

(1) The Council shall enjoy, in the territories of the Contracting Parties, such legal capacity as may be agreed between the Council and the Government of the Contracting Party concerned.

(2) The Council, delegates and experts, the General Secretary, and other officials shall enjoy in the territories of the Contracting Parties such privileges and immunities, necessary for the fulfillment of their functions, as may be agreed between the Council and the Government of the Contracting Party concerned.

ARTICLE 16

(1) This Convention shall be open until 31st December, 1964, for signature on behalf of the Governments of all States which participate in the work of the Council.

(2) This Convention is subject to ratification or approval by the signatory Governments in accordance with their respective constitutional procedures. The instruments of ratification or approval shall be deposited with the Government of Denmark, who will act as the depository Government.

(3) This Convention shall enter into force on the 2 July next following the deposit of the instruments of ratification or approval by all signatory Governments. If, however, on the 1st January, 1968, all the signatory Governments have not ratified this Convention, but not less than three quarters of the signatory Governments have deposited instruments of ratification or approval, these latter Governments may agree among themselves by special protocol on the date on which this Convention shall enter into force and on other related matters; and in that case this Convention shall enter into force with respect to any other signatory Government that ratifies or approves thereafter, on the date of deposit of its instrument of ratification or approval.

(4) After the entry into force of this Convention in accordance with paragraph 3 of this Article, the Government of any State may apply to accede to this Convention by addressing a written application to the Government of Denmark. It shall be permitted to deposit an instrument of accession with that Government after the approval of the Governments of three quarters of the States which have already deposited their instruments of ratification, approval, or accession has been notified to the Government of Denmark. For any acceding Government this Convention shall enter into force on the date of deposit of its instrument of accession.

ARTICLE 17

At any time after two years from the date on which this Convention has come into force, any Contracting Party may denounce the Convention by means of a notice in writing addressed to the Government of Denmark. Any such notice shall take effect 12 months after the date of its receipt.

ARTICLE 18

When the present Convention comes into force it shall be registered by the depository Government with the Secretariat of the United Nations Organization in accordance with Article 102 of its Charter.

FINAL CLAUSE

IN WITNESS WHEREOF the undersigned being duly authorized have signed the present Convention:

DONE at Copenhagen this twelfth day of September 1964, in the English and French languages, both texts being equally authentic, in a single copy which shall be deposited in the archives of the Government of Denmark who shall forward certified true copies to all signatory and acceding Governments.

Note: See *Commercial Fisheries Review*, Aug. 1964 p. 51.

INTERNATIONAL CONVENTION ON THE
TERRITORIAL SEA AND CONTIGUOUS ZONEDOMINICAN REPUBLIC
RATIFIES CONVENTION:

The instrument of ratification by the Dominican Republic of the Convention on the

International (Contd.):

territorial Sea and Contiguous Zone was deposited on August 11, 1964. The ratification entered into force on September 10, 1964.

The Convention was formulated at the United Nations Conference on the Law of the Sea at Geneva on April 29, 1958.

FISH MEAL

PRODUCTION AND EXPORTS FOR SELECTED COUNTRIES, JANUARY-JUNE 1963-1964:

Member countries of the Fish Meal Exporters' Organization (FEO) account for about 90 percent of world exports of fish meal. The FEO countries are Chile, Angola, Iceland, Norway, Peru, and South Africa/South-West Africa. Production and exports of fish meal by FEO countries during January-June 1964 were up substantially from the same period of the previous year.

Table 1 - Exports of Fish Meal by Member Countries of the FEO, January-June 1963-1964

Country	June		Jan.-June		Total
	1964	1963	1964	1963	
	. . . (1,000 Metric Tons) . . .				
Chile	10.5	1/	72.6	1/	1/
Angola	5.3	2.3	29.2	13.8	30.0
Iceland	5.3	3.2	53.0	37.2	99.1
Norway	13.6	5.6	109.0	41.6	102.1
Peru	106.4	84.7	771.4	614.3	1,159.4
South Africa (including S.-W. Africa)	16.7	16.1	106.9	72.5	198.8
Total	157.8	111.9	1,142.1	779.4	1,589.4

Table 2 - Production of Fish Meal by Member Countries of the FEO, January-June 1963-1964

Country	June		Jan.-June		Total
	1964	1963	1964	1963	
	. . . (1,000 Metric Tons) . . .				
Chile	15.7	1/	91.0	1/	1/
Angola	5.8	2.3	30.6	13.1	31.5
Iceland	17.2	4.8	52.9	39.6	87.2
Norway	13.8	19.5	99.8	45.1	132.2
Peru	91.9	98.5	869.6	700.9	1,159.2
South Africa (including S.-W. Africa)	29.2	32.2	159.2	146.8	238.0
Total	173.6	157.3	1,303.1	945.5	1,648.1

Data not available. Chile became a member of FEO at the end of 1963.

During the first 6 months of 1964, Peru accounted for 67.5 percent of total fish-meal exports reported by FEO countries, followed by Norway with 9.5 percent, South Africa with 9.4 percent, Chile with 6.4 percent, Iceland with 4.6 percent, and Angola with 2.6 percent. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, September 11, 1964.)

WORLD PRODUCTION, JUNE 1964:

World fish meal production in June 1964 held steady at about the same level as in the previous month, according to preliminary data from the International Association of Fish Meal Manufacturers. Compared with the same month in the previous year, world fish meal production in June 1964 was

up about 7 percent due mainly to higher output in Chile, Iceland, the United States, and Angola.

World fish meal production in the first 6 months of 1964 was considerably above that in the same period of 1963. The increase was due largely to expanded production in Peru which accounted for about 56 percent of world output during January-June 1964. Higher production during January-June 1964 was also reported in Norway, South Africa, Chile, Iceland, and Angola. The increase was partly offset by lower production in Canada, Denmark, and the United States.

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

Country	June		Jan.-June	
	1964	1963	1964	1963
 (Metric Tons)			
Canada	5,533	5,966	21,934	37,910
Denmark	11,776	11,485	41,850	47,444
France	1,100	1,100	6,600	6,600
German Fed. Rep.	5,727	5,821	37,277	38,949
Netherlands	600	300	3,500	2,000
Spain	1/	1/	1/	10,869
Sweden	238	324	3,666	3,107
United Kingdom	6,471	6,656	40,283	38,849
United States	39,548	2/31,620	76,160	2/82,590
Angola	5,795	2,288	2/30,542	13,462
Iceland	17,210	4,754	52,879	39,568
Norway	13,787	19,469	99,835	44,488
Peru	91,904	98,657	869,682	701,507
So. Afr. (incl. S.-W. Africa)	29,316	34,393	163,593	147,997
Belgium	375	375	2,250	2,250
Chile	15,727	5,692	90,980	2/67,797
Morocco	1/	1/	3/4,060	1/
Total	245,107	228,900	1,545,091	1,285,387

1/Data not available.
2/Revised.
3/Data available only for January-May 1964.
Note: Japan does not report fish meal production to the International Association of Fish Meal Manufacturers at present.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

BUREAU MEETING OF FISHERIES COMMITTEE HELD:

A Bureau meeting of the Fisheries Committee, Organization for Economic Cooperation and Development (OECD), was held on September 7, 1964, in Paris, France. The purpose of the Bureau meeting was to consider and approve the draft 1965 program on behalf of the full committee. The meeting was attended by the U. S. Regional Fisheries Attache for Europe, United States Embassy, Copenhagen.

FOOD AND AGRICULTURE ORGANIZATION

FISHERY TRAINING CENTER TO BE BUILT IN SOUTH KOREA:

The Food and Agriculture Organization (FAO) is scheduled to build a fishery training center in Pusan, Korea, as part of FAO's five-year technical development assistance pro-

International (Contd.):

gram for the Republic of Korea. The center, to be financed by the U.N. Special Fund, will train 30-40 Korean fishery technicians each year.

Two training vessels (one 200-ton tuna vessel and one 150-ton trawler) will be used by the center, and bid invitations for their construction are expected to be sent to Japanese firms. (Suisancho Nippo, August 22, 1964.)

WHALING

SOVIETS PROPOSE CONFERENCE FOR REVISION OF ANTARCTIC CATCH ALLOCATION:

The Soviet Union is reported to be dissatisfied with the reduction in her whale catch quota for the 19th International Antarctic Whaling Expedition, which begins in December 1964, and proposed this past fall that the three whaling countries--Japan, U.S.S.R., and Norway--hold a conference to revise the present catch allocation.

A catch quota of 8,000 blue-whale units was informally agreed to by Japan, Norway, the Soviet Union, and the Netherlands this year, since the International Whaling Commission, which met in Sandefjord, Norway, in June 1964, failed to reach agreement on the catch quota for the 19th Antarctic Whaling Expedition. The Netherlands, however, sold her whale factoryship Willem Barendsz (26,830 gross tons) and her six-percent international whale catch quota to Japan in August this year. Thus, the number of countries participating in the 1964/65 Antarctic Whaling Expedition was reduced to three. Their catch quotas are: Japan 4,160 blue-whale units (52 percent); Norway 2,240 units (28 percent); Soviet Union 1,600 units (20 percent).

Reportedly, the Soviet Union, which plans to operate 4 fleets, considers her catch share insufficient and seeks a quota increase to around 2,000 blue-whale units. She claims that the catch quota allocation and the observer system adopted in 1962, when there were 5 nations participating in the Antarctic whaling expedition, need to be revised since there are now only 3 nations engaged in whaling. Japan's position is that the 1962 agreement is effective for another two years and it was on that basis that she purchased the Dutch whale factoryship and that factoryship's six-percent international catch quota.

Informed observers in Japan foresee possible Soviet withdrawal from the 1962 agreement. Japan fears that this would disrupt orderly whaling operations and would result in a free-for-all competition, to the detriment of the Antarctic whale resources. Moreover, she considers that such a move by the Soviet Union would render meaningless the high price Japan has paid for the Dutch whale factoryship and her catch quota. Therefore, should a meeting of the three whaling nations be called, as requested by the Soviet Union, Japan is expected to strongly insist upon retaining her 52-percent catch quota. (Suisan Tsushin, September 16; Suisan Keizai Shimbun, September 11, 1964; and other sources.)

Note: See Commercial Fisheries Review, September 1964 p. 54; August 1964 pp. 52, 76; April 1964 pp. 62, 66.



Argentina

FISHERIES TRENDS, 1963-1964:

Landings in 1963: Argentina's commercial fishery landings in 1963 amounted to 122,308 metric tons with an ex-vessel value of 1,170 million pesos (US\$8.5 million). Compared with 1962 landings of 92,326 tons valued at 806 million pesos (\$7.1 million), the 1963 landings increased 33 percent in quantity and 364 million pesos in value. (A comparison of the U. S. dollar value of the landings for the two years, however, is not a true comparison because the Argentine peso depreciated from an average dollar value of 113.3 pesos in 1962 to an average of 137.8 pesos to the dollar in 1963.)

In 1963 there was expansion in practically all segments of the Argentine fishery industry. It was a peak year for commercial fishing, production of processed fishery products and byproducts, and exports. Continued progress was anticipated for 1964, with estimates of fishery landings placed at about 200,000 tons.

The record commercial fishery landings for 1963 were due to a number of reasons among which are included: (1) the increased capacity and demand of freezing and packing plants, especially for fish fillets for export; (2) the growing demand in the domestic market and abroad for fish meal, and the expanded plant capacity in Mar del Plata for processing it; (3) the reactivation of the anchovy, horse mackerel, and tuna-canning industry; and (4) the increased tonnage of the deep-sea fishing fleet.

Argentina (Contd.):



Fig. 1 - Map of Argentina showing extensive Continental Shelf.

Fishing Fleet: The Argentine maritime fishing fleet operating in 1963 consisted of 38 deep-sea trawlers manned by some 450 crew members. During the year those vessels made 1,697 trips and caught 57,280 tons of fish, about 90 percent of which was whiting (merluza). In addition, an inshore coastal fleet of 313 vessels and 25 other small craft with a total of about 1,600 crew members landed 53,039 tons (mostly anchovies and mackerel). The commercial fresh-water fish catch in 1963 amounted to 11,988 tons, mostly eel, smelt, and several other species.

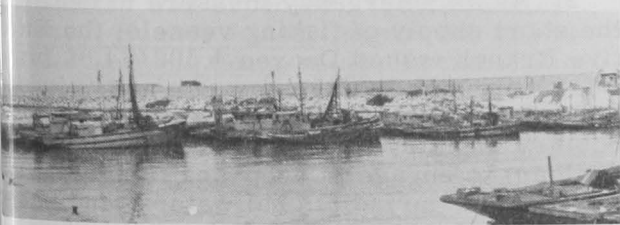


Fig. 2 - Shrimp fishing vessels docked at the Mar del Plata port (Buenos Aires Province).

Utilization of Fishery Catch: Of the total 1964 fishery landings of 122,308 tons, about

43,000 tons went into fresh (iced) fish consumption and the remainder was used for manufacturing processed fishery products and byproducts valued at about 2,399 million pesos (\$17.3 million). Included were canned fish and shellfish (13,264 tons); chilled and frozen fish and shellfish (14,852 tons--mostly "whiting," round, dressed, fillets); fish meal (8,055 tons); and fish oil (1,199 tons). Rapid growth was indicated in 1963 in the canning, freezing, and fish-meal-producing segments of the industry.



Fig. 3 - Unloading and packing fish at Mar del Plata.

Fish Meal: Argentina's fish meal production more than doubled in 1963 as compared with the previous year, and another substantial increase is anticipated for 1964. By 1963 there were 5 major fish meal plants operating in Mar del Plata with a total annual capacity of some 12,000 tons, and plans were under way for the construction of 6 more plants. A significant increase in fish meal production for use as poultry feed was expected as a result of two meatless days a week initiated by the government. Also, there have been some experiments in the production of fish flour for human consumption using a freeze-drying process.

Foreign Trade: In 1963 Argentina switched from its former position of net importer of fishery products to that of net exporter. Argentine exports of fishery products and byproducts increased in 1963 to 7,353 tons valued at \$1.2 million from 2,532 tons with a value of \$391,884 in 1962. An additional 1,458 tons of ocean seaweed (valued at \$287,713) was exported in 1963, as compared to 992 tons worth \$204,710 in 1962. Argentine imports of fishery products and byproducts in 1963 dropped to 2,361 tons (value \$835,039) from 2,560 metric tons (value \$1,022,014) in 1962. The two most important fishery exports in quantity and value were frozen fish--2,768 tons worth

Argentina (Contd.):

\$707,841 in 1963, over half of which went to Spain, and fish meal (3,978 tons valued at \$396,552), principally to West Germany.

Argentine exports to the United States in 1963 were: 244 tons of frozen fish valued at \$116,397 and 1 ton of seaweed valued at \$200. In 1962, exports to the United States consisted of 331 tons of frozen fish valued at \$133,312, and a very small quantity of canned fish. Argentina imported only a very small quantity of canned fish, caviar, and some other prepared fish products from the United States in 1963 and 1962.

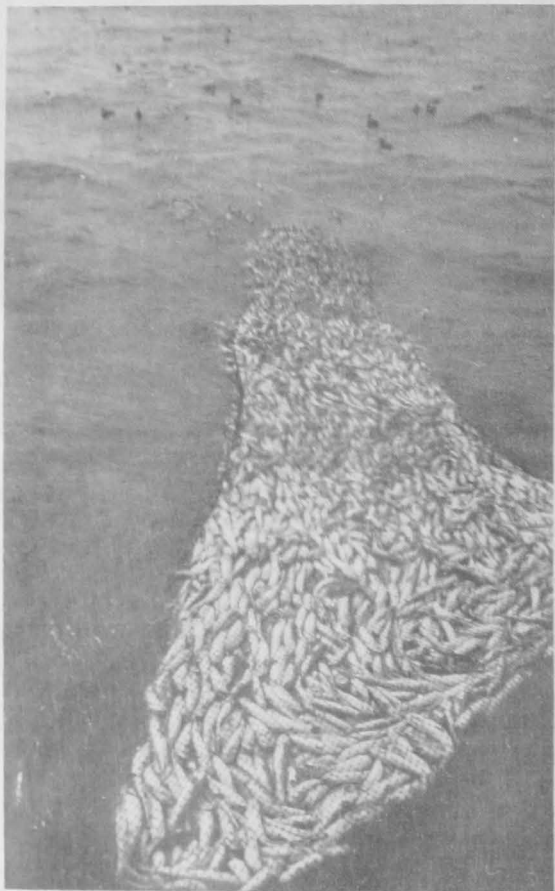


Fig. 4 - Result of a one-hour groundfish drag by Argentine fishing vessel at 120 fathoms--latitude about 42nd south parallel.

Fishery Resources Potential: The Argentine Continental Shelf covers an area of nearly 400,000 square miles. International fishery experts believe it abounds in marine species of commercial value, especially in the zone between parallels 38° and 44° south where the Antarctic and Equatorial currents converge. Argentine Government officials

estimate potential fishery yields as high as four million tons annually. Actual exploitation has never measured more than a small fraction of that amount. Nevertheless, Government officials believe that in view of the short distance of the underexploited fishery resources from Argentine fishing ports, adequate capital investment for expanding the national commercial fishing fleet and industry would place Argentina in a highly advantageous export position. Moreover, it has been argued that, with increased domestic consumption of fish, a corresponding amount of meat products could be diverted into the export market.

Developments in 1964: When in the first half of 1964 there developed a shortage of domestic beef and constantly increasing beef prices, renewed attention was given to Argentina's underutilization of the rich fishery resources off its continental shores, and to the fact that Argentina has one of the lowest average per capita fish consumption rate in the world (2.7 kilograms or about 6 pounds edible weight in 1963). Significant developments affecting the Argentine fishing industry in 1964 were:

1. In June the Argentine Central Bank announced that, as the first step in an overall promotion scheme for the fishing industry, it would make available, through rediscounts to the Bank of the Nation and the Industrial Bank credits totaling 709 million pesos (about \$51 million) to finance the construction of fishing trawlers, modernization of the canning and freezing/chilling industry plant and equipment, the acquisition of refrigerated storage facilities and transport, and the installation of modern fish markets. Promotion credits for the fishing industry, especially in the commercialization sector, also were expected to be released by the Provincial Bank of Buenos Aires.

2. As an emergency measure to deal with the short supply of fishing vessels, the Executive Branch issued Decree 4,508/64 of June 17, 1964, establishing one-year authority for Argentine-chartered trawlers under LAFT country registry (primarily Peruvian and Chilean) to engage in deep-sea fishing outside Argentina's jurisdictional waters, and according national treatment to fish catches by the vessels. The Argentine Government received offers from Spain, Japan, and Yugoslavia to supply fishing vessels in exchange for Argentine

Argentina (Contd.):

meat and agricultural products. However, Government proposal to modify existing legislation protecting the Argentine shipbuilding industry met with such stiff opposition from the local shipbuilding associations that the project was temporarily shelved. About 6 fishing vessels newly constructed had been expected to be operating in 1964 but only about 7 of them will be completed this year.

3. The presence of foreign fishing fleets (principally Japan and the U.S.S.R., but also several West European nations, Brazil, and Uruguay) in the deep-sea fishing areas off the Argentine coast was cited by the Executive Branch as partial justification for recently submitting to Congress a draft law which would (1) extend the present 3-mile limit of Argentina's territorial sea to 6 miles, and (2) declare exclusive Argentine sovereignty, and thereby the applicability of Argentine police and customs powers, over the entire contiguous Continental Shelf and epicontinental water, and declare exclusive rights to exploring and exploiting the natural resources (including fish) in that extensive area.

4. Increasing retail fish prices were recently studied by the National and Buenos Aires Municipal authorities. They were deemed unjustifiable and the result of a producers' "fish monopoly" in Mar del Plata artificially reducing output and of wholesalers in Buenos Aires exacting enormous profit margins. Price controls were subsequently applied by the government. In order to increase fish consumption, the Buenos Aires Municipality committed itself to construct fish stands in lower-income neighborhoods for the sale of fish at "reasonable" prices.

5. The presentation to the Argentine Congress of an Executive Branch proposal for a comprehensive law promoting and protecting all aspects and sectors of the Argentine fishing industry was expected. (United States Embassy, Buenos Aires, August 20, 1964.)

See *Commercial Fisheries Review*, July 1964 p. 45; December 1963 p. 54; November 1963 p. 54.



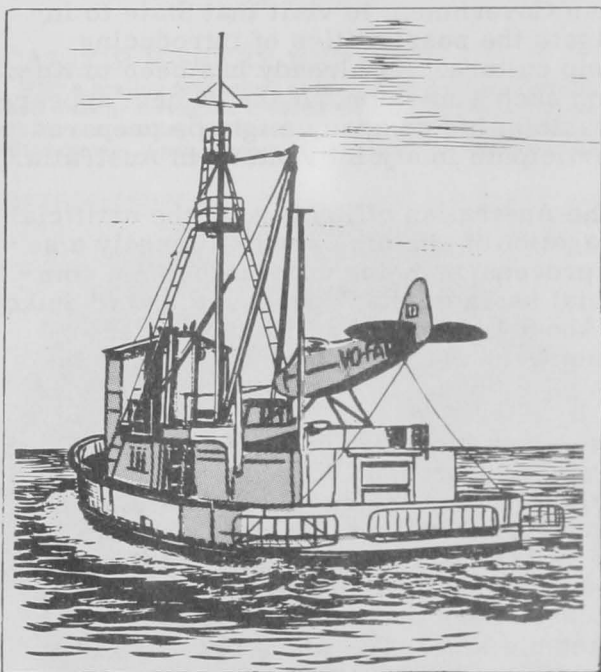
Australia

FACILITIES EXPANDED TO HANDLE INCREASED TUNA CATCH:

To cope with the growing Australian tuna catch, a fishermen's cooperative in South Australia is expanding its activities in Victoria and New South Wales. The cooperative's general manager announced that his organization, together with a Melbourne firm, is taking over a large Melbourne fish cannery. He said they also would build brine tank fish-holding facilities at Eden in New South Wales to allow tuna to be handled in good condition at Eden and transported to Melbourne for canning.

The Melbourne cannery is capable of freezing 100 metric tons of tuna every 36 hours, and will hold in cold storage more than 300 tons. Arrangements have also been made with a public cold-storage plant in Melbourne to store much larger quantities.

The firms involved will form a subsidiary company to operate the Melbourne cannery, handling bluefin tuna from Eden, skipjack from Victoria, and Victorian-caught "salmon" and barracouta.



Stern view of Australian tuna clipper, showing fishing racks and live-bait tanks. Spotting plane fitted with floats on top of tanks.

The brine-tank facilities at Eden will have a capacity of 100 tons. At the end of the New South Wales season, the tanks, which are mo-

Australia (Contd.):

bile, will be transported to Port Lincoln, South Australia, where they will be used to handle the increasing tuna catch there. (Australian Fisheries Newsletter, July 1964.)

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JOINT VENTURES WITH JAPANESE IN SHRIMP FARMING AND TUNA FISHING IN AUSTRALIA CONSIDERED:

The shrimp-rearing methods developed in Japan impressed fishery officials of the Western Australian State Government when they visited the island of Shikoku, Japan, in mid-1964. The Western Australian Minister for Fisheries said on his return to Australia that in view of the uncertainty of shrimp stocks at Shark Bay it might be worthwhile to introduce shrimp farming to Western Australia.

At Takamatsu on the island of Shikoku, the Australian officials held discussions with a Japanese scientist who helped develop the technique of shrimp culture. The Japanese scientist said that if it was desired, he could accept an invitation from the Western Australian Government to visit that State to investigate the possibilities of introducing shrimp culture. He already has been to Korea on such a mission. If the project appeared feasible, his company might be prepared to participate in a joint venture in Australia.

The Australian officials said the artificial propagation of shrimp, which is largely a secret process, is being undertaken on a commercial basis on the Japanese island of Shikoku. About 100 tons of artificially-reared shrimp were marketed by the Japanese in 1963.

After hatching, the Japanese cultured shrimp pass through 17 stages in about 28 days before they assume the appearance of shrimp. By that time they are from half to three-quarters of an inch long. At that stage they are sold to farmers who have ponds on the coast where the shrimp are reared to marketable size. The whole process takes slightly less than a year.

The Australian officials also held discussions with a large Japanese fishing company concerning the possibility of developing a joint tuna venture in the Indian Ocean, with Western Australian capital and Japanese vessels, equipment, and if necessary, experi-

enced fishermen. (Australian Fisheries Newsletter, August 1964.)

* * * * *

SHRIMP FISHERY GOOD IN 1964:

Big shrimp landings were reported during May and June 1964 in Queensland, northern New South Wales, and Western Australian waters. Trawlers operating off Moreton Bay, Southport, Tweed Heads, and Brunswick Head landed about 300,000 pounds of shrimp in a week.

The manager of the Fishermen's Cooperative at Evans Head reported that their intake of shrimp for April-May 1964 was 542,842 pounds compared with 229,336 pounds for the same period in 1963.

The Cooperative's shrimp landings from June 1, 1963, to May 31, 1964, were 920,468 pounds compared with 1,142,034 pounds in the previous year. The manager of the Cooperative said that this slight drop in production was not significant because in 1962/63 trawlers operating south of Evans Head brought in large quantities of small shrimp. During the 1964 season the shrimp were larger and of better quality. As many as 37 vessels were based on Evans Head for the shrimp season, he said.

At Shark Bay, in Western Australia, where the season is later than on the East Coast, a catch of one million pounds for the season was forecast.

Most of Australia's large shrimp are exported to Japan, France, and the United States. The total shrimp catch in 1963 was 12,614,000 pounds, and exports were worth £479,000 (US\$1.1 million). (Australian Fisheries Newsletter, July 1964.)

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INCREASE IN SCALLOP EXPORTS PLANNED:

With Australian scallop production in 1963/64 substantially increased by the opening up of new beds in Victoria, the need to increase scallop exports became apparent. At the request of the Tasmanian Sea Fisheries Advisory Board, the Fisheries Branch of Australia's Department of Primary Industry undertook a survey of possible overseas markets. Australian Trade Commissioners overseas were asked for the latest "on the spot" market evaluations, and the information they supplied has been incorporated in a full report to be made available soon.

Preliminary investigations on the export potential of Australian scallops were reported most encouraging, and some indication of the general prospects in selected countries follows:

Australia (Contd.):

France: There has been a rapid expansion in the quantity of scallop exports from Australia to France in the past two years. Prospects are excellent for further expansion because consumption of scallops has increased, and local production has not increased at a corresponding rate.

Belgium: Traditionally, Belgium has been supplied by France, although the increased demand has led Belgium to look for new sources of supply. The main outlet is the hotel and restaurant trade where scallops traditionally are an accepted "menu item."

Malaysia: There is a good demand for scallops in the former territories of Malaya and Singapore. In the past few years there have been small sales of Australian scallops in that area, and there appears to be some preference for scallops without roe. There is a considerable demand in Malaya for sun-dried scallops for use in soups and gravies.

Pacific Islands: A small but useful market for scallops in the Pacific Islands has existed for some time and generally is confined to small European communities in the main commercial centers. Australia is the main supplier, and increasing sales appear likely. New Caledonia, with a population of 100,000 (predominantly French) offers the best prospects.

United Kingdom: There is an established consumer demand for scallops in the United Kingdom. The market is supplied mainly by local producers, supplemented by imports. Supplies from overseas are in greatest demand between May and August. There is a preference for live in-shell scallops and fresh scallop meats, but there is a ready market for frozen scallops with low counts per pound. Commonwealth preference arrangements give Australia a good opportunity to expand this market.

Greece: There is a marked preference for seafoods in that country. Scallops, although relatively new to Greece, suit the cooking methods of the inhabitants. Australian scallops were to be featured at a food-tasting exhibition at the Salonica International Fair this September, and later on at Athens.

Hong Kong: In 1963, Hong Kong imported 26,000 pounds of scallops, but Australia's share in the market was insignificant. Efforts have been made to stimulate sales through major retail outlets but hotels and restaurants appear to offer the best prospects. Hong Kong is a popular tourist resort, and it is expected that the demand for scallops will increase. Prices appear satisfactory, and Australian scallops are acceptable in Hong Kong.

Kenya: Scallops generally are acceptable as a seafood in East Africa by the European community. The United Kingdom was the main source of supply in the past. Frozen scallops with roe on them are acceptable and the prices are favorable. It has been suggested that there could be a good market for frozen scallops with the shells packed separately and for canned scallops because of lack of refrigeration in much of East Africa.

Persian Gulf: The only possible outlets are the small oil-rich States, notably Bahrain and Kuwait, where the demand is confined to hotels and restaurants. Present imports are mostly canned scallops from Japan.

West Germany: Scallops are unknown to most West Germans and consumption is confined to a few gourmets. Supplies are obtained from Canada and Ireland, and there is a preference for "roe-on" scallops. There appears to be a possible market for scallop shells for decorative purposes. Scallops prices quoted appear quite attractive, despite the 3-1/2 percent customs tariff.

United States: The world's largest producer and consumer of scallops is the United States; the bulk of its supplies is

Estimated Australian Exports of Scallop Meats, 1960/61-1963/64				
Country of Destination	1963/64	1962/63	1961/62	1960/61
	(In Pounds)			
France	651,000	70,300	5,200	4,500
Pacific Islands	22,000	12,400	12,800	6,100
Malaysia	5,000	7,700	3,000	8,500
Other Countries	77,000	900	2,400	900
Total	755,000	91,300	23,400	20,000

normally obtained from the local scallop fishery. Some supplies are received from Canada, Japan and U.S.S.R. There is a strong preference for "all-white" scallops (scallops without roe). There have been scallop gluts in the past, which led in 1961 to a major promotional sales campaign. Small quantities of Australian scallops have been marketed in the United States.

Lebanon: Scallops have no great appeal to Arab communities who have conservative food tastes, but there is an established market in the tourist hotel and restaurant trade, particularly in Beirut. Preference is for scallops with roe-on and no trade barriers exist at present. British and American armed forces establishments also offer export prospects.

Venezuela: Although scallops have not been imported in the past by that country, there are prospects for developing a market in catering and supermarket establishments. Businessmen have expressed willingness to consider stocking Australian scallops and developing a regular market. (Australian Fisheries Newsletter, August 1964.)

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SCALLOP FISHERY EXPANDS:

With a scallop production of more than 5 million pounds (shell weight) during the 1962/63 season, Australia was the fifth largest scallop producer in the world, following the United States, Japan, Canada, and France. In 1963, the United

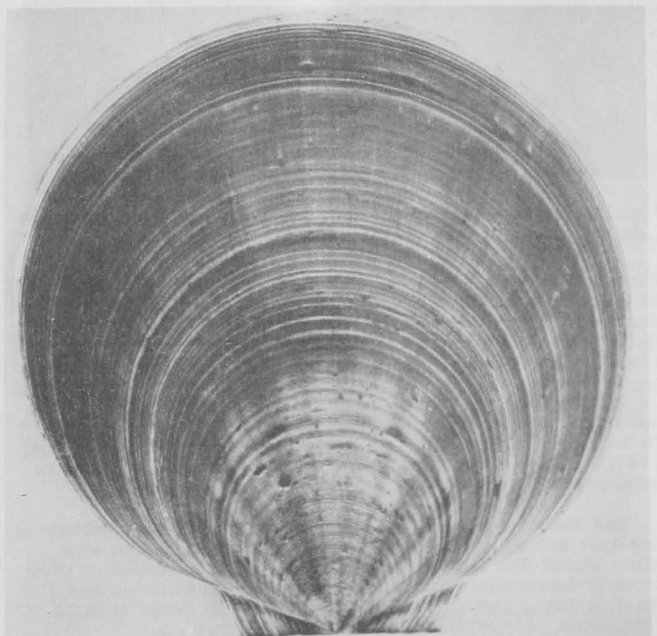


Fig. 1 - Queensland scallops average six inches in diameter--much larger than the Tasmanian variety. Upper shell of the Queensland scallop.

Australian (Contd.):

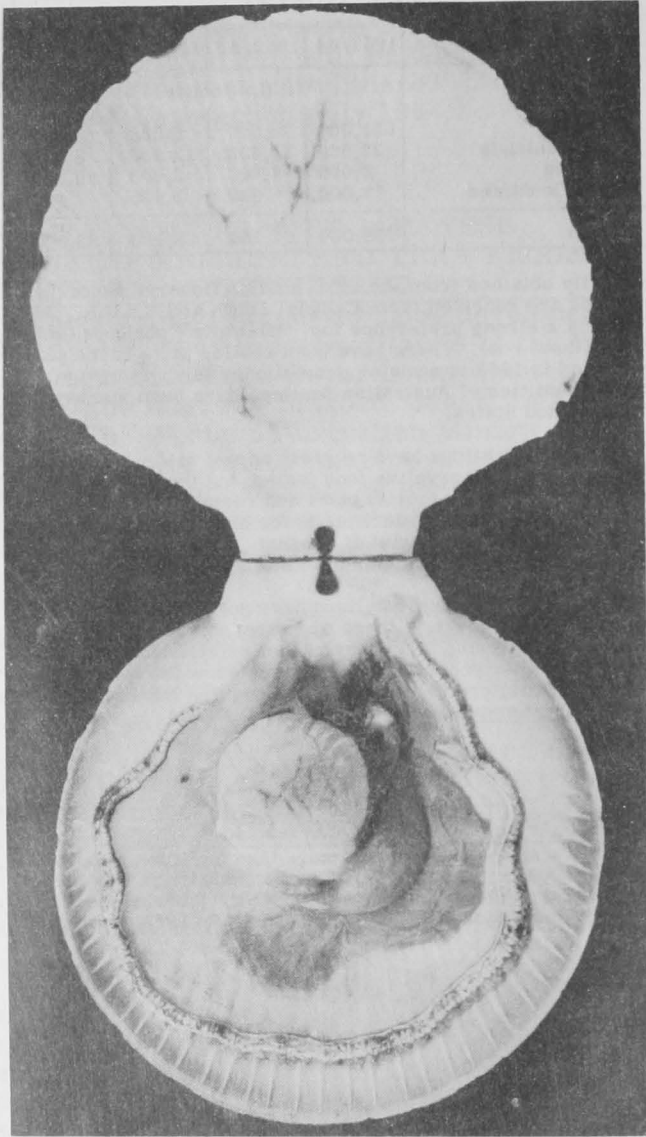


Fig. 2 - A Queensland scallop in its shell, showing the large adductor muscle or meat of the scallop.

States production of scallop meats was about 20 million pounds; in 1962 it was nearly 25 million pounds. The 1962 scallop production of the other countries was (shell weight basis in millions of pounds) Japan 22.3, France 13.7, and Canada 13.9, followed by Australia with 5.1.

Scallop beds exist in a number of regions in Australia, but until recently, commercial production was virtually confined to Tasmania, and to a lesser degree, Queensland. During the 1962/63 season Tasmania produced 90 percent of Australia's total production of a little more than 5 million pounds.

The Tasmanian scallop fishery has a long history extending back before World War I. The greatest expansion was after World War II when the area fished was extended in 1950 from D'Entrecasteaux Channel, near Hobart, to Coles and Norfolk Bays, and subsequently to east coast areas such as Triabunna, Maria Island, St. Helens, and Bicheno.

In 1963 a commercial scallop fishery was established in Victoria, based on beds in Port Phillip Bay, and it has grown



Fig. 3 - A portion of the scallop fishing fleet at the dock in Bundaberg, Queensland.

significantly. In July 1964, 90 vessels were dredging for scallops in Port Phillip Bay. In September 1963, only two vessels were dredging. By February the number of vessels jumped to 40, reached 51 in May, and 90 in June.

April 1964 was the best month for scallop dredging with 42 vessels landing 16,393 bags, each bag containing between 400 and 600 scallops and yielding 17 to 18 pounds of meats. Some of the best individual catches in 1964 were at the rate of 8 to 9 bags an hour (or 4,000 to 4,500 scallops an hour). The best conditioned scallops were taken off Brighton.

Victoria now produces more than 80 percent of Australia's scallop exports which amounted to 755,000 pounds worth about A£180,000 (US\$400,000) for the year ended June 30, 1964.

The Tasmanian scallop fishing season opened on May 14, 1964, and the best results were on east coast beds.

The D'Entrecasteaux beds, which for many years were the main source of supply, have declined and because of the poor quality of the scallops are not being fished.

Interest now is centered on the east coast, from Maria Island to Eddystone Point, where a Tasmanian exploratory fishing vessel has assisted by locating new beds and will continue to do so. Although fishing activity has been hampered at times by rough weather, catch rates on east coast beds have been good, and the scallops are of consistently high quality. A fleet of 60 vessels is operating in that area, taking scallops in from 20 to 30 fathoms of water from a clean sea bed. (Australian Fisheries Newsletter, August 1964.)

Note: See Commercial Fisheries Review, October 1964 p. 87.

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Australia (Contd.):

EXPORTING PET FOOD TO THE UNITED STATES:

The first Australian export shipment of pet food (prepared from fishery products) was loaded in July 1964 at Port Lincoln, South Australia, for United States delivery. The 300-ton shipment consisted of 25,000 cases valued at about £50,000 (US\$111,100). The pet food was packed at a Port Lincoln cannery. (Australian Fisheries Newsletter, August 1964.)

* * * * *

STANDARDS FOR OYSTERS PROPOSED:

In Australia, the New South Wales State Department of Public Health proposes to set bacteriological standards for the sale of oysters for human consumption. It is hoped that the new standards will help open new export markets.

For many years, oyster bacteriological standards have been in effect in various other countries. The main method of cleansing oysters has been ultraviolet light.

When the New South Wales Oyster Farmers' Association was informed of the proposal to establish a bacteriological standard, it sought information from the British Ministry of Agriculture on procedures to adopt in cleansing the oysters. British experts supplied plans and specifications for a modern ultraviolet treatment plant.

An Australian oyster supply firm built a trial plant on Georges River to apply the ultraviolet treatment. After three months of continuous operation, the trial plant was reported to be performing satisfactorily. Treated oysters conformed to a bacteriological standard likely to be established. The treated oysters suffered no impairment of flavor or texture. Oyster treatment costs worked out at about 10 shillings (US\$1.11) a bag.

While the plant operated, oystermen were invited to inspect it; they were shown how it worked and given the plans and specifications of the facility.

A newly formed company plans to build another ultraviolet treatment plant in Sydney, Australia.

The annual New South Wales oyster harvest is in excess of 12,000,000 pounds (weight with shell) with a value of £1 million (\$2.2 million), according to reports. (Australian Fisheries Newsletter, July 1964.)



Canada

FEDERAL-PROVINCIAL BRITISH COLUMBIA FISHERIES COMMITTEE ESTABLISHED:

The study of fisheries problems on Canada's west coast will be facilitated by a new Canadian Federal-Provincial committee which held its organizational meeting in Nanaimo, British Columbia, August 19, 1964. The initial members of the committee are the Deputy Minister of the British Columbia Department

of Recreation and Conservation and the Deputy Minister of Fisheries for Canada. The Deputy Ministers will each name two additional members from Federal and Provincial agencies to bring the committee to full strength.

The next meeting of the committee will be held at Ottawa in early November 1964. Among the problems expected to be brought before the committee at that meeting are those of the West Coast oyster industry, the maintenance and improvement of salmon spawning streams in the face of industrial expansion, and the relationship of sport and commercial fisheries in British Columbia. (Canadian Department of Fisheries, Pacific Area, August 19, 1964.)

* * * * *

FEDERAL-PROVINCIAL ATLANTIC FISHERIES COMMITTEE MEETING IN OTTAWA:

Problems affecting Canada's Atlantic fisheries were discussed at the sixth annual meeting of the Canadian Federal-Provincial Atlantic Fisheries Committee, which is made up of Federal and Provincial deputy ministers with responsibilities for fisheries in the five Canadian Atlantic Provinces. The meeting was opened September 1, 1964, by the Federal Deputy Minister of Fisheries who stressed the value of frank exchanges of views in planning new joint projects.

Subjects discussed at the meeting included Canada's participation in international conservation programs for the Northwest Atlantic; territorial waters and Canada's exclusive fishing zone; fisheries training and marine works in the Atlantic provinces; financial assistance and inspection programs; and marketing organizations. Progress reports were submitted on the proposed Canadian Atlantic Fishing Trawler Conference, and on programs for industrial development. The Committee also received reports from its special sections dealing with salmon, trout, and oysters. (Canadian Department of Fisheries, Ottawa, September 1, 1964.)

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NEW CHART OF NOVA SCOTIA FISHING BANKS:

A new type of Canadian chart--a fisheries chart--has been issued by the Canadian Hydrographic Service.

Canada (Contd.):

The new chart, No. 4041, covers the Atlantic Coast banks of Banquereau and Misaine, which lie off Nova Scotia between Scatarie and Sable Islands. It is essentially an accurate detailed picture of the shape and depth of the sea bottom enabling fishermen to select the most favorable areas and banks for fishing. The chart is drawn on a scale of 1:300,000, or about 4 miles to the inch, and is thus 4 times the scale of previous Canadian charts covering the area.

Through the use of a small contour interval, the new chart helps fishermen pick out likely areas to fish and avoid those areas where the bottom is uneven. It illustrates depths primarily by contour lines. The contours are shown as a solid blue line spaced at 10-fathom intervals to a depth of 100 fathoms; at 20-fathom intervals to 200 fathoms; and thereafter at every 100 fathoms to a depth of 1,000 fathoms.

General depths are indicated by three shades of blue. Depths of less than 10 fathoms are shown as a dark blue; the extensive fishing banks, of between 10 and 50 fathoms of water, by a medium blue; and the areas containing over 50 but less than 100 fathoms, by a light blue.

The new chart is available in two versions: L(D6)4041, which shows the decca lattice for the Cabot Strait chain; and 4041-L, which shows the 3 loran rates covering the area. Each version is available (price \$2.00 each) either from chart dealers or from the Marine Distribution Office, Canadian Department of Mines and Technical Surveys, Ottawa, Canada.



Ceylon

PROPOSED GOVERNMENT FISHERIES CORPORATION MAY LEAD TO FISHERIES EXPANSION:

A proposal to establish a Government-managed Fisheries Corporation was reported in the official *Ceylon News-Letter*, July 24, 1964. Designed to increase domestic fisheries production, the proposal would also involve a reorganization of the Ceylonese Fisheries Department. All commercial fishing projects of that Department would be transferred to the Fisheries Corporation.

The functions of the Fisheries Corporation would be: (1) commercial fishing, including deep-sea trawling; (2) fish processing, including canning and drying, either directly through authorized agents; (3) distributing fish through wholesale and retail markets, either directly or through authorized agents; and (4) building and maintaining harbors and shore facilities including cold-storage plants.

Under the proposed reorganization, the functions of the Fisheries Department would be: (1) fisheries regulation under Ceylonese Fisheries Ordinance; (2) fisheries research; (3) fisheries extension work; and (4) miscellaneous service activities such as administration of the vessel loan program, and maintenance of repair facilities and housing for fishermen.

All the assets of the Fisheries Department used or intended for use in commercial activities would be transferred to the Fisheries Corporation. In addition, funds provided for the commercial activities of the Fisheries Department for fiscal years 1963/4 and 1964/65 would be transferred to the Corporation. The Corporation would also receive Rs. 3.5 million (US\$736,000) as initial working capital from the 1964/65 budget of the Ceylonese Government.



Ceylonese fishermen launch their shallow log raft traps. Tests have proved that these craft, which can slide over coral and sand reefs and budge ashore on any beach, can catch more fish if mechanized with outboard engines.

The Fisheries Corporation presumably would take over certain fishing vessels which may be delivered by foreign shipyards. Ceylon has ordered 5 trawlers from Yugoslavia but because of technical difficulties only 1 may actually be purchased. Ceylon is also trying to buy 10 new tuna fishing vessels abroad.

Ceylon (Contd.):

Ceylonese fishery imports, valued at about Rs. 61 million (\$12.8 million) in 1963, are a drain on the country's foreign exchange. That provides a strong incentive to increase domestic fishery landings. The Fisheries Corporation was still in the planning stage when it was mentioned in the *Ceylon News-Letter*. However, in September 1964 the Ceylonese Minister of Agriculture, Food, and Fisheries was reported to be seeking Cabinet authority for the establishment of the Fisheries Corporation under the State Industrial Corporation Act. If established as planned, it may be necessary for the Fisheries Corporation to obtain advisors from abroad. (United States Embassy, Colombo, September 15, 1964.)



Colombia

FISHERIES TRENDS AND POTENTIAL:

Colombia has access to abundant fishery resources in both the Caribbean Sea and Pacific Ocean, but has not been able to harvest enough fish to meet its domestic requirements. The reasons have been the lack of modern fishing vessels and adequate shore-processing facilities.

The greatest potential for Colombia's commercial fishery is in the waters off the Pacific coast. The Humboldt Current, which produces the environment for the rich Peruvian fishing grounds, is found 200 miles off the coast of Colombia. The intermingling of that cold stream with the warm tropical waters provides an excellent habitat for tuna. Extensive shrimp grounds and large quantities of spiny lobster are found closer to land. The Caribbean fishery harvests a wide variety of tropical fish species such as the snook, snapper, needlefish, yellowfin, shrimp, and sardines.

Colombia has a total of 102 fishing vessels operating on both oceans. The Pacific fleet consists of 53 shrimp vessels and 5 tuna vessels and the Atlantic fleet of 43 general-purpose ships and one shrimp vessel. They are mostly ancient wooden vessels, and both equipment and fishing methods are obsolete.

There are fish-processing plants on both coasts with a concentration of three canneries near the Caribbean ports of Barranquilla and



In Colombia fish are transported to Barranquilla for marketing by canoe down the Magdalena River.

Santa Marta. They process yellowfin, bonito, albacore tuna, and sardines. Plants on the Pacific coast at Buenaventura and Tumaco process tuna, shrimp, and spiny lobster. Fresh fish are sold locally on the coast and iced fish are flown inland and sold as a luxury item in the cities. The only fish meal produced in Colombia is from the waste of canning operations, as the underequipped fishing fleets are able to supply just enough fish to keep the canneries at half capacity.

The price of fresh fish in Colombia's inland cities is often double that of beef and other fresh meats. Since the fishing industry enjoys absolute protection from imports, a large internal market could be developed for frozen fishery products if prices were competitive with those of fresh meat. Surface transportation with refrigeration facilities would probably mean a greater demand. There are freezing facilities already at some of the shore locations, but those were not being used.

Both government and private interests have been looking for a way of increasing the country's fishery catches. The vessels being used are usually owner-operated and inefficient, but steel vessels under coordinated management, using electronic techniques and with up-to-date equipment and refrigerated storage, could increase landings significantly.

The Colombian Government has declared the fisheries a basic industry, and has granted tax waivers to fisheries firms. In April 1963, the Second National Fisheries Congress drew up a ten-point program for developing the fishing industry. Its main purpose was to provide a basis for a new Department of Fish-

Colombia (Contd.):

eries, but it also recommended the extension of territorial waters to 200 miles and the restriction of fishing within this area to Colombian vessels. Fishing cooperatives and government credit facilities were also recommended.

It was reported that Colombian fishing companies would welcome joint ventures to provide capital and technical assistance, and Japan has already provided a vessel for fisheries research on the Pacific coast. Also, Colombian shipbuilders were said to be interested in forming licensing arrangements with foreign companies for building new types of fishing vessels and importing modern fishing gear. The types of vessels needed are in the 50- to 70-foot class, equipped for shrimp fishing, long-lining for tuna, and trawling for sardines and small fish. In line with the Colombian policy of national development, the import of complete vessels would not be permitted. Construction and assembly of component vessel parts in local shipyards would be a primary requirement for any firm wishing to supply equipment.

ports (particularly of fresh and frozen shellfish), indicate that the Colombian fishing industry is entering a dynamic phase of development and may soon become an important segment of that country's economy. (Department of Trade and Commerce, Ottawa, August 22, 1964.)

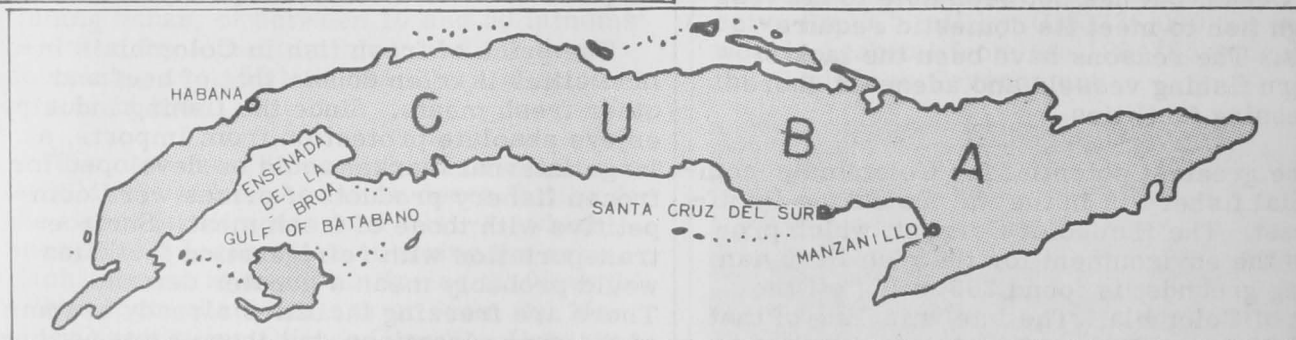


Cuba

CATCH AND FISHING FLEET EXPANDED:

Cuba's fisheries are expanding in the direction of state-operated fishing fleets, according to an official Cuban report. Those fleets include large trawlers, long-line tuna vessels, and other vessels capable of high-seas operations. In 1963, the state-operated fisheries produced a catch of 12,112 metric tons or about 30 percent of Cuba's total fishery landings. In 1962, the initial year those fisheries were operated by the state, production was 2,558 tons or about 7 percent of total production.

Traditionally, the Cuban fishing fleet has been limited to coastal waters with the exception of a few old schooners. The majority of Cuba's 12,000 fishermen still operate their small craft in coastal waters and the Cuban Government has organized them into fishery cooperatives. Most of the Cuban fishery catch is taken by their 3,800 small boats (under 100 gross tons).



Colombia exported practically no fishery products before 1949, and in 1962 shipped 942 metric tons to the United States out of a total catch of 42,500 metric tons. Exports now consist mainly of frozen or iced shrimp for the United States market.

The Latin American Free Trade Area (LAFTA) also presents a potential export market for Colombian fishery products. However, most of the LAFTA countries have fisheries equal to those of Colombia, so export success could depend on having facilities for packaging and shipping frozen products.

Colombia's natural resources, coupled with a large local market and possibilities for ex-

Cuba's state-operated fishing fleet consists of 22 vessels: (1) 5 tuna vessels of 350 gross tons which were built in Japan; (2) 15 trawlers (742-gross-ton refrigerated stern trawlers built in East Germany but supplied by the U.S.S.R.);

Cuban Marine Fish Landings by Type of Fishery, 1960-1963

Fishery	1963	1962	1961	1960
	. . . (Metric Tons). . .			
Coastal ^{1/} / Offshore:	25,400	27,891	22,361	22,341
Trawlers	13,624	6,374	4,772	4,449
Long-liners ^{2/}	3,089	1,606	3,298	3,735
Total	3/ 42,113	35,871	30,431	30,525

^{1/}Principally snappers and groupers.

^{2/}Principally skipjack and blackfin tuna.

^{3/}Includes catch of 7,203 metric tons by the 10 medium-size refrigerator stern trawlers supplied under the Cuban-U.S.S.R. Fishing Agreement; 5 additional trawlers were given to Cuba. In 1963, those Havana-based vessels were manned partly by Cubans.

Cuba (Contd.):

and (3) 2 trawlers (medium-size types built in Poland). Ten of the refrigerated stern trawlers still belong to the U.S.S.R. and are used to train Cuban crews. In addition, wooden fishing boats of the Lambda class (97 gross tons) and smaller are included in the production of state-operated fisheries. Tuna long-lining is conducted throughout the Caribbean and off Brazil; trawling is conducted in the North Atlantic between 32° and 43° N. latitude off the Middle Atlantic States and on the Campeche Bank. (Las Pesquerias Cubanas, February 1964.)



Denmark

NEW FISHERIES ATTACHE APPOINTED FOR U. S. AND CANADA:

The position as Danish Fisheries Attache for the United States and Canada, with headquarters in New York City at the Consulate General of Denmark, was filled about November 1, 1964. The position had been vacant since April 1963. The new Fisheries Attache, Erling Hulgaard, was chosen for the post by Denmark's Ministry of Fisheries. His primary duties will be to increase the sale of Danish fishery products in the United States and Canada. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, September 3, 1964.)



France

SHIPYARDS RECEIVE ORDERS FROM SOVIETS FOR FISHERY FACTORYSHIPS AND FROM SOUTH KOREA FOR TRAWLERS:

An order for three modern fishery factoryships costing a total of US\$20.4 million was received in mid-1964 by a shipyard in Nantes, France, from the U.S.S.R. for the Soviet fishing industry.

Each vessel is to be specially equipped for fishing and processing sardines and herring and will have a daily production capacity of 100,000 cans on a 12-hours-a-day basis. The cans will be stocked in separate holds with a total capacity of 70,600 cubic feet (space for 4,750,000 cans). The fish in bulk will be deep-frozen and stocked in a special 26,000-cubic-foot hold. The vessels will also make fish oil and fish meal.

Another order obtained by French shipbuilders at Le Havre is for 48 trawlers des-

tined for South Korea. Another order from South Korea calls for 7 tuna vessels, 3 trawlers, and 1 refrigerated vessel.

It was reported that out of 88 vessels completed by French shipyards in 1963, 47 were fishing vessels. During the same year, 42 fishing vessels were launched in France out of a total of 86, and among the 88 keels laid, 39 were for fishing vessels. (Fish Trades Gazette, August 8, 1964.)



German Federal Republic

NEW FISH-GUTTING MACHINE OFFERED BY FIRM:

A new fish-gutting and beheading machine is being marketed by a West German manufacturer of fish-processing machinery. The new machine is said to be able to handle ocean perch ranging in length from 12 to 22 inches and various other groundfish ranging in length from 14 to 31 inches. The new machine can be adjusted to handle between 25 and 40 fish per minute. It requires only one attendant; his job is to place fish on an infeed conveyor. The machine then automatically heads and guts the fish, removes entrails, and cleans the belly cavity of the fish. The headed and gutted fish leave the machine on an automatic conveyor.

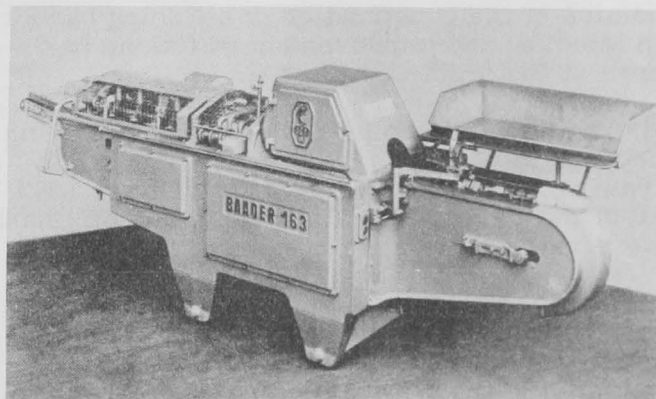


Fig. 1 - A new fish-gutting and beheading machine marketed by a West German manufacturer.

The machine works in a straight line. Its approximate dimensions are length 15 feet, 10 inches; width 3 feet, 7 inches; and maximum height 5 feet, 4 inches. The housings and the frame of the machine are designed to allow an offal conveyor to be placed underneath. The power requirements of the machine are 3 kilowatts.

German Federal Republic (Contd.):

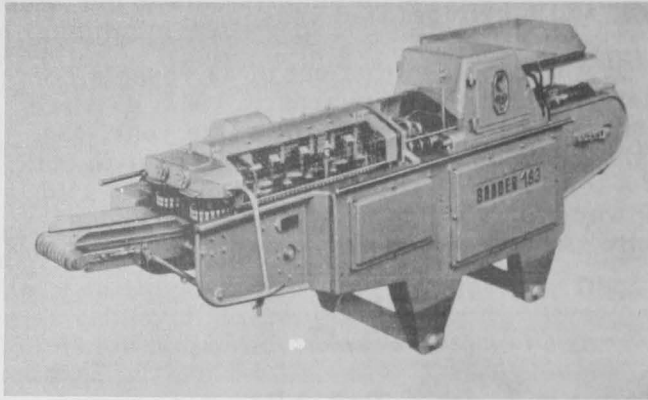


Fig. 2 - Design of the base of the new fish-gutting machine allows for a conveyor to be placed underneath the machine for removal of the offal. The handle on the left hand side permits the tilting and lifting of the upper assembly for better access to the cutting tools for maintenance and cleaning.

The machine is built for heavy duty use, particularly on board fishing vessels. The first production model of the new machine is now in use aboard a German trawler.



Ghana

TECHNICAL FISHERIES ASSISTANCE BY SOVIETS:

The Soviet Union was reported planning to send specialists to Ghana to study the economics of the construction of a fishing harbor in Miemia, and improvement of fishing harbors at Takoradi and Elmina.

The Soviets also planned to send a floating drydock to Ghana for use in repairing their trawlers operating there. In December 1963, 10 of the 17 large trawlers operating off Ghana were reported to be of Soviet registry.

A total of 118 Ghanaian students has already been sent to the Soviet Union for training in fisheries. It was believed they would remain there for 3 to 4 years as they have to learn the language before their fisheries training begins.

A fish cannery was reported being built in Ghana by the Soviets this past summer, and that ground for it had already been broken. (Fishery Attache, United States Embassy, Abidjan, August 13, 1964.)

Note: See Commercial Fisheries Review, March 1964 p. 54.



Greece

ATLANTIC FREEZER-TRAWLER FISHERY TRENDS, JANUARY-JUNE 1964:

During June 1964, a total of 6 Greek freezer-trawlers and 1 refrigerated transport vessel returned from Atlantic operations to home ports with 2,343 metric tons of frozen fish as compared with 1,700 tons of frozen fish delivered in June 1963 by 4 freezer-trawlers and 3 refrigerated vessels.

In January-June 1964, the Greek fleet of freezer-trawlers and carrier vessels operating in the Atlantic landed 9,650 tons of frozen fish in Greek ports, up only 2.7 percent from landings of 9,395 tons in the same period of 1963. In the first half of 1962, the Greek Atlantic fleet delivered 7,481 tons of frozen fish.

Although the total landings in January-June 1964 showed a small gain, average landings by individual vessels were down somewhat from the previous year. (The gain in Atlantic frozen fish landings did not keep pace with the expansion of the Atlantic fleet.) The drop in average landings in 1964 was attributed to a decline in the catch on fishing grounds off Mauritania. In early July 1964, the Greek Atlantic refrigerated fishing fleet (trawlers and transports) included 34 units of which 21 were on active service and 13 were undergoing repair and reconstruction.

In regard to Government policy affecting Greek Atlantic freezer-trawler operations, the Union of Hellenic Overseas Fishing Enterprises has submitted a detailed memorandum to the Greek Minister of Industry. The memorandum points out that a Greek fleet of 23 active freezer-trawlers could be expected under normal conditions to produce annual landings of 26,000 tons of frozen fish with a value of Dr.300 million (US\$10 million). The memorandum then called for the "creation of competitive conditions" for the Atlantic freezer-trawlers. Among other things, it asked for a reduction in the interest rate on fishery loans by Greek commercial banks. It was stated that charges on Greek fishery loans were considerably above average rates in the European Common Market. In the field of marketing, the memorandum referred to the general management of market price control at the Greek Trade Ministry and requested that domestic frozen fish landings be placed on a competitive basis with imported frozen fish. (Alieia, July 1964.)

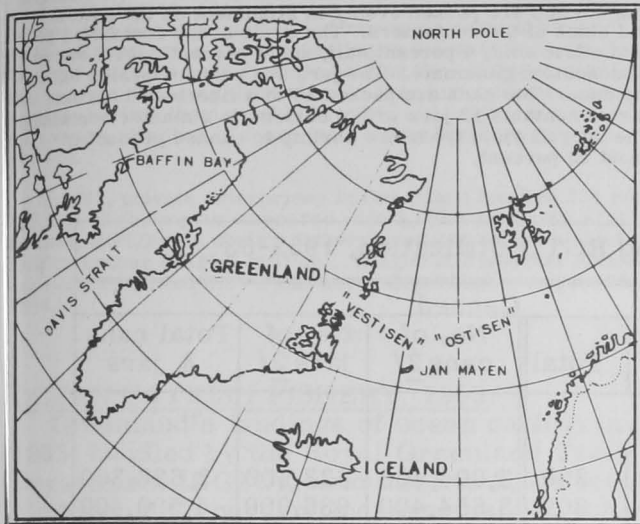


Greenland

12-MILE FISHING LIMITS MODIFIED TO CONTINUE CERTAIN HISTORIC FISHING RIGHTS OF OTHER COUNTRIES:

When Greenland's fishing limits were extended from 3 to 12 miles on June 1, 1963, certain concessions were made to the historic fishing rights of France, Iceland, Norway, Portugal, Spain, the United Kingdom, and West Germany. Permission has now been granted to fishing vessels registered in those countries to fish with long lines and hand lines and to transfer catches up to Greenland's 3-mile limit until October 31, 1968 (Decree 227 issued by the Danish Ministry for Greenland, July 3, 1964). This represents a 5-year extension of a concession originally granted by the Danish Ministry For Greenland Announcements Number 193, May 27, 1963. (Regional Fish

Greenland (Contd.):



ies Attache for Europe, United States Embassy, Copenhagen, August 12, 1964.)

Note: See Commercial Fisheries Review, August 1963 p. 88.

HALIBUT FISHERY TRENDS, 1963:

Landings of Greenland halibut in 1963, handled by the Royal Greenland Trading Department (RGTD), totaled 1,906 metric tons as compared with 1,302 tons in 1962. Except for incidental catches in shrimp trawls, Greenland halibut are taken mainly by long line in clay bottoms, often in fjords with glaciers. In winter the long-line fishery is conducted through the ice.

The greater part of the Greenland halibut catch is from the Jakobshavn district which in 1963 accounted for about half the total landings of that species. Most of the halibut catch is handled by the government RGTD which processes it as frozen fillets and salted halibut. Since 1962, more of the halibut catch has been frozen than salted.

Salted Greenland halibut is sliced thinly, colored a salmon shade, lightly smoked, canned in oil and marketed as "solaks"

Table 1 - Greenland Halibut Landings for RGTD by District, 1963

District	Summer Fishery	Winter Fishery	Other	Total
	.(Metric Tons).			
Julianehaab	4.8	-	-	4.8
Narssaq	25.5	-	-	25.5
Frederikshaab	36.5	-	-	36.5
Godthaab	12.7	244.0	12.8	269.5
Sukkertoppen	45.6	-	-	45.6
Holsteinsborg	22.3	-	12.3	34.6
Egedesminde	6.4	-	-	6.4
Christianshaab	50.3	114.5	-	164.8
Jakobshavn	630.0	281.6	7.8	919.4
Umanak	138.6	232.5	15.7	386.8
Upernavik	-	-	12.1	12.1
Total 1963	972.7	872.6	60.7	1,906.0
Total 1962	468.3	717.2	116.2	1,301.7

Source: Royal Greenland Trade Department, Copenhagen.

Table 2 - Greenland Halibut (Frozen Fillets and Salted) Exports by RGTD, 1963

Type and Country	Quantity Metric Tons	Value	
		Kroner	US\$
Frozen halibut fillets:			
Belgium	202	661,934	95,980
Denmark	164	406,311	58,915
United States	58	227,734	33,021
West Germany and Sweden	46	127,698	18,517
Total	470	1,423,677	206,433
Salted halibut:			
Denmark	221	846,770	122,782
Belgium	12	32,238	4,675
Total	233	879,008	127,457
Grand total	703	2,302,685	333,890

Note: Values converted on basis of one Danish krone equals US\$0.145.
Source: Royal Greenland Trade Department, Copenhagen.

(sea salmon), an imitation smoked salmon. It is reported that only the salted product takes color well. However, the demand has been growing for frozen Greenland halibut that is sliced and uncolored, lightly smoked, and packed in film bags. The United States market for frozen halibut fillets also is being tested. Belgian buyers favor Greenland halibut that is cut to their own specifications. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, August 26, 1964.)

SHRIMP FISHERY TRENDS, 1963-1964:

Greenland's shrimp fishery is its second most important fishery, accounting for 7 percent of the total fishery catch in 1962 and 8 percent in 1963. Its steady growth enabled it to surpass the declining ocean catfish fishery in 1962 and 1963. Shrimp are caught entirely by trawls with a mesh of about 20-22 mm, (25/32 to 55/64 inches) knot to knot, on smooth bottoms in depths of 656 to 1,640 feet, mainly in Disko Bay by 15-30 ton cutters with 60-hp. engines. Significant quantities of Greenland halibut and ocean perch are caught with the shrimp. In 1963, the districts of Christianshaab and Jakobshavn accounted for about 70 percent of the total shrimp landings. Shrimp are caught only from May to November in Disko Bay because of ice during the winter. But in Southwest Greenland the boats usually can fish all winter by shifting grounds.

Table 1 - Greenland Shrimp Catch by District and RGTD Utilization, 1963

District	Processed Shrimp			
	Catch	Canned 1/	Jars	Frozen
				peeled 2/
Metric Tons	(Number)			Metric Tons
Narssaq	282	552,300	-	-
Sukkertoppen	86	-	-	19
Egedesminde	287	-	-	86
Christianshaab	1,459	2,452,100	623,900	-
Jakobshavn	775	-	-	144
Godhavn	206	-	-	50
Total 1963	3,095	3,004,400	623,900	299
Total 1962	3,360	3,654,400	936,000	237

1/Includes 1.4 million units of machine-peeled shrimp in 2.5- to 7-ounce cans, and about 160,000 units of hand-peeled shrimp in 7-ounce cans.
2/Packed in containers from 2 1/2 ounces to 6.6 pounds.
Note: Contents of cans and jars--80 grams (2 7/8 ounces).
Source: Royal Greenland Trade Department, Copenhagen.

Greenland (Contd.):

Biologists state that overfishing apparently is not a problem in the Greenland shrimp fishery because the trawling grounds are limited compared to the presently unfishable areas in the fjords and along the coasts which would repopulate depleted grounds. Disko Bay trawling grounds are surrounded by very large areas which are not fished. In 1961, trawlers in Disko Bay averaged 880 kilos (1,940 pounds) per day for most of the year. This year (1964) they have been limited to about 300 kilos (661 pounds) per day because of limited plant capacity on shore.

pounds) an hour, getting about a 25-percent yield. Hand peelers average about 100 glass jars an hour and about the same rate for labeled cans of the same size (2-1/2-2-3/4 ounces). The shrimp are packed evenly in alignment on the bottom and sides of the containers. The brine added contains 1 percent citric acid, 4 percent salt, and 2 percent sugar, but no monosodium glutamate. The jars are vacuum-sealed but not the cans. The cans are packed 48 to a fiberboard carton, carton contains 12 jars with 4 cartons to a master container. The overall yield from raw shrimp to canned product is about 20 percent.

Table 2 - Greenland Shrimp Catch and RGTD Utilization, 1955-63

Year	Catch	Froz. ^{1/}	Canned					
			Hand-peeled	Machine peeled	Total	No. of cans ^{2/}	No. of jars ^{2/}	Total cans & jars
. (Metric Tons).								
1963	3,108	299	188	102	290	3,004,400	623,900	3,628,300
1962	3,362	238	236	132	368	3,654,400	936,000	4,590,400
1961	2,545	125	217	82	299	2,882,000	851,700	3,733,700
1960	1,789	69	175	56	231	2,271,000	612,500	2,883,500
1959	949	34	3/	3/	3/	1,306,200	385,500	1,691,700
1958	759	32	3/	3/	3/	963,700	449,800	1,413,500
1957	670	13	3/	3/	3/	1,025,000	259,800	1,284,800
1956	528	6	3/	3/	3/	800,910	161,000	961,910
1955	564	6	85	-	85	981,300	84,000	1,065,300

^{1/}All peeled except for 30 tons in shell in 1963
^{2/}Number of cans and jars is given in terms of various sizes converted to 80 gram (2 $\frac{1}{2}$ - to 2 $\frac{3}{4}$ -ounce) size.
^{3/}Not available.
Source: Royal Greenland Trade Department, Copenhagen.

The 1963 shrimp catch was canned and frozen in plants operated by the Royal Greenland Trade Department (RGTD), a part of the Ministry of Greenland, in about equal proportions. Three-year old shrimp may be used by the canneries and freezers but the larger 4- and 5-year old shrimp are preferred. Older year classes are infrequent.

At a typical modern shrimp processing plant in Christianshaab, shrimp trawlers land their catches (90-140 count per pound), only a few hours old and not iced, in 20-kilo (44 pound) boxes. Sorting machines separate the sizes over 6 grams (0.2 oz.) for hand peeling and those between 3 and 6 grams (0.1-0.2 oz.) for machine peeling in United States-built equipment. The former size is cooked and hand-peeled as quickly as possible whereas the latter usually is iced and held for easier machine peeling, uncooked, after storage. For hand peeling, the shrimp are cooked 3-1/2 minutes (automatically timed) in boiling water with 2 percent salt added. Female peelers average about 2 to 2-1/2 kilos (4.4 to 5.5

The iced shrimp for machine peeling may be stored for two days and then blanched with live steam on the feeder board of the machine which averages about 250 kilos (550 pounds) of raw shrimp an hour with a yield of 12-18 percent. The yield from raw shrimp to the canned product is about 1 percent which could be increased to 16 percent or more. For use as frozen shrimp the yield is about 20 percent. (Another plant reported 22-23 percent for hand-peeled shrimp). The cans of machine-peeled shrimp are filled by "throw" filling (2-1/2-4-1/2 ounces), filled with a similar brine containing MSG, and sealed without a vacuum.

At the typical plant in Christianshaab, hand-peeled cans of shrimp are cooked one hour at 105° C. (221° F.), machine-peeled at the same temperature but for 1-1/2 hours because of the storage time before processing. At some other plants hand-peeled shrimp are packed in 100-gram (about 3.5-ounce) and one-pound film bags and vacuum-sealed before freezing.

Table 3 - Frozen Peeled Shrimp Sold by RGTD in 1963

Country	Qty.	Value	
		Metric Tons	US\$ 1,000
United Kingdom	103	1,871	272
Denmark	87	1,744	253
France	39	320	46
West Germany	21	413	60
United States	2	28	4
Other countries	37	718	104
Total	289	5,094	739

Table 4 - Canned and Preserved Shrimp Sold by RGTD in 1963

Country	Cans			Jars			Total Value	
	Qty.	Value		Qty.	Value		1,000	US\$
	In 1,000	1,000 kr.	US\$ 1,000	In 1,000	1,000 kr.	US\$ 1,000	1,000	US\$ 1,000
Denmark	1,214	2,545	369	23	41	6	2,586	377
United States	557	701	102	109	246	36	947	133
W. Germany	86	168	24	247	540	78	708	100
United Kingdom	118	212	31	69	159	23	371	52
65 other countries	395	626	91	369	808	117	1,434	200
Totals	2,370	4,252	617	817	1,794	260	6,046	877

Source: Royal Greenland Trade Department, Copenhagen.
Note: Value converted on basis of one Danish krone equals US\$0.145.

Greenland (Contd.):

For the future, consideration is being given by shrimp processing plants to methods of removing some shell parts of the shrimp prior to hand-peeling to increase the output. Thought has also been given to holding the shrimp in wells in the vessels, bringing them alive to the plant, pumping them ashore, sorting them quickly by size, and holding them in salt water. Neither of those innovations has been put into use yet.

In 1963, private enterprises in Greenland handled 234 metric tons of shrimp as compared with 3,108 tons by the RGTD. In 1963, RGTD sold shrimp fishery products valued at 11.1 million kroner (US\$1.6 million). (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, August 26, 1964.)

OCEAN CATFISH FISHERY, 1963:

Greenland's landings of ocean catfish in 1963, handled by the Royal Greenland Trade Department (RGTD), amounted to 2,400 metric tons, a 41-percent increase as compared with 1,700 tons landed in the previous year but 46 percent lower than the record 1957 ocean catfish landings of 4,450 tons. Landings of that species continued lower each year since 1957 through 1962 but were a little higher the following year. Biologists believe the decline may be due to depletion of local stocks near the coast.

Ocean catfish are caught along the West Greenland coast as far north as Upernavik and to Angmagssalik in East Greenland. The most important fishery is off Sukkertoppen where ocean catfish are fished by long line in depths of about 984 to 1,312 feet inside Little Hellefiske Bank. There is a smaller fishery in the Egedesminde district. Spotted, striped, and blue ocean catfish are found in Greenland waters but only the spotted species is of commercial importance. The blue species has watery meat which makes it unsuitable as a food fish, and the striped species (*Larhichas lupus L.*) is smaller than the spotted species and less abundant.

Greenland's catch of ocean catfish is processed into fillets and frozen for export as it is highly favored as an export item.

Private enterprises in Greenland utilized 58 tons of ocean catfish (including some ocean perch) in 1963 as compared with 2,400 tons handled by the Government RGTD. In 1963 the RGTD exported 459 tons of ocean catfish fillets (value US\$246,000) to the United States and 10 tons (value \$5,000) to Sweden. (Regional Fisheries Attache for Europe, United States Embassy, Copenhagen, August 26, 1964.)



Iceland

EXPORTS OF FISHERY PRODUCTS, JANUARY-JUNE 1964:

During January-June 1964, there was an increase in exports of frozen salted fish (uncured), frozen fish fillets, cod-liver oil, and fish meal as compared with the same period in 1963, according to the Icelandic periodical *Hagtidindi*, July 1964. Exports of herring on ice, frozen herring, and herring oil showed a considerable decrease in the first 6 months of 1964.

Product	Jan.-June 1964			Jan.-June 1963		
	Qty.	Value f.o.b.		Qty.	Value f.o.b.	
	Metric Tons	1,000 kr.	US\$ 1,000	Metric Tons	1,000 kr.	US\$ 1,000
Salted fish, dried	640	16,569	384	1,411	28,467	660
Salted fish, uncured	19,121	298,719	6,930	14,446	185,887	4,313
Salted fish fillets	846	11,821	274	767	8,877	206
Wings, salted	1,130	14,270	331	1,402	17,499	406
Stockfish	4,501	125,157	2,904	3,034	81,538	1,892
Herring on ice	19	140	3	7,224	23,417	543
Other fish on ice	16,847	96,275	2,234	17,753	90,360	2,096
Herring, frozen	13,106	77,806	1,805	24,212	131,593	3,053
Other frozen fish, whole	1,551	14,408	334	1,612	18,698	434
Frozen fish fillets	30,987	617,250	14,320	28,668	522,645	12,125
Shrimp and lobster, frozen	372	34,276	795	180	17,876	415
Roes, frozen	1,030	17,415	404	659	10,497	244
Canned fish	149	8,534	198	105	6,622	154
Cod-liver oil	6,365	56,670	1,315	4,609	31,749	737
Lumpfish roes, salted	383	9,526	221	218	3,568	83
Other roes for food, salted	2,606	39,053	906	3,176	44,919	1,042
Roes for bait, salted	1,675	14,013	325	974	7,203	167
Herring, salted	14,066	140,255	3,254	17,520	166,658	3,866
Herring oil	9,492	73,555	1,706	15,614	62,717	1,455
Ocean perch oil	28	188	4	116	515	12
Whale oil	2,101	18,675	433	2,035	11,042	256
Fish meal	22,212	138,697	3,218	5,614	33,294	772
Herring meal	31,640	178,138	4,133	32,368	198,149	4,597
Ocean perch meal	255	1,475	34	956	4,479	104
Wastes of fish, frozen	1,919	7,142	166	1,095	3,295	76
Liver meal	307	2,032	47	283	1,970	46
Lobster and shrimp meal	87	346	8	-	-	-
Whale meal	780	4,315	100	100	558	13
Whale meat, frozen	522	4,201	97	838	5,887	137

Note: Values converted at rate of 1 krona equals 2.32 U.S. cents.

FISHERY LANDINGS BY PRINCIPAL SPECIES, JANUARY-APRIL 1964:

Species	Jan.-April	
	1964	1963
... (Metric Tons) ...		
Cod	219,196	142,221
Haddock	22,983	20,883
Saithe	11,515	4,663
Ling	2,636	3,432
Wolffish (catfish)	5,698	9,111
Cusk	2,665	4,041
Ocean perch	5,049	7,025
Halibut	280	340
Herring	65,028	75,365
Shrimp	89	349
Capelin	8,640	1,077
Other	1,504	1,358
Total	345,283	269,865

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

Source: *Aegir*, July 15, 1964.

Iceland (Contd.):

UTILIZATION OF FISHERY PRODUCTS,
JANUARY-APRIL 1964:

How Utilized	January-April	
	1964	1963
 (Metric Tons)	
Herring^{1/} for:		
Oil and meal	52,300	51,637
Freezing	9,497	11,925
Salting	3,231	6,348
Fresh on ice	-	5,456
Groundfish^{2/} for:		
Fresh on ice	15,180	14,410
Freezing and filleting . . .	109,003	83,080
Salting	72,580	47,731
Stockfish (dried unsalted) . .	68,610	41,881
Canning	24	35
Home consumption	4,838	4,919
Oil and meal	1,291	1,013
Capelin for:		
Freezing	133	188
Oil and meal	8,507	889
Shrimp for:		
Freezing	53	267
Canning	36	82
Lobster for:		
Fresh on ice	-	2
Freezing	-	2
Total production	345,283	269,865

1/Whole fish.
2/Drawn fish.
Source: Aeqir, July 15, 1964.

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**LOBSTER PRODUCTS
EXPORTS INCREASED:**

Iceland is exporting increased quantities of its small lobsters which are fished profitably during the summer only in specific sea areas. The Icelandic Freezing Plants Corporation sells them quick-frozen as "lobster tails" in the United States, usually with the shell, or as "lobster meat" without the shell. In Great Britain, Switzerland, and Italy they are best known as "scampi" or "prawns," and are sold there in a similar way as in the United States.

The packs in which the Icelandic Freezing Plants Corporation exports lobster to those markets are 1-lb., 5-lbs., and 12-lbs. Although most of the Icelandic production goes to various institutions, lobster is increasing in popularity on the normal consumer market. (Iceland Review, Reykjavik, vol. 2, no. 2, 1964.)

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**NEW TYPE LOBSTER
PRODUCT AVAILABLE:**

A new type of lobster pack called "boil-in-the-bag lobster" is now available from the

Export Branch of the Federation of Icelandic Cooperatives. The lobster is first quick-frozen in airtight cryovac bags and then boiled in the bags, so that it loses none of its delicate flavor or juices. The quality of the lobster is thus preserved.

The new product is available in 225-gram packs (8-oz.) and is intended both for the United States and the European markets. It was developed in the research department of the Icelandic Federation at Hafnarfjorour in Iceland, which also was responsible for the new processing of Icelandic eel and the production of spiced roes. (Iceland Review, Reykjavik, vol. 2, no. 2, 1964.)

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FIRST FISH SAUSAGES PRODUCED:

Iceland recently started making fish sausages, a product that is now available in Icelandic retail stores. They look exactly like meat frankfurters and are lightly smoked, but are made out of haddock and lumpsucker. It is planned to produce the fish sausages for the Icelandic home market only, but later and depending on their acceptance, it is hoped they may become an export item.



Ireland

**FISH MEAL FACTORY
PLANNED FOR EAST COAST:**

Negotiations for the construction of a new fish meal plant on the east coast of Ireland were reported to be well advanced in the fall of 1964. Fishermen in the area should be able to increase their earnings substantially. Raw material for the plant will be furnished by the recently discovered stocks of sprat and sand eel on the east coast. The plant will also take trash fish, which are now dumped in large quantities.

Export markets are reported to have been negotiated for the planned firm, and the growing poultry industry in Europe is expected to create a continuing demand for Irish fish meal. (The Irish Skipper, September 1964.)



Japan

ALBACORE AND YELLOWFIN EXPORT PRICES:

The export price of Japanese albacore shipped direct from Japan proper to the United States as of early September 1964 was US\$370 a short ton c. & f., but sales were reported slow due to lower offers of \$360-365 a short ton made by many United States buyers. The ex-vessel albacore price in Japan was holding at around 122 yen a kilogram (\$308 a short ton).

Yellowfin tuna exports direct from Japan were transacted at \$350 c. & f. a short ton. (Suisan Tsushin, September 8, 1964.)

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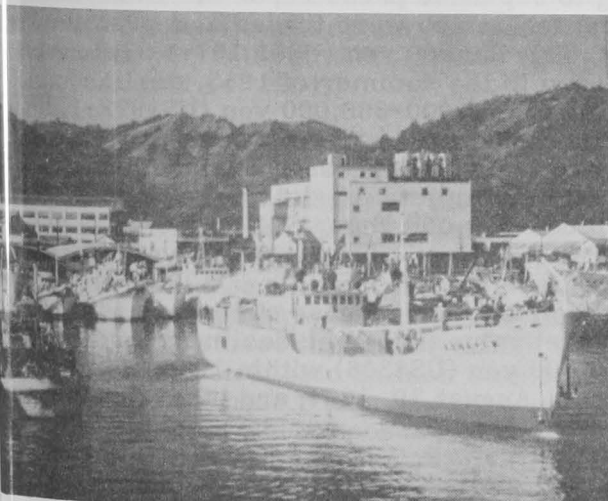
FROZEN TUNA SALES TO U. S. CONTINUED SLOW, JULY-AUGUST 1964:

Japanese frozen tuna exports to the United States were slow during July and August 1964. The slowdown in sales was attributed to good albacore landings by United States fishermen in southern California. Prices of Japanese albacore exported to the United States in July and August declined from US\$330 to around US\$300 a short ton, f.o.b. Japan. (Suisancho Shippo, August 31, 1964.)

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ATLANTIC TUNA FISHERY, AUGUST 1964:

The Japanese Atlantic Ocean albacore fishery was leveling off as of late August 1964 and big-eyed tuna were again dominating the tuna landings, particularly in the fishing



Japanese tuna long-liner.

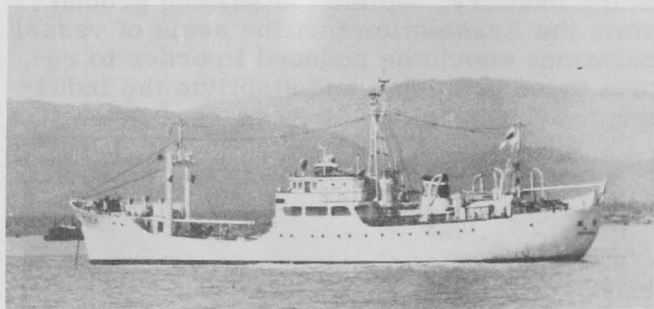
grounds off the coast of West Africa. Increased yellowfin catches were also observed. Bluefin, which were taken in considerable quantities during May and June, virtually disappeared during the mid-summer months and were expected to show up again during September and October.

The frozen tuna market in Italy was reported to be holding steady, but Japanese traders were again showing some concern over the increasing big-eyed catch. The price of Atlantic albacore exports to the United States in August 1964 was US\$310 a short ton, f.o.b. Las Palmas. (Suisan Tsushin, August 25, 1964.)

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TUNA RESOURCES IN EASTERN PACIFIC TO BE SURVEYED BY RESEARCH VESSEL:

The Japanese Fisheries Agency on September 7, 1964, announced the fiscal year 1964 (April 1964-March 1965) tuna resource investigation program to be conducted by its research vessel Shoyo Maru (604 gross tons). The purpose of the cruise is to cooperate in the tuna resource investigations of the Inter-American Tropical Tuna Commission (IATTC) as well as to expand Japanese data on tuna resources. This year the Shoyo Maru will conduct a close study of the yellowfin tuna resources in the eastern Pacific Ocean.



Japanese research vessel Shoyo Maru to survey tuna resources in Eastern Pacific.

The Shoyo Maru cruise plans are as follows:

1. Three researchers from the Nankai Regional Fisheries Laboratory and the Fisheries Agency, and one assistant from a Japanese university accompanied the cruise.
2. The ship departed from Japan on October 10, 1964, on a 5-months cruise and will return home on March 15, 1965. During the cruise, she is scheduled to call at Pago Pago,

Japan (Contd.):

American Samoa; Papeete, Tahiti Islands; Valparaiso, Chile; Balboa, Panama Canal Zone; San Diego, Calif.; and Honolulu, Hawaii.

3. Research objectives are: (a) study geographical distribution, abundance, catch quantity by fishing ground and hook rate of important fish; (b) conduct gear tests; (c) collect samples of juvenile fish in the central Pacific Ocean area extending 20 degrees north and south of the equator; (d) conduct oceanographic and meteorological studies; (e) conduct biological studies (collect measurements on lengths and weights of fish, study feeding habits, collect data on gonad weights, conduct experiments on artificial fertilization, and collect specimens); (f) tag and release fish; (g) study fishing conditions at ports of call; (h) transmit fishing condition reports daily to Misaki, Shimizu, and Yaizu radio stations. (Suisan Tsushin, September 8, 1964.)

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STUDY OF RESOURCE MANAGEMENT PROBLEMS CONFRONTING TUNA FISHING INDUSTRY:

The Japan Federation of Tuna Fishermen's Cooperative Association is studying ways and means of coping with the increasing resource management problems confronting the tuna fishing industry. Opinion is gaining ground within the Association that the scale of vessel operations should be reduced in order to resolve those problems and stabilize the industry.



Yellowfin tuna about to be transferred to a Japanese tuna mothership.

Earlier, the Association had planned to develop a long-range plan in line with the Government's policy of renewing all tuna vessel licenses by 1967. However, in view of the declining tuna resources and worsening labor problems, the Association realized the necessity of developing measures to cope with the immediate problems in order to save vessel owners from possible bankruptcy. Preliminary statistical studies on tuna resources conducted by Professor Morigoro Tauchi (lecturer at the Tokyo Fisheries College) for the Association indicated that overfishing of adult fish in the Atlantic Ocean has seriously threatened reproduction in that ocean. His studies covering other regions can be expected to produce similar findings.

The Association began to study the tuna resource and management problems two years ago at the time when the Fisheries Agency was considering authorizing an additional 20,000 tons of vessel tonnage for the tuna fishing fleet. The Association at that time took the position that it would be unwise to expand the tuna fleet, but the Agency nevertheless proceeded to license the additional tonnage (primarily to permit fishing vessels withdrawn from other fisheries to enter the tuna fishery). Since that time the awareness of resource problems has begun to grow rapidly among tuna vessel owners. (Nihon Suisan Shimbun, August 17, 1964.)

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MARKET VALUE OF TUNA FISHING LICENSES CONTINUES TO FALL:

The market value of tuna fishing licenses traded in Japan continues to decline, according to Japanese press reports. Tuna fishing licenses, which were traded at a premium of 420,000-460,000 yen (US\$1,167-1,278) a vessel ton in the summer of 1963, declined in value to 350,000-360,000 yen (US\$972-1,000) a ton in June 1964, and subsequently continued to drop, due to depressed business conditions. Quotations in late August were given as 170,000-200,000 yen (US\$472-556), and even at \$472, buyers were making payments in promissory notes payable in 120 days. The opinion among Japanese observers is that the market value may even decline to around 110,000 yen (US\$306) within 1964. (Suisan Nippo, August 29, 1964, and other sources.)

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Japan (Contd.):

DRIFTWOOD RELEASED BY TUNA VESSELS RECOVERED:

The Tokai University Fisheries Research Laboratory in Shizuoka, Japan, has recovered about 200 planks and logs released by Japanese fishing vessels in June 1964 off Southeast Formosa in an experiment to study the association of tuna with driftwood. The planks were transported northward by the Kuroshio Current and were recovered on the beaches of Okinawa, Kagoshima (southern Kyushu), and Chiba Peninsula (south of Tokyo).

Examination showed traces of a considerable number of organisms having become attached to the driftwood, revealing the fact that organisms attach themselves to floating objects at sea within a short period of time. However, since all 6 wooden pieces had drifted ashore by the time they were found, the

the Agency's proposal, the Association would handle the export sales of the canned pink salmon at an assessment of six yen per case (US\$0.017) to the mothership firms. Normally, the Association assesses a fee of 10 yen per case (\$0.028), but it is understood that the reduced assessment will be an exceptional case applicable only to this year's sale.

The Association has abandoned its attempt to buy any Alaska pink salmon from the mothership firms. (Suisan Tsushin, September 2, 1964.)

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HALIBUT LANDINGS AND EXPORTS, 1958-63:

Japan's total halibut landings of 9,688 metric tons in 1963 were down 2 percent from the previous year and dropped 15 percent from the record 1961 halibut landings. During the 1963 North Pacific halibut fishing season, Japan took 3.7 million pounds from the Triangle Area of the eastern Bering Sea.

Japanese Landings and Exports of Halibut, 1958-1963

Country	1963		1962		1961		1960		1959		1958	
	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value	Qty.	Value
	Metric Tons	US\$ 1,000	Metric Tons	US\$ 1,000	Metric Tons	US\$ 1,000	Metric Tons	US\$ 1,000	Metric Tons	US\$ 1,000	Metric Tons	US\$ 1,000
Production	9,688	-	9,899	-	11,416	-	6,931	-	1,240	-	1,270	-
Exports:	Short Ton		Short Ton		Short Ton		Short Ton		Short Ton		Short Ton	
United States	785	511,305	2,160	1,713,000	990	568,000	411	260,200	225	99,000	18	10,000
United Kingdom	779	443,372	210	84,800	156	85,000	-	-	124	40,100	8	2,500
Australia	2	1,340	-	-	-	-	-	-	1	300	-	-
Canada	-	-	-	-	-	-	-	-	2	900	-	-
West Germany	154	93,669	-	-	-	-	-	-	-	-	-	-
Netherlands	6	3,505	-	-	-	-	-	-	-	-	-	-
Other Countries	1	440	-	-	-	-	4	2,000	-	-	-	-
Total	1,727	1,053,631	2,370	1,797,800	1,146	653,000	415	262,200	352	140,300	26	12,500

ment of pursuit of those objects by tuna, if it could not be determined. (Suisan Keizai Shinbun, August 14, 1964.)

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MOTHERSHIP FIRMS TO CONSIGN SALES OF ALASKA PINK SALMON TO LAND-BASED PACKERS ASSOCIATION:

The four salmon mothership firms, which had purchased fresh pink salmon from Alaska fishermen, had refused to sell any of the fish to the land-based Hokkaido Salmon Packers Association. But those firms have accepted the Fisheries Agency's proposal that they consign the sales of the canned salmon packed from Alaskan pinks to that Association. Under

The 1963 quota for that area was set at 11 million pounds with the United States, Canada, and Japan fishing in the area.

Japan exported about 16 percent of its 1963 halibut landings. Most of those exports, valued at US\$1.1 million, were about equally divided between the United States and the United Kingdom, with a smaller quantity going to West Germany. (Fisheries Attache, United States Embassy, Tokyo, September 9, 1964.)

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JAPANESE VIEWS ON NEW LAW PROHIBITING FISHING IN U. S. TERRITORIAL WATERS BY FOREIGN VESSELS:

On May 20, 1964, President Johnson signed into law S. 1988 (introduced in the Senate

Japan (Contd.):

by Senator Bartlett), an act to prohibit fishing in the territorial waters of the United States and in certain other areas by vessels other than vessels of the United States and by persons other than United States nationals or inhabitants--P. L. 88-308. In signing the bill the President said, "This law fills a long-standing need for legislation to prevent foreign fishing vessels, which in recent years have appeared off our coast in increasing numbers, from fishing in our territorial waters..."

Japanese views on P. L. 88-308 were contained in an article written by Kunio Yonezawa, First Ocean Section of Japan's Fishery Agency, which was published this past June in the Japanese periodical Suisan Jiho. A translation of that article follows:

"The Bartlett bill 'to prohibit fishing in the territorial waters of the United States and in certain other areas by foreign vessels and by persons in charge of such vessels' was signed into law by the President on May 20. Moreover, the Convention on the Continental Shelf, which is closely related to the so-called Bartlett Law, came into effect on June 10 following ratification by the United Kingdom (on May 10).

"Japan, fearing that the implementation of the 'Bartlett Law' would adversely affect the Bristol Bay king crab fishery which Japan has been conducting since 1930, conferred on this matter with the U. S. State Department through Ambassador Takeuchi. As a result, confirmation was made in the President's statement that the new law will not establish any new rights for the United States, and that, in its enforcement, full consideration will be given to Japan's long-established king crab fishery. Japan was thereby assured that her existing king crab fishery would be maintained. Of course, Japan had repeatedly indicated to the United States that she (Japan) was neither a signatory nor a participant to the Continental Shelf Convention so that, from the standpoint of international law, she was not bound by the Convention provisions embodied in that law. However, examples such as the 200-mile territorial sea limits imposed by Latin American countries, the Rhee Line, and the 1962 Shelikof Strait incident (involving seizure by the Alaskan Government of Japanese vessels fishing for herring on the high seas of that Strait and indictment of responsible persons) show that unilateral acts not sanctioned under international laws can actually eliminate foreign vessel operations through application of force. This is why Japan is so gravely concerned about the Bartlett Law and the Convention on the Continental Shelf.

"The Convention on the Continental Shelf is one of the Four Conventions on the Law of the Sea, and was drafted at the First Law of the Sea Conference held in Geneva in 1958. It defines the jurisdictional rights of coastal states with respect to natural resources and living resources of the continental shelf, and among the four conventions, it was the second to come into effect, next to the Convention on the Law of the High Seas. Japan, as mentioned earlier, is not a signatory to that Convention.

"The principal signatories are the United Kingdom, the United States, the Soviet Union, Australia, and Denmark. Latin American countries, which also assert their sovereignty over superadjacent waters of the continental shelf, are not signatories, since the Convention does not recognize jurisdiction of the coastal state over superadjacent waters. The United States, by means of the Truman Proclamation of 1945 and the Outer Continental Shelf Lands Act of 1953, has been asserting her rights over the continental shelf natural resources.

"The 'Bartlett Law' is intended to halt Cuban and other foreign vessel operations within U. S. territorial waters, as well as to check the expansion of Japanese and Soviet king crab operations. The bill was submitted to the United States Congress on August 6, 1963, under the joint signatures of such influential senators as Bartlett (Alaska), Jackson (Washington), Magnuson (Washington) and Kennedy (Massachusetts). It was designed to prohibit fishing by foreign vessels in the territorial waters of the United States or within any waters in which the United States has the same rights with respect to fisheries as it has in its territorial waters, and prohibits the taking of any continental shelf fishery resources which appertains to the United States. It further provides for penalties of up to \$10,000, imprisonment of up to one year, or both, and seizure of fishing gear.

"The Act defines the continental shelf and the shelf fishery resource in the same manner as set forth in the Continental Shelf Convention. The continental shelf is defined as the seabed and subsoil of the submarine area to a depth of 200 meters or, beyond that limit, to where the depth of the superadjacent waters admits of the exploitation of the natural resource of the said areas, and the continental shelf fishery resources are defined as 'living organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed.' Concerning the listing of species belonging to the continental shelf fishery resources, the Secretary of the Interior, in consultation with the Secretary of State, will publish in the Federal Register a list of species to which this law applies.

"The discussion on the continental shelf resources evoked heated debates at the first Law of the Sea Conference held in 1958. The original draft contained the provision 'swimming fish and shellfish are not included' and thus left little room for argument. In the deliberations on the final draft, however, a proposal was made to delete that provision. The motion was voted down by the Fourth Committee but, following deliberations, it was approved at the plenary meeting, thus keeping alive among the nations, a needless source of argument over the application of the Convention, as was feared by the British delegate.

"The exclusion of the provision, 'swimming fish and shellfish are not included,' led to the development of two views on shellfish. (Incidentally, the United States, which opposed the deletion of that provision when the final draft was put to a vote by the Fourth Committee, voted in favor of deletion at the plenary session.) One view, shared by the United States and the Soviet Union, is that shellfish naturally are to be included in the definition of shelf resource. The other view (supported by the majority of nations at the Law of the Sea Conference) is that the continental shelf resource should be confined to those organisms in very close contact with the seabed, which naturally would not include shellfish and other swimming creatures. As was pointed out by the Australian delegate, who offered the definition of

Japan (Contd.);

continental shelf resource, and by Garcia Amador, chairman of the deliberation committee, the provision was deleted for no other reason than it was 'repetitious of the text and therefore considered unnecessary.'

'The definition of the continental shelf and living resources of the shelf was jointly proposed by Australia, Ceylon, Malaya, Norway, and the United Kingdom (and later supported by the United States and the Soviet Union). However, at that time Ceylon stated that the 'living resources dwelling on the seabed can be classified into three categories: (1) those which are absolutely immobile on the seabed; (2) those which do not move more than 2-3 feet; and (3) those which move over a considerable distance (fish and shellfish), and the limit of inclusion of shelf resources is somewhere between categories 2 and 3.' Thus, the provision was deleted at the plenary meeting.

'Judging from the opinions of the various nations, as described above, as well as from the circumstances surrounding the deletion of the provision, i.e., 'swimming fish and shellfish are not included,' and moreover, considering the fact that the majority of the nations, which had agreed to retain the provision at the drafting committee meeting, had voted for its deletion at the plenary session, it seems reasonable to assume that the purport of the original draft remained unchanged. This has been pointed out by McDougal and Burke (1962), distinguished U.S. experts on international law, in their book entitled, 'The Public Order of the Oceans.' In it, they state that 'the thinking at the Law of the Sea Conference was that the living organisms that cannot move without constant contact with the seabed include only those organisms which cannot move more than a few inches to a few feet from their stationary positions on the seabed.' Thus, in view of the substance of the definition and the circumstances surrounding the deletion of the provision, the view that shellfish are not included in the shelf resource was shared by the majority of the countries (including Japan).

In spite of this preponderance of opinion, the United States Government, in implementing the 'Bartlett Law,' has to designate king crab as a species of the continental shelf resource under Article 5-a of that law. It is perhaps as natural when viewed from the standpoint that the aim of the law was to have the United States retain exclusive rights to the king crab resource in the Gulf of Alaska. At the Senate public hearings on the Bartlett bill, officials of the U. S. State and Interior Departments testified, on the basis of the interpretation provided by experts of the Smithsonian Institute, that the king crab, which do not have swimming legs, belong to the shelf resource, whereas the blue crab and shrimp (including lobsters) do not fall within that category. However, even some Americans are concerned over this interpretation, which they feel will not necessarily bring about only beneficial results to their country. For example, the Astorian, a daily published in Oregon, stated as follows in its May 22 editorial: 'The paramount question is whether the United States will gain much or lose much from implementing this Act. In effect, this Act will be lending support to those countries which are seeking to extend their fishing rights to superadjacent waters of the continental shelf.'

Ghana was recently reported as having extended her territorial waters to a distance of 130 miles offshore. The shrimp problems in the Gulf of Mexico and

the extension of territorial sea limits by Latin American countries are unlikely to strengthen the U. S. position as a result of her recent legislation, although they could weaken her position.

'The shrimp fishery in the Gulf of Mexico is one of the most important fisheries of the United States, yielding over \$30-40 million annually. About one-third of the Gulf shrimp is taken from waters of the continental shelf off Mexico. During deliberations on the Bartlett bill, Senator Bartlett is said to have explained to the head of the Gulf shrimp fishermen's union that the legislative measure would not affect the Mexican Government and thus successfully persuaded the union to withdraw its opposition to his bill.

'Brazil considers shrimp a shelf resource, and, as is still fresh in our memories, this provoked a crisis between that country and France a few years ago. On May 6 this year, Congressman O'Neill (Massachusetts) introduced a bill (H.R. 11158) which purported to prohibit import of fishery products from any country which does not permit American fishing vessels to operate in waters not recognized as territorial seas by the United States. Apparently the principal aim of this bill was to check extension of territorial water limits by Latin American countries, and it may have had some bearing on Senator Bartlett's persuasion in connection with U.S. shrimp fishing on the continental shelf off Mexico.

'In view of the circumstances described above, there are unmistakable indications that the U. S. Government plans to include king crab in the category of shelf resource under the new Act. However, this poses a problem involving the relationship between the U. S. Act and the historical king crab fisheries conducted by foreign countries.

'The purport of the U. S. Act is not to unconditionally exclude fishing by foreign nations. Article 1 of that Act provides that a foreign vessel will be authorized to engage in fishing by means of a specific international agreement or by means of a permit granted by the Secretary of the Treasury after the Secretary of the Interior has certified that it would be in the national interest and upon concurrence of the affected State (possession). In the latter case, fishing may be authorized only when the concerned foreign nation extends the same privileges to U. S. fishing vessels. Therefore, in recognizing the historical fisheries of other countries under this Act, some kind of specific agreement with the affected nation becomes necessary. In view of Japan's basic position, it is obviously impossible for Japanese fishing vessels to operate by means of permits granted by the U. S. Secretary of the Treasury, and Japan and the United States are expected to hold a meeting in the near future to develop an agreement whereby Japan could continue her king crab fishery in Bristol Bay.

'In addition to Japan, the Soviet Union is also conducting king crab fishing on a fairly large scale in Bristol Bay. Unlike Japan, the Soviet Union, which is a signatory to the Continental Shelf Convention, is faced with a delicate situation. The Soviet crab fishery in Bristol Bay has only a five-year history dating back to 1959, but will the United States recognize it as an historical fishery? If not, will the Soviet Union quietly withdraw from that fishery? Also, if the Soviet Union is excluded from the Bristol Bay crab fishery, will she recognize Japan's historical fishing operations off her coast (Sea of Okhotsk)? These matters are all of grave concern to Japan. (Aside from this problem, the Soviet Union recognizes Norway's historical fisheries in Russian terri-

Japan (Contd.):

torial waters under an agreement concluded between those two countries.)

"As stated above, despite the implementation of the Continental Shelf Convention and enactment of the Bartlett bill, Japan has been able to continue her king crab fishery in Bristol Bay. However, one big question looms in our minds. The continental shelf off Alaska, even if limited to a depth of 200 meters, embraces an area totaling about 600,000 square miles, approximating the size of the entire State of Alaska. The United States not only asserts jurisdiction over the subsoil resource in that vast sea area but attempts to bring under her jurisdictional control other high sea resources that have been historically available for utilization by all the countries of the world, such as the king crab, which at the harvestable season travel (whether they swim is still questionable) hundreds of miles on and beyond the continental shelf. This attitude of the United States, stemming from her own one-sided interpretation, cannot but create a feeling of fundamental skepticism.

"After World War II, the unilateral acts imposed by many coastal countries have resulted in trampling upon the freedom of the high seas. The recent U. S. Act is a new challenge to this freedom and arouses concern not only because it tends to obscure the definition of living organisms belonging to the shelf resource but because it may result in lending support to those forces which seek to utilize it for their own advantage."

Note: See Commercial Fisheries Review, August 1964 p. 73; July 1964 p. 89.

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KING CRAB OPERATIONS IN BRISTOL BAY:

The two Japanese king crab factoryships operating in Bristol Bay were packing an average of 500-600 cases a day. Production as of September 3, 1964, was 114,000 cases (target 120,000 cases) for the Tokei Maru (5,385 gross tons) fleet and 100,000 cases (target 115,000 cases) for the Dainichi Maru (5,859 gross tons) fleet. Both fleets were ex-



A large catch of crabs on the deck of a Japanese king crab factoryship.

pected to attain their targets around September 15. (Suisan Tsushin, September 5, 1964)

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BERING SEA MOTHERSHIP-TYPE BOTTOMFISH OPERATIONS:

Bottomfish catches by Japanese motherships operating in the Bering Sea were exceeding those of 1963 as of August 1964. As of August 31, the combined fleet catch was about 340,000 metric tons, compared with about 240,000 metric tons for the same period in 1963. The herring catch of 42,000 tons this year was ahead of last year by about 10,000 tons. Fishing for that species had been terminated since production had already exceeded the target by 5,000 tons. Other Bering Sea catches as of August 31 were (1963 in parentheses): Alaskan pollack 161,000 tons (85,000 tons); rockfish 32,000 tons (9,000 tons); cod 18,000 tons (13,000 tons); flatfish 60,000 tons (50,000 tons); sablefish 5,500 tons (18,000 tons); halibut 2,000 tons (9,000 tons); shrimp 19,000 tons (25,000 tons).

The 1964 Bering Sea bottomfish operations were scheduled to be concluded in early October. (Suisan Tsushin, September 3, 1964.)

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FREEZERSHIP RETURNS WITH ATLANTIC TRAWL-CAUGHT FISH:

The Japanese freezership Banshu Maru 12 (1,800 gross tons) returned to Shimonoseki, Japan, on September 5, 1964, with 1,250 metric tons of "kishima" sea bream taken off Southwest Africa. The freezership was assigned to the Japanese owners' trawling base at Cape Town, South Africa, in April this year. This was her second trip back to Japan with Atlantic trawl-caught fish. (Minato Shimbu, September 6, 1964.)

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ATLANTIC TRAWL FISHERY:

The Atlantic trawl fishery holds the spotlight in Japan as the most promising enterprise among all Japanese distant water fisheries. The fishery first developed in 1959 with two exploratory vessels to open up a new fishing ground for Japanese trawl operators seeking to transfer from the overcrowded East China Sea fishery. Subsequently it made a rapid expansion, and in 1963 the fleet had grown to 34 vessels with a total annual production of 92,082 metric tons of bottomfish.

The rapid expansion of the Japanese Atlantic trawl fishery is attributed to the abundance of high-value fish, such as sea bream, squid, and octopus, off the coast of West Africa, as well as to the growing market demand for those fish. The

Japan (Contd.):

Expansion of Japanese Trawl Fishery, 1959-1963

Year	Size of fleet	Catch
	No. Vessels	Metric Tons
1963	34	92,082
1962	26	49,133
1961	15	27,952
1960	8	6,380
1959	2	802

Circumstances led the Japanese Fisheries Agency in July 1963 to license the operation of an additional 13 vessels (6 over 1,000 gross tons, 1 under 1,000 but over 300 gross tons, and 6 under 300 gross tons) for the Atlantic trawl fishery. Those 13 newly licensed vessels are expected to be placed in operation within this year, along with 5 other new vessels earlier authorized by the Agency for construction. Therefore, by 1965, the Japanese Atlantic trawl fleet is expected to increase to over 50 vessels.

The principal areas of operation of the Japanese Atlantic trawl fleet are the waters off northwest Africa between 10-30° N. latitudes and the area off southwest Africa south of 30° S. latitude. In the northwest African fishing grounds, the principal species of fish taken are "sakura" sea bream, "monko" squid, and octopus. In the southwest African coast, "kishima" sea bream and "merluza" (hake) are primarily taken. Japanese vessels generally trawl at depths ranging from 60-200 meters (196.8-656 feet).

The trawl-caught fish are quick-frozen in the round or dressed. Sea bream, squid, and octopus, which command a high price in the Japanese market, are mostly transported back to Japan, while "merluza" and mackerel are practically all exported to European and African countries. Japanese exports of Atlantic-caught bottomfish to those countries are yearly increasing--sales in 1963 reached 38,000 metric tons.

Most of the Japanese trawlers operating in the Atlantic Ocean work out of either Las Palmas, Canary Islands, or Cape Town, South Africa. From those bases they go out on 10- to 40-day fishing trips and normally remain away from Japan for about 1-1/2-2 years. Crew members are rotated periodically, and some companies have instituted a program of flying replacements from Japan on chartered planes. (Nihon Suisan Shimbun, August 28, 1964.)

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EXPLORATORY TRAWLING IN NORTHWEST ATLANTIC TO BE CONTINUED:

A large Japanese fishing company was granted a one-year extension of a fishing permit by the Japanese Fisheries Agency to continue experimental trawl operations in the Northwest Atlantic Ocean. The original one-year permit expired August 31, 1964. In the second year, the firm plans to change its method of operations and for that reason is considering replacing the trawler Tenyo Maru No. 3 (3,500 gross tons) now trawling in the Northwest Atlantic waters with a new 2,800-ton stern trawler presently under construction.

The Tenyo Maru No. 3, which is fishing together with two 300-ton trawlers in the

Northwest Atlantic, was last reported as taking mostly rockfish, and her daily catch was said to be averaging 40-50 tons, falling below the production target of 60 tons per day. (Suisancho Nippo, September 1; Shin Suisan Shimbun, August 24, 1964.)

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JAPAN TO JOIN NORTHWEST ATLANTIC FISHERIES CONVENTION:

The Japanese Fisheries Agency, in cooperation with the Foreign Ministry, is studying the possibility of becoming a member of the various international fishery treaties which are considered likely to affect Japan's fishing industry. In particular, the Japanese Government is proceeding with definite plans to join the International Convention for the Northwest Atlantic Fisheries, which regulates fishing in the northwest Atlantic Ocean. Japan, which is conducting experimental trawl fishing in those waters, has been asked by the signatories to become a party to that Convention. (Suisan Keizai Shimbun, August 28, 1964.)

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LONGER TRIP DOUBLES BOTTOMFISH CATCH FOR TRAWLERS IN NEW ZEALAND WATERS:

A large Japanese fishing company's trawlers (Taiyo Maru Nos. 56 & 57, each of 744 gross tons) landed a total of 3,000 metric tons of bottomfish in almost 9 months of trawling in New Zealand waters. This represents close to twice the catch that had been taken during comparable periods in previous years when that company's trawlers were shifted every 3 months. One-third of the catch consisted of sea bream and the rest was jack mackerel and Spanish mackerel. Most of the catches landed by the two trawlers were transshipped to Japan from Noumea, New Caledonia, by carrier vessels. In view of this success, the firm plans to extend the trip length for its future trawl operations in New Zealand waters. (Nihon Suisan Shimbun, August 10, 1964.)

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LICENSING OF BOTTOMFISH OPERATIONS OFF NEW ZEALAND:

Japanese fishing vessel owners in Nagasaki, Japan, who are fishing bottomfish by long-line in New Zealand waters, are planning on petitioning the Fisheries Agency to license that fishery in order to restrict the expanding Japanese vessel operations in that area. They fear that the present unrestricted fishing will

Japan (Contd.):

eventually deplete the local sea bream resources.

Long-line fishing in New Zealand waters attracted the attention of Japanese operators for the first time in 1963 when Chiyoda Maru No. 6 (472 gross tons) conducted experimental long-line fishing for bottomfish in that area in August 1963 and returned with 187 metric tons of sea bream in late November that year. Subsequently, Japanese long-liners began to converge on the new fishing ground until there were some 18 vessels working that area. (Minato Shimbun, August 14, 1964.)

STATUS OF VOLUNTARY FISHERY EXPORT CONTROLS, FY 1964:

Japanese "voluntary" fishery export controls in fiscal year 1964 (April 1964-March 1965) include quantitative and price controls. The United States is affected by the Japanese voluntary quantitative controls applied to shipments of frozen swordfish, frozen tuna, and frozen tuna loins and discs to the Western Hemisphere (see table). The United States is also affected by Japanese price controls on pearl shipments.

quota of 70,000 tons. (United States Embassy Tokyo, August 11, 1964.)

Note: See Commercial Fisheries Review, May 1962 p. 63.

HOKKAIDO SAURY CANNERS SIGN ADVANCE PURCHASE AGREEMENT WITH FISHERMEN'S ASSOCIATION:

The 26 Hokkaido export saury canners on August 20, 1964, signed an advance saury purchase agreement with the Hokkaido Fishery Products Association, representing Hokkaido saury fishermen. This agreement, the first of its kind to be concluded in Japan, provides that: (1) the period of contract shall begin August 12 and end October 10 each year (although for 1964 the beginning date shall be September 3); (2) the total quantity to be contracted shall be 13,000 metric tons, with purchasers agreeing to purchase 160-200 tons daily at unloading ports; (3) canners shall pay a standard purchase price of 14.5 yen a kilogram (US\$37 a short ton).

A similar agreement was under negotiation between 14 saury canners and 20 vessel owners in Choshi, Chiba Prefecture (south of Tokyo). Canners had offered to pay 18 yen a kilogram (US\$45 a short ton), but producers were seeking an arrangement whereby price adjustments could be made in case the mar-

Japanese Voluntary Quantitative Export Quotas Affecting Shipments of Fishery Products to the United States, FY 1964

Product	Destination	Export Quota, Fiscal Year 1964 ^{1/}	Actual Exports to United States, Calendar Year 1963 ^{2/}	
		Quantity	Quantity	Value ^{3/}
Swordfish, frozen . . .	North and South American countries	5,500	6,363	US\$1,000
Tuna, frozen	United States and Canada	4/111,800	} 52,021	} 17,598
Tuna loins and discs, frozen . . .	United States and Canada	7,000		

1/April 1964-March 1965.

2/Exports to the United States on Japanese customs clearance basis during January-December 1963.

3/F.o.b. Japan.

4/Includes 110,000-ton quota for Japanese Frozen Food Exporters Association and 1,800-ton quota good for those who are not members of the Association.

Note: Export regulations have been listed as "voluntary" controls only when the export situation indicates they were imposed primarily for the purpose of maintaining orderly marketing abroad. The "voluntary" controls do not include those imposed as a result of (1) bilateral or multilateral agreements with other countries; (2) United States tariff quotas such as the quota on canned tuna in brine; and (3) Japanese regulations designed primarily to avoid or halt "excessive competition" among Japanese manufacturers and exporters.

Japan also applies voluntary fishery export controls which do not affect United States trade. Japanese exports of canned tuna in oil are subject to price controls, but that commodity is mostly not exported to the United States. Japanese shipments of canned sardines and mackerel to Burma are subject to a fiscal year 1964 quota of 200,000 cases (48 15-oz. cans), and Japanese shipments of frozen tuna to Europe are subject to a FY 1964

quota advanced. (Minato Shimbun, August 22, 1964.)

FISH MEAL ASSOCIATION ORGANIZED:

The Japan Fish Meal Producers Association, a national organization of coastal fish meal producers, was formally organized at a meeting held on August 12, 1964. Business

Japan (Contd.):

activities to be conducted by the Association during the first year are: production survey, marketing research, and contact with the concerned agencies of the national Government. (Suisan Tsushin, August 13, 1964.)

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FISHERIES AGENCY APPROVES JAPANESE-CHILEAN WHALE MEAT SALES AGREEMENT:

The Japanese Fisheries Agency on August 4, 1964, approved the whale meat sales plan arranged between a Japanese whaling firm and a Chilean firm. Under the sales agreement, the Japanese firm will sell its whale catches taken in the waters off Chile to the Chilean firm and will repurchase whale meat from it for export to Japan. The Japanese firm plans to repurchase 11,000 metric tons of whale meat from the Chilean firm at a price of about 20,000 yen (US\$55) a metric ton, which it will freeze aboard the chartered Japanese freezership Seifu Maru (7,000 gross tons), for shipment back to Japan.

The Japanese firm plans to operate 5 catcher vessels for this whaling operation, for which it has established a catch target of 485 whalebone whales (converted to blue-whale units) and 640 sperm whales. This year is the Japanese firm's second year of whaling operations based in Chile. (Shin Suisan Shimbun, August 24, 1964.)

* * * * *

FISHING VESSEL CONSTRUCTION:

Data on Japanese fishing vessel construction compiled by the Fisheries Agency show that during the first quarter of fiscal year 1964 (April 1964-March 1965) the Agency approved the construction of 100 fishing vessels--68 steel vessels (totaling 27,257 gross tons) and 32 wooden vessels (totaling 1,091 gross tons). This was a sharp decrease from the same period in the past three years when 283 vessels were approved for construction in fiscal year 1963, 200 in fiscal year 1962, and 312 in fiscal year 1961.

While comparison with 1963 may not be appropriate, since that year saw a sharp increase in the construction of 39-ton class vessels prior to the Government's adoption of a new policy to license vessels in the 39-ton category, the fiscal year 1964 figure is a sub-

stantial decrease of over 50 percent even when compared with fiscal years 1961 and 1962. The Agency attributes that decline to poor business conditions prevailing in all the fisheries, and estimates that this slowdown in vessel construction will continue for the rest of the fiscal year.

A Japanese firm took delivery of its new stern trawler Ojika Maru (3,000 gross tons) built at a total cost of about 750 million yen (US\$2.1 million). The Ojika Maru is equipped with filleting and fish-meal processing machines, and is one of the most modern fishing vessels in Japan. She was scheduled to depart Japan for the fishing grounds off West Africa on September 3, 1964. Specifications and complement of the Ojika Maru are: gross tonnage--3,000 tons; total length--310.8 feet; beam--48.9 feet; draft--23.5 feet; maximum speed--15.6 knots; freezing capacity--51.77 tons a day; cruising range--24,000 nautical miles; complement--80.

A new Japanese stern trawler Koyo Maru (2,521 gross tons) was delivered to her owners on September 1, 1964. After a five-day shakedown cruise in the East China Sea, the vessel was to depart Japan on September 10, 1964, for the trawl fishing grounds off West Africa, where she is scheduled to operate for a period of one year and three months.

Another Japanese fishery firm is building three 3,500-ton-class stern trawlers in Okayama Prefecture. The first trawler Aso Maru was scheduled for completion at the end of September and was assigned to the Bering Sea. The second vessel Kirishima Maru was scheduled to be launched in November and upon completion would be despatched to the Atlantic trawling grounds. The third vessel Takachiho Maru was tentatively scheduled to be assigned to the Gulf of Alaska upon completion. (Suisan Keizai Shimbun, September 9, 1964; Minato Shimbun, September 2 and 3, 1964; Shin Suisan Shimbun Sokuho, August 20, 1964.)

* * * * *

EIGHT FACTORYSHIPS TO BE BUILT FOR U.S.S.R.:

A large Japanese shipbuilding company has received orders from the Soviet State Fisheries Commission for the construction of eight 1,800-ton-class bottomfish factoryships. The firm's Yokohama shipyard was scheduled to commence construction of the vessels in Sep-

Japan (Contd.):

tember 1964 with plans to complete the first vessel in April 1965 and the rest by November 1966.

Construction of those vessels is expected to further intensify competition between the Soviet Union and Japan in the bottomfish fishery, but the view of the Japanese Fisheries Agency is that Japan will have to extend her cooperation to foreign fisheries if she is not to become isolated from other countries. (Suisan Keizai Shimbun, September 4, 1964.)

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FISHERIES AGENCY TO BUILD LARGE RESEARCH VESSEL:

The Japanese Fisheries Agency's budget submission for fiscal year 1965 (April 1965-March 1966) contains a program to build a 2,600-gross-ton fishery research vessel. The vessel will be used to conduct investigative work on bottomfish resources in the northern waters (Okhotsk Sea, Bering Sea, and North Pacific Ocean), offshore waters of New Zealand and Africa, and in the northwest Atlantic Ocean.

At present, the Agency operates 11 research vessels, but the Shoyo Maru (641 gross tons), now being used for tuna investigations, is the only one that can be sent on distant-water cruises. All other distant-water resource and oceanographic investigations by the Agency are being conducted by chartering commercial research vessels or by placing Government researchers aboard commercial fishing vessels. (Suisan Keizai Shimbun, August 12, 1964.)



Republic of Korea

FREEZER VESSEL LAUNCHED AT NETHERLANDS SHIPYARD:

A new freezer vessel of 7,000 deadweight tons built by a Rotterdam, Netherlands, shipbuilding firm for a fishing firm in Pyongyang, North Korea, was scheduled for launching at its Alblasserdam shipyard in August 1964. The vessel has a storage capacity of 7,500 cubic meters (about 265,000 cubic feet) for frozen fish, that can be held up to -13° F. (United States Embassy, The Hague, August 29, 1964.)



Mexico

OPENING OF SHRIMP FISHING SEASON:

Mexico's West Coast commercial shrimp fishing season inside the coastal lagoons opened September 1, 1964, and some shipments have already been made.

The West Coast ocean shrimp fishing season was to have started on September 15 but the fishing cooperatives petitioned for a delay to October 1. In a compromise with the private vessel owners who reportedly wanted to open the season on schedule, the Mexican Government set the opening for September 22.

Meanwhile, on Mexico's East Coast on the Gulf, all parties concerned have reached agreement on conditions for the season and fishing was reported to be proceeding. (Fisheries Attache, U. S. Embassy, Mexico, September 19, 1964.)

* * * * *

NEW TARIFF RATES FOR FOUR CATEGORIES OF FISHERY PRODUCTS:

New tariffs on Mexico's imports of fishery products and byproducts were published in the Official Daily of September 1, 1964. The tariff on only four classifications was changed, including a lower duty on cod oil. The new tariff on cod oil imports is 0.25 pesos per gross kilogram (0.9 U. S. cents a pound) plus 10 percent. The old rate was 0.30 pesos per gross kilogram (1.1 cents a pound) plus 30 percent. The percentage figure is the additional rate based on invoice price or official price whichever is higher.

United States exports of cod oil to Mexico in 1963 were valued at \$34,300, and in 1962 they were valued at \$43,000.

Tariff changes on the other fishery classifications were (figures in parentheses are old rates):

Live fish, except those for repopulation programs; each fish: 9.00 pesos (72 cents plus 100 percent (1.00 peso or 8 cents plus 50 percent).)

Shellfish, fresh or frozen, not otherwise specified, per gross kilogram: 2.00 pesos (7.3 cents a pound) plus 60 percent (1.00 peso or 3.6 cents a pound plus 50 percent).

Shellfish, canned, not otherwise specified per legal kilogram: 3.50 pesos (12.7 cents)

Mexico (Contd.):

pound) plus 100 percent (2.00 pesos or 7.3 cents a pound plus 100 percent). (Fisheries Attache, United States Embassy, Mexico, D. F., September 9, 1964.)

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FOREIGN TRADE IN FISHERY PRODUCTS, 1963:

Exports: Shipments to the United States accounted for 99 percent of the value of total Mexican fishery exports during 1961-1963. The trade is dominated by fresh and frozen shrimp exports, which accounted for 88.6 percent of the value of total Mexican fishery exports in 1963. Mexican fishery exports, far in excess of fishery imports, are a major source of foreign exchange in Mexico and directly affect the income of thousands of Mexican fishermen.

The total value of Mexican fishery exports rose to a record \$64.7 million in 1963. The increase was due mainly to higher average prices for the leading products, because the quantities shipped remained about the same as in 1962. Unit prices were also boosted in 1963 by the tendency to include a larger proportion of processed fishery products in the exports (such as peeled and deveined shrimp, and individually frozen shrimp).

A limited amount of canned and dried shrimp is also exported. Both were formerly of considerable importance, but have now dwindled away to practically nothing. Canada was the principal buyer of Mexican canned shrimp.

Second in importance among Mexican fishery export items is canned abalone, which accounted for 5 percent of the value of the fishery exports in 1963. In the last few years, exports of frozen sliced abalone meat have also achieved considerable importance. Formerly, dried abalone was exported in quantity, but the demand for frozen abalone in the United States has resulted in a diversion of abalone meat to that market.

Table 2 - Value of Mexican Exports and Imports of
Fishery Products, 1961-1963

Item	1963	1962	1961
. (US\$1,000)			
Exports:			
Fresh or frozen	60,317.0	53,285.0	43,866.6
Canned	3,750.1	2,623.3	2,464.1
Salted, dried, etc.	39.6	37.0	40.9
Edible products, not specified	3.2	50.0	57.4
Industrial	598.6	518.7	482.6
Total fishery exports	64,708.5	56,514.0	46,911.6
Imports:			
Industrial	4,130.6	2,920.6	1,854.7
Salted, dried, etc.	562.0	491.3	365.4
Canned	158.3	279.2	385.0
Fresh or frozen	229.5	166.3	209.4
Total fishery imports	5,080.4	3,857.4	2,814.5

Note: Values converted at rate of ₱12.50 equal US\$1.00.

All of the abalone for export is harvested in Baja California, mostly in the northern State.

Third in importance is spiny lobster with an annual value in 1963 of \$878,700. Practically all of the export lobster is also produced in Baja California.

Mexico has developed a good market in the United States for frozen fish fillets with annual shipments valued at \$0.5 million. Furthermore, much of the exports listed under "Other products" in table 1 are also fresh or frozen fish.

After the United States stopped buying frog legs from Cuba, exports of frog legs from Mexico increased considerably and there is interest in expanding Mexican frog production further.

Imports: Because the Mexican fishing industry can supply most of the needs of the Mexican market, fishery imports continue at a rather low level. Efforts of the Mexican Govern-

Table 1 - Mexican Exports of Principal Fishery Products, 1962-1963

Product	1963			1962		
	Qty.	Value		Qty.	Value	
	Metric Tons	US\$ 1,000	% of Total Val.	Metric Tons	US\$ 1,000	% of Total Val.
Shrimp, fresh & frozen	34,639.9	57,360.4	88.6	34,664.8	49,836.6	88.2
Abalone, canned	3,818.0	3,212.2	5.0	3,083.7	2,311.6	4.1
Spiny lobster, fresh & frozen	795.8	878.7	1.4	744.4	884.7	1.6
Fish fillets, fresh & frozen	1,441.9	520.8	0.8	1,383.3	538.7	1.0
Tuna, fresh & frozen	2,010.5	407.5	0.6	1,986.3	454.3	0.8
Abalone fillets, fresh & frozen	167.1	348.1	0.5	177.9	342.4	0.6
Marine algae	18,591.8	242.9	0.4	21,175.7	292.9	0.5
Frogs, fresh & frozen	314.0	236.0	0.4	293.9	232.1	0.4
Totoaba, fresh & frozen	366.8	86.8	0.1	745.7	452.1	0.8
Shrimp, canned	0.6	0.3	1/	240.7	298.0	0.5
Other products	3,952.6	1,414.8	2.2	3,076.7	870.6	1.5
Total fishery exports	66,099.0	64,708.5	100.0	67,573.1	56,514.0	100.0

Note: Values converted at rate ₱12.50 equal US\$1.00.

Mexico (Contd.):

ment to further develop and diversify the Mexican fisheries may result in even smaller imports in the future.

By far the most important single fishery product imported by Mexico is Peruvian fish meal which is used as feed by the rapidly developing Mexican poultry industry. The only other fishery import of real importance is dried salted cod (mostly from Norway). Because of its low cost and its keeping qualities in extreme climates, salt cod or "bacalao" has long been a favorite throughout Latin America.

Marine oils and agar-agar are also imported products of some value. Most of the rest are luxury items which can not be produced in Mexico because the resources do not exist or the cost of production would be excessive. Those include such things as frozen eels, canned anchovy and anchovy paste, canned smoked oysters, frozen, canned and smoked salmon, canned crab, and caviar.

The United States is Mexico's third most important supplier of fishery products (after Peru and Norway). But United States fishery exports to Mexico were valued at only \$320,700 in 1963. (United States Embassy, Mexico, D. F., August 27, 1964.)

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FISHERIES TRENDS, 1963:

Shrimp: By far the dominant factor in the Mexican fishing industry is shrimp. Those landings in Mexico during 1963 were about the same as in the previous year, and down only 1.4 percent from the record landings in 1961. Shrimp landings in 1963 were reported from all coastal states and territories except Michoacan on the Pacific Coast and Quintana Roo on the Caribbean. Despite widespread operations on both coasts, some excess capacity is now reported in the Mexican shrimp industry.

The United States is the main market for Mexican shrimp. In the latter half of 1963, United States shrimp prices declined from the high levels established earlier in the year, and by early 1964 the profit margin in the Mexican shrimp industry had narrowed. Future market upsets could affect Mexican shrimp production adversely. For that reason, the industry is attempting to develop shrimp markets outside the United States, and real efforts are being made to diversify the entire fishing industry to avoid the difficulties of a monolithic fishery.

While Mexican shrimp landings at Gulf of Mexico ports have remained fairly steady for many years, catches on the Pacific Coast more than doubled between 1957 and 1961. Since 1961, the Pacific catch has shown a small decline (to 54,532 metric tons in 1963), while Gulf Coast landings increased (to 18,393 tons in 1963).

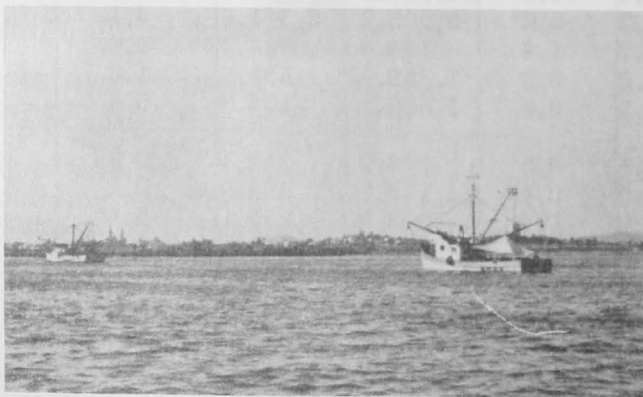


Fig. 1 - Mazatlan, Sinaloa, as seen by a shrimp fishing vessel returning to port.

Table 1 - Mexican Shrimp Landings 1/ by State, 1957-1963

States by Coastal Grouping	1963	1962	1961	1960	1959	1958	1957
(Metric Tons)							
West Coast:							
Sinaloa	28,092	29,293	30,863	25,306	18,613	15,007	12,100
Sonora	16,315	17,136	16,717	14,119	13,208	10,391	9,033
Oaxaca	5,972	5,512	5,799	7,440	8,455	5,931	3,333
Chiapas	2,092	1,887	1,648	1,949	1,568	1,401	1,133
Nayarit	918	652	1,031	584	1,217	1,803	1,133
Baja California, Norte	913	952	1,154	1,004	851	1,309	463
Colima	87	37	116	72	12	96	11
Baja California, Sur . .	72	35	126	32	193	119	11
Guerrero	56	127	116	63	24	139	11
Jalisco	15	3	3	46	92	1	1
Total West Coast . .	54,532	55,634	57,573	50,615	44,233	36,197	27,100
East Coast:							
Campeche	15,392	12,362	13,653	14,737	13,702	13,970	14,266
Veracruz	1,663	2,749	1,696	1,656	1,656	1,121	1,133
Tamaulipas	1,034	877	818	651	1,111	820	1,133
Tabasco	300	231	253	328	334	162	11
Yucatan	4	-	-	-	-	-	-
Total East Coast . . .	18,393	16,219	16,420	17,372	16,803	16,073	17,100
Total Mexican shrimp landings . . .	2/72,924	2/71,852	2/73,993	67,987	61,036	52,270	45,200
Total landings divided on percentage basis:							
(Percent)							
West Coast	74.8	77.4	77.8	74.4	72.5	69.3	61.1
East Coast	25.2	22.6	22.2	25.6	27.5	30.7	38.9

1/Heads-on weight.
2/Total does not exactly equal combined East and West Coast landings.

Sinaloa is now the leading Mexican shrimp State, accounting for almost 39 percent of the total catch in 1963. Sonora, also on the Pacific Coast, was in second place in 1963 with about 22 percent of the total.

Campeche on the Gulf of Mexico was for many years the leading Mexican shrimp-producing State until the upsurge of the Pacific Coast fishery. Campeche landings fluctuated from about 12,000 to 15,000 tons between 1957 and 1962 with a low in 1962. The catch improved to a high of 15,392 tons in 1963 or 21 percent of the national total. (The waters off Campeche produce far more than the Mexican landings indicate. United States shrimp vessels fish in the Gulf of Mexico outside Mexican territorial waters and land directly at Florida and Texas ports.)

Fourth in importance is Oaxaca on the Pacific Coast. Catches increased rapidly in 1958 when many vessels transferred to Salina Cruz from the Gulf of Mexico. Landings peaked at 8,500 tons in 1959 and have leveled off at about 6,000 since then. In 1963 Oaxaca accounted for 8 percent of the total Mexican shrimp catch.

Landings in other Mexican states accounted for the remaining 10 percent of Mexican shrimp landings. Veracruz, which supplies much of the fresh shrimp for the domestic Mexican



Fig. 2 - Part of the 270 shrimp fishing vessels operating out of port of Mazatlan.

Mexico (Contd.):



Fig. 3 Part of canoe fleet of about 100 that lands on beach at Mazatlan.

market, has had widely fluctuating catches ranging between 1,100 and 2,700 tons since 1957.

Shrimp landings were reported in 50 Mexican ports in 1963, but 5 ports accounted for over 72 percent of the total catch.

Mazatlan, Sinaloa, bases its claim to be the shrimp capital of the world on its 1963 landings of 19,328 tons which accounted for 26.5 percent of the Mexican shrimp catch. In order, the other leading ports in 1963 were: Guaymas, Sonora, 12,430 tons (17.0 percent); Ciudad Carmen, Campeche, 10,289 tons (14.1 percent); Salina Cruz, Oaxaca, 5,629 tons (7.7 percent); and Campeche, Campeche, 5,086 tons (7.0 percent). Puerto Penasco, Sonora, reported 2,734 tons, and 5 other ports took delivery of a little over 1,000 tons each.



Fig. 4 - General view of fishing boats in harbor at Ensenada, Baja California.

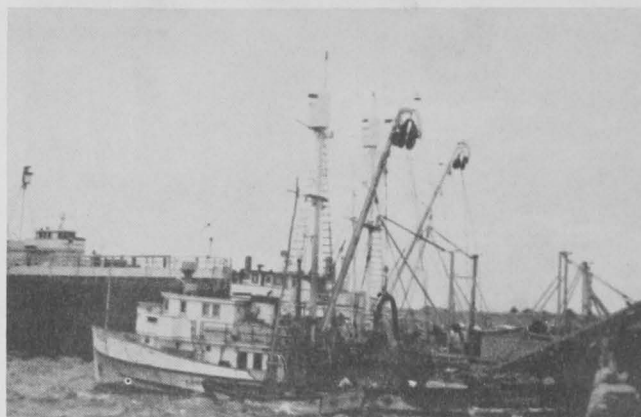


Fig. 5 - Purse seiners unloading sardines and mackerel at Ensenada. Suction pumps are on floating barge between vessels. Belt conveyors carry fish to trucks.

Other Major Fisheries: Although the Mexican shrimp industry has apparently reached a plateau, other Mexican fisheries have considerable potential for expansion. In 1963, Mexican landings of edible fish other than shrimp were up 23.4 percent from the comparable landings in 1962. The increase was due mainly to a gain in landings of species in the "miscellaneous" classification (table 2).

In the Mexican fisheries, during the period 1961-1963, oysters (shell weight) and sardines alternated in second and third place (from a volume standpoint). Oysters, which are taken mainly for the Mexican domestic fresh market, showed relatively steady production during the 3 years at about 19,000 tons. The greater part of the oyster harvest comes from the Tampico area.

The sardine catch has fluctuated widely, depending on the availability of fish to the Ensenada fleet. The sardine vessels, equipped with brine refrigeration, fish several hundred miles south of their home port in order to maintain production when the fish fail to appear in local waters. Sardines are canned, mainly for domestic consumption, although some are exported. The same fleet, based at Ensenada, also takes Pacific mackerel and jack mackerel for canning. The reported mackerel catch increased sharply in 1963 to nearly 8,000 tons. Actually, sardines and both species of mackerel are often landed in mixed loads. Therefore, it may be more accurate to say that the combined sardine-mackerel fishery for the canneries yielded a catch of 27,281 tons in 1963 as compared with 18,120 tons in 1962 and 25,297 tons in 1961.

Industrial Fish: Landings of industrial fish and the output of industrial fishery products in Mexico is not of great significance.

Table 2 - Mexican Fishery Landings 1/ of Edible Species, 1961-1963

Species	1963	1962	1961
(Metric Tons)			
Shrimp	72,924	71,852	73,995
Oysters	19,770	18,320	19,186
Sardine	19,394	14,918	20,375
Salmon	8,281	7,231	6,443
Mackerel (Pacific & jack)	7,887	3,202	4,922
Sea bream, grouper, cabrilla	7,238	6,083	5,833
Shark	4,776	4,637	4,859
Sea bream	4,038	3,812	3,207
Pacific mackerel (sierra)	3,867	4,025	3,898
Clapper	3,491	2,883	2,198
Flounder	3,472	3,189	3,144
Sea bream (robalo)	3,299	3,976	3,071
Shrimps (marine & fresh-water)	2,071	2,237	2,248
Sea bream (marine & fresh-water)	1,849	1,568	1,584
Sea bream	1,637	1,560	1,242
Anchovy	1,637	1,066	244
Whitefish, fresh-water	1,505	1,275	980
Sea bream, milkfish	1,451	1,762	1,686
Many lobster	1,281	1,230	1,190
Oaxaca	1,108	1,245	798
Yellowtail, jacks, pompano	1,095	1,291	1,210
Coakers	1,060	766	984
Marine turtles	948	1,451	1,330
Miscellaneous species	26,542	15,777	12,794
Total landings of edible species	200,621	175,356	177,421

Landings are shown on a live-weight basis. For certain species, live-weight landings were computed.

Mexico (Contd.):

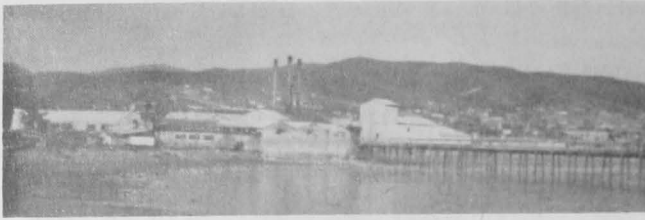


Fig. 6 - Largest fish cannery (sardines, mackerel, tuna) in Mexico at El Sauzal, Baja California Reduction and stickwater plants at left.



Fig. 7 - Butchering four large sharks on the beach at Teacapan, Sinaloa.

Omitting kelp (19,054 tons were harvested in 1963), Mexican output of industrial products averaged 7,774 tons annually in 1961-63. The most important item on a weight basis was fish meal. However, the annual fish meal production, which averages about 5,500 tons, is far from sufficient for the needs of the Mexican poultry industry, and fish meal has become Mexico's major fishery import. (United States Embassy, Mexico, D. F., August 27, 1964.)

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JOINT JAPANESE-MEXICAN WHALING VENTURE IN MEXICO PROPOSED:

Negotiations were under way between a Japanese whaling firm and Mexican interests for the establishment of a joint Japanese-Mexican whaling venture in Ensenada, Baja California. The Japanese firm was expected to send a representative to Mexico to discuss the details of the arrangement and was also scheduled to conduct an exploratory survey off the Baja California peninsula in early September 1964 with two catcher boats (Kyo Maru Nos. 20 and 22). The catchers will conduct the survey for about one week after which they will proceed to the whaling base at South Georgia Island. If agreement can be reached between the two national interests, the Japanese firm plans to send a freezer ship and sev-

eral catcher boats to Ensenada in the spring of 1965. (Suisan Keizai Shimbun, August 27, 1964.)

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FOUR FISHERY TRAINING VESSELS ORDERED BY GOVERNMENT:

Four all-purpose 32-foot fishing vessels with fiberglass hulls were ordered in the summer of 1964 by the Mexican Government. The vessels will be used for training purposes by the Practical Fishing Schools at La Paz (Baja California Sur) and Manzanillo (Colima). Each of the vessels has accommodations for four men. One of the vessels may be loaned to a fishermen's cooperative.

The vessels have been ordered through a Mexican shipyard in Mazatlan. Fiberglass hulls for the vessels are being built under a subcontract by a United States firm in Kirkland, Wash. The first vessel will be completely outfitted and delivered ready to fish by the United States builder. The fiberglass hulls of the other three will be finished and outfitted at the Mazatlan yard.

Each of the new vessels will be capable of fishing gill nets, small purse seines, long lines and other gear, and will be able to carry up to five tons of iced fish. They will be equipped with all-purpose winches, hydraulic net drums, and power blocks. The vessels will be powered by 130-horsepower engines. (United States Embassy, Mexico, D. F., September 10, 1964.)



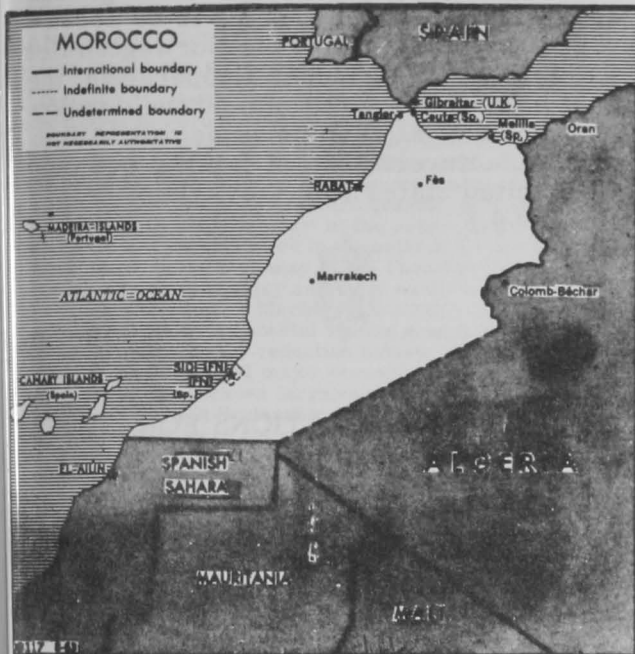
Morocco

JOINT MOROCCAN-FRENCH TUNA FISHING EXPLORATION PLANNED:

The Government of Morocco has been contemplating a one-year tuna fishing exploration program using an adequately equipped tuna fishing vessel of about 250 tons. The main objective is to determine in a more scientific manner the tuna resources available off the Moroccan coast before investing in expanded tuna canning facilities.

It was reported that Moroccan Government authorities were considering an offer by a French group to carry out the experimental project, and that a partial subsidy might be forthcoming from the French Government. Later developments brought about an agreement between the Moroccan Government and the French group for implementation of the program. The French vessel in question, which had been fishing in the waters south of Morocco, was said to be equipped to fish using both purse-seine and live-bait methods. The vessel was supposed to be available and ready to begin the experiment about September of this year, and a joint organization to handle the project has been set up.

Morocco (Contd.):



A spokesman stated that the project was to be carried out as closely as possible in line with recommendations made by a United States tuna expert who conducted a tuna fishing survey in Morocco in July 1963. Tuna catches will most likely be sold in the ports of Safi and Agadir to local canneries. No price has been fixed for the tuna as yet, but it is believed that this might be in the negotiation stage with the French. It is presumed that some Moroccan crewmen will be taken aboard the French vessel.

The spokesman for the project stated he hoped the experiment would be carried out in the most effective way possible, and that the results would be made available to United States as well as European tuna canning groups and financial institutions. He expressed the hope that if the results of the survey are positive and confirm that there is a basis for a modern and expanded tuna canning industry in Morocco, that United States firms might be interested in taking part in the development of the plants and fishing program. (United States Embassy, Rabat, August 28, 1964.)

CANNED SARDINE LOANS RECEIVE RENEWED PARTIAL GUARANTEE FROM GOVERNMENT:

The partial government guarantee for bank loans on canned sardines in Morocco was renewed for the period April 1964-March 1965 by Moroccan Decree No. 311-64 of May 11, 1964, issued by the Minister of Economic Affairs, Finance, and Agriculture (published in the Bulletin Officiel No. 2697, July 8, 1964).

The guarantee was originally established by Dahir 1-56-329 of January 8, 1956. Under the conditions and ceilings specified by an earlier implementing decree, that dahir authorized the government to guarantee against depreciation of security or bankruptcy of debtor up to 20 percent of the total amount of credit advanced annually to dealers in canned sardines.

Under the implementing decree for 1964/65, bank loans for canned sardines are fixed at an annual interest rate of 4.5 percent and must not exceed 32 dirhams (US\$6.40) per case for ordinary sardines and 50 dirhams (\$10.00) per case for skinless and boneless sardines. Only one million cases of sardines may be covered by guaranteed loans at any one time. Within their quotas, however, exporters may continually substitute new cases for exported cases covered under guaranteed loans. (United States Embassy, Rabat, August 18, 1964.)



Norway

EXPORTS OF CANNED FISH, JANUARY-JULY 1964:

Norway's total exports of canned fish during January 1 - July 4, 1964, were up 5.0 percent from those in the same period of 1963, due mainly to larger shipments of canned brisling and canned soft herring roe.

Norwegian Exports of Canned Fish		
Product	1/1-7/4	1/1-7/6
	1964	1963
.. (Metric Tons) ..		
Brisling	3,035	2,607
Small sild	6,615	6,720
Kippered herring	1,555	1,627
Soft herring roe	968	497
Sild delicatessen	224	211
Shellfish	876	807
Other fishery products	1,593	1,694
Total	14,866	14,163

1/Preliminary.

The packing of sild sardines started in early May and by July 25, 1964, a total of 139,425 standard cases of small sild had been packed, compared with 154,184 standard cases in the comparable period of 1963.

The pack of brisling from the start of the season in late May to July 25, 1964, amounted to 278,485 standard cases, compared with 201,090 standard cases in the same period of 1963.

Mackerel landings for canning purposes totaled 147 tons as of July 11, 1964, compared with 487 tons in the corresponding period of 1963. (Norwegian Cannery Export Journal, August 1964.)

HERRING FISH MEAL QUALITY CONTROL STUDIES:

The use of nitrite to preserve herring and other fish intended for industrial purposes was one of the main subjects discussed in a report on 1963/64 research activities of the Norwegian Research Institute of the Herring Oil and Meal Industry. The report was pre-

Norway (Contd.):

sented at the annual meeting of the Board of Representatives of the Fat Herring Fishermen's Marketing Cooperative which was held in Trondheim, Norway, August 27-28, 1964. Following are highlights of the report as published in Fiskaren, August 26, 1964:

Preservatives for Industrial Fish: A high-priority project is the development of preservatives for fish being transported to the reduction industry. The extension of the industrial fishery into distant waters has made this project particularly urgent.

Research is continuing on the possible production of toxins in industrial fish preserved with nitrite. The research is designed to determine what nitrite concentrations and conditions might cause toxic material to be produced. Investigators are also trying to determine whether nitrite together with any toxins present can be removed from industrial fish by adding acid or applying steaming treatments.

In the industrial fishery off Iceland, experiments are being conducted with lower than usual concentrations of nitrite in the preservation liquid. Also, steps have been taken to find better application equipment for vessels as well as for factories. In the meantime, there is every reason for the reduction industry to show the greatest care when using nitrite preservative. For that reason, the Norwegian Herring Meal Inspection Office has tightened its instructions and effected special measures for the use of nitrite.

Handling Fish Meal in Bulk: Storing and shipping herring meal in bulk can simplify transport requirements. Investigations have shown there is no problem with bulk shipments when airtight containers are used. An initial shipment of 100 metric tons of fish meal in bulk was sent to Sweden in the summer of 1964. The shipment proceeded normally and was discharged without difficulty.

Fish Meal Uniformity: In order to encourage the production of high-grade products, a premium is paid annually for herring meal which satisfies certain standards. Buyers are becoming increasingly quality-minded and have become particularly strict in their demand for uniformity. The Norwegian reduction industry with its varied raw material and decentralized industry has unusual

problems in achieving uniformity. The installation of mixing equipment to achieve gradually the goal of uniformity seems to be necessary. In cooperation with the Norwegian Herring Fishermen's Producer Cooperative, the Research Institute has promoted the development of suitable silos and has helped 16 fish meal manufacturers design mixing equipment. (United States Embassy, Oslo, September 20, 1964.)



Panama

TUNA FISHING REGULATIONS FOR FOREIGN VESSELS IN PANAMANIAN WATERS:

To regulate foreign tuna fishing within its claimed territorial waters (12 miles), the Republic of Panama issued Decree No. 127 of July 28, 1964. Under the new decree licenses must be obtained, fees must be paid, and other requirements must be met by foreign fishermen who wish to operate tuna vessels within Panamanian waters.

The owner of such a foreign tuna vessel must obtain from Panamanian authorities (1) a permit issued by the Ministry of Agriculture, Commerce, and Industries; (2) a fishing license issued by the Department of Fisheries and Related Industries (good only during season of September 1 and August 30 of following year); and (3) a special navigation license issued by the Ministry of Finance and Treasury. A Panamanian tax of \$5 per registered net vessel ton or fraction thereof on foreign tuna vessels operating in Panamanian waters has also been established.

The new decree sets up a number of other requirements which must be met by foreign tuna vessels off Panama. Some of those are: (1) every vessel which receives a Panamanian license for tuna fishing must purchase supplies, lubricants, fuel, and repair services in Panama rather than in the Canal Zone; (2) vessels which obtain Panamanian tuna licenses must employ at least two Panamanian sailors during the period when they are fishing in Panamanian waters; (3) at the end of each fishing season, fishing vessel owners must present a detailed report on the tuna catch (species caught and total catch) to the Panamanian Department of Fisheries and Related Industries.

The tuna fishing authorization does not include permission to catch other fishery species (such as sardine, herring, and shrimp). Foreign tuna fishing vessels are forbidden to use fishing equipment and techniques which might be harmful to local marine life in Panamanian waters. Foreign tuna fishing vessels are forbidden to sell fishery products within the territorial waters of Panama or its local markets without previous authorization by the Panamanian Ministry of Agriculture, Commerce, and Industries.

Penalties provided by the new Panamanian decree for violations are: (1) minimum fine of \$1,000, maximum fine of \$10,000, according to the seriousness of the offense; and (2) confiscation of the catch of the vessel involved. (United States Embassy, Panama, September 3, 1964.)



Peru

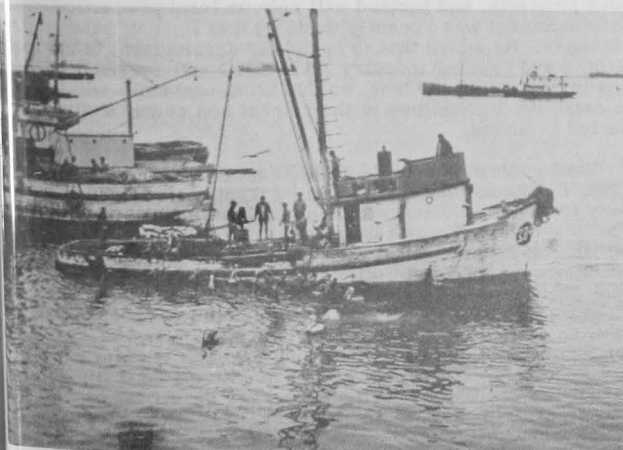
FISH MEAL AND OIL INDUSTRY TRENDS, JANUARY-JULY 1964 AND OUTLOOK IN SEPTEMBER 1964:

Outlook: Production and exports of fish meal were at a record level in Peru during January-July 1964, although Peruvian fish meal output in June and July 1964 was down from the extremely high levels reached in the early months of 1964 (table 1). Peru usually experiences a seasonal decline in fish meal production in the third quarter, with output expanding again in the latter part of the year. This year, however, there are uncertainties in the outlook for the anchoveta fishery, which is the mainstay of the Peruvian fish reduction industry. In an exploratory survey in early September 1964, the Peruvian Institute of Marine Resources swept three-fourths of the Peruvian coastal fishing area with some 35 vessels furnished by the reduction industry. Echo-sounding equipment did not reveal major concentrations of fish. That was disappointing because large schools of anchoveta have appeared off Peru in September during past years. Water temperature data were collected during the survey of the fishing areas. Analysis of those data may throw more light on anchoveta fishing prospects during the remainder of the year.

Fish Meal Supply Situation: On May 15, 1964, Peruvian stocks of fish meal totaled 271,544 metric tons (table 2).

Table 1 - Peruvian Fish Meal Production and Exports, January-July 1963-1964

Month	Production		Exports	
	1964	1963	1964	1963
	. . . (1,000 Metric Tons) . . .			
January	196	146	102	147
February	125	46	101	104
March	175	122	186	104
April	159	129	142	96
May	123	160	133	78
June	92	99	106	85
July	84	39	142	110
Total Jan.-July	954	741	912	724



1 - In Peru, anchoveta boat waiting to unload at the port of Chimbote.

Table 2 - Peruvian Fish Meal Supply Situation, Jan. 1-May 15, 1964 with Comparisons

Item	1964	1963	1962	1961
 (Metric Tons)			
Supply:				
Carryover stocks, January 1	156,372	192,884	156,774	76,985
Production, Jan. 1-May 15	710,201	512,599	388,113	314,061
Total available supply, Jan. 1-May 15	866,573	705,483	544,887	391,046
Disposition, Jan. 1-May 15:				
Exports	584,801	488,632	401,774	279,014
Other disposition ^{1/}	10,228	10,388	5,375	8,685
Carryover stocks, May 15	271,544	206,463	137,738	103,347

^{1/}Includes domestic sales in Peru (6,156 tons in January 1-May 15, 1964) and "other" unexplained disposition.

Those stocks were substantially reduced by heavy export shipments in mid-1964. During the period May 15-July 30, 1964, Peruvian fish meal exports amounted to 327,000 metric tons while Peruvian fish meal production amounted to only 243,000 metric tons. (Editor's Note: Peruvian fish meal

Table 3 - Peruvian Fish Meal Exports by Country of Destination, January 1-May 15, 1964

Country of Destination	Quantity
	Metric Tons
United States:	
East Coast	128,112
West Coast	23,084
Hawaii	495
Total United States	151,691
Germany, West	92,063
Germany, East	15,898
Austria	500
Brazil	1,589
Belgium	16,221
Colombia	1,650
Czechoslovakia	10,700
Spain	19,218
Philippines	3,099
France	19,867
Netherlands	74,339
Hungary	14,199
Great Britain	23,139
Rumania	3,000
Italy	24,121
Japan	59,057
Mexico	16,673
Poland	4,950
Sweden	6,175
Venezuela	7,574
Yugoslavia	18,397
Other countries ^{1/}	681
Total all countries	584,801

^{1/}Includes shipments to Argentina, Bolivia, Ecuador, El Salvador, and Taiwan.

Peru (Contd.):

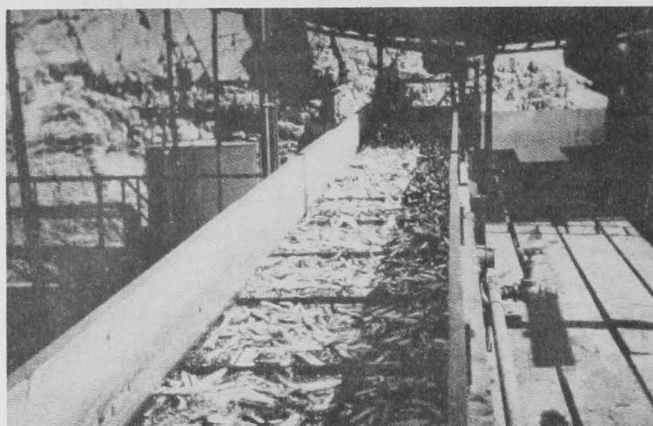


Fig. 2 - Conveyor belt carrying anchovies into fish meal plant for processing.

prices--for 65 percent protein meal f.o.b. United States East Coast and Gulf ports--increased from US\$123-125 per short ton in late May 1964 to \$133-137 per short ton in late September 1964.)

Fish Meal Exports by Country of Destination, January 1-May 15, 1964: The United States was the leading buyer of Peruvian fish meal during January 1-May 15, 1964, with 26 percent of total shipments, followed by West Germany with 16 percent, the Netherlands with 13 percent, and Japan with 10 percent (table 3).

Table 4 - Peruvian Marine Oil Exports by Country of Destination, January 1-May 15, 1964	
Product and Country of Destination	Quantity
	Metric Tons
<u>Crude Fish Oil:</u>	
Germany	1,450
Netherlands	3,741
Total crude fish oil exports ..	5,191
<u>Semirefined Fish Oil:</u>	
Germany	7,415
Netherlands	10,959
Colombia	2,190
Czechoslovakia	1,750
Denmark	5,905
France	1,100
Norway	2,312
United Kingdom	280
Sweden	280
Total semirefined fish oil exports	32,191
<u>Sperm Oil:</u>	
Netherlands	400
Total marine oil exports	37,782



Fig. 3 - The fish are being pumped from the boat to awaiting truck.

The Consorcio Pesquero del Peru S. A. (Fisheries Consortium of Peru) is the leading marketing agency for Peruvian fish meal exports. During January 1-May 15, 1964, the Consortium shipped 402,213 metric tons of fish meal or about 69 percent of total fish meal exports. The remainder was shipped by producers who do not belong to the Consortium.

Marine Oil Exports by Country of Destination, January 1-May 15, 1964: The leading buyers of Peruvian crude and semirefined fish oil during January 1-May 15, 1964, were the Netherlands and Germany (table 4). Sizable shipments of semirefined fish oil were also made to Denmark, Norway, Colombia, Czechoslovakia, and France. (United States Embassy, Lima, September 10, 1964.)



Philippines

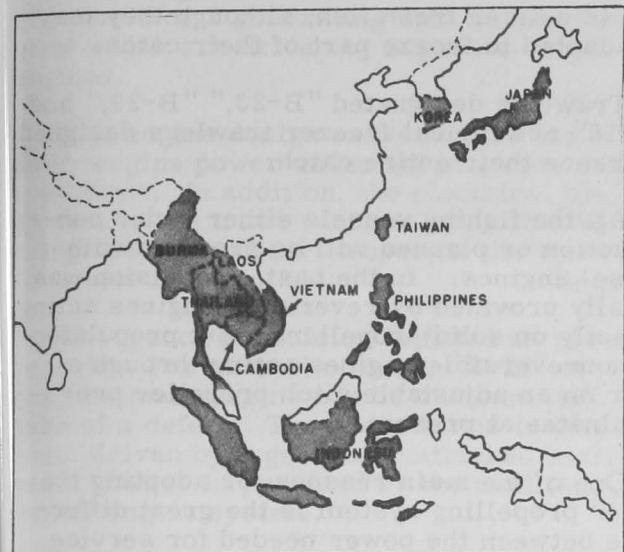
DEVELOPMENT OF FISHING INDUSTRY SPURRED BY CHANGE IN GOVERNMENT IMPORT POLICY:

The National Marketing Corporation (NAMARCO), a Philippine Government agency, will phase out its policy of importing canned fish tax free in order to stabilize the market for such products, and instead will rely on local production. The announcement was recently made by that Agency's General Manager. He added that to speed the development of the local fishing and canning industry NAMARCO will import tinplate and tomato paste tax free, so that local canneries will be able to establish themselves in the market and compete with imported products.

Taking advantage of NAMARCO's new policy, on August 17, 1964, Philippine and Australian interests formed a new company to engage in deep-sea fishing, fish storage, and canning. The new company was capitalized at 15 million pesos (US\$4.3 million) and authorized to import its tinplate requirements tax free until 1967. An official of the firm, which is 80 percent Philippine and 40 percent Australian, estimated that the plant would begin operations by the middle of 1965. It will have an estimated annual output of 800,000 cases of sardines for local consumption, and 600,000 cases of tuna for export and for the Philippine market. It is anticipated that the major export market will be Australia, where Philippine canned fish will replace imports from Japan.

At the same time, the Philippine subsidiary of a United States firm is planning to extend its operations in the Philip-

Philippines (Contd.):



Philippines. The Philippine subsidiary, which is 51 percent American, reportedly has acquired a site for its operations, purchased the necessary equipment, commissioned the building of fishing vessels in Japan, and will go into operation in February 1965. Like the newly formed Philippine-Australian firm, the subsidiary of the United States company intends to export a part of its production of canned tuna and sardines to other markets but will sell most of it in the Philippines.

It was stated that NAMARCO's new policy would also result in increased output of a third Philippine cannery which is operating in the southern Philippines. Philippine Government officials, as well as the local business community, are confident that the policy change will boost Philippine production of canned fish from its present level of 60,000 cases a year to the point where it will eventually meet the national requirement of 2.4 million cases. (United States Embassy, Manila, August 25, 1964.)



Poland

FISHING VESSEL CONSTRUCTION PROGRAM:

The Government of Poland is planning to construct, during the next 5 years (1966-1970), 130 fishing vessels with a total deadweight tonnage of 346,000--averaging over 2,660 tons each. Like the vessels constructed in Poland during the previous 5-year plan (1961-1965), most of the new fishing vessels will go to the Soviet Union. During 1966-1970, Polish shipyards at Gdansk are scheduled to construct a total of 83 fishing vessels (24 large motherships and 59 stern factory trawlers). Other fishing vessels will be built at Gdynia and Szczecin. (Tygodnik Morski, May 7, 1964, and Trybuna Ludu, August 8, 1964.)

The growing importance of Polish shipyards is related to the CEMA (Communist Common Market) Agreement under which Poland has been assigned the task of building ocean-going vessels for the entire Soviet Bloc. The average production costs during the 1966-1970 vessel construction plan are expected to be 10 percent below those of the 1961-1965 plan due to savings made possible by specialization and mass production. Also, fewer classes of vessels will be built.

Following is a report on the Polish fishing vessel construction industry which appeared in the Polish Maritime News, August 1964:

Construction of Large Fishing Vessels, 1963 and January-June 1964: Poland has important fishing vessel construction facilities at the ports of Gdansk, Gdynia, and Szczecin. In 1963, Poland was second only to Japan in total tonnage of fishing vessels constructed (table 1). The 15 large fishing vessels (of more than 100 gross tons) launched by Polish shipyards in 1963 included 7 refrigerated

Table 1 - World Launchings of Fishing Vessels (of More Than 100 Gross Tons), 1963 with Data for Leading Countries

Item	No. of Vessels	Gross Tonnage	Percentage of Total
Total world fishing vessel launchings ^{1/}	541	205,847	100.0
Launchings ^{1/} by Leading Countries:			
Japan	230	80,183	38.9
Poland	15	40,470	19.7
Spain	93	23,128	11.2
German Federal Republic	12	10,453	5.1
Netherlands	49	9,932	4.8
France	45	9,816	4.8
Norway	39	9,416	4.6
Canada	23	5,193	2.5
Denmark	1	4,700	2.3
Great Britain	12	4,378	2.1

^{1/}Excludes vessels of less than 100 gross tons.

stern trawlers of 850 gross tons each, 6 factory stern trawlers of 2,670 gross tons each, and 2 factory motherships of 9,250 gross tons each.

Gdansk specializes in the construction of factory motherships and factory stern trawlers. Gdynia concentrates on building large fishing trawlers (other than factory trawlers.)

In the first half of 1964, Gdynia shipyards completed 3 trawlers ("B-23" type) of 850 gross tons each, and Gdansk shipyards com-

Poland (Contd.):

pleted 1 factory mothership ("B-64" type) of 9,250 gross tons and 2 factory trawlers of 2,670 gross tons each.

During the first half of 1964, Polish shipyards had under construction 7 large trawlers with a combined gross tonnage of 4,455 tons, 12 factory trawlers with a combined gross tonnage of 31,760 tons, and 5 factory motherships with a combined gross tonnage of 46,250 tons. Poland is building trawlers for France and Great Britain as well as for the Soviet Bloc.

Large Fishing Trawlers: Up to 1962, Gdynia shipyards built several types of side trawlers. In 1963, the first trawlers designed for fishing from the stern were delivered by Gdynia. Although a few side trawlers (type "B-20/II," "B-27/I," and "B-27/II") are still being built, the main emphasis has shifted to stern trawlers. The main specifications of fishing vessels under construction or planned at Gdynia are shown in table 2.

Certain planned trawler types ("PK-1322," "PK-1319," and "B-28") are designed primarily to deliver fresh fish, although they may be adapted to freeze part of their catch.

Trawlers designated "B-23," "B-29," and "B-18" are typical freezer trawlers designed to freeze their entire catch.

All the fishing vessels either under construction or planned will be provided with Diesel engines. In the past, propulsion was usually provided by reversible engines acting directly on solid propellers. But propulsion by nonreversible engines acting through a gear on an adjustable pitch propeller predominates at present.

One of the main reasons for adopting the latter propelling system is the great difference between the power needed for service speed and that needed for trawling. The main engine has surplus power at trawling speed. In order to use that surplus power, two generators are usually attached to the engine gear, one of which drives the trawl winch. There

Table 2 - Polish Trawler^{1/} Specifications by Main Vessel Types

Designation	Description of Vessel	Length Overall	Length Between Perpendiculars	Deadweight Tonnage	Hold Capacity	Propulsion ^{2/}	Trial Speed
		Meters	Meters	Metric Tons	Cubic Meters		Knots
B-20	Freezer stern trawler	61.55	55.10	500	519	Diesel--1,375 hp. at 275 r.p.m.	13.1
B-20/I	Starboard trawler	63.22	56.38	495	509	Diesel--with gear of "father and son" system--1,310 hp. at 400 r.p.m.	14.33
B-20/II	Starboard trawler	63.20	56.50	500	580	Diesel--1,800 hp. at 250 r.p.m.	15.00
B-27/I	Starboard trawler	47.43	42.50	215	295	Diesel--with gear--1,200 hp. at 380 r.p.m.	13.50
B-27/II	Starboard trawler	47.43	42.50	215	330	4 Diesel engines--with gear --1,200 h.p. at 1,250 r.p.m.	13.50
PK-1322	Stern trawler ^{3/}	43.72	38.00	200	300	Diesel--with gear--1,200 hp.	13.5
PK-1319	Stern trawler ^{3/}	50.10	44.00	300	400	Diesel--with gear--1,500 hp.	14.0
B-28	Stern trawler ^{3/}	56.50	50.00	400	500	Diesel--1,800 hp.	14.5
B-23	Freezer stern trawler	69.35	60.00	600	570	Diesel--with gear--1,600 hp. at 400 r.p.m.	14.0
B-29	Freezer stern trawler	75.50	68.00	800	1,150	Diesel--with gear--2,400 hp. at 500 r.p.m.	14.0
B-18	Freezer stern trawler	85.20	80.00	1,250	1,700	Diesel--2,250 hp. at 225 r.p.m.	13.80

^{1/}Does not include factory trawlers.

^{2/}All vessel types listed have an adjustable propeller except the "B-20," the "B-20/II," and the "B-27/I," which have a solid propeller.

^{3/}Planned for future construction.

Note: To convert meters to feet multiply by 3.28 feet. To convert cubic meters to cubic feet multiply by 35.3147 cubic feet.

Poland (Contd.):

are also 1 or 2 generating sets in the power plant which are driven by separate Diesel engines.

That engine design assures good use of main-engine power under varying operating conditions. In addition, the electrical brake system of the trawl winch is simplified by using the engine gear to operate the trawl generator.

Emergency propulsion is fitted on some vessels. For example, on the "B-23" trawlers, the main engine can be disconnected in case of a defect. The propeller is in such case, driven by a generator attached to the gear. Power is provided by the auxiliary Diesel engine system.

The adopting of the stern-fishing method and the expansion of vessel freezing and processing facilities has brought a range of new appliances and innovations to trawling vessels. Stern-trawlers built at Gdynia are provided with a system of hydraulically-controlled blocks and fish chutes. Freezing installations on Polish trawlers include both horizontal plate freezers and blast-freezing tunnels. Some trawlers are equipped with conveyers for transferring frozen fish blocks to storage holds. Unloading conveyers have also been tried. Partitions of polyester laminates have been applied in fish holds recently. This saves weight and facilitates loading and unloading.

Small Fishing Vessels: In the early post-war period, Polish shipyards concentrated on small fishing cutters. Several types of small fishing vessels are still being built at "ship-repair" yards at Szczecin and Gdynia.

Four small side trawlers (of the "Storem" type) are being built at Szczecin for Indian owners. The specifications of the vessels are: length overall 17.6 meters (57.7 feet), length between perpendiculars 15.0 meters (49.2 feet), and deadweight tonnage 17.5 tons. The insulated fish hold has a capacity of 28.3 cubic meters (1,000 cubic feet). Each of the vessels is equipped with a 180-horsepower Diesel engine which provides a speed of 9 to 9.5 knots.

The "B-25-S" side-trawler (evolved from earlier "super" cutters) is built at Gdynia. The specifications of the "B-25-S" are: length overall 24.6 meters (80.7 feet), length between perpendiculars 21.85 meters (71.7

feet), deadweight tonnage (including fishing gear) 105 tons, and fish-hold capacity 100 cubic meters (3,531.5 cubic feet). The vessel has a 225-horsepower Diesel engine, a speed of 10 knots and an operating range of 3,500 miles. It usually carries a 9-man crew.

Polish shipyards have also started building the newly designed "T-27" small stern-trawler. The main specifications of the "T-27" are length overall 27.5 meters (90.2 feet) and length between perpendiculars 23.7 meters (77.7 feet). Propulsion is by a 450-horsepower Diesel engine with gear and adjustable propeller which drives the vessel at about 11 knots. The "T-27" can remain at sea about 20 days with its standard fuel tank with a capacity of 40 cubic meters (1,412.6 cubic feet). The fish hold, which has a capacity of about 135 cubic meters (4,767.5 cubic feet), is cooled to about 0° C. (32° F.). The power plant and hydraulic trawl winches are controlled from the wheel house. The vessel can be equipped with machinery for preliminary fish processing such as heading fish and grinding fish waste.

Another newly designed Polish vessel is the "K-17" small seiner. The main specifications of the vessel are: length overall 19.6 meters (64.3 feet), length between perpendiculars 16.8 meters (55.1 feet), and fish-hold capacity 40 cubic meters (1,412.6 cubic feet). Propulsion is by a 230-horsepower Diesel engine with gear and adjustable propeller. Using full power, the vessel's operating range is 6 days on its standard 40-cubic-meter (1,412.6 cubic feet) fuel tank. Service speed is 9.5 knots.

Note: See *Commercial Fisheries Review*, June 1964 p. 55, May 1964 p. 71, Mar. 1964 p. 71, and Feb. 1964 p. 80.



Senegal

FOUR TUNA VESSELS TO BE PURCHASED FROM BRITISH:

A £500,000 (US\$1.4 million) Bank of England loan to Senegal for the acquisition of four 30-meter (98 feet) steel-hulled tuna vessels was confirmed by an agreement between the Government of Senegal and Great Britain. The agreement was signed June 15, 1964, by Senegal's Minister of Plan and the British Ambassador to that country. (United States Embassy, Dakar, July 22, 1964.)



South Africa Republic

TUNA VESSEL DELIVERS GOOD CATCHES:

About 100 short tons of tuna with an ex-vessel value of about R28,000 (US\$39,200) was landed June 5, 1964, at Table Bay (Cape west coast) by the 108-foot refrigerated tuna vessel Marinette. That was the vessel's best catch since she began fishing for tuna in 1963 after conversion from cargo-hauling work. (The Marinette had delivered a previous record catch of 60 tons earlier in 1964.) The June tuna delivery was taken during a 21-day long-lining trip. During 3 days of the trip, the Marinette was assisted by a catcher vessel. Plans call for the Marinette to be assisted during future trips by two 45-ton catcher vessels--the Vollendam and the Bressa. With the assistance of the catcher vessels, the Marinette should be able to cut the length of her fishing trips down to about 10 days. All 3 vessels, however, are equipped to spend 40 days at sea. The Marinette has a crew of 4 officers and 16 men, and each catcher vessel has a skipper and a crew of 8. (The South African Shipping News and Fishing Industry Review, June 1964.)

Note: See Commercial Fisheries Review, March 1964 p. 67 and Nov. 1963 p. 78.

NEW ANCHOVY FISHERY MAY DEVELOP RAPIDLY:

Five South African fishing vessels caught 7,800 short tons of anchovy off the Cape west

pected in the fishery, however, as more nets--costing about R8,000 (US\$11,200) each--are imported. It is expected that 3 anchovy nets will be imported by each of 14 fish meal factories in the South Africa Republic.

Large shoals of anchovy have been seen off Walvis Bay in South-West Africa, according to the Namib Times. It is believed that South-West African fish meal factories will also be allowed to import a limited number of the anchovy nets, raising the total number of anchovy nets in South Africa to over 50 and the total investment in the nets to over R400,000--or \$560,000. (The South African Shipping News and Fishing Industry Review, June 1964.)

Notes: (1) South African rand 1.00 equals US\$1.40.
(2) See Commercial Fisheries Review, Aug. 1964 p. 84.

PRODUCTION OF LEADING PROCESSED FISHERY PRODUCTS, 1962-1963:

In 1963, record production of fish meal at Walvis Bay in the Territory of South-West Africa offset a modest decline in fish meal output on the Cape west coast of South Africa. On the other hand, South African canned fish production was down sharply in 1963 at both Walvis Bay and Cape west coast factories.

In spite of the decline in output in 1963, South African canned fish production continued to yield a large export surplus. Domestic consumption of the 3 leading South African canned fishery products (pilchards, maasbanker

Production of Leading Processed Fishery Products in the South Africa Republic and the Territory of South-West Africa, 1962-1963

Product	Unit	South Africa		South-West Africa		Total South Africa and South-West Africa	
		1963	1962	1963	1962	1963	1962
Canned:							
Pilchard	Short tons	8,445	7,344	32,053	66,712	40,498	74,056
Maasbanker	" "	2,090	9,595	-	-	2,090	9,595
Mackerel	" "	1,719	3,947	-	-	1,719	3,947
Total	Short tons	12,254	20,886	32,053	66,712	44,307	87,598
Cured & Salted:							
Maasbanker	Short tons	1,959	5,000	-	-	1,959	5,000
Industrial:							
Fish meal	Short tons	111,068	126,000	1/140,000	98,773	251,068	224,773
Fish-body oil	1,000 imp. gals.	6,765	8,295	1/4,500	1/4,000	11,265	12,295
Whale oil	Long tons	5,886	5,892	-	-	5,886	5,892
Sperm oil	Long tons	10,780	10,283	-	-	10,780	10,283
Seal oil	1,000 imp. gals.	16	1/16	63	39	79	55

1/Estimated.

coast during April-May 1964. During that period, the anchovy fishery was limited to vessels equipped with the special 1/2-inch mesh knotless purse-seine nets imported for experimental purposes. Rapid expansion is ex-

and mackerel) in 1963 amounted to 14,400 short tons (mainly pilchards), or only 32.5 percent of total output. (United States Consulate, Cape Town, September 4, 1964; and other sources.)

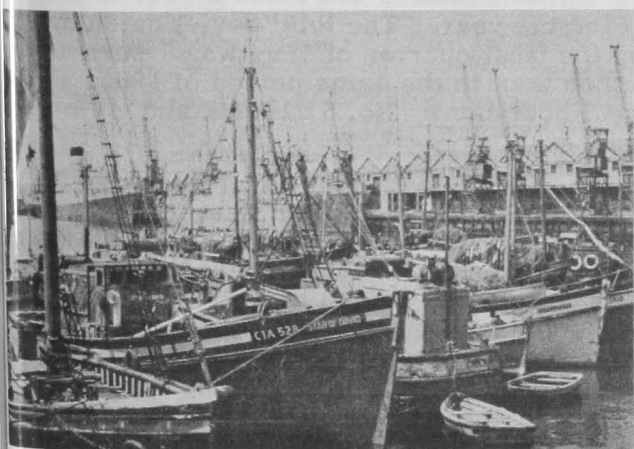
FISHERIES CATCH, 1963:

The pilchard catch taken in the pelagic shoal fishery made up the bulk of the 1963 fisheries catch in the South Africa Republic and the Territory of South-West Africa. Landings of spiny lobster, hake, and snoek

contributed substantially to the value of the 1963 catch. The newly developed tuna fishery in South Africa yielded a catch of 2,500 tons valued at R300,000 (US\$417,000) in 1963 (see table).

South Africa Fisheries Catch and Ex-Vessel Value, 1963									
Catch by Fishery and Species	Republic of South Africa			Territory of South-West Africa			Total South Africa and South-West Africa Combined		
	Quantity	Value		Quantity	Value		Quantity	Value	
		Short Tons	R1,000		US\$1,000	Short Tons		R1,000	US\$1,000
Trawl Fishery:									
Hake	75,175	3,817.3	5,306.0	-	-	-	75,175	3,817.3	5,306.0
Spiny lobster ^{1/} . . .	106	66.3	92.2	-	-	-	106	66.3	92.2
Other species . .	2/37,193	2/1,310.4	1,821.5	1,055	130.0	180.7	38,248	1,440.4	2,002.2
Total trawl fishery	112,474	5,194.0	7,219.7	1,055	130.0	180.7	113,529	5,324.0	7,400.4
Pelagic Shoal Fishery:									
Pilchard	441,943	3/3,942.1	5,479.5	602,000	4/5,177.2	7,196.3	1,043,943	9,119.3	12,675.8
Maasbanker . . .	26,400	3/235.5	327.3	-	-	-	26,400	235.5	327.3
Mackerel	14,824	3/132.2	183.8	-	-	-	14,824	132.2	183.8
Total pelagic shoal fishery	483,167	3/4,309.8	5,990.6	602,000	4/5,177.2	7,196.3	1,085,167	9,487.0	13,186.9
Other Line and Net Fisheries:									
Snoek	4,500	5/900.0	1,251.0	2,250	5/270.0	375.3	6,750	1,170.0	1,626.3
Tuna (dressed weight)	2,500	6/300.0	417.0	-	-	-	2,500	300.0	417.0
Dogfish and other shark	2,500	7/	7/	-	-	-	2,500	7/	7/
Total other line and net fisheries	9,500	1,200.0	1,668.0	2,250	270.0	375.3	11,750	1,470.0	2,043.3
Shellfish Fishery:									
Spiny lobster (whole)	9,300	5/2,790.0	3,878.1	8,021	5/1,600.0	2,224.0	17,321	4,390.0	6,102.1
Abalone (meat only)	3,000	5/900.0	1,251.0	-	-	-	3,000	900.0	1,251.0
Total shellfish fishery	12,300	3,690.0	5,129.1	8,021	1,600.0	2,224.0	20,321	5,290.0	7,353.1

- 1/ Trawler catch off Natal; main South African lobster catch listed below under "Shellfish Fishery."
 2/ Includes 20,952 tons of offal valued at only \$36,709 (US\$51,026).
 3/ Based on season landings price of R7.95 (\$11.05) per ton, plus bonus of R0.97 (\$1.35) per ton paid at end of season on the basis of international sales results.
 4/ Based on fixed landings price of R8.60 (\$11.95) per ton.
 5/ Estimated.
 6/ Based on an average price of R120 (\$166.80) per ton.
 7/ Not available.
- Notes: (1) South African rand 1.00 equals US\$1.39.
 (2) Table does not include whale and seal catch.



Part of the Cape Town fleet engaged in the South African spiny lobster fishery.

South African whalers took 4,455 whales from the Indian and Atlantic Oceans in 1963. That total included 2,651 sperm whales and 1,092 sei whales.

In 1963, the Territory of South-West Africa reported a seal catch of 42,412 pups and 3,391 bulls, and the South Africa Republic reported a seal catch of 6,749 pups and 2,109 bulls. (United States Consulate, Cape Town, August 25, 1964.)

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DOMESTIC CONSUMPTION OF LEADING PROCESSED FISHERY PRODUCTS, 1963:

Although exports are the major factor in the South African fishing industry, domestic consumption of some products is also sub-

South Africa Republic (Contd.):

stantial. The domestic market absorbs the bulk of South African production of fresh, frozen, and cured finfish products. A considerable quantity of canned fish and frozen spiny lobster tails is also consumed locally.

Domestic Consumption of Leading Processed Fishery Products Prepared in the South Africa Republic and the Territory of South-West Africa, 1963		
Product	Unit	Quantity
Canned pilchards, maasbanker, and mackerel	Short tons	1/14,400
Canned spiny lobster	" "	2/2.5
Frozen spiny lobster tails	" "	2/250
Fresh, frozen, and cured finfish	" "	2/77,500
Industrial Products:		
Fish meal	" "	28,000
Whale meat meal	Long tons	700
Fish-body meal	" "	10,500
Whale oil	" "	1,000
Sperm oil	" "	200
1/Consists of 800,000 cases.		
2/Estimated.		

Among the industrial products, domestic consumption accounted for only about 11 per cent of total South African production of fish meal. Fish-body oil, whale oil, and sperm oil are also produced primarily for export markets.

The South Africa Republic imports only a small quantity of edible and industrial fishery products for the domestic market. (United States Consulate, Cape Town, September 4, 1964.)

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FIBERGLASS VESSEL SUCCESSFUL IN PILCHARD FISHERY:

The 67.5-foot fiberglass vessel Western Dawn was reported to be having a good season in the 1964 pilchard fishery off the Cape west coast of South Africa. The "sandwich" principle was used in constructing the hull when the vessel was built in 1963. Since then the hull has withstood all tests. There was no sign of wear even after the vessel unloaded in heavy weather. In mid-1964 the vessel brought in a catch of 124 short tons in bad weather. The only maintenance the hull requires is a semiannual removal of marine growths and a yearly underwater inspection.

The vessel is equipped with fish-finding and echo-sounding equipment, power block, and hydraulic steering with control positions in the wheelhouse and in the bow. Powered by a 220-horsepower Diesel engine, the ves-

sel has a speed of 11 knots, making it one of the fastest vessels in the South African fishing fleet. (The South African Shipping News and Fishing Industry Review, June 1964.)

Note: See Commercial Fisheries Review, Nov. 1963 p. 79.



Taiwan

ITALY AND TAIWAN TO SIGN FISHERY COOPERATION AGREEMENT:

Taiwan and Italy were expected to sign a fishery cooperation agreement, according to a foreign dispatch from Taipei. Under that agreement, the Taiwan Nationalist Government will sell tuna to Italy and will use the payments to build tuna vessels in Italy.

Taiwan's current annual tuna production is reported to be around 6,000 metric tons, of which half is exported to foreign countries. The Nationalist Government is building thirteen 300-ton vessels and three 1,000-ton tuna vessels with loans obtained from the World Bank. Upon completion of those vessels, Taiwan's annual tuna production is expected to increase to 10,000 tons. (Minato Shimbun, August 28, 1964.)



U.S.S.R.

FISHERY LANDINGS IN 1964 EXPECTED TO SURPASS CATCH TARGET:

Soviet fisheries landings (fish, shellfish, and whales) in 1964 will probably exceed the 4.9-million-metric-ton catch target established for the year. The total Soviet catch during the first quarter of 1964 was 7 percent higher than in the same period of 1963. (Russkoe Khoziaistvo, No. 6 (1964), and other sources.)

Some of the Soviet Far Eastern fishing fleets reported total landings during the first 8 months of 1964 which exceeded those made during the same period in 1963 by 25-35 percent and exceeded the planned catch by 15 to 25 percent. In August 1964, the Soviet Atlantic catch was also reported to be considerably above the planned catch. Since Atlantic and Pacific fisheries landings make up almost three-fourths of all Soviet landings, it can be estimated that by

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

the end of 1964 Soviet fisheries landings will probably be about 10 percent higher than planned. That would give the Soviet Union a total 1964 catch approaching 5.5 million tons, an all-time record.

FISHERY DEVELOPMENTS:

According to a Soviet press release, dated August 1, 1964, the U.S.S.R. Fisheries Bureau chief of Kaliningrad, one of the major Baltic Sea fishing ports in the Soviet Union, stated that a total of 232 Soviet vessels (comprising the Soviet Atlantic fishing fleet based at Kaliningrad) were operating in the Atlantic Ocean as of August 1964. The Kaliningrad fleet reportedly consists of 201 fishing vessels, 8 factoryships, 14 freezerships, 7 tankers, and 2 towed vessels.

Another Soviet press report, dated August 18, indicates that Soviet and Cuban researchers are conducting joint fishery investigations in the Caribbean Sea aboard a Soviet research vessel. (Suisancho Nippo, August 26, 1964.)

TEN FREEZER-TRANSPORT VESSELS BUILT IN SWEDEN FOR SOVIET FISHING FLEET:

Sudoimport, Moscow, ordered 10 freezer-transport fishery vessels from shipyards in

port fish for the Soviet fishing fleet. The refrigerated areas of the vessels are designed to maintain a temperature of -30 C. (-22° F.). For loading and unloading, the vessels are equipped with endless conveyor belts. At the launching of the Kamchatskie Gory, it was reported that the vessel's loading equipment would be capable of handling 800 tons in 18 hours. Processing equipment is not being installed on the vessels at the Swedish shipyards.

Sudoimport also ordered two floating docks from a shipyard in Goteborg, Sweden, in 1963. One of the floating docks was completed in the summer of 1964 and towed to its destination at Novorossiysk on the Black Sea, where it is being used in vessel repair work. The floating dock has a lifting capacity of 27,000 tons and can accommodate vessels up to about 45,000 tons deadweight in drydock. The floating dock has a length of 218 meters (715 feet) and a width of 40.5 meters (133 feet). Accommodations are provided for about 30 men. The dock develops its own electric power from a 15,000-kilowatt station. The second dock is under construction.

The launching of the freezer-transport Carl Linne in June 1964 coincided with the visit of the Soviet Premier to Sweden. During his visit to Goteborg, the Soviet Premier stated that 152 vessels were being built abroad for the Soviet Union and that 60 of those would be launched in the summer of 1964.

Delivery Schedule and Specifications of Ten Freezer-Transport Fishery Vessels Ordered by Sudoimport from Swedish Shipyards in 1963

Construction Site	Name of Vessel	Launching Date	Scheduled Year of Delivery	Approximate Specifications
Goteborg	<u>Priboj</u>	February 14, 1964	1964	Length, overall--515 feet Beam, molded--69.5 feet Dead weight tonnage--about 7,800 tons Refrigerated cargo capacity--451,400 cubic feet Speed, loaded--17.5 knots Power--8,750 hp. at 112 r.p.m. Refrigerated areas designed to maintain a temperature of -30° C. (-22° F.)
"	<u>Khibinskie Gory</u>	April 14, 1964	-	
"	<u>Carl Linne</u>	June 24, 1964	-	
"	<u>1/</u>	<u>1/</u>	-	
Uddevalla	<u>Krymskie Gory</u>	April 23, 1964	-	
"	<u>Uraljskie Gory</u>	June 26, 1964	1964	
Goteborg	<u>Kamchatskie Gory</u>	May 5, 1964	1964	Length, overall--497 feet Beam, molded--67 feet Dead weight tonnage--about 8,000 tons. Refrigerated cargo capacity--450,000 cubic feet Speed--17 knots Power--8,750 hp. at 112 r.p.m.
"	<u>Sahalinskie Gory</u>	<u>1/</u>	1965	
"	<u>Sajanskie Gory</u>	<u>1/</u>	-	
"	<u>Altajskie Gory</u>	<u>1/</u>	1965	

1/ Not available.

Goteborg, Sweden, in 1963. Six of those vessels had been launched by mid-1964, including which were built under subcontract at a shipyard in Uddevalla, Sweden (see table). The new vessels will freeze, store, and trans-

(United States Consul, Goteborg, August 13, 1964.)

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

CONSTRUCTION OF FACTORYSHIP FOR NORTH PACIFIC NEAR COMPLETION:

The eighth Soviet factoryship of the Zakharov class being constructed at the Leningrad Admiralty Shipyard is nearing completion. It is named the Mikhail Tukhachevskii and is designed for use as a cannery as well as for manufacture of fish meal and oil. The new vessel will have a displacement of about 16,000 gross tons, is 538 feet long, and will have a crew of about 600 (40 less than the first vessel of this type).

This new Soviet factoryship will be used in the Pacific with the rest of the Zakharov fleet; the factoryships process crab meat off Alaska in the spring and saury off the Kuriles in late summer and the fall. It is reported that reductions in personnel on those vessels have been made possible by additional automation of production lines. An earlier Soviet report indicated that the number of personnel may be reduced by 115 persons by the time the final vessel of this series is completed.



United Kingdom

REPORT ON FISH BOXED AT SEA:

The British trawler Arlanda landed 30 boxes of cod and haddock at the port of Fleetwood early in August 1964. On the Icelandic fishing grounds, the fish had been stored in metal boxes soon after it was caught as part of experiments being carried out by the Industrial Development Unit of the White Fish Authority. Similar tests in boxing fish at sea were carried out at the fishing port of Hull in December 1963 but this was the first one at Fleetwood.

From a scientific point of view the Arlanda experiment was considered a success, but there were other factors to consider including the important one of cost. It took longer to box the fish than to stow it in the traditional way and this made it a more costly operation. The boxes were numbered, indicating when the fish were caught--during the early part of the trip or toward the end.

There was little doubt, said a White Fish Authority spokesman, that the boxed fish was superior in quality to similar fish caught at the same time. This view was endorsed by a

spokesman for the wholesale firm which bought the fish and was cooperating in the tests. He said that even the 15-day-old fish was in first-class condition, and that it filleted well, and the weight was good.

The boxed fish was sent to Birmingham, where it was sold in retail fish stores. The store managers were asked to make a note of which customers bought the fish, and they were asked to give a report on its quality and taste when it was cooked. In this way it was possible to keep a check on the fish from the sea to the table to find out, among other things, how it kept.

The owners of the Arlanda said that they had been happy to cooperate in the experiment. It was probable that more tests of a similar nature would be carried out aboard the trawler. The opinion of the vessel owners was that Fleetwood had always been noted for its high quality fish and anything which could be done to maintain or improve the quality was worth trying.

These tests by the White Fish Authority with the cooperation of trawler owners in Hull and Fleetwood have demonstrated that boxing fish at sea in distant-water trawlers would have a number of important advantages, according to a report issued in mid-August 1964.

The report states that this method of stowing the catch is common practice in certain sections of the inshore fleet and in one trawler fleet fishing near and middle waters, but although it has been advocated for many years by the Torry Research Station it has not hitherto been used in the distant-water fleet.

Among the advantages are improved quality of catch, absence of damage during discharge, ease of discharge, avoidance of mixing fish caught on different days, and improved fillet yields. The fish can remain undisturbed in ice until the time of filleting, and this should give a further improvement in "shelf life," especially in summer.

The results have been sufficiently good to justify the planning of a full-scale test in a trawler yet to be selected. The main purpose will be to establish whether the problems of handling large quantities of boxes, and of stowing the catch, can be overcome in a distant-water trawler. It is believed that if the fish hold is modified specifically for boxing, the crews will find little difficulty in the new methods.

United Kingdom (Contd.):

In the tests so far carried out fish were stowed in boxes at various stages in the trip while other fish caught at the same time were stowed in the conventional manner, either by bulking or by shelving.

Comparisons made by the Torry taste panel, port inspectors, and members of the trade indicated an improvement of 1 to 1½ days in "shelf life" for early-caught cod and haddock stowed in boxes. Improvements in fillet yield of up to 5 percent have been measured, while wastage due to hook damage is completely eliminated.

Measurements indicate that the likely variation in weight of fish in a given number of boxes can be predicted, and that with wide experience a fairly constant weight can be achieved by the crews.

The main deterrent to the trawler owner may therefore be the cost of modifying the hold and of providing the boxes. Since the method appears to have a number of advantages for the wholesale merchant and processor, some of which are directly measurable in financial terms, it would seem reasonable for him to encourage the adoption of the new method by passing on some of the benefits in the form of slightly higher auction prices.

Improvement in quality is possible only if the design of the box and the method of packing the fish and ice follow very closely the requirements laid down by the Torry Research Station; for example, the drainage from one layer of boxes should not pass through the fish and ice in the layer below. To design suitable boxes which at the same time avoid waste of hold space to an unacceptable degree, and which when empty can be "nested" so as to provide room for working and for ice, is difficult.

The specification prepared by the Authority's Industrial Development Unit took all those factors into account and attractive de-

signs in both light alloy and plastic have been put forward by specialist manufacturers. The first full-scale tests will employ light alloy boxes since production runs of plastic boxes are economical only when the design has been finally proved and accepted. (Fish Trades Gazette, August 8 and 22, 1964.)

* * * * *

SALMON AND TROUT FARMING METHOD DEVELOPED IN NORWAY ATTRACTS INTEREST:

In July 1964, a large British firm announced that it had acquired rights to use a Norwegian method for breeding and rearing salmon and trout. The new salmon farming technique was developed by two experimenters in Sykkylven, Norway. Under the Norwegian method, baby salmon and trout are periodically transferred to ponds of gradually increased salinity as they develop, thus introducing them to salt water at a much earlier stage than under natural conditions. It has been said that trout can develop from the egg to a size of 5 pounds within 2-1/2 years under the new rearing method.

The Norwegian experiments have already aroused considerable interest in Scotland, as several people who have been to Sykkylven have established similar fish farms in the Scottish lochs. One such venture (now in its second year of operation at Loch Sween) has a stock of 250 salmon and 6,000 rainbow trout.

The possibility of establishing a large-scale commercial fish farm to rear salmon and trout is being studied by the North of Scotland Hydro-Electric Board, with the aim of finding a solution to some of the social and economic problems of the Highlands and helping to counteract the present drift of population from the area. The British firm which has acquired rights to the new fish-breeding method is also said to be considering the Scottish lochs as likely areas for the development of their project. (Fish Trades Gazette, London, July 11, 1964.)

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FIRST SHIPMENT OF SMOKED SHARK FILLETS MARKETED:

Smoked shark fillets made their first appearance in Britain when they were offered as a delicacy by London's Billingsgate market in July 1964. The marketing venture is being watched with interest by fishermen at the port of Looe, Cornwall (southern England), where as many as 6,000 sharks are landed in a good year. A fishermen's representative at Looe strongly recommended the shark fillets: "It is very nice to eat, but very sweet." He indicated, however, that a new name for the product would aid marketing prospects. (Fish Trades Gazette, July 25, 1964.)

