

A PLEA FOR THE ESTABLISHMENT OF A FISHERY RESEARCH INSTITUTE.

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As man must get his food either from land or from aquatic sources, there are correspondingly two basic food industries, one comprising agriculture and animal husbandry and the other fisheries in a broad sense. It is necessary, therefore, that our fishery resources should be properly husbanded so that in times of emergency, like the present, they can be utilised very fully to supplement the deficiencies and failures of crops and foods from the land.

Importance of Fisheries.

The fisheries of a country, unlike all other primary natural sources of wealth of a nation, such as agriculture, animal husbandry, forests, mining, etc., are the property of all the people, since they are not subject to ownership in the same way as any other natural resources. Unlike the farmer, whose individual prosperity depends upon the welfare of his individual herds and fields, the fisherman feels little responsibility for the maintenance of a resource that belongs to everyone. In view of this fact, it is a fundamental necessity that Government's vigilance in relation to fisheries should be sharp and thorough, for public duty requires the proper maintenance of a source of national wealth which belongs not to the fishermen alone or even to the present generation, but to all of us and to the posterity.

It will thus be clear that it should be a constitutional function of the Government to promote the general welfare of the people under its charge by conserving the aquatic resources of the nation. But unfortunately the position of fisheries in India is far from satisfactory and one can aptly recall even today Day's (*The Fishes of Malabar*, p. vii, London, 1865) remarks made as early as 1865:

Present Position of Fishery Research.

'To study the wants of a people, to inquire into the history, language, habits, and customs of a nation, is generally deemed a duty on the part of its rulers: but hardly any objects of research are more worthy of the attention of a Government than the sources whence the food of the population is derived, or the nature of the articles most adapted for its manufacturing processes, or best fitted in the raw state for its home or foreign trade. In India the details of Native agriculture have been carefully studied, if they have not been improved; the earth has been ransacked for its minerals; the forests have been explored for their timber, the land for its agricultural capabilities, even the atmosphere for its meteorological variations; and in all these matters Government has wisely shown its interest; but the fish with which the fresh waters of Hindustan teem, and which abound in the seas that wash her coasts, have rarely met with attention from those in authority, or even from individuals whose private tastes have led them towards the cultivation of zoological science.'

Diwan Bahadur Dr. B. Sundara Raj, formerly Director of Fisheries, Madras, in a recent article on 'Development of Indian Marine Fisheries' (*Science and Culture*, Vol. VIII, p. 435, 1943), has thus summed up the attitude of Government towards fisheries:

'The history of the efforts made so far to develop marine fisheries, one of the major food producing industries of India, is a dismal tale of neglect or half-hearted local endeavour without any consistent or co-ordinated policy. Unlike its sister subjects, Agriculture, Forest and Veterinary Science, which for a long time received the parental attention of the Central Government and even after transfer to ministerial control in the Provinces by the reforms of 1919 still continue to be actively fostered by all-India departments, officers and institutions, Fisheries never had the benefit of a central agency for control, guidance or even technical advice. With the transfer

of Fisheries to provincial control the Government of India seem to have disowned even the moral obligation they had towards the neglected industry.'

In a letter, dated the 8th June, 1943, addressed to me, Dr. Stanley Kemp, D.Sc., F.R.S., Director and Secretary to the Council of Marine Biological Association of the United Kingdom, made certain observations which seem to me relevant to the subject-matter of my note. On hearing of my appointment as Director of Fisheries, Bengal, he wrote:

'It is indeed news to me that you have taken over the job of Director of Fisheries, Bengal. I hope your experience in this new post will be happier than that of those who held it in former years. There is surely a vast amount to be done, and I am convinced that you are the proper man for it, though I feel myself that nothing really effective will be done until there is an Imperial Fisheries Department.'

His advice to me was that 'Do not let the Bengal Government clutter you up with masses of administrative work that any non-scientific man can do'.

The two extracts from Dr. Kemp's letter sum up admirably the present state of fisheries research in India. There is certainly a vast amount of work to be done, but nothing effective will be done until there is an Imperial Fisheries Department. It is true that during recent years most of the Provinces and some of the larger States have employed scientists as fishery officers, but it is also true that they, possibly with the exception of Madras, have inadequate or no research staff at their disposal and fully equipped Laboratories, Research Vessels or Fishery Research Stations are practically lacking everywhere. Further, all the Fishery Officers are at present overburdened with non-scientific, routine administrative work with the result that the output of scientific research on fisheries is very poor. Unfortunately, in the absence of a central co-ordinating authority, there is much overlapping of work and waste of effort and limited talent in the country.

Since its inception in 1916, the Zoological Survey of India has, on several occasions,

Earlier Recommendations.

directed the attention of the Government of India to the desirability of establishing in the country a central organisation for research in fishery. The successive Directors of the Survey, the late Dr. N. Annandale, Dr. S. W. Kemp, Lt.-Col. R. B. S. Sewell and Dr. Bains Prashad, have been fully alive to the need of such a research institute and placed before the Government detailed proposals for the establishment of a fishery research organisation. The Indian Industrial Commission had also recommended that ichthyologists should be attached to the Zoological Survey of India in order to give expert advice on fisheries to local Government and others, thus assuming the position of Imperial rather than local advisers. The two monthly scientific journals of India, *Current Science* and *Science and Culture*, have also, within recent years, advocated the establishment of a fishery institute. Notes on this subject have appeared in other Indian and British journals also from the pen of eminent zoologists and fishery experts. On the occasion of the Silver Jubilee Session of the Indian Science Congress in 1938, the overseas zoologists were greatly struck with the comparative failure to develop the fisheries of the country as a source of food. It was keenly felt by them that the attention of the Government should be directed to the urgent necessity of developing the fishery resources of India for augmenting the food supply, for the production of agricultural manure, for the control of diseases arising out of malnutrition and for fighting malaria, guinea-worm disease, etc. In a combined meeting of the overseas and Indian zoologists under the auspices of the Zoology Section of the Indian Science Congress, the following resolution was unanimously adopted:—

'That this meeting of the Zoology Section of the Indian Science Congress Association in session at Calcutta urges upon the Government of India the necessity and importance of constituting an all-India Department of Fisheries for the development of the fisheries resources of Indian waters on scientific lines. It is of opinion that the commercial development of the fisheries of India should be accompanied by the scientific investigation of fishery problems by means of a carefully planned programme of co-ordinated scientific research, which can most easily be controlled by one central authority for all-India, leaving to the separate provincial Governments the task of

administering the fishery laws and regulations. It is further of opinion that, unless development of the fishery resources of Indian waters is carried out with due regard to the scientific principles which form the basis of successful fishery developments, there will be grave danger of irreparable damage to the fisheries concerned.'

From the platform of the Indian Science Congress another strong plea for the establishment of a Fishery Research Institute was made early this year by Dr. B. N. Chopra in his Presidential Address to the Zoology Section. After dealing with prawn fisheries in particular, he concluded:

'In my opinion, the first step in India should be the setting up of a central fisheries research organisation, where intensive research on problems connected with fisheries will be carried on. The Imperial Council of Agricultural Research has done a great deal of useful work on the improvement of our agriculture, and a section of it, under the Animal Husbandry Commissioner to the Government of India, looks after, among other things, the fisheries of the country. The work so far done by this section on the improvement of our fisheries is, however, hardly comparable with that of the main body on agriculture or commensurate with the requirements of the country. Fishery research is a whole-time job and the problems connected with it are too numerous and too involved to be satisfactorily handled as a subsidiary activity of a section of the Imperial Council. Like agriculture, fisheries should have an Imperial Council of Fisheries Research under the scientific control of an expert Fisheries Officer, with a band of scientists working on its staff, with technologists trying to solve the difficulties experienced under varying conditions all over the country, with marketing experts always keen to devise means for better distribution and better utilisation, and with the whole body alive to the ideal of providing "better food, more food, more and better fertilizer, better organisation", and last but not the least, to the improvement in the moral and material conditions of the poor fishermen, for on his well-being will ultimately depend the prosperity of the industry.'

Though there can hardly be any doubt that the Fish Committee of the Imperial Council of Agricultural Research during the brief period of its existence (3 years) has awakened considerable interest in fishery matters throughout India, there is great force in what Dr. Chopra says, for the work that can be done by the Fish Committee can hardly be 'comparable with that of the main body on agriculture or commensurate with the requirements of the country'. Though it may be premature to have an 'Imperial Council of Fisheries Research' in India, the time has certainly come when there should be a central organisation to deal with the fisheries of the country in its various aspects. If we had such an organisation in existence at the present juncture, its value for war purposes would have been very great indeed. There is certainly need for co-ordinating the activities of the fisheries departments of the provinces and states so as to achieve the maximum production of fish and to deal satisfactorily with the methods of preservation and transport of this readily perishable commodity.

Reports have appeared in the press that the Government of India have formed six Policy Committees to advise regarding Post-War Reconstruction after examining data already collected by the departmental experts. There have been sufficient indications in the news from Delhi that the fisheries of the country will also receive consideration at the hands of one of these committees or the General Policy Committee. The time is most opportune, therefore, for the National Institute of Sciences of India to urge upon the Government the necessity and importance of establishing such an institute. For a really sound research in Indian fishery, it is most essential to break down provincial barriers, for in Europe, even national basis was found too narrow for fishery administration and fishery science may be said to have originated in 1902, when the International Council for the Exploration of the sea was founded to co-ordinate the fishery investigations of the countries of North-Western Europe.