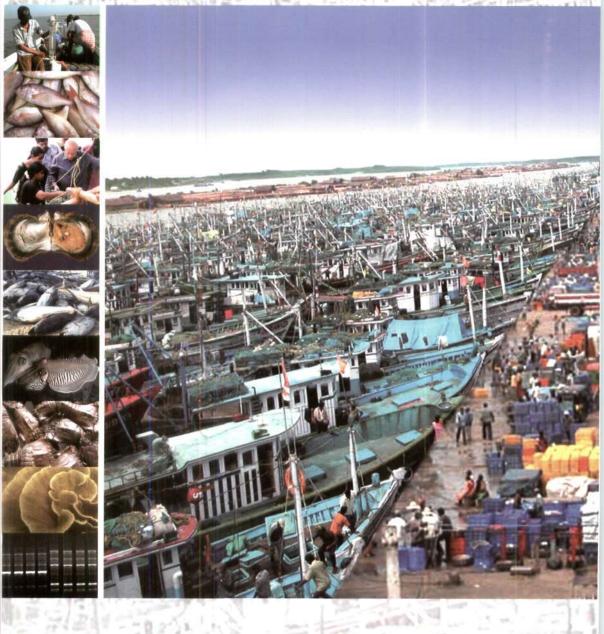
# Glimpses of CMFRI





Central Marine Fisheries Research Institute (Indian Council of Agricultural Research)



Cochin - 682 018, Kerala, India

## CMFRI...

Established in 1947, the Central Marine Fisheries Research Institute has been carrying out pioneering research and development work in the field of marine fisheries with the objective of ensuring fisheries resource, ecosystem and livelihood sustainability in the country.

Since 1971, the headquarters of the Institute is in Kochi, Kerala State. Presently the Institute has three Regional Centres at Mandapam Camp, Visakhapatnam and Veraval. Research Centres are located at Mumbai, Karwar, Mangalore, Calicut, Vizhinjam, Tuticorin and Chennai.

Excellent infrastructure and research facilities at the headquarters and research centres include three sea-going vessels, five research hatcheries, four marine aquaria, three biodiversity museums, well equipped research laboratories including an electron microscope, an Agricultural Technology Information Centre (ATIC), computer centre, a state of the art library with server, a Krishi Vigyan Kendra (KVK), guest house, students hostels, marine farm, etc.

# **Our Vision**

Sustainable marine fisheries through management intervention and enhanced coastal fish production through mariculture for improved coastal livelihoods.

# **Our Mission**

To develop an information based management system for change over from open access to regulated regime in marine fisheries, augment coastal fish production through mariculture and sea ranching and restore critical marine habitats.

## **Our Mandate**

to undertake basic, strategic and applied research in marine fisheries and mariculture

- to monitor and assess the fisheries resources of the Exclusive Economic Zone (EEZ) and to understand the stock and its dynamics in relation to environment and human interventions
- to develop and commercialize hatchery and production system technologies for finfish, shell fish and other commercial marine organisms in coastal and open seas
- to build up database on marine biodiversity, carry out research on fragile marine ecosystems for their conservation and restoration

> to undertake research on utilization of potentially beneficial marine organisms

- to act as a repository of information on marine fishery resources with a systematic and analytical data base for policy interventions and to carry out research on social and economic costs and benefits of marine fisheries
- to conduct front line demonstrations and training to develop human resource for R&D in capture fisheries, mariculture
  - to create awareness and provide training and consultancy services

# Research Divisions

- Fisheries Resource Assessment
- Pelagic Fisheries
- Demersal Fisheries
- Crustacean Fisheries
- Molluscan Fisheries

- Marine Biotechnology
- Marine Biodiversity
- Mariculture
  - Fisheries Environment Management
  - Socioeconomics & Technology Transfer

Marine Fisheries Census 200 Part - III (7) - Karnataka

# Major Research Achievements

The Institute developed an information-based fisheries management system supported by an exhaustive database on fish landings, fishing effort, population biology and dynamics for enabling the government to manage the marine fisheries through development of appropriate policy interventions. The institute developed a multistage stratified random sampling methodology for generating reliable marine fish landings database and the required software. Realizing the importance of enhancing coastal fish production, the Institute developed and commercialized appropriate technologies for mariculture of shrimps, mussels, oysters, crabs, seaweeds, lobsters, marine ornamental and food fishes. Other noteworthy achievements include marine biodiversity, conservational mariculture, socioeconomics and policy research. Tissue culture technique for marine pearls, onshore pearl culture technology and breeding of sand lobsters are unique achievements of the Institute. Both national and international patents have been registered.

# **Ongoing Research**

Addressing emerging issues and concerns in marine capture fisheries and mariculture through multidisciplinary interdivisional research projects is the mode of research investigations in CMFRI. This is currently being carried out through various in-house and funded research projects. The major areas of research are: Fish stock assessment, appraisal of marine fisheries on a regional basis, predictive modeling, fishery resource characteristics, environmental impacts, conservation research, marine biodiversity, hatchery and grow out technologies, marine biotechnology, social and economic impacts, policy research and transfer of technology.

# Human Resource Development

CMFRI conducts Masters (M.F.Sc) and Ph.D programmes in mariculture as part of the teaching programme of the Central Institute of Fisheries Education (CIFE), a Deemed University under the ICAR. CMFRI Headquarters and all centres of CMFRI are recognized research laboratories for Ph.D. programme by various reputed universities in the region. The Institute conducts regular training programmes in several areas of fisheries and marine biology. So far, the institute has produced over 200 Masters and 125 Ph.D. degree holders. The Krishi Vigyan Kendra (KVK) of the Institute at Narakkal imparts training in mariculture, agriculture, animal husbandry and related subjects to farmers. So far 1546 training programmes have been conducted for the benefit of the farmers/entrepreneurs/women self help groups.

White Spot Syndrome Virus Detection PCR Kit (Duplex PCR askay based)

(Indian Council of Agricultural Research) Tabasetan P.O. R.E. No. 1995

# Emerging Thrust Areas of Research



★ Fishery yield forecasting through modeling ★ Trophic modeling of marine ecosystems ★ Straddling and migratory stocks ★ GIS based fishing and mariculture sites ★ Impact of climate change on marine fisheries ★ Hatchery technology for marine food fishes ★ Genetic improvement of farmed species ★ Fish nutrition and fish health management ★ Molecular taxonomy and genomics ★ Black lip pearl oyster farming & tissue culture technology ★ Open sea cage farming ★ Demand-supply, benefit-cost analysis ★ Policy research, WTO, CBD, IPR, TRIPS impacts ★ Conservation research and mariculture ★ Impact analysis

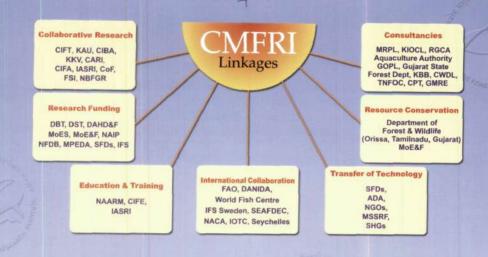
# **Consultancy Services**

For various clients, CMFRI provides consultancy services as per guidelines of ICAR. Consultancy services are available in a wide range of specialized areas such as fisheries management, taxonomy, bicdiversity, fish stock assessment, hatchery protocols, coastal aquaculture, mariculture technology, fish nutrition, fish health management, modeling and software development, scuba diving, environmental monitoring, feasibility studies, impact analysis, etc.

Over 75 clients representing international agencies, governments, public sector and private companies have been served under the consultancy programme.

## **Outreach** Activities

The Agriculture Technology Information Centre (ATIC) located at the headquarters serves as an interface between fish farmers, fishermen, entrepreneurs and scientists of the Institute. The ATIC also takes part in fish farmers melas, exhibitions, extension activities at various places in the country. Other outreach activities include publication of posters, fliers, stickers and radio talks. The marine aquaria of the Institute at the headquarters, Calicut, Vizhinjam, Mandapam and the Marine Biodiversity Museums at the headquarters and Mandapam Regional Centre attract thousands of visitors annually. The institute is open to the public on the 3rd of February, the Foundation day of the institute, every year.



## Knowledge Management

The Institute has one of the best specialized libraries in the field of fisheries and marine sciences. The state of the art library in the

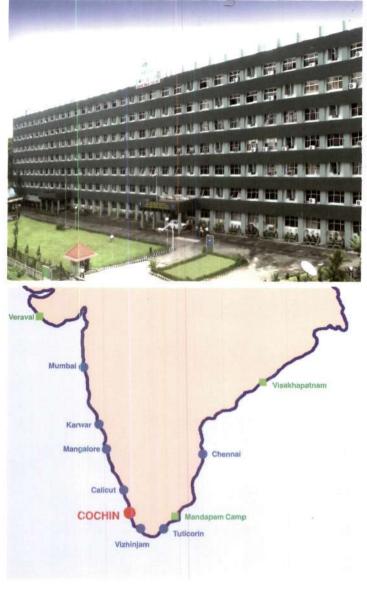
headquarters has over 60,000 books and periodicals and over 400 scientific journals. There are about 80 foreign and over 50 Indian journals subscribed in

addition to 235 journals accessible in the electronic form through internet. The digital library with substantial digital resources including videos is connected by LAN. Information is also available on the CMFRI Website : www.cmfri.org.in

CMFRI has so far published over 6000 research papers. Apart from this, numerous books, special publications and newsletters have also been published. In addition, the CMFRI Newsletter, Marine Fisheries Information Service and the Indian Journal of Fisheries are also published regularly.



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Published by Director, Central Marine Fisheries Research Institute, Kochi - 682 018, India 2007. Concept and design M.J. Modayil, K.K. Vijayan and N.K. Sanil Printed at Niseema Printers & Publishers, Kochi © Central Marine Fisheries Research Institute, Kochi