

- Investigations on the status of the coral reef biodiversity of Gulf of Mannar and Palk Bay.



- Environmental impact of anthropogenic and natural changes taking place in the coral reef and seagrass ecosystems of Gulf of Mannar and Palk Bay.

MARINE HATCHERY COMPLEX

- The hatchery was constructed at an estimated cost of Rs.2.5 crores. The foundation stone for the complex was laid on 19.05.2006.

- It has a total plinth area of 1300 sq. meters. The hatchery complex houses 3 separate hatcheries – (i) Marine Foodfish Hatchery (ii) Crustacean Hatchery and (iii) Marine Ornamental Fish Hatchery. Each hatchery has individual area of 280 sq. meters.

- Apart from hatcheries, it houses rooms for scientific and technical staff, stores, facilities for live feed culture of both phytoplankton and zooplankton and a central instrumentation room.

- The roofing of hatcheries was provided with galvanised aluminium / FRP corrugated sheets with fiberglass wool insulations. The rest of the complex has RCC roofing. Flooring was done with kota and granite stones.

- Each hatchery has provisions for aeration, supply of seawater and freshwater. The aeration requirement for the hatcheries and other facilities was provided with 2 nos. of 5HP blowers.

- Water Intake system: Seawater is drawn from the sea through pipelines laid 60m inside the sea from the shore. The water from the sea is collected through cartridges in the collection well by

gravity and from there it is passed through sedimentation tank (100 ton) and slow sand filters before pumping onto overhead tank of 100 ton capacity. The filtered and clean seawater from the overhead tank is supplied to hatchery through the seawater distribution lines.



- Waste water disposal: The waste water from hatcheries is collected in 6” PVC pipelines inside masonry channel with RCC cover and the treated waste water is discharged back to sea. For treating the wastewater, 2 nos. of 50 ton capacity biodegradation tanks were constructed in the seashore.



Major Areas for Future Research Thrust at the centre

- * Seed production of high value finfish (cobia, pompano, grouper and sea breams) and shellfish.
- * Open sea cage culture.
- * Development of artisanal mariculture programmes.
- * Establishment of seed bank for marine farming.
- * Marine ornamental fish seed production for trade.
- * Integrated farming of finfish and shellfish with seaweed.
- * Development of capture based aquaculture.
- * Large scale sea ranching of selected species for stock enhancement.
- * Establishment of a Centre of Excellence in Mariculture.
- * Development of strategies for ensuring sustainability in the exploitation of marine resources of the area.
- * Evolving conservation and management strategies for coral reef biodiversity of Gulf of Mannar and Palk bay.
- * Impact assessment of anthropogenic activities and natural changes in the marine environment of the area.

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केंद्रीय समुद्री मत्स्यिकी अनुसंधान संस्थान का
मंडपम क्षेत्रीय केंद्र

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Historical Background

The Mandapam Regional Centre of Central Marine Fisheries Research Institute is one of the premier institutions for R and D in the field of marine fisheries research and is the largest centre among the subordinate establishments of Central Marine Fisheries Research Institute (CMFRI). It is located 2 kilometers away from Mandapam Camp on an impressive and picturesque elevated sand dune spread over 90 acre campus overseeing the Palk Bay in the north and Gulf of Mannar in the south.

The headquarters of CMFRI was at Mandapam Camp from 1949 to 1971 in the Naval Building Complex which was acquired and modified into laboratories and other facilities. In the year 1971, the headquarters was shifted to Cochin and thereafter the establishment was renamed as Mandapam Regional Centre of Central Marine Fisheries Research Institute.

The shallow, unpolluted seawater and the coral reef habitat of the Palk Bay and Gulf of Mannar offer an ideal location for carrying out Research and Development on Mariculture, Marine biodiversity, Marine environment and Marine capture fisheries.

Infrastructure

- Wet and dry laboratories
- Hatcheries for finfishes and shellfishes

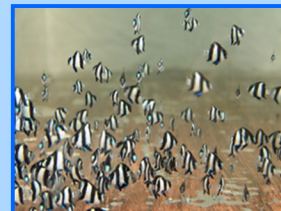


- Centralised instrumentation room
- Marine museum
- Marine aquarium
- Library
- Sea cage farm
- Fish farm
- Conference hall with audio visual equipments
- Guest house
- Residential quarters



Research Highlights

- The contributions of pioneering research in the country on marine ecology, biodiversity, capture fisheries and mariculture still remain as the major milestones of knowledge in these areas.
- The exploited marine fishery resource assessment and the investigations on fishery and biological characteristics of the major resources of the east coast of India have contributed to the development of management advisories for sustaining the capture fishery resources of the coast.
- Studies on corals of Indian seas were initiated and the first international coral symposium was organised here.
- The Gulf of Mannar, known to be a marine biodiversity hotspot has been declared as the first marine national park of India. Investigations on the coral reef and seagrass ecosystems of these area have generated a treasure house of information which will be of immense value



for the conservation and management of this biosphere reserve.

- Pen culture of high value finfishes was initiated.
- Improved research on scaling up of marine pearl production was undertaken.
- Seaweed research in the India was pioneered and the technology for seaweed culture was developed and popularised.
- Developed the techniques of seed production for banana shrimp *Penaeus semisulcatus* and blue swimmer crab, *Portunus pelagicus*. Mass scale sea ranching of *P. semisulcatus* for stock enhancement was experimented.
- Seed production techniques of 6 species of damsel fishes which are of good demand in the international market were developed and standardised.
- The broodstock development of high value finfishes (Cobia, Pompano and Groupers) was initiated in sea cages.
- Conservational mariculture research on sacred chank and seahorse.

Current Research Thrusts

- Development of seed production techniques for cultivable high value finfish and shellfish.
- Open sea cage farming.
- Development of management advisories for sustainable exploitation of marine fishery resources.

