

## Research Locations



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● **Regional Centre - MANDAPAM**  
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● **Regional Centre - Visakhapatnam**  
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● **Regional Centre - VERAVAL**  
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● **Research Centre - MUMBAI**  
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# CMFRI: An insight....



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## CMFRI....

The Central Marine Fisheries Research Institute (CMFRI) established in 1947, has been carrying out pioneering research and development work in the arena of marine fisheries with the objectives 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 of Tamil Nadu, Visakhapatnam of Andhra Pradesh and Veraval of Gujarat. Research Centres are located at Mumbai, Karwar, Mangalore, Calicut, Vizhinjam, Tuticorin and Chennai. In addition to these there are fifteen field centres throughout the coastal belts of the country.

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, state of the art research laboratories including an electron microscope, an Agricultural Technology Information Centre (ATIC), Agricultural Research Information Service Cell (ARIS), a well equipped library with server, a Krishi Vigyan Kendra (KVK), farmers' rest rooms, 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 information based management system 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.

## Our Mandate

- To monitor the exploited and assess the under-exploited of the marine fisheries resources of the Exclusive Economic Zone (EEZ).
- To understand the fluctuations in abundance of marine fisheries resources in relation to change in the environment.
- To develop suitable mariculture technologies for finfish, shellfish and other culturable organisms in open seas to supplement capture fishery production.
- To act as a repository of information on marine fishery resources with a systematic database.
- To conduct transfer of technology, post graduate and specialized training, education and extension education programmes.
- To provide consultancy services.

## Research Divisions

- ✕ Fishery Resources Assessment
- ✕ Pelagic Fisheries
- ✕ Demersal Fisheries
- ✕ Crustacean Fisheries
- ✕ Molluscan Fisheries
- ✕ Marine Biotechnology
- ✕ Marine Bio-Diversity
- ✕ Mariculture
- ✕ Fishery Environment Management
- ✕ Socio Economic Evaluation & Technology Transfer

## Major Research Achievements

- Mariculture through open sea cage culture: Open sea culture of finfish species like asian seabass, pearl spot and lobsters was initiated and successfully demonstrated at Veraval, Mumbai, Karwar, Mangalore, Cochin, Kanyakumari, Chennai, Kakinada, Visakhapatnam, Srikakulam and Balasore. Very good success was achieved for farming of seabass at Balasore and for lobster at Vizhinjam.
- A major breakthrough in Cobia breeding and seed production : This was achieved at Mandapam Regional Centre of CMFRI. Successful broodstock maturation of Cobia was obtained in sea cages for the first time in India by feeding with suitable broodstock diets. The hatchery production of Cobia fingerlings can pave the way for large scale sea-cage farming of Cobia in our country.
- Pompano broodstock and seed production: This is achieved for the first time in India. The species tolerates wide salinity, grows fast and is highly suitable for pond farming. Continuous seed production is being carried out and farm trials are going on at different locations.
- Cobia F1 : The cobia seed, which were produced during March 2010, attained a size of about 15 kg by September 2011. They also matured and spawned resulting in seed production. Cobia seeds are also continuously produced and the farm trials are being carried out at different locations. This is an excellent species for open sea cage culture.
- CMFRI data base recognized: CMFRI's marine fisheries data base is recognized by the Ministry of Agriculture as the official marine fisheries data of the country. This recognition was regained after a gap of 40 years.
- E-prints@cmfri: CMFRI has established Open Access Institutional Repository, Eprints@CMFRI, for its research publications. This is an open access digital collection containing the research output of CMFRI scientists.





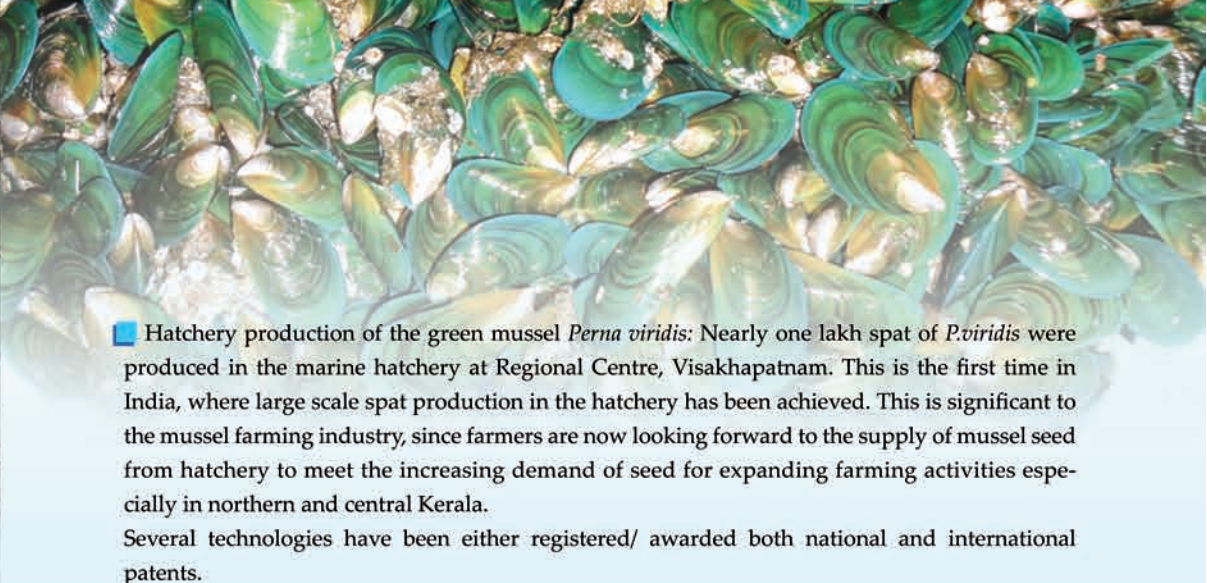
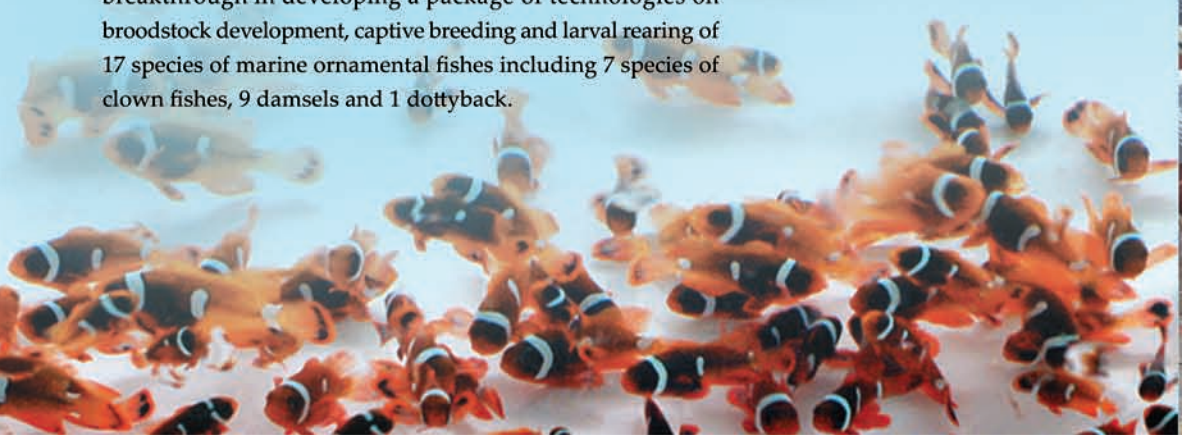
■ **Fish Watch:** CMFRI has initiated a new system of field information dispensation on a near real time basis. As the first phase of this effort, the fish landing figures and the landing centre price range of important resources at six major fishing harbours of the country are being published as “Fish Watch” in CMFRI website. The landing figures are given in kg starting from 12.00 noon of the first calendar day to 12:00 noon of the subsequent day. These figures are updated at 16.00 hrs on working days.

■ **National Marine Fisheries Census-2010:** The National Marine Fisheries Census was successfully completed during 2010 and the draft report was submitted to Ministry.

■ **Launching of CMFRI Trademark-‘Cadalmín™’:** CMFRI has officially registered a trademark entitled ‘Cadalmín™’ for the products and services of the Institute.

■ **Launching of products GMe and Varna:** CMFRI launched two products namely, Cadalmín™ Green Mussel extract (GMe) and Cadalmín™ Varna- Marine Ornamental Fish Feed. GMe contains 100% natural marine bioactive anti-inflammatory ingredients extracted from green mussel, which is an effective green alternative to synthetic non steroidal anti-inflammatory drugs to combat joint pain/arthritis and inflammatory diseases in humans. ‘Varna’ is a scientifically evaluated, standardised slow sinking marine ornamental fish feed with all essential ingredients.

■ **Breakthrough in ornamental fish breeding:** CMFRI achieved breakthrough in developing a package of technologies on broodstock development, captive breeding and larval rearing of 17 species of marine ornamental fishes including 7 species of clown fishes, 9 damsels and 1 dottyback.



■ **Hatchery production of the green mussel *Perna viridis*:** Nearly one lakh spat of *P. viridis* were produced in the marine hatchery at Regional Centre, Visakhapatnam. This is the first time in India, where large scale spat production in the hatchery has been achieved. This is significant to the mussel farming industry, since farmers are now looking forward to the supply of mussel seed from hatchery to meet the increasing demand of seed for expanding farming activities especially in northern and central Kerala.

Several technologies have been either registered/ awarded both national and international patents.

## Thrust Areas of research in the 12<sup>th</sup> Plan

- Development of a model for chlorophyll based forecasting of fish and potential yield
- All India Coordinated Research Project on Mariculture
- Trophic modeling of marine eco systems
- Fishery yield forecasting through modeling
- 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
- Marine fisheries 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
- Biodiversity
- Fish stock assessment
- Hatchery protocols and coastal aquaculture
- Mariculture technology
- Fish nutrition and fish health management
- Modeling and software development
- Scuba diving, environmental monitoring
- Feasibility studies, impact analysis

Over 100 clients representing international agencies, governments, public sector and private companies have been served under the consultancy programme.



## Outreach Activities

- The Agricultural Technology Information Centre (ATIC) located at the headquarters serves as a 'single window delivery system' for the technologies and services of the Institute which plays as an interface between fish farmers, fishermen, entrepreneurs and scientists of the Institute. The ATIC also takes part in fish farmers' melas, exhibitions and extension activities at various places in the country. Other outreach activities include publication of posters, flyers, 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 90,000 books and periodicals and over 75 Indian / Foreign 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. The entire stored information are made available as 'Eprints@CMFRI' as 'on line computer network' developed as the institutional repository in which more than 9,000 research papers are uploaded.
- 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.
- CMFRI has officially registered a trademark entitled 'Cadadmin™' for the products and services of the Institute. The technologies and services of the Institute are available on the CMFRI website: [www.cmfri.org.in](http://www.cmfri.org.in)



## CMFRI Organogram

