MODERN FISHING GEAR OF THE WORLD*

FISHING is one of the earliest occupations of man in the field of food production, but it is not generally known how complex is the practice of modern fishing. In 1957, the FAO organised a Fishing Gear Congress which was held at Hamburg. This was an important step forward in the development of commercial fishing and the present book is the edited version of the large number of technical papers presented and discussed at this Congress.

Following an introduction by the Director of the Fisheries Division of the FAO and a note on modern trends in fishing by the Editor of this volume, over 100 technical papers are grouped under the headings: material, terminology and numbering systems; characteristics of fishing twines and their testing; net making; net preservation; relative efficiency of nets made of different materials; engineering theory and model testing; use of measuring instruments and underwater observations; methods of specifying gear; fishing gear and its operation; location of fish; detection of fish; attraction of fish; and, electrical fishing. These papers cover the wide range of technical improvements which have been effected in fishing gear, gear materials and techniques of fishing. The most important advances in the field of fishing have been summarised by the Editor in his introduction as (*a*) mechanisation of fishing; (*b*) the application of echo-sounding techniques; and (*c*) the advent of synthetic fibres for fishing nets. It is indicated that the fourth more important stride which is to take place is the application of engineering theory and rational methods to the development of fishing gear and their operation.

A perusal of the papers presented would indicate the correctness of highlighting the above three as the most significant advances which have taken place in recent years. The advent of steam-power and later the diesel which began at the beginning of this century, and which have been gaining ground in all countries, is the one significant factor which has contributed to the enlargement of the area and seasons for fishing. It is possible to recognise two distinct phases in this because there is, first of all, the mechanisation of the craft alone as is now largely taking place in India in the Bombay-Saurashtra area and, secondly, the utilisation of mechanical power for the handling of nets. The rapid strides in underwater instrumentation which took place during the Second World War gave great stimulus to the use of echo-sounding and fish finding equipment in fishing vessels and, in fact, has made fishing more exact and certain of success in many commercially well-known fishing grounds. The old system of shooting the net and leaving the rest to chance is no longer in vogue and in years to come will certainly be ranked as wasteful.

Man-made fibres of various kinds beginning with nylon are slowly replacing the old types of fishing twines made of cotton and hemp and their relative efficiency is so pronounced that synthetic fibres have secured an assured place in fishing. Even with the frail catamarans operating on the East Coast of India, it is not unusual to find the fishermen's catches increased 5 to 10 times when the cotton nets are replaced with nylon nets. It is only by a large combination of factors leading to improved gear and better methods of operations could, however, the disparity in *per capita* production of fish per fisherman from about one ton per head per annum in the underdeveloped countries to about 80 tons per annum in the most advanced fishing countries could be achieved. Such improvement in efficiency will take many years of long and arduous work to accomplish but without substantial increase in *per capita* output, the fishing industry of most countries would not be able to thrive and develop.

And such a rapid increase in production through more efficient techniques is of the greatest importance to countries deficit in protein foods where, apart from contributing a large supply in terms of weight, fish products offer the most easy and practicable means of correcting nutritional imbalance. Fish production has increased during the last few years from 25 million Metric tons to nearly 30 million Metric tons in 1957 and it is hoped that the combined efforts in the numerous fields of fisheries will make it possible to increase the world fish production to some 60 million tons a year.

Students of fisheries science will find this volume a mine of information relating to fishing gear and the book will serve as a valuable work of reference for many years to come.

N. K. PANIKKAR.

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