

Six decades of
CMFRI



OUR MANDATE

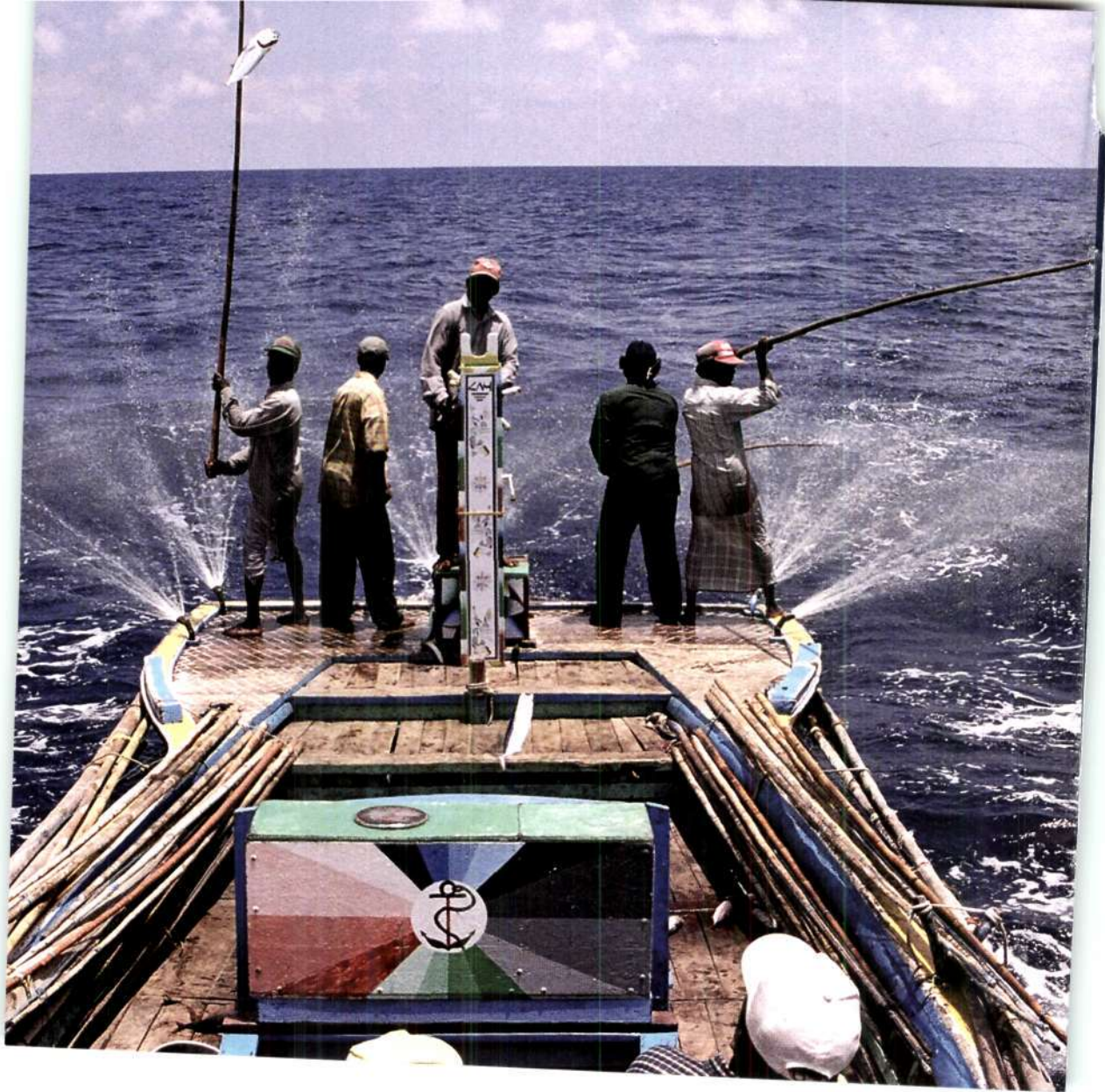
- *to undertake basic, strategic and applied research in marine fisheries and mariculture*
- *to monitor and assess the fisheries resources of the Exclusive Economic Zone (EEZ) and to understand the stock and its dynamics in relation to environment and human interventions*
- *to develop and commercialize 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*

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.



*C*mfri..... ensuring sustainability

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

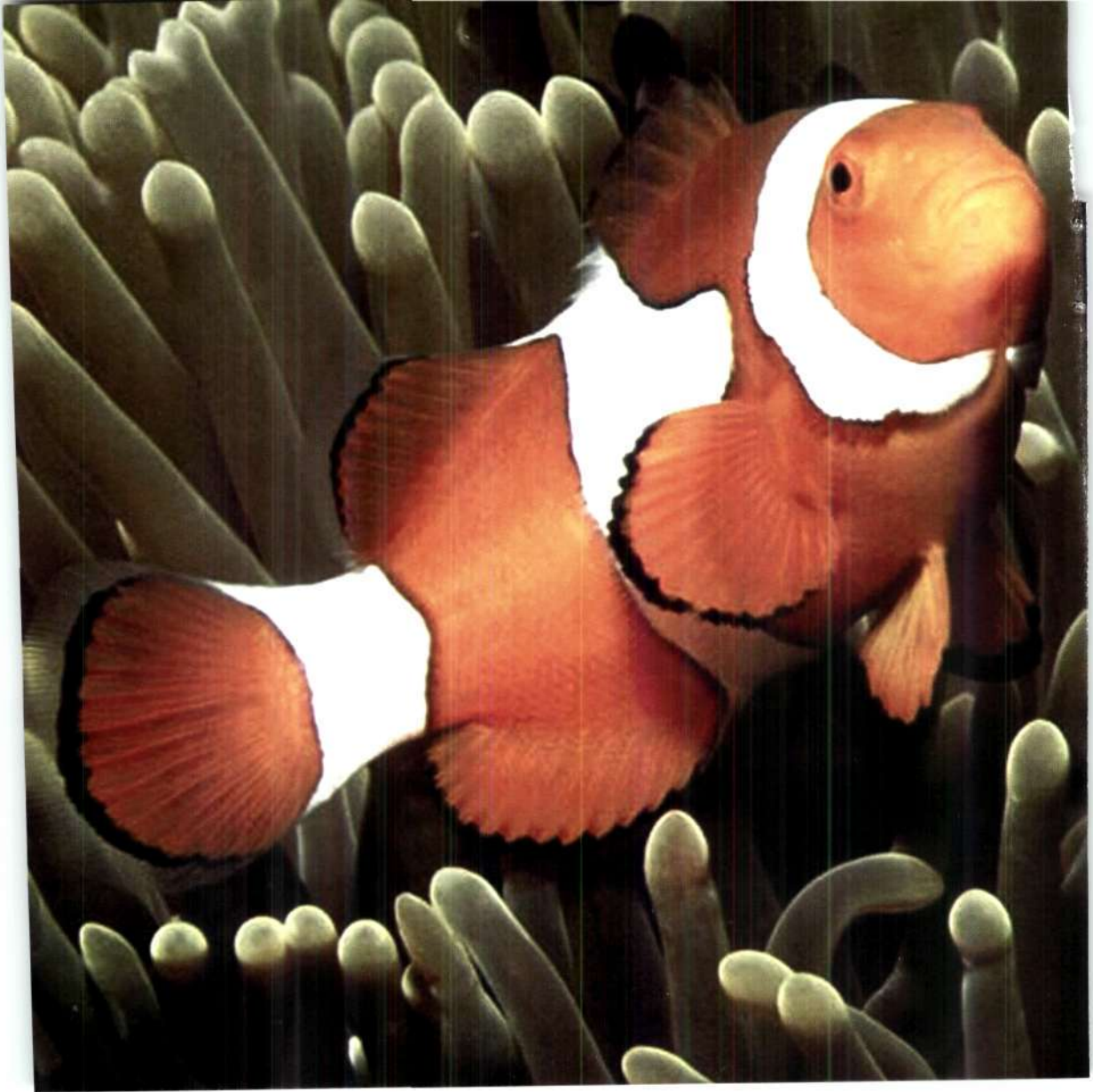
Since 1971, the headquarters of the Institute is in Kochi, Kerala State which was earlier at Mandapam Camp in Tamil Nadu. Presently the Institute has three Regional Centres at Mandapam Camp, Visakhapatnam, Veraval and Research Centres at Mumbai, Karwar, Mangalore, Calicut, Vizhinjam, Tuticorin and Chennai.

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 electron microscope, an Agricultural Technology Information Centre (ATIC), computer centre, a state of the art library with digital server, a Krishi Vigyan Kendra (KVK), guest house, students hostels, marine farm, etc.



*R*esearch divisions

- ◆ Fisheries Resource Assessment
- ◆ Pelagic Fisheries
- ◆ Demersal Fisheries
- ◆ Crustacean Fisheries
- ◆ Molluscan Fisheries
- ◆ Marine Biotechnology
- ◆ Marine Biodiversity
- ◆ Mariculture
- ◆ Fisheries Environment Management
- ◆ Socioeconomics & Technology Transfer





Major research achievements

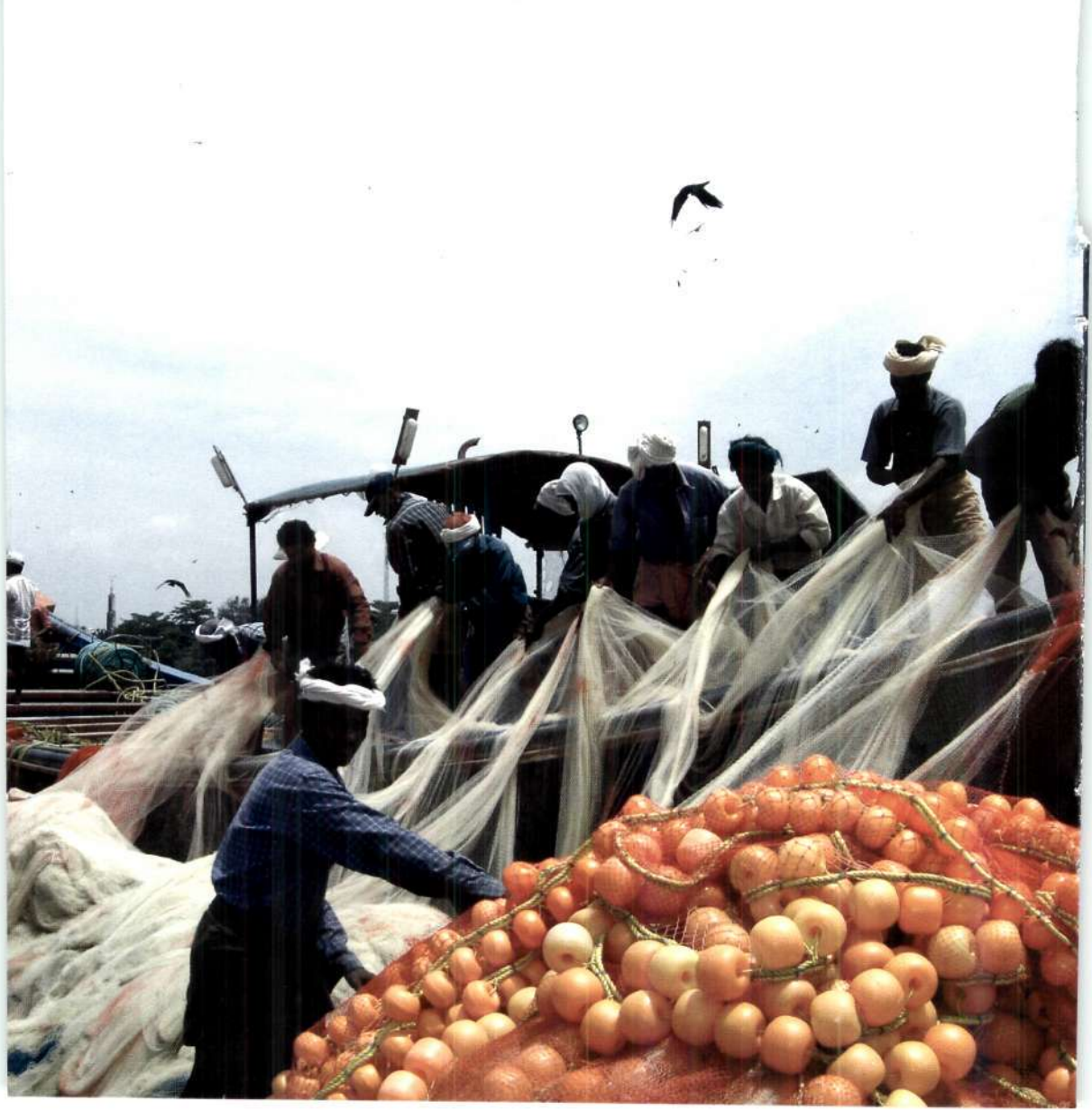
During the last six decades, the Institute developed an information-based fisheries management system supported by an exhaustive database on fish landings, fishing effort, population biology and dynamics for enabling the government manage the marine fisheries through development of appropriate policy interventions.

The institute developed a multistage stratified random sampling methodology for generating reliable marine fish landings database and the required software for its analysis and interpretation. 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 biotechnological research, fish nutrition, fish health management, technology transfer and dissemination, 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.



ngoing research

Addressing emerging issues and concerns in marine capture fisheries and mariculture technologies through multidisciplinary interdivisional research projects is the mode of research investigations in CMFRI. This is currently being carried out through 31 in-house research projects and 17 projects through funding from Indian Council of Agricultural Research, Ministry of Earth Sciences, Ministry of Agriculture, Ministry of Environment & Forest, Department of Biotechnology and Marine Products Export Development Authority. 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.



*E*merging thrust areas for 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*
- *Bioinformatics, gene library of marine pathogens*
- *Molecular taxonomy*
- *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*



*H*uman 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. Cochin University of Science and Technology (CUSAT) has recognized CMFRI as a Centre of Advanced Studies in Fisheries. All centres of CMFRI are recognized research laboratories for Ph.D. Programme by many Universities. The Institute conducts regular training programmes in several areas of fisheries and marine biology. The research hatcheries are utilized by the research fellows of the various externally funded projects for carrying out studies leading to Ph.D. Degrees. So far, the institute has produced over 200 Masters and 120 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 30260 farmers/entrepreneurs/women self help groups



*C*onsultancy 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, biodiversity, fish stock assessment, hatchery protocols, coastal aquaculture, mariculture technology, 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.



*K*nowledge management

The Institute has one of the best specialized libraries in the field of fisheries and marine sciences. The rare and old publications in marine sciences and fisheries are housed at the Mandapam Regional Centre while 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 to all computers in the headquarters for easy access to users from their desktops. Monthly abstracting and title page service through hard copy is sent to all research centres for keeping scientists working in the centres updated. Computerized search facility and electronic check in and check out are also available. The ARIS cell provides replies to all subject related enquiries as well as manages and updates the website of the Institute

www.cmfri.org.in

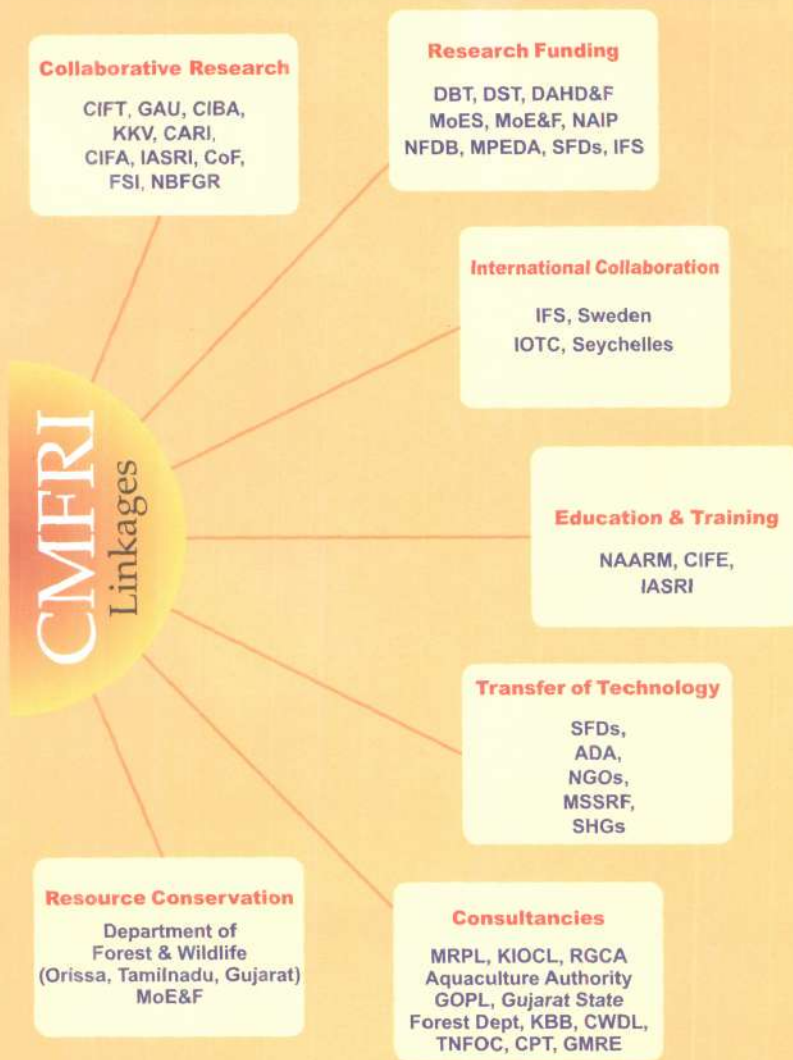
CMFRI has so far published over 6000 research papers in Indian and foreign journals apart from books, special publications and newsletters. In addition, the CMFRI Newsletter, Marine Fisheries Information Service and the Indian Journal of Fisheries are published quarterly to keep everyone informed about the recent research and developments.





utreach 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 exhibits of resources, technologies, products and services in the ATIC stimulates the interest of the visitors who have also access to several videos and publications, models, photographs, etc. The sales counter in the ATIC has many fish products, publications, CDs for sale to the visitors. 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 conduct of awareness meets in fishing villages on the need for responsible fisheries and conservation of endangered species. Many scientists give invited radio talks on fisheries related topics through the All India Radio. Popular articles are also written in newspapers, the Recreation Club magazine 'Tharangam' and the official language Hindi publication of the Institute 'Matsyagandha'. 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. Posters on marine biodiversity are available through the ATIC for creating awareness among people. The Open House on 3rd February, the Founders Day has been very popular with students of schools and colleges.



*L*inkages

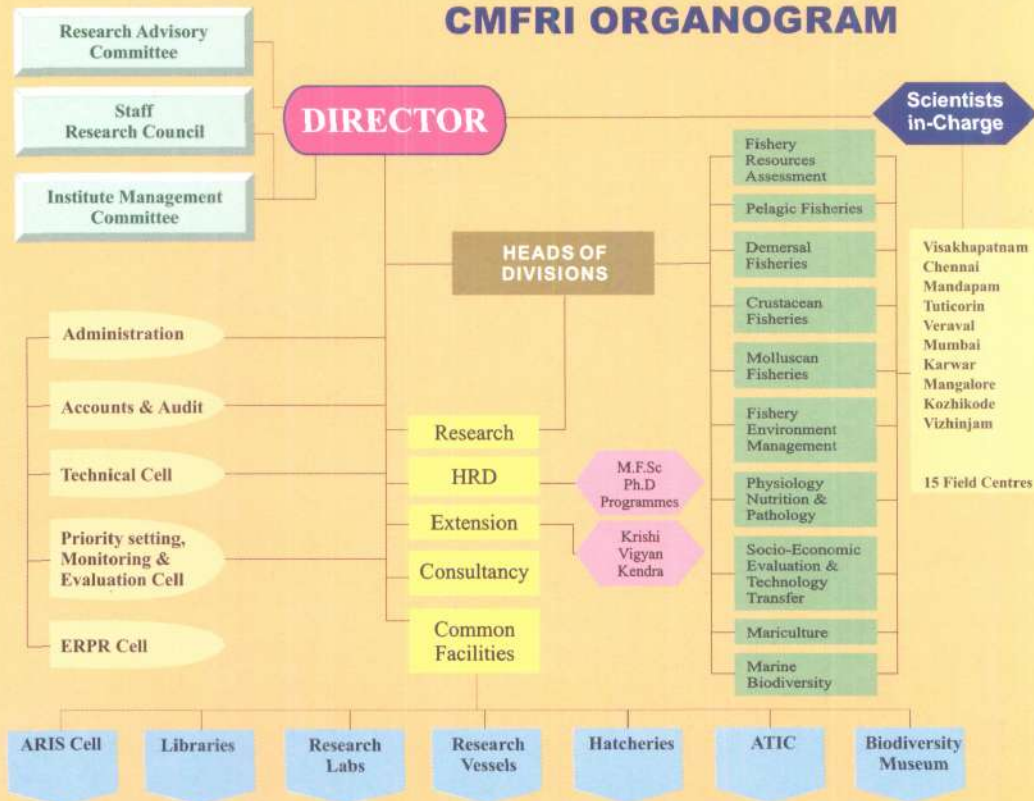
CMFRI has a long history of professional linkages with various national and international organizations. The UNDP initiated and supported the Centre of Advanced Study (CAS) in Mariculture programme leading to professional postgraduate degree in Mariculture. The CAS is being continued as a centre of the Cochin University of Science and Technology. National and International Linkages for collaborative research include those with NIO, CIFT, CAU, CIBA, KKV, CARI, CIFA, IASRI, CoF, FSI, NBFGR, NACA, IOTC, Worldfish center. International collaboration in the past were with FAO, DANIDA, Worldfish Center, IFS and SEAFDEC. HRD collaborative linkages with NAARM, CIFE, SEAFDEC, IASRI and funding for research from external sources such as MoEF, MoES, MoA, DBT, DST, AP Cess of ICAR, IFS and Worldfish Center are noteworthy.



Awards and recognitions

Several scientists of the Institute have bagged awards for best scientists and best papers in many national events. Significant national/international awards bagged by CMFRI scientists include Rafi Ahmed Kidwai Award (2001-2002), Prof. T.J. Pandian- Prof. A.J. Matty Award (2005), Yama Moto Prize (2006). CMFRI also has numerous awards for implementation of the official language Hindi, including the ICAR Rajarshi Tandon Award during 2003, 2004 and 2005 and Best Annual Report Award for the years 2001-02 and 2004-05. Several awards have been won by the Institute for the Best Marine Aquaria in national exhibitions.

CMFRI ORGANOGRAM



Central Marine Fisheries Research Institute

Research Locations



● Headquarters - COCHIN

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■ Regional Centre - VERAVAL

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■ Regional Centre - MANDAPAM

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■ Regional Centre - Visakhapatnam

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