IMPROVING THE FISHERIES CONTRIBUTION TO World Food Supplies

An abstract by
A. H. J. KROON

A New Caledonian native on a reef-fishing expedition, holding a speared carangue, or trevally. The primitive age-old methods of fishing still widely followed throughout the South Pacific will have to give way to modern techniques if fish production in the area is to be significantly increased.

THE F.A.O. Fisheries Bulletin for September-October, 1953, carries a paper prepared by the staff of the Fisheries Division of the Food and Agriculture Organization on “Improving the Fisheries Contribution to World Food Supplies”.

The paper states that only about 10 per cent. of the animal protein component of the world’s food supplies is derived from the waters, although these occupy 75 per cent. or more of the earth’s surface. A considerable increase in the production of foodstuffs and raw material from the world’s waters seems within reach, and the Sixth Session of the F.A.O. Conference expressed the view that, in general, world fish production could be doubled without any detriment to the resources.

The paper seeks to indicate something of the pattern of evolution and development which might be displayed by the fishing industries within the next few decades, and is chiefly devoted to the examination of the main problems which must be faced if a substantial rise in fish production is to occur to meet targets such as the 1960 targets of fish for human consumption set out in the F.A.O. Second World Food Survey, which aim at an average increase of 47 per cent. on the present world’s output.

The analysis leads into a series of conclusions on which any efforts to increase the world’s fish food production should be based. As these should be of interest in relation to the development of fisheries in the South Pacific, they are reproduced below in the summary form used in the F.A.O. paper.

1. World aquatic resources could yield food supplies to man in quantities much greater than those taken at present.

2. The increased yields would consist primarily of the kinds of organisms which are taken at present, but types of organisms other than those which bulk largely in current catches could become important.

3. The immediately predictable increases could be obtained by the employment of existing types of equipment and techniques, with, in some cases, refinements of kinds already in at least experimental stages.

4. It can be imagined that some entirely novel changes in technique, amounting to intervention in basic productivity cycles of the waters, and to development of animal husbandry regarding the fish stocks and agriculture in respect of the plant resources, could be evolved out of current technical advances in other fields.

5. There seems to be no reason, therefore, to suppose that there exists any technical factor which would prevent achievement of the increased production.

6. On the other hand there are various economic and organizational factors which obviously at present operate to hinder the technical developments required.

7. The fisheries in general support relatively small industries which in many cases are not integrated with the over-all economy on whose development their own prosperity depends.

8. Present levels and patterns of demand are unfavourable to heavier production. On the one hand, high purchasing power permits discrimination in favour of other foodstuffs, while on the other, consumer incomes are too low to support the price structures on which heavier investment in primary production depends.

9. There is a widespread lack of the administrative and commercial acumen required for the successful organization of fishery industries.

10. The financial risks represented by fluctuations in supply and demand have severely restricted the flow of capital to the fisheries, while in many

(Continued overleaf)

* (a) Vast accumulations of nutrient materials lie on the floor of the ocean; some of them remain undisturbed and therefore unused. In a very remote future artificial upwellings would perhaps be possible.

(b) Present harvests of seaweeds represent only a very small fraction of the measurable stands of weeds.

(c) Substantial quantities of food could perhaps be obtained directly by using the phytoplankton and zooplankton. Its use would mean an exploitation of a stage of the production cycle lower, and therefore more efficient, than fish.

(d) A substantially increased production of the inland fisheries “will most certainly take place.”
of the industries themselves the accumulation of earnings is insufficient to finance further expansion.

11. Restrictions enforced on international trade as a result of payment problems or protection of domestic markets operate to the serious disadvantage of fishery products. Furthermore, there has been little attempt so far to overcome the problems of distance and demand so as to make surplus supplies from one region available to needy markets in another.

12. Research investigations in support of fisheries have not yet developed sufficient knowledge of the resources to permit confident predictions and effective management. Technological research has usually been applied late and tends not to be influenced by technical problems in the fisheries.

13. The technical education of workers in all sections of the fisheries is far behind present needs in many countries.

14. Fishery policies in general tend to be frustrated by the difficulty of promoting co-ordinated development in different sections of the industry and the problem is particularly acute in the case of small and inexperienced administrations.

In the paper under review, there also appears an extensive and useful bibliography.

EIGHTEEN senior specialists in agricultural sciences, education and health assembled recently in Noumea for the sixth annual meeting of the Research Council of the South Pacific Commission, which was held from 31st May to 10th June, 1954. The Chairman was Dr. F. Buginicourt, Director of the French Institute of Oceania, Noumea.

The meeting was opened by Sir Brian Freeston, Secretary-General of the South Pacific Commission.

The Council reviewed the arrangements made for the carrying out of research studies and technical services approved by the Commission following recommendations made by the Council at its meeting in 1953. The meeting reaffirmed the content of long-range work already defined, and formulated additional proposals for work in the subjects selected by the Commission for concentrated attention at the present time. These subjects include the coconut, rice and fisheries industries in the Pacific islands; the introduction of economic plants for improved agriculture; the control of pests and diseases in agriculture, especially the rhinoceros beetle; the assessment and improvement of nutritional standards; the control of filariasis and malaria; co-operative societies; the promotion of literature for islands people, and the use of visual aids in health and educational work.

(Continued from page 14)

Sponge Culture In Micronesia could adversely affect the cultures. As many as eighteen million sponges could be grown there annually only the outbreak of war in the Pacific prevented the establishment of a flourishing industry.

Many of the British and French possessions in the South Pacific have physical, chemical and oceanographic conditions similar to those of the Palau and Marshall groups. They are, as was shown by the tragic trade recession of the nineteen-thirties, dependent to a dangerous extent upon the vagaries of the world market in copra.

(Continued from previous page)