

XXVI.—CENTRAL ADMINISTRATION OF NORWEGIAN FISHERIES NEEDED.*

[A Circular from the Board of Directors of the Association for the Promotion of the Norwegian Fisheries.]

Our fisheries occupy a very prominent place among the industries of Norway. The annual value of the fishery products exported from Norway from 1866 to 1883 was as follows:

Year.	Average per annum.	Year.	Average per annum.
1866-'70	\$8,924,400	1881	\$13,453,600
1871-'75	11,202,400	1882	12,622,800
1876-'80	11,550,800	1883	11,443,600

These figures, however, do not represent the total value of the fisheries, as a large quantity of fish is of course consumed at home, nor do they include the income from the seal and whale fisheries.

For the sake of comparison we give below the value of other products exported from Norway during the same period :

Average per annum.

Years.	Forest and wood industry.	Other articles.	Foreign goods re-exported.
1866-'70	\$8,308,000	\$2,170,800	\$214,400
1871-'75	12,033,200	4,529,200	696,800
1876-'80	16,398,400	5,218,800	750,400
1881	12,033,200	6,432,000	482,400
1882	12,301,200	7,209,200	830,800
1883	11,738,400	7,102,000	830,800

On an average, therefore, the value of the fishery products exported from Norway was 41.8 per cent of the total exports.

According to the census of 1876 the number of persons engaged in the fisheries was 52,587, and this number has now considerably increased. From the official reports it appears that the number of fishermen in 1882 was 78,589, distributed as follows: 61,357 in the cod fisheries, 4,448 in the caplin fisheries, 2,766 in the mackerel fisheries, and 10,000 in the spring-herring fisheries. If we add to these the large

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number of men who during the winter carry on haddock fisheries near their homes, and the number of persons engaged in the seal and whale fisheries, in the Arctic Ocean fisheries, and in the fat-herring fisheries, we may give 100,000 as the number of men who gain their support either exclusively or in part from the fisheries.

For the sake of comparison we give the number of fishermen in some other countries, as follows: France, 82,700; Canada, 47,200; Scotland, 48,100; Netherlands, 11,250.

In consideration of the great and varied interests connected with this industry, the desire has often been expressed to have these interests represented in the central Government by a competent and responsible person.

In the report of the Norwegian Government of December 23, 1881, approved by royal decree of January 7, 1882, relative to the appointment of a director of the salt-water fisheries, a review is given of all that has been done in this matter since 1859, when the subject was first broached. The matter was discussed during the Fishery Exposition at Bergen in 1865. At this meeting it was not deemed advisable to pass any resolution in regard to this matter, as it was thought that the expressions of opinion, which especially showed the desirability of having a central administration of fisheries and of forming a society for promoting the fisheries, would be sufficient to direct the attention of the Government to the subject. The direct result of the different propositions was, however, very different from the one aimed at, namely, to have some man in authority who would watch over the interests of the fisheries, and act the part of an adviser to the Government. All that was obtained was an annual appropriation for practical and scientific investigations; which of course are of importance to the fisheries but which constitute only a part of the duties of a commission of fisheries, and this a very insignificant one, if, as is the case with us, the appropriation is so small as to allow only special investigations on a very limited scale.

In 1879 the Association for the Promotion of the Norwegian Fisheries was formed; and thus a way was found for satisfying demands, which it was thought could best be satisfied by a voluntary association. Since 1881 this association has received from the Government the annual sum of \$3,216. Although various questions relating to the administration of the fisheries have been referred to the association for decision, and although it has made several propositions relating to the same subject, the whole matter of a central administration of fisheries has been mentioned only incidentally. The principal aim of the association is, and will be as long as its present organization lasts, to develop the fisheries as a branch of our industries; and in this respect the association has, during the few years of its existence, done some good work.

The question of a central administration of our fisheries remains, therefore, in the same condition as in 1859, only with this difference, that

during the twenty-five years which have elapsed the fisheries have developed to such a degree as to make the desire for such an administration stronger and more general, and to define more clearly the duties which should be assigned to it. The fishery association of the district of Nordland in its memorial dated September 29, 1881, states that "the importance and necessity of such an office are so self-evident that no proof is needed," and we fully agree with our northern colleagues.

During the last twenty years the fisheries, the principal industry of our country, have given rise to special administrative measures; superintendents' offices have been established for the great fisheries; roads and telegraph lines have been constructed for the special benefit of the fisheries; soundings have been taken on the banks of the sea, and charts of our seas have been published; a special fund has been created for constructing harbors; another fund has been started for the benefit of sick or disabled fishermen, which disburses annually about \$13,400; special officers have been appointed to superintend the freshwater fisheries; the fishery statistics have been systematized; and on the whole a good deal has been done to promote our fisheries. For all these purposes, and for the practical and scientific investigations referred to, as well as for the Association for the Promotion of the Norwegian Fisheries from \$160,000 to \$180,000 are spent every year; and there is no likelihood that these efforts will be discontinued, but, on the contrary, there is every prospect of their being increased.

Besides those persons who have charge of the different branches of activity referred to above, there are a number of other authorities, functionaries, corporations, &c., who are either in direct relation with the fisheries, or who publish reports, memorials, and propositions relating to them. These are district governors, mayors, consuls, trade associations, financial committees, &c. We therefore already possess many of the elements needed in an administration of fisheries. With due regard to individual effort, it must be said that the demands of the fisheries are at present to a great extent dependent on accidental knowledge of the fisheries, or accidental interest taken in them by this or that person; and that invariably either the one or the other is not found to exist to such a degree as the true interests of the fisheries require. There is consequently a more urgent need than ever of having our fisheries represented in the central government by an independent (*i. e.*, of other offices), competent, and responsible authority, whose activity should not be confined to mere office work and the compilation of statistics and information, but which should take the initiative in different enterprises, and should systematize this work. As far as we know, there is no difference of opinion with regard to this matter; and if so far nothing has been done, the reason must be sought partly in the fear of the expense connected with it, and in the uncertainty as to the best manner of practically carrying out the idea; partly, also, in the circumstance that no one interested in the fisheries has been found to

speak for this. The long time which has elapsed during which no serious attempt has been made to settle this question is in itself a proof of the necessity for having the fisheries specially represented in the central administration. It may be useful in this connection to give a brief review of what other countries have done in this respect.

SWEDEN.—At present the fisheries are in charge of the managing committee of the Royal Academy of Agriculture, whose chairman, who is also always the director of the academy, is appointed by the King. This committee appoints the following officers, who are responsible to it: One superintendent of the freshwater and Baltic fisheries, with two assistants; and one professor of fish-culture.

Several of the provincial agricultural associations have a superintendent of fisheries, who is paid in part by the provincial government and in part by the association, and who has to report to both. Halland, Malmöhus, and Christianstad have a superintendent in common, while Bohus, Wärmeland, Södermanland, Gefleborg, and Linköping have one each. In those districts which have special fishery laws, the districts appoint district superintendents, who report to the provincial superintendent. In 1883 the Association for Promoting the Bohuslän Fisheries was formed, whose object is the same as that of the Norwegian association.

A royal commission, appointed to consider the propriety of changing the fishery laws, has in its memorial, dated March 3, 1883, proposed the creation of a commission of fisheries, to consist of one director, one secretary, four superintendents of fisheries, each having a separate district, and a number of ichthyologists, employed temporarily for special purposes. The director is to be appointed by the King, and the other officers by the Secretary of the Interior.

DENMARK.—The fisheries are under the Department of the Interior. In Lym Fiord there is a superintendent of fisheries, with one assistant and four rowers. In the Cattegat a gunboat is stationed to watch over the fishing interests, and on the west coast of Jutland there is an armed schooner for the same purpose. The department pays a gentleman to act as adviser in all matters pertaining to the fisheries, but, as that gentleman holds another office, the fisheries are to him only a matter of secondary interest, and his pay is only \$268 per annum. In 1884 there was formed an association to promote the fisheries in Denmark and the Danish Colonies (especially the two islands, Iceland and Greenland).

There is a project on foot to change the present arrangement in connection with a proposed revision of the fishery law. It is proposed to have two inspectors of fisheries, one for the Danish Islands and the south of Jutland, to be stationed at some place on the Great Belt; and one for the north of Jutland, to be stationed at some place on Lym Fiord. Each of these inspectors is to have two assistants and a number of rowers. In order that the provisions of the law may be properly

carried out, each fiord is to have a superintendent of fisheries, who is to be appointed and paid by the district authorities.

GERMANY.—The police authorities see to it that the fishery laws are properly observed. The Government, however, is at liberty to appoint special officers for this purpose. Fishery associations, towns, and many owners of large fisheries appoint and pay officers, who are subordinate to the authorities appointed by the Government. Several associations are active in promoting the fisheries.

THE NETHERLANDS.—The superintendence of the salt-water fisheries is in the hands of a board (*het Collegie voor de Zeevischerijen*) composed of fifteen members appointed by the King, one-third of whom retire from office every year. There is a provision of the fishery law, according to which no member of this board can have a pecuniary interest in the fisheries. The board selects five of its members, as a managing board, to attend to the current business. Each province is represented in the board, which meets only once a year, while the managing board meets every third month. Its business consists principally in collecting statistics relative to the fisheries, in furnishing information on matters pertaining to the fisheries, and in promoting the fishing interests in every possible way. Every year it publishes a report containing detailed statistics of the Dutch fisheries, a review of the fisheries in other countries, and different articles on the condition of the Dutch fisheries and on various means of promoting them. The report is edited by the secretary of the board, at present a professor of law at the University of Leyden, the different members of the board furnishing him with the necessary material. The secretary receives a salary of \$241.20 per annum, while the other members of the board are merely paid their traveling expenses for all journeys undertaken in the interests of the fisheries. Under this board there are twelve *keurmeesters* or "branders," who now, since the barrels are no longer branded, have to classify the herring brought in by the fishing-boats before they are sold at public auction.

For superintending the fisheries there is one steamer and six sailing-vessels on the river Schelde, and a steamer to watch over the oyster fisheries in the Zuyder Zee. This last-mentioned steamer is also to see to it that no nets of the kind called "*knijnnetten*" are used from May 15 to July 15, during the period when their use is forbidden by law. All the officials connected with the superintendence of the fisheries are under the board.

For the practical and scientific investigations which, so far, have principally been directed to the raising of oysters, there is a traveling zoological station, maintained by the *Nederlandsche Dierkundige Vereeniging* [Netherlands Zoological Society], which receives some aid from the Government.

BELGIUM.—The fisheries belong under a bureau in the Ministry of Public Works—the Bureau of Maritime Affairs. In each of the 4 sea

districts there is a marine commissioner, who has to report to the chief of the bureau referred to, and whose duty it is to see to it that the fishery laws are properly enforced. To these commissioners fishermen can appeal in all matters pertaining to the fisheries.

FRANCE.—In the Ministry of Marine there is a special bureau for the salt-water fisheries (the Bureau of Fisheries), which is under the commissary-general, who has charge of recruiting the hospital service, as well as of the pay and clothing of the navy. The functionaries in the districts (prefects of marine) and in the subdistricts, who are under the commissary-general, have also the fisheries in charge. In districts where there are extensive fisheries there are special inspectors of fisheries, of whom at present there are 18, who have to see to it that all the fishery regulations are properly observed. Among the persons connected with the administration of the fisheries we must include the so-called superintendents of fisheries (*prud'hommes pêcheurs*) and sworn guards (*gardes jurés*), whose number is determined by the prefect of each district. The former are appointed by the prefect at the recommendation of the chief of the recruiting district. They must have been captains or owners of boats or vessels, and must possess some knowledge of the fisheries. They have to watch over the proper observance of the fishery laws, and assist in collecting statistical material. There is no salary connected with these places, but the time spent in these duties is counted in awarding pensions as time of service on board a man-of-war. Every one whose name is on the naval register is entitled to a pension at the age of fifty, after a service of twenty-five years, either on board or on shore, either on a merchant-vessel or a fishing-vessel in the service of the Government. For five years' service in time of war an extra pension is granted. The sworn guards are selected by the prefect from a number of candidates proposed by the captains of boats, double the number of men to fill the vacant places always being proposed. They must be twenty-five years of age, must have served as captains of boats for at least twenty-four months, and have been on board a man-of-war for two years. They are elected for the term of one year, but can be re-elected. After ten years' service, and if there is no complaint against them, they are entitled to a medal, which is worn on a blue ribbon. There is no salary connected with these places, except in cases where they have had a loss of time, when they receive a certain sum per day and traveling expenses. The time of service is, as regards the pension, counted as military service in time of peace. They have to watch over the proper observance of the fishery laws and call the attention of the inspectors to anything that will promote the fisheries. The freshwater fisheries are under the Ministry of Public Works.

ITALY.—There is no special administration of fisheries. The proper carrying out of the provisions of the fishery laws is intrusted to the ordinary authorities: to the navy, harbor-masters and inspectors, custom-house officers, forest guards, and, in fact, to any sworn officer un-

der the Government. Provinces, towns, or private individuals can, subject to the approval of the Government, appoint special officers to watch over the fishing interests. Such persons are duly sworn in, and in the performance of their duty have the same powers as police officers.

In Naples there is a zoological station (*Napoli Stazione Zoologia*) which, though a private establishment, is supported by international contributions. Germany contributes annually \$7,236; and several other countries give a total sum of \$8,040. For every student sent to this station an annual sum of \$402 is paid. Italy has 6 students' places, Prussia 3, and Russia 2. In all there are 22 places. In 1884 an international subscription was taken up to buy a steamer for practical and scientific investigations in the Mediterranean.

ENGLAND.—There is no public functionary who has charge of the salt-water fisheries. They belong under the Board of Trade, which has special investigations made by commissioners or experts specially appointed for this purpose. The wish, however, has often been expressed in many journals to have the Government take charge of the salt-water fisheries.

During the last few years two private associations have been formed: the National Fish Culture Association, whose aim is to encourage artificial fish-culture; and the National Sea-Fisheries Protection Association, principally formed to protect the interests of its own members. An association formed in 1861—the Fisheries Preservation Association—aims especially at preserving the stock of fish. For the freshwater fisheries there are two inspectors, who are under the Home Office. There are numerous private associations and clubs for the preservation and promotion of the freshwater fisheries.

SCOTLAND.—From 1809 to 1882 the fisheries, principally herring fisheries, were under the Board of British White-Herring Fishery, composed of nineteen members chosen by the Government. They were selected principally from among the nobility and men of science, while men directly interested in the fisheries were excluded by law. The business was done by a secretary, who had his office, with five clerks, in Edinburgh. Under this board there was a general inspector, an assistant inspector, and 26 inspectors, some having assistants. At the disposal of the board there were several vessels, one of them belonging to the board, and the others furnished by the navy. The duties of the board consisted principally in branding the herring barrels, collecting statistics of the fisheries, and taking general supervision of the fisheries. Since 1828 the board has enjoyed an annual government appropriation of \$14,472 for improving harbors. The conditions under which this appropriation is granted are that the work is done by the engineers of the board, and that the persons interested in the matter pay at least one-fourth of the expenses.

This board (whose members had no salary) did not prove satisfactory, and it was reorganized in 1882. Its official name was changed to Fish-

ery Board for Scotland. It is now composed of three sheriffs, who remain in the board as long as they hold the office of sheriff, and six other members, who are elected for five years. Three members constitute a quorum. All members of the board are appointed by the Government, which also appoints the president and secretary, each of whom has a fixed salary. The duties of the board were extended, and now it has charge both of the salt-water and salmon fisheries; and it is to promote the interests of the fisheries by all the means in its power. The revenue of the board consists principally in the tax for branding barrels. At present the board is having practical and scientific investigations of the herring fisheries made on a tolerably vast scale. An experimental station has been established at Granton, and it is the intention to establish a similar station on the west coast of Scotland. For the promotion of the freshwater fisheries a private association—the Scotch Fisheries Improvement Association—was formed in 1880. Besides this association there were also at the end of 1883 ninety-eight clubs or associations with the same object.

IRELAND.—Both the salt-water and the freshwater fisheries are under the Office of Irish Fisheries in Dublin. This office has three inspectors, each having his own district. There are, besides, one secretary, three clerks, and one engineer. The inspectors have charge of the administration of the fisheries in general, and are assisted by the coast guards. They can make regulations for the proper management, promotion, and protection of the fisheries, and are allowed to advance money to fishermen for purposes connected with the fisheries. In 1882 sums amounting in all to \$42,880 were loaned to fishermen.

CANADA.—At the head of the administration of fisheries there is a director, whose office is under the Ministry of Marine and Fisheries. The following persons are appointed in the provinces:

In Quebec: One captain of the steamer, forty-nine overseers, and forty-nine guardians.

In the other provinces: One inspector in each, one overseer in every county, and one guardian in every township.

The total number of persons comprised in the administration of fisheries was the following in 1882:

Where employed.	No.
In Ontario.....	90
In Quebec.....	98
In Nova Scotia.....	241
In New Brunswick.....	109
In Prince Edward Island.....	46
In British Columbia.....	2
On board the steamer.....	30
At the hatching stations.....	25
Total.....	641

The sums expended for salaries amounted to \$40,200, and for other purposes to \$53,600 per annum. The inspectors and overseers have judicial power, except in cases where they are witnesses. The same power is delegated to every stipendiary magistrate and to every naval officer on board vessels engaged in the superintendence of the fisheries. Special officers are appointed to superintend the hatching of fish.

UNITED STATES.—There is a Commissioner of Fish and Fisheries, who is appointed by the President. The work of the United States Fish Commission is in three directions, namely:

Occupation.	Persons employed.
Scientific investigations.....	10
Hatching of fish.....	15
Statistics of fishing industries.....	6

The Commissioner has also an office for conducting the correspondence of the Commission. All persons employed in the Fish Commission are appointed by the Commissioner. For practical and scientific investigations he has two steamers, one of 385 and the other of 206 tons. During the fiscal year 1871-'72 the appropriation for the Fish Commission was \$8,576, while in 1882-'83 it amounted to \$230,212.

Most of the States have a commissioner of fisheries, who is appointed by the governor. There are persons appointed who have to see to it that the fishery laws are properly observed; and informers receive half of the fine imposed. In 1865 the different States spent for their fish commissions \$6,566, and in 1882 \$120,600. There is in the United States an association called the American Fish-Cultural Association, whose name was at the last general meeting changed to the American Fisheries Society.