





ICAR-Central Marine Fisheries Research Institute

- Top-ranked among the Fisheries Research and Animal Science Institutes of ICAR (2019-2021)
- An ISO 9001:2015 Certified Institute



#### Vision

Sustainable marine fisheries through management interventions and enhanced coastal fish production through mariculture for improved coastal livelihood.

#### Mission

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

### Mandate

- Monitor and assess the marine fisheries resources of the Exclusive Economic Zone (EEZ) including the impact of climate and anthropogenic activity and develop sustainable marine fishery management plans.
- O Basic and strategic research in mariculture to enhance production.
- Act as a repository of geo-spatial information on marine fishery resources and habitats.
- O Consultancy service and human resource development through training, education and extension.

## **Cadre Strength**



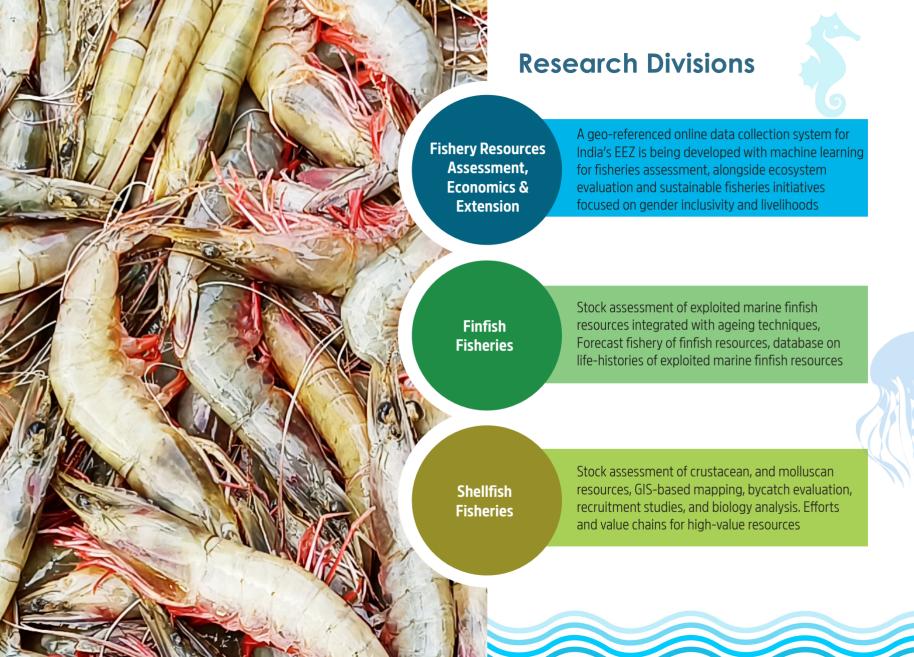
198
Technical staff

121) Administrative staff



Multi Tasking staff







Develop and scale up sustainable mariculture technologies, diversify production systems, enhance mariculture nutrition and health, and create spatial plans, techno-economic models, and digital tools

Mariculture

Utilize genetic and genomic tools for marine resource management, develop biotechnological solutions for mariculture, disease management with diagnostic tools and vaccines. Formulate sustainable aquafeeds and develop high-value products

Marine Biotechnology, Fish Nutrition & Health

Repository of Indian marine biodiversity, monitor coastal and marine habitats, study ecosystem structure and function for sustainable interventions, and assess climate change and human impact on marine fisheries and biodiversity to develop mitigation and adaptation strategies

Marine Biodiversity & Environment Management



## **Research Projects**

The institute currently operates 42 in-house, 37 externally funded research projects, and 11 consultancy projects on various key aspects of the institute's mandate and national priority. The Annual Institute Research Council and the Research Advisory Committee evaluate the progress of the projects.

## **Human Resource Development**

The Institute's Human Resource Development (HRD) activities are coordinated by the HRD Cell. Regular training and capacity-building activities for fishermen, fish farmers, entrepreneurs, researchers and academics, professionals, in-house staff, scholars, and students are being conducted. These activities mainly include Academic programmes (Doctoral and Post-Doctoral Studies; Post-graduate dissertation programs), Short-term training programs, and Winter/Summer schools in specialized areas.

## **Academic Programmes**

Post-Doctoral



Doctoral

120 Ph.D Scholars Masters Dissertation





### **Outstanding Research Contributions**

- Database on landings of over 1200 marine fish species; species-wise, sector-wise marine fish landings/fishing effort estimation covering all maritime states/UTs, using self-developed stratified multi-stage random sampling protocol.
- National marine fisheries census at quingennial intervals covering fisherfolk population and infrastructure facilities in fishing villages.
- Estimations on value of marine fish landings and economic efficiencies of various craft-gear combinations on annual basis.
- Potential Yield Estimation (PYE) and optimimum Fishing fleet estimates for rational exploitation of marine resources in all maritime states of India.
- Regular stock assessment of over 100 marine finfish and shellfish species using advanced analytical models (Marine Fish Stock Status 2022 assessed 135 fish stocks of which 91.1% were healthy, with 86.7% being sustainable).
- A unique, customized methodology for the life cycle assessment of carbon emissions from the marine fisheries sector encompassing input use, vessel construction and net fabrication, fish harvesting, till the fish reaches the final consumer.
- Scientific management interventions such as development of State Fisheries Management Plans (FMPs); recommendations for Minimum Legal Size (MLS) for commercially important fishes to curb juvenile fishing; recommendations for seasonal fishing bans; and Guidance on National Plan of Action for sharks.
- Bio-inventorying of marine organisms (fishes, shellfishes, sponges, copepods, and fish parasites). 248 marine species new to science described since 1947.





- Identification and mapping of new and non-conventional deep sea marine resources by vessel based surveys, including abundance maps of oceanic squid resources.
- Regular assessements of major marine and island habitats for their biodiversity; and development and application of restoration protocols through artificial reef deployment.
- Use of advanced biotechnological, genetic and genomic techniques for genetic improvement of mariculture species, development of sustainable feeds and disease management tools, and high-value bioproducts from marine organisms.
- Development and continuous refinment of mariculture technologies such as marine and coastal cage farming, seaweed farming, mussel and oyster culture, Integrated Multi-trophic Aquaculture (IMTA), etc.
- Captive breeding, hatchery and grow-out technologies for food fishes (13 spp). ornamental (37 spp), crustaceans (3 spp), edible oyster and pearl oyster (2spp), mussels (2 spp), sea cucumber and clams (2 spp).
- Technology backstopping and facilitation of commercial farming of mussels and oysters in coastal areas with an annual production of over 10,000 tonnes benefitting nearly 6000 women self-help groups.
- Development and commercialization of marine nutraceuticals (13 formulations).
- Scientific and technical back-up for India's first eco-labelled (MSC certified) fisheries (short-neck clam) meeting global standards of fisheries management.
- O Socio-economic evaluation studies; impact assment of technologies and their extension for the benefit of fishing community.

#### **Outreach Activities**

#### **Extension services**

- The extension services of ICAR-CMFRI are mainly routed through the Agricultural Technology Information Centre (ATIC) and two KVKs (Krishi Vigyan Kendra) located at Ernakulam and Lakshadweep.
- The ATIC acts as a single window delivery system for the products, publications, and services from CMFRI to the fishers/fish farmers, entrepreneurs, and other interested groups.
- KVKs functioning under ICAR-CMFRI aim at the overall development of the agriculture and allied sectors through the linkages with the line departments, Agricultural Universities, and ICAR Institutes in the country.

#### **Consultancy Services**

- ICAR-CMFRI offers consultancy, and contract research services to Public/Private organizations in a wide array of specialized areas.
- The key areas are environmental impact assessment, artificial reef installation, setting up of aquariums, mariculture, finfish hatchery, pearl culture, biodiversity evaluation, impact assessment and socio-economic evaluations, specimen identification, biotechnology services, underwater scuba diving, library and information management services, etc.
- Since the establishment of the consultancy project cell in 1997, the institute has signed 128 consultancy projects.



## Corporate Social Responsibility (CSR)

ICAR-CMFRI facilitates CSR implementation in association with corporate organizations by providing technical support in the fields of Blue Economy development activities, ecosystem sustainability programs, responsible fisheries and environment management, biodiversity, and conservation programs, and other socially impactful activities for the benefit of all stakeholders in the fisheries sector.

## **Major Infrastructure Facilities**

Central Laboratory, Transmission Electron Microscope (TEM), Biodiversity museum, Library and Documentation Centre, Science Technology Innovation Hub (STI Hub) and Agricultural Technology Information Centre (ATIC)

Research Hatchery (Mandapam, Visakhapatnam, Madras, Karwar, Calicut & Kochi)

Recirculating Aquaculture Facility (Mandapam, Karwar, Visakhapatnam and Vizhinjam)

National Broodbank (Mandapam and Vizhinjam)

Marine Aquarium Complex (Kochi, Vizhinjam, Calicut and Mandapam)

Platinum Jubilee Hall with 300 seats at Kochi

Conference Halls and Meeting Rooms at Headquarters and all Centres

Staff Quarters at Kochi, Mandapam, Visakhapatnam, Mumbai, Karwar and Calicut

Farmers' Training Hostel at Kochi & Visakhapatnam, One Guest House and one International Training Hostel at Mandapam

Staff Canteen at Kochi, Visakhapatnam, Mangalore and Veraval

Research Vessels (2 nos) FV Silver Pompano (Kochi) and FV Cadalmin (Visakhapatnam)



## Library and Documentation Centre

The CMFRI Library and Documentation Centre is a vital hub for fisheries research, offering extensive physical and digital resources, including 16,500+books, journals, and global databases like Eprints@CMFRI and JGate@CeRA. It supports marine sciences, coordinates publications, and provides ISBN/ISSN services, empowering researchers and advancing marine fisheries knowledge.











#### **Publications**

More than 15,000 scientific articles in national and international journals, books, and bulletins, which form a treasure for researchers all over the world. CMFRI Newsletter Cadalmin, Marine Fisheries Information Service, and the Indian Journal of Fisheries.

## Indian Journal of Fisheries

Indian Journal of Fisheries is the peer reviewed quarterly journal of ICAR published from CMFRI with an International Impact Factor of 0.6. Marine Fisheries Information Service, Matsyagandha, CMFRI Special Publications, Marine Fisheries Policy Series are the other serials published from the Institute.



#### **Awards & Accolades**

Sardar Patel Outstanding Institute Award (2007 & 2019)

Indira Gandhi Rajbhasha Puraskar (2013) & Kshetriya Rajbhasha Puraskar (2023-24)

21 Indian Patents

Over 200 individual awards (inlcuding Norman Borlaug Award)

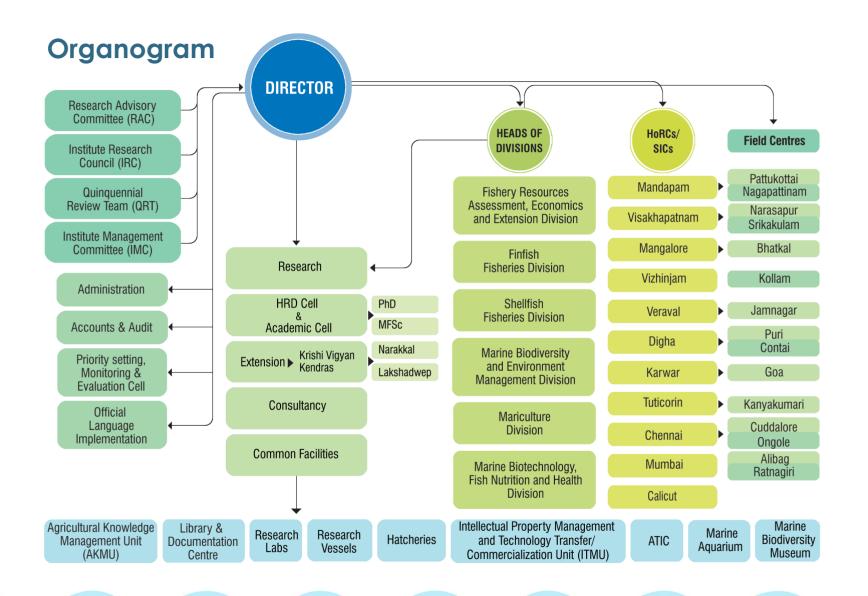
# The Marine Biological Association of India

The Marine Biological Association of India (MBAI), established in 1958, promotes marine science research in the Asia-Pacific region. MBAI organizes lectures, symposia, and seminars, and publishes the Journal of the Marine Biological Association of India, monographs, memoirs, and bibliographies. MBAI supports research via fellowships, prizes, and expeditions, attracting nearly 1,000 institutional members globally. Operating from CMFRI, Kochi, Director CMFRI is the President of the association and it has hosted numerous international symposia on key marine biology topics, contributing significantly to the field's advancement.









## Collaborations and Linkages





Headquarters- Kochi, Kerala Regional Centres- 4 Regional Stations- 7 Krishi Vigyan Kendra (KVK)- 2 ■ Field Centres- 15

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