

U.S. participation in conservation of international fishery resources

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IN THE Fourth International Fishery Congress held in Washington, D.C., in 1908, Mr. CHARLES E. FRYER, Superintending Inspector of the Board of Agriculture and Fisheries of the United Kingdom, made the following statement: "The further afield the fishermen of any state go, the more certainly will they be brought into closer relations with the fishermen of fresh nationalities, and the longer will be the list of states which find that they have interests in common—interests which will, sooner or later, call for combined action in the direction of international regulations of the fisheries on the high seas."

Time has proven Mr. FRYER a most competent prophet. With the passing years and development of more efficient and intensive fishing activities, the international problems and frictions arising from fishing activities have multiplied. Numerous attempts have been made to find solutions to these problems through international agreements. Many of the most extensive and successful of these attempts have been in the Western Hemisphere.

Here, beginning some forty years ago, the United States and Canada working together, and in more recent years with other countries, have embarked on a system of fishery conservation conventions which are proving successful in restoring and safeguarding the productivity of common high-seas fishery resources. Progress has been made through careful step-by-step exploration and development. This exploration has been directed first towards developing and co-ordinating research, and secondly, after research demonstrated the necessity, towards devising practical and effective conservation measures to ensure the maximum sustainable productivity of the particular fishery. As one step proved itself, and convinced an always sceptical fishing industry and public, which watched with a critical eye this increasing delegation of responsibility and authority to an international body, it was possible to move on to development and adoption of additional measures to handle more difficult, involved, or controversial problems. Thus by means of much study, discussion, and negotiation since the Fur Seal Convention of 1911, a considerable assortment of procedures for handling a variety of international fishery conservation problems have been developed, tested and applied. The United States now is party to eight agreements involving twenty-one nations. The Great Lakes Convention, covering the principal waters of our northern boundary, is the latest addition to this group.

These conventions range from bilateral agreements providing for research in and regulation of a single species, to flexible multilateral agreements covering many species in a given ocean area. Among the features included in one or another of these conventions are provisions for the handling of any joint conservation problem by the signatory nations concerned with that problem; for research and management with special treatment for stocks of fish under full utilization; and for the solution of special problems in cases where the established international commission cannot reach agreement.

Following is a brief commentary concerning each of these agreements:

INTERNATIONAL FUR SEAL AGREEMENTS

The supply of fur seal furs for the world market now comes almost entirely from three small island groups of the north Pacific, where this resource has been maintained as a result of effective international action. The International Fur Seal Convention negotiated in 1911 was the first successful international action to restore and maintain the productivity of a major high-seas aquatic resource. These island groups are the Pribilofs of the Bering Sea, which furnish the major portion of the current supply, the Commander Islands off Kamchatka, and Robben Island off the southern part of Sakhalin Island.

In the latter half of the 19th century, it became clear that extensive killing of seals at sea—pelagic sealing—was depleting the north Pacific seal herds and threatening their survival. Numerous efforts were made to bring the nations bordering the north Pacific together in a joint effort to prevent the destruction of the herds and ensure the preservation of the valuable industry founded upon them. It was not until 1911, however, that the United States, Japan, Russia, and Great Britain (on behalf of Canada) entered into an agreement for the protection of the seals.

Outstanding features of this agreement were the prohibition of pelagic sealing, provision for regulated killing on the rookeries, and provision for the sharing of the proceeds from annual killings among the nations party to the agreement. The agreement did not provide for joint research. Within a relatively short time the beneficial effects of the limitation on killing began to manifest themselves. The downward trend in the seal population reversed itself and by 1916 the population had approximately doubled. By the 1930's, the Pribilof herd had increased to approximately $1\frac{1}{2}$ million individuals.

This convention operated successfully until October 1940, when the Japanese Government notified the other signatories to the convention of its intention to terminate the convention one year thereafter. In its opinion the fur seals of the north Pacific had grown so numerous that the objective of the convention, the protection of fur seals, had been achieved and, on the other hand, the direct and indirect damage inflicted by the fur seals on the fishing industry of Japan was proving more and more serious. Since no new agreement was reached, the convention was terminated on the 23rd of October 1941.

Protection of fur seals was continued through an agreement between the United States and Canada (1942) and the unilateral action of the Government of the U.S.S.R., and later of the Government of Japan after the Japanese Treaty of Peace. The governments of Japan, the U.S.S.R., and Canada have very recently accepted the invitation of the U.S. Government to a conference in Washington, D.C., late in November 1955, to negotiate a new fur seal convention.

PACIFIC HALIBUT CONVENTION

The Halibut Convention between the United States and Canada, negotiated in 1923 to provide for the conservation of halibut of the northeastern Pacific Ocean, was the first successful attempt involving joint action in research, and international

conservation management, of a high-seas fishery. Prior to negotiation of the convention the halibut fishery had expanded rapidly, and following that expansion the yields in individual areas had precipitously declined.

Several characteristics of the fishery contributed to the success of the Halibut Convention. The fishery concerned two countries only, and was confined to one species and largely to a single type of fishing operation. However, success was furthered most of all by a realistic and effective research program which determined, then concentrated upon, the lines of research which revealed the relation between the fishery and the stocks of fish, and indicated the management measures which would be most effective. As first negotiated, this convention provided for an international commission empowered to conduct research but not to regulate. The results of the research were so convincing that the convention was renegotiated in 1930 to include provisions which gave the commission the authority to regulate the fishery. This commission has its own research staff, and makes use of an advisory committee of representatives from the halibut industry. The convention provides for equal sharing of the expenses by the United States and Canada.

The Halibut Convention has been further revised—in 1937 and 1953—in order to keep it up to date and permit the most effective handling of its responsibilities.

Following inauguration in 1931 of the management program, the decline in the halibut stocks was halted, and a major increase in productivity has resulted since. From a poundage of 44 millions in 1931, the catch rose to more than 70 million pounds in 1954. This production exceeds that of the early years when the fishery was drawing heavily upon accumulated stocks. About 75 per cent of the world's present supply of halibut is produced from the stocks managed by the Halibut Commission.

PACIFIC SOCKEYE SALMON CONVENTION

The United States and Canada ratified their third effective fishery convention in 1937 to cover the sockeye salmon of the Fraser River. These salmon had been practically wiped out as a result of landslides on the river, and overfishing. The convention provided for regulation after research covering two cycles of the salmon run, or eight years. The costs of the convention are divided equally between the two governments, and the commission is required to regulate the fishery in such a way that the catch is divided as nearly as possible in equal shares between the fishermen of the two countries. After several years of investigation the commission proceeded with the construction of fishways at Hell's Gate and elsewhere, which the commission's investigations had clearly demonstrated were critical to the rebuilding of the salmon runs and, after the lapse of the required eight years, undertook regulation of the fishery.

The commission's work is now showing practical results in the rapid increase in the runs of sockeye. Through the continued operations of this commission it is confidently expected that the runs, worth many millions of dollars annually, will be restored and maintained at maximum productivity. During the peak years of the fishery the production averaged about 20,000,000 fish annually. From this level it was reduced to less than two million. The work of the Commission restored the run in 1954 to about 10,000,000 fish, and it is expected that, under continued sound research and management, runs can be built up to their original level.

INTERNATIONAL WHALING CONVENTION

It has been recognized for some years that unrestricted whaling would deplete or even destroy the world whale stocks, and seriously affect the economy of countries dependent upon this resource for fats and oils. Multilateral agreements for the regulation of whaling have been in effect for more than twenty years, the first having entered into force in 1934. Revised agreements were negotiated in 1937, 1938, 1944, and 1946. The 1946 convention is now in effect with seventeen nations as signatories, including all the major whaling countries.

To the 1946 Convention was annexed a schedule of whaling regulations which is amended from time to time as the whaling commission established by the convention finds necessary. This device, coupled with mandatory reporting of whales killed, and related data, provides the flexibility needed to meet changing conditions in the whale stocks through modification of the open season, closed areas, minimum lengths, and so forth.

The International Whaling Commission, on which all parties to the 1946 convention are entitled to be represented, is the supervising authority under that convention, meeting annually. Its main responsibility relates to amendment of the schedule of whaling regulations. These include fixing of species and minimum lengths of whales which may be taken, open and closed seasons and waters, types of gear permitted, methods of measurement, catch returns, and other statistical and biological records and reports. Additionally, it conducts scientific research on whales and whaling, and reviews enforcement by the contracting parties, on their own nationals, of the obligations deriving from the convention.

Under the provisions of the agreements in force during the period from 1944 to 1953, the annual catch of whales in the Antarctic was limited to 16,000 blue whale units, which represented a reduction by one-third of the catch during six pre-war years. (The blue whale unit is a measure to equalate the varying sizes of different whale species, e.g. one blue whale unit equals one blue whale or six sei whales, etc.) This was further reduced to 15,000 blue whale units in 1954. During this period the open season for Antarctic whaling has been progressively shortened, and the opening date advanced. All this has been accomplished while the production of whale oil has remained about the same as in 1938-39. The number of whales taken has been reduced to encourage recovery of the stocks from their dangerous low, while oil production has been maintained by increasingly concentrating the season in months when the whales are the fattest, that is, yield the greatest amount of oil per animal.

INTER-AMERICAN TROPICAL TUNA CONVENTION

The results of the halibut and salmon conventions, have encouraged a similar approach to other international high-seas fishery problems. In 1949 the United States negotiated with Costa Rica the Inter-American Tropical Tuna Convention. This convention provides for research on the yellowfin tuna, skipjack, and bait fish found in the waters off the Pacific Coast of the Americas, and for recommending to the contracting parties the conservation measures found necessary. It adds two new features to U.S. fishery treaty practice: (1) The convention is open-ended, that is, any of the nations concerned with these fisheries can adhere to the convention at a later date with the consent of the countries then party to the convention; (2) It provides that the costs of operation shall be divided among the contracting parties

in relation to the catch from the fish stocks covered by the convention. It is hoped through this convention eventually to develop the co-operation of all of the eastern Pacific coastal states, off which tuna are found, in a programme of research and, if necessary, regulation. Recently, Panama has adhered to this convention, and is now an active member.

NORTHWEST ATLANTIC FISHERY CONVENTION

For the past two decades many people interested in New England's high-seas fisheries have strongly advocated a fisheries convention among the nations fishing the northwest Atlantic. This finally led to the negotiation in February 1949 of the Northwest Atlantic Fisheries Convention, which convention includes all ten countries from the two sides of the Atlantic whose vessels fish in the area.

Several new features were developed in this convention to handle the special problems arising from so many countries fishing to varying extents in the different parts of the northwest Atlantic area. The convention divides the northwest Atlantic into five sub-areas and provides a separate panel for each sub-area, each panel including representatives only from those nations fishing in the sub-area concerned. It is possible by this means to bring the many separate problems involving the different groups of countries in each sub-area under one over-all convention. This avoids the necessity of a multiplicity of separate agreements. The convention also provides that, when conservation measures recommended by the commission are accepted by all the parties which are members of the panel for a given sub-area, the measures then apply to all parties to the convention. The operations of the commission are financed on the basis of \$500 annually from each contracting party, with the remaining costs divided among the parties in proportion to the number of panels on which they are members. In the field of research, the convention provides that the commission, when feasible, shall arrange for the co-operative study of the fishery problems of the area by the countries party to the convention, through preparation and co-ordination of an over-all research program, rather than by operating its own research staff as do the halibut, salmon, and tuna commissions.

NORTH PACIFIC FISHERIES CONVENTION

The north Pacific area includes the three oldest examples of successful international co-operation in the maintenance of the productivity of major aquatic resources—fur seals, halibut, and salmon. It is also an area which has witnessed some of the most severe conflicts and disagreements between the fishermen of different countries in connection with their fishing operations. The fisheries for halibut and salmon of the northeastern Pacific were developed at an early stage because of the strong market demand which resulted in a premium price. The Governments of the United States and Canada have participated in extensive unilateral and joint efforts to study and regulate these fisheries, and to restore and maintain their maximum productivity. It is generally recognized that the continued productivity of these resources is the result of the expenditure of research and funds by the managing governments and the restraints placed upon their own fishermen by an extensive regulatory system. It is generally felt that if these resources, which have been maintained by the contiguous states, could be drawn upon by the fishermen of other countries which had

not participated in the research and regulatory programmes, the returns to the regulating countries would be so reduced that they would not be justified in maintaining these expensive programs.

A solution for the problems of this area finally was developed in the North Pacific Fisheries Convention negotiated between Japan, Canada, and United States, and ratified in 1953. This convention was designed to cover all the joint fishery problems of the three contracting parties in the north Pacific area. It concerns all stocks of fish under substantial exploitation by two or more of the contracting parties, with the decisions and recommendations concerning regulation of such stocks being confined to the parties engaged in their substantial exploitation. It sets up a new principle, "abstention", which provides that, where a stock of fish is being fully utilized by one or more of the contracting parties, and where such parties have enacted and are enforcing fishery conservation regulations and limitations developed through extensive scientific research, other contracting parties not sharing in exploitation of that stock should continue to abstain from participation.

To facilitate the administration of this abstention principle a provisional line was drawn in the north Pacific Ocean to separate the stocks of salmon of American and Asian origin, and a mandate placed upon the commission to undertake immediate research to verify or improve this provisional line. It was further provided that, in the event of the commission failing within a reasonable period of time to reach unanimous agreement on such a line, the matter should be referred to a special committee of scientists consisting of three competent and disinterested persons, no one of whom should be a national of a contracting party, selected by mutual agreement of all parties. Majority determination by such a committee would determine the recommendation to be made by the commission.

OBJECTIVES OF THE CONVENTIONS

The primary objective of the various international fishery conventions, involving north American countries, has been consistently confined to conservation; that is, to making possible the maximum sustainable productivity of the aquatic resources covered by the conventions. It is obvious that such conservation programmes have many economic implications and involve economic considerations. The results of any such program must be in products useful to man, and regulations must be adapted to the practical operations of the fishery. However, the economic considerations have been secondary. The conventions provide for conservation management, not economic management.

POLICIES

In the process of studying the various problems, developing practical solutions, and operating the commissions, certain policies have been evolved and have proved themselves. The principal such policies are the following:

1. *Specific Conventions for Specific Problems*

The fishery conventions have been individually tailored for specific situations and problems. As has been pointed out above, the first conventions covered single species and areas. As the procedures developed for these conventions proved successful, it has been possible to negotiate conventions covering a

greater complexity of species and problems and wider areas. The Northwest Atlantic Convention covering all joint fishery conservation problems of the ten countries fishing the northwest Atlantic area, and the North Pacific Convention covering joint problems of the United States, Canada, and Japan in the north Pacific area, are examples of these recent developments.

2. *Selection of Commissioners*

Members of the various commissions should be selected with respect to the specific commission to which they are appointed. The requirements may vary with the particular commission and stage of its development, so that emphasis is in some cases upon special knowledge of the particular problem, and in others upon general qualifications. It is extremely important that the commissioners have the confidence and support of the public in their respective areas, for such confidence and support is an essential requirement for the success of the commissions. For this reason, in the United States, for example, except for Government members, the Commissioners are appointed from the area affected by the convention.

3. *Advisory Committees*

Experience in the U.S. with the several commissions has demonstrated the desirability of providing for advisory committees from the public, and interested state governments. They serve a 2-way function. They provide detailed and practical advice to the commission, particularly with respect to the relation between the problems and proposals considered by the commission and the practical operations of the fishery and the state governments. They also serve an invaluable function in informing the various segments of the interested public of the work of the commission and the justification for the various acts which it may perform. In the present commissions they are proving extremely helpful in maintaining public support.

4. *Periodic review of Commission Work*

Experience has indicated the desirability of providing for a periodic review of the work of a commission by the member parties. This would include a study of progress made in achieving the objectives of the convention, whether the convention served its purpose and should be terminated, or should be continued as before or with modifications which would enable it to more effectively pursue its objectives. A provision of this kind was included in the North Pacific Convention. It is included in a more developed form in the Great Lakes Fisheries Convention. It seems desirable that it should be included in future conventions.

5. *Provision for research under the conventions*

Two general arrangements for research work are provided under the several conventions. These are to provide: (1) that the commission shall co-ordinate the research work of the contracting parties; or (2) that the commission shall set up its own independent research staff. Co-ordination of the research work of the contracting parties is favoured in situations where the contracting parties involved in the particular problems covered by the convention have established research staffs engaged on these or related problems in the convention area,

unless other considerations govern; for example, if the fishery is located in substantial part off the coasts or in the territorial waters of one party. In the latter case, and in cases where the parties do not have adequate scientific staffs, the use of an independent commission staff has been favoured.

CONCLUSION

It is not possible at present to draft an acceptable over-all convention to cover all areas of the Atlantic and Pacific. It is quite possible that further experience will confirm present indications that such over-all conventions never will be the most effective procedures for handling such problems. Furthermore, it is not likely that the expense of operation of such an over-all convention would be less than the costs of specialized conventions such as exist at present. In fact it might be increased. The maintenance of separate commissions does not involve an increase in the expense of operation through additional travel and working time since, whether one or a group of commissions handled the various problems, the number of regional meetings and travel would not be substantially affected. With an over-all convention it would be much more difficult to focus proper attention on specific problems and to maintain necessary public interest and support.