

SOUVENIR



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THE CENTRAL MARINE FISHERIES RESEARCH INSTITUTE —
PERSPECTIVES AND NEW DIMENSIONS

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The Central Marine Fisheries Research Institute, Cochin, under the ICAR is the premier Institute which engages itself primarily in all aspects of research in marine fisheries and marine life, their ecology and biology. Starting after India's independence in the sprawling sea side campus at Mandapam, Tamilnadu, the CMFRI has now become a major fisheries Institute with about 253 Scientists and a total manpower of 1193 persons.

The Institute has 12 Research Centres and 28 field stations situated all along the Indian coastline extending from Gujarat to Kerala on the West Coast and from Tamilnadu to West Bengal on the east coast. They provide network and research infrastructure to cover the Indian Coastline.

The mention of marine fisheries reminds of millions of undernourished fishermen who live in poverty and misery in small improvised huts in coastal villages all along the Indian Coast. They use local craft and gear made of hemp and cotton for the exploitation of the fisheries resources of the inshore waters. Over decades from one generation to the next, they had fished the inshore seas, enjoyed the bounties of good fishing seasons with plenty of fish in certain periods and had also faced the periods of adverse and very poor catches. They were silent spectators, to the events of good and bad fishing seasons. They use indigenous craft and the primitive gear to fish in coastal waters upto a distance of about 15 km from the shoreline. In the past, on the socio-economic front, marine fisheries in India was a backward profession, in which the poor earned their livelihood from the sea surrounding the Indian Coast, about which we had very little knowledge. Since independence, this picture has changed, gradually. Today, India has a strong coastal fishing fleet and trained manpower for the operation of the fleet. Trained Manpower skilled in fish handling and processing, and marketing has also contributed to the country's economic progress and export trade. A large number of fish processing factories has also come up particularly for the export trade. However, the potential is enormous and much needs to be done. The lack of information about the Indian Ocean was to some extent overcome with the launching of the International Indian Ocean Expedition which was organised by UNESCO during 1960s. This resulted in

more information about the seas around India and a greater appreciation of the fisheries resources by the Indian Government and the people.

During this period the CMFRI has made original and valuable contributions, and as a first task, established a nationwide system of collecting and interpreting data on the marine fish landings in India. This system has now become an important tool for the acquisition and processing of the data on marine fisheries of India, which forms the basis for realistic evaluation and planning and development of marine fisheries in the country. In the recent past, with the declaration of the EEZ, the task has become more difficult. It requires collection of real time data from distant waters and high seas and involves shipboard research. It has posed a new and a difficult task which requires that the Scientists spend most of their working time on shipboard research. This has now become an important and a continuous task to understand the fluctuations in the abundance of commercially important fish stocks in coastal, nearshore and distant waters. It also involves prolonged shipboard research to conduct fish operations in different parts of the ocean and evaluate their economics so as to provide real time data which should become the basis for large scale investments in marine fisheries. Resource information has shown geographical and seasonal variations due to variations in oceanographic parameters. In order to understand these changes, the CMFRI has started studies on stock assessment of commercially important marine fisheries. These studies supplemented with the dynamics of the lesser known mesopelagic and pelagic fishes, including of tuna and the tuna-like fishes have become one of the major thrusts of the Institute.

The ever changing marine environment is very challenging and influences the migrations, breeding, survival and abundance of fish stocks. Related marine life particularly the abundance of plankton and the benthos which form the food of fishes are also influenced. The other important factors which need extensive studies include the distribution of nutrients, temperature, currents and other physico-chemical factors which essentially influence and govern the marine productivity.

The problems of marine fisheries have become more complicated due to the extensive uses of the oceans for navigation and transport and for the exploration and exploitation of oil and other minerals. The major economic activities in many parts of the oceans have also resulted in extensive pollution. Disastrous accidents of oil tankers, like the "Torry Canyon" off the UK Coast and oil well blowouts off the California Coast in the USA, are becoming common in the Indian Ocean also. The oil tanker accident off Gujarat Coast, Oil-well fire at the Bombay High and the blowout of an oil well in Gujarat indicate that India is also getting increasingly exposed to the dangers of pollution due to oil. The threat of pollution from sewage and industrial pollution to coastal

fisheries is increasing every day near our large cities like Ahmedabad, Baroda, Bombay, Mangalore, Cochin, Madras, Vishakhapatnam and Calcutta. Thus, one of the major emerging disciplines of study in marine sciences is pollution and its abatement with special reference to coastal fisheries. Coastal fisheries play an important role in our economy, because this sector still contributes about 65% of our fish catch and almost 90% of the Indian fishermen depend on the Coastal seas for their livelihood.

India has a long tradition of marine research. The Zoological Survey of India and the Universities situated in the coastal regions have made valuable contributions on the taxonomy and biology of different species of marine fishes. The old tradition was started with Sir Francis Day (1875) who had written on Indian Marine Fishes and the CMFRI has developed this tradition into a productive area of research through important contributions on various aspects of fisheries including marine biology and oceanography. These have contributed new knowledge and have become the basis for further studies and research. Research at CMFRI has also led to the generation of large manpower in the field of marine fisheries. Distinguished contributions have also been made on marine flora and fauna which have been recognised both at the national and international levels. The Institute has a band of highly educated and well trained young Scientists who are constantly endeavouring to study and understand marine life and continue to make research contributions of high order.

The study of the interaction between the marine environment and capture fisheries has gradually led to the development of new technologies of mariculture. Amongst these, pearl culture, prawn culture, culture of sea weeds and culture of marine fishes are important for the future of mankind. Mariculture is now emerging as an important field and it is necessary to organise information inflow for the development and refinement of mariculture technologies.

The contribution of the CMFRI for the development of a system for the survey of marine flora and fauna, monitoring of coastal and near shore fisheries, developing new aquaculture technologies and building a cadre of scientific manpower etc. are some of the distinguished services rendered by this Institute. With the construction of the new building and with the new vessels that the Institute has acquired, the CMFRI is entering a new era where marine fisheries Scientists will concentrate more on ship-based research to understand and predict the commercially important stocks of marine fisheries, which will help India to develop its marine fisheries and make optimum use of EEZ. It is necessary to protect the marine environment so that the coastal villages, cities and the fishermen continue to enjoy the bounties of nature. The CMFRI has new challenges of the 21st Century. They have to develop new management practices and new technologies to meet the increasing demand for the valuable marine food which can become a support of health and wealth for people living along the coast line.