



CMFRI

NEWSLETTER

ISSN: No.0972-386



No. 97

January - March 2003

DR. MANGALA RAI TAKES OVER AS SECRETARY, DARE AND DG, ICAR

Director and staff of Central Marine Fisheries Research Institute express their hearty congratulations to Dr. Mangala Rai, the distinguished agronomist of the country who has taken over as the Secretary, Department of Agricultural Research and Education, Government of India and Director General, Indian Council of Agricultural Research on January 9, 2003.

Born on June 30, 1947, Dr. Mangala Rai completed his Masters Degree in Genetics and Plant Breeding in 1969, Doctorate in 1973 and was conferred D.Sc. Degree in 1999. Dr. Rai started his professional career as a junior plant breeder in 1973 and worked as a teacher and research guide in Agra University and Orissa University of Agriculture and Technology and thereafter in the Indian Council of Agricultural Research. Dr. Rai has held many eminent positions, as National Co-ordinator for AICRP on Linseed, Director (Oilseeds Technology), ADG (Seeds), ADG (Policy and Perspective Planning), National Director (NATP) and has worked on a variety of crops such as rice, wheat, barley, sunflower, safflower, rape seed - mustard, linseed and maize wherein he concentrated on genetic improvement and development of varieties for commercial cultivation. Dr. Rai's contributions to the hybrid development programmes and to the oilseed research and development are well recognized all over the world. Dr. Mangala Rai has served as consultant to FAO and functioned as the Chairman of SAARC Agricultural Information Centre. At present Dr. Rai is



the Chairman of Asian Maize Biotechnology Network, International Sunflower Research Network, the President of Indian Society of Oilseeds Research, on the Board of Trustees of CIMMYT, Mexico and also in the Board of Management of six Agricultural Universities. Dr. Rai's planning of research and development activities has been instrumental in finalising Vision-2020 Perspective Plans for all ICAR institutes.

Dr. Mangala Rai is thus a rare combination of excellence in scholastic records and a professional career enriched with varied experiences as that of a teacher, plant breeder, research guide and manager. Dr. Rai has over one hundred and eighty publications to his credit including research papers, technical bulletins and books such as Transgenics in Agriculture, Hybrids in Crops and Oilseeds Research and Development. Dr. Rai has bagged in a number of awards including CG Chair's Award of international recognition.

Dr. Mangala Rai has described his mission as the Director General, ICAR, to bring transparency, efficiency, effectiveness and relevance in scientific pursuits with a human touch to achieve ecologically sustainable agriculture in the country. CMFRI family welcomes Dr. Mangala Rai who has taken over the reins of the Council and looks forward to the guidance and leadership of the Chief of the ICAR to augment the blue revolution in the country.

From the Director's Desk.....

One of the recent concerns of marine fisheries managers across the world is to plan interventions to mitigate the impact of global warming on coastal commercial fisheries. The common belief that global warming will not affect tropical fish and fisheries is not well founded. The impact of global warming and the consequent sea level rise will be very pronounced in tropical near-shore fisheries which are sources of livelihood to millions of poor people in Asia.

Short term changes, intermediate to decadal scale changes and long term changes are all expected from global warming. Submersion of coastal mangroves, wetlands, estuaries, oceanic islands and coral atolls, changes in ecosystems, species diversity, species ratios, abundance, distribution are all possible direct effects. Macro-level climatic changes are expected which include uncertain monsoons resulting in changes in coastal nutrient cycles and productivity, coastal food chain, changes in reproductive cycles and larval survival leading to decline in coastal fish production. Other anticipated effects include changes in oceanic currents and upwelling resulting in wide fluctuations in major oceanic fisheries, migration and recruitment patterns. Higher seawater temperatures will lead to disruption in predator-prey relations, disappearance of small pelagic fishes, appearance of predatory

oceanic fishes and changes in fishing patterns.

In the Indian context, all these assume great importance because of the dependence of a major sector of the coastal population on fisheries for livelihood and nutrition. Increased cost of fishing operations, marginalisation of coastal small-scale harvest and post-harvest fish sector, reduced employment and investment opportunities in the coastal fisheries related sector, reduced fish availability and increased fish costs affecting food and nutritional security of coastal households, changes in supply - demand dynamics and in fish processing and export trade are expected. Some of these anticipated impacts are disturbing information to our country.

Submersion of mangroves and wet lands, loss of biodiversity, uncertainties in coastal fisheries, increased cost of fish capture, changes in food consumption patterns and livelihoods, marginalisation of coastal fisherfolk and threat to the nutritional security of coastal households are areas of concern for research and intervention. Marine natural resource management and generation of an information base for interventions are research priorities of CMFRI, which hopefully we will be able to address in the near future.

Mohan Joseph Modayil

NEWS FROM THE RESEARCH FRONT

Excellence achieved in marine pollution monitoring

The Mangalore Research Centre has generated a total income of Rs. 1.02 crore, for the period from 1996 to January 2003, by giving consultancy services to various industries on marine pollution monitoring. The Karnataka State Pollution Control Board has recognised the Centre as the nodal agency for carrying out marine pollution monitoring work.

The Centre has developed a modern marine pollution monitoring laboratory consisting of imported equipments such as Ion Chromatograph, Gas Chromatograph, Trace Metal Analyser (Voltametry), Ultrapure Water System, Automatic BOD Analyzer (OxiTop System), Multi-parameter Probes, Global Positioning System, COD Digester, Automatic Titrator, etc. With these modern facilities and equipments, the Mangalore Research Centre can further take up consultancy projects on marine pollution monitoring, EIA studies and water and wastewater analysis.

Rapid Impact Assessment Study in the Marine National Park, Gulf of Kutch, Gujarat

A study team from the Environment Management Division headed by Dr. M.

Rajagopalan conducted investigations along the Jamnagar-Okha coast on the assessment of primary and secondary production, water quality, benthic productivity, BOD, heavy metals, hydrocarbons, total phenolics and on the status of corals, sponges, seaweeds, mangroves and nesting of turtles. The study was aimed at collecting data to assess the impact on the environment in relation to four pipelines which have been laid and on the proposed dredging in the Poshitra port area and approach channel to the Marine National Park and Sanctuary in Jamnagar, Gujarat.

Impact of dams : Estuarine biota dwindling along Saurashtra coast

The frequent damming and freshwater impoundment of rivers and rivulets of Saurashtra developed over the years have virtually stopped the output of rivers to the coastal waters and has led to the closure of river mouths. Several rivers including Bhadar, Nethravathi, Hiran, Devka, Meghal and Shingoda were studied. These river systems which were well known for commercially valued crustacean and fish resources have now been reduced to stagnating high saline creeks which neither support biological productivity nor serve as nurseries.

Pellet feed for mud-crab fattening developed

A formulated pellet diet costing Rs. 35/kg with 47% crude protein 10% lipid, 18% total ash and 17.8 MJ/kg gross energy has been developed with indigenous ingredients for fattening mud crabs of three grades (excellent, big and medium). The feed has been successfully used as a substitute for the traditional feeds such as trash fish, salted fish, clams and slaughter-house waste used for fattening by the farmers. On-farm trial conducted in a crab farm using plastic cages for the first time at Vypeen Island near Cochin showed that the pellet feed is commercially viable, eco-friendly, easy to transport, store and dispense.

On seacucumber rearing

Juveniles of *Holothuria spinifera* were successfully produced at the hatchery of the Tuticorin Research Centre. 56 numbers attained an average length of 4.6 cm and weight of 2.9 g within three months time.

New records of seaweed and seagrass from Kerala coast

Occurrence of the red seaweed *Gracilariopsis lemaneiformis* (Bory) Dawson and the seagrass *Halophila beccarii* Asch. is reported from Kerala waters for the first time.



Seaweed *Gracilariopsis lemaneiformis*

The macroscopic branched alga, *G. lemaneiformis* was found distributed in Ashtamudi Lake (Kollam), Kadalundi estuary (Kozhikode) and Mopla Bay (Kannur). In this estuarine seaweed, the polysaccharide content vary from 18 to 26% dry weight.

The seagrass *H. beccarii* was found growing in the tidal mudflats at Kumbala estuary (Kasaragod) associated with mangroves.

Fish Aggregating Devices deployed

Two temporary FADs using locally available materials were deployed in the sea near Minicoy Island on 28 March. The FAD at the eastern side in the open sea was deployed at a depth of about 220 m at 8°18'N lat. - 73°04'E long. and at the western side inside the lagoon at a depth of about 3.5 m at 8°17'N lat. - 73°03'E long.

Marine damsel fishes bred

Two species of ornamental fishes belonging to the family Pomacentridae, *Neopomacentrus sindensis* and *N. cyanomos* reared at the marine aquarium of the Veraval Regional Centre attained maturity within a span of 6-8 months and bred under captivity. Larval rearing is continuing.

Record tuna catch

At Minicoy, 1927 t of skipjack tuna was caught during the year ending 31 March 2003, against 973 t during the same period of 2002 registering a 98% increase.

Large sized mackerel landed at Mangalore

A giant sized Indian mackerel, *Rastrelliger kanagurata* locally known as 'bangudae' measuring 405 mm in total length and weighing 751 g was caught off Mangalore at a depth of 50 m in October 2002. This is the largest size ever recorded for mackerel at this centre. However, it is smaller than the

largest mackerel recorded from Indian waters, caught off Karwar in August 1999, which measured 421 mm in total length and 859 g in weight.

Changing scenario of oil sardine fishery

In the eighties, the southwest coastal states of Kerala and Karnataka accounted for nearly 95% of the oil sardine landings. But there has been steady decrease of the landings in Karnataka where its share to the total fish came down from 33% (1980) to 7% (1990) and in Kerala reached an all time low of 1554t in 1994. A noteworthy feature since 1996 was the emergence of oil sardine as an established fishery along the south-east coast.

However, in six years time, the fishery in Kerala resuscitated and peaked to an ever time high of 2.63 lakh tonnes in the year 2000. This indicated high recruitment and survival resulting in a massive build up of the stock by 2000 - 2001. Landings of ring seine units were unusually heavy along the Kerala coast since July 2002. These fishes competing for space and food, even enter estuaries and backwaters as has happened in the Ashtamudi Lake in Quilon, Cochin backwaters and coastal waters of Alleppey. Young sardines which entered the Cochin backwaters, moved 6-7 km north and south of the barmouth. Inside the backwaters they were netted by Chinese dip nets, cast nets and stake nets. Swarming of the juveniles of the size range 60-90 mm which occurred in the coastal waters of Alleppey and elsewhere north

of it is a tell tale evidence of their stock abundance. The sardine shoals that swarmed the coastal waters in Alleppey were mostly exploited by the ring seine units for more than six months from July 2002. It was a harvest *Mela* involving thousands of fisherfolk, auctioneers, merchants and traders. Many ring seine units used to make more than one trip a day depending on the demand. Because the fat content in the young sardines is very low, the catch is mostly sundried. The cost of dried young sardine was around Rs. 7/kg. The price per a 50 kg basket varied from Rs. 50



Young sardines landed at Alleppey

to Rs. 600 depending on the daily landings and the demand. Dried sardines packed in gunny bags (35 kg) are transported regularly to Andhra Pradesh.

Along the Karnataka coast, the very high landings of smaller sized oil sardine by the 'Matudhoni' which did not fetch good price was beach dried and the dried product used in the preparation of fish/poultry feed.



Beach dried oil sardine at Mangalore

TRANSFER OF TECHNOLOGY

Training for practising farmers, youth and rural women

Krishi Vigyan Kendra of the Institute at Narakkal imparted training to 758 persons by conducting 37 training courses. The number of courses and beneficiaries are as follows: Fisheries: 8-173; Agriculture: 11-226; Home Science: 17-339; Animal Science: 1-20.

Trainings for nominated officials and entrepreneurs

The Trainers' Training Centre of the Institute organised three short-term courses on *ornamental fish culture* at Calicut and imparted training to 40 men and 7 women. The six day programmes covered topics on site selection, design of aquarium tanks, maintenance of brooders, breeding techniques of the exotic varieties, live feed culture and disease management.

Training for fisherfolk

Training was imparted on *Agar production* to ten fisherfolk of Ramanath-

apuram District from 21 to 27 January.

At Padanna, Kasaragod, 29 farmers (15W/14M) were imparted training on all aspects of *mussel culture* under the *Kudumbasree Programme* by BFFDA, Kannur and Calicut Research Centre of the Institute on 18 February. The Centre also conducted training on *mussel culture* and *crab fattening* at Pattuvam for 40 fishers (33M/7W).

Income generating unit established

The Self Help Group 'Shree Lakshmi' at Kuzhupilly which was given training at KVK, Narakkal in the preparation of cleaning powder has started marketing their product under the name 'Shree Lakshmi Products'. The inaugural sale of the product was on 27th January.

Demonstration on desalination

In Vypeen Island where there is an acute shortage of sweet water, a demonstration was arranged by KVK, Narakkal on desalination to educate the local people about the usefulness of desalination.

Exhibitions

- At the *International Aqua Show 2003* held at Cochin in January, the Institute displayed 35 varieties of marine fauna including sea anemones (4), lobster (1), oyster (1), echinoderms (3) and fishes (26) and bagged in two First prizes: **Best Marine Aquarium set up by scientific institutions** and **Best Multi Species Aquarium**.
- CMFRI put up a stall in the *Techno Fusion* exhibition organized by Mahatma Gandhi University College of Engineering, Muttom, Thodupuzha from 7th to 9th March. Live specimens of ornamental fishes, cultivable brackishwater fishes and shrimps and the culture technologies developed at the Institute were displayed.

Collaborative training programmes

Ten courses were organised by KVK Narakkal in association with different agencies as indicated. The beneficiaries included village extension workers and members of IVLP.

Collaborating Agency	Preparation of			Ornamental fish culture	Shrimp farming	Vegetable cultivation
	Cleaning powder	Jam	Value added products from shrimp			
Vypeen Block, Kuzhupilly	14 Jan.	27 Jan	21-22 Feb., 21- 22 Mar.			
Elamkunnappuzha Panchayat	15 Feb.					
Pallippuram Panchayat	20 Feb.					
Ernakulam Social Service Society			3-5 Feb.	27 & 28 Jan.		
Brackishwater Fish Farmers Development Agency					25 -26 Feb.	
SEETT Division of CMFRI						12 Mar.

INTERACTION AND EVALUATION

Expenditure Finance Committee Meeting

Discussions on X Plan EFC documents of Fisheries Research Institutes of ICAR was held at CMFRI, Cochin on 13 February under the chairmanship of Smt. Krishna Bhatnagar, Principal Advisor (Agriculture), Planning Commission, Govt. of India. Other participants of the meeting were Shri. Gautam Basu, Additional Secretary & Financial Advisor (DARE/ICAR), Dr. S. Ayyappan, DDG (Fy.), ICAR and Directors of eight fisheries research institutes (CMFRI, CIFRI, CIFA, CIBA, CIFT, NBFGR, CIFE and NRCCWF).

Research Advisory Committee Meeting

The RAC meeting to review the progress of the In-house Research Projects for 2002-2003 was held under the chairmanship of Prof. (Dr.) T.J. Pandian at CMFRI, Cochin on 4 February.

Review Workshop of WorldFish Centre-ICAR Project

The review workshop of the ADB sponsored WorldFish - ICAR Project "**Strategies and options for increasing and sustaining fisheries and aquaculture production to benefit poor households in Asia**" was held during 28-29 January, at CMFRI, Cochin. Senior Scientists from WorldFish Centre, Penang; NCAP, New Delhi; CIFRI and Agricultural Universities participated. The technical sessions were devoted to technological and socio-economic issues in fisheries sector of India, demand supply estimation and sanitary (SPS) measures in fisheries sector.

First Indian Pearl Congress and Exposition held

Under the World Bank aided NATP scheme on marine pearl technology, the

CMFR Institute organised the FIPCE at International Hotel, Cochin during 5-8 February. The Congress was inaugurated by Dr. S.Z. Qasim, former member, Planning Commission, Govt. of India and presided over by Dr. K.V. Peter, Vice-Chancellor, Kerala Agricultural University. Dr. Qasim reminisced the difficult days of pearl culture experiments at Tuticorin during 1970's and the excitement when the first cultured pearl was produced at the Institute. Dr. E.G. Silas, former V.C., KAU requested the state government to establish pearl parks. Dr. S.C. Pathak, Chief General Manager, NABRD called upon fisheries graduates to make use of the Agrilclinic/Agribusiness schemes and start their own income generating projects. The scientific sessions on marine and freshwater pearl culture were held on 6th and 7th in which 53 scientific papers on different aspects of pearl culture including physiology

and biotechnology applications, seed production and hatchery techniques, pearl culture technology and image production were presented. At a Round Table Session led by Dr. E.G. Silas and Dr. P.S.B.R. James, discussions were held on pearl business and problems faced by the pearl industry and an Action Plan charted out for pearl culture and trade development.

At the *Pearl Exposition* organised by the institute during 6 to 8 February information on pearl culture technology, methods to identify cultured pearls and the ways to take care of pearl jewellery were explained to the public. Stringed and loose pearls and pearl handicrafts made from pearl producing molluscs and gastropods were displayed at the Institute counter. Leading pearl jewellers from different parts of India exhibited their pearl jewellery like *Mabe* pearls, *Mikura* pearls from Japan set in white and yellow gold and pearl jewellery in combination with diamonds, corals and rubies. Pearl handicrafts and decorative items from the cottage industries of Andaman-Nicobar islands were also on sale. The unique opportunity to purchase pearls produced in India and abroad was utilized by more than 3000 people with business done for more than Rs.6 lakhs.

Women's meet conducted

In order to empower rural women by starting different self employment and income generation units, two seminars

were conducted at the *Krishi Vigyan Kendra* of the Institute, Narakkal. The participants were briefed on the preparation of value added products from shrimp and fish and given guidelines on forming Self Help Groups.

Justice (Retd.) Smt. D. Sreedevi inaugurated the women's meet which was presided over by Smt. Rosilin, the Panchayat President on 11th January arranged in association with Gramapanchayat, Elamkunnappuzha. In the meet at the Model *Kudumbasree* unit, Narakkal on 10th March, 32 rural women participated.

Seminar conducted on Pokkali paddy cultivation

With the aim to revive the *Pokkali* paddy cultivation in Vypeen Island through organic farming, KVK, Narakkal organised a Seminar in collaboration with Kasturba Memorial Library, Vypeen. Subject experts from Rice Research Station, KAU; KVK, Narakkal; Krishi Bhavan, Elamkunnappuzha and *Pokkali* Paddy Development Agency, Parur held discussions on cultivation practices, constraints and benefits of organic farming on 12th February at Elamkunnappuzha. Members of Krishi Samajam *Pokkali* paddy farmers and farm labourers attended the seminar. An action plan was also prepared for the cultivation of *Pokkali* paddy during the next season.

Divisional Seminars Held

- Studies on the Euphausiids of the West Coast of India - Dr. K.J. Mathew.

- Seed production of the blue swimmer crab *Portunus pelagicus* - Dr. Josileen Jose.
- Agricultural Technology Information Centre (ATIC) on overview - Smt. Sheela Immanuel.

National Conference on Aquaculture Nutrition held

A National Conference on Aquaculture Nutrition sponsored by National Agricultural Technology Project was organized by the Physiology Nutrition and Pathology Division at the Institute Headquarters from 12 to 14 March. A total of 60 delegates representing various ICAR Institutes, State Agricultural Universities, MPEDA, representatives from feed industry and farmers from different parts of the country participated in the three days long deliberations. In the four technical sessions, research papers on Larval nutrition, Biotechnological interventions, Grow-out nutrition and Feed management and nutrition of endangered species were presented. A panel discussion on prospects and constraints of aquafeed industry was held on the concluding day.

Winter School to be held

ICAR has sanctioned a Winter School on 'Recent Advances in Mariculture Genetics and Biotechnology' to be conducted during November 2003.

NEW HEIGHTS

New Sponsored Projects

- **Farming and pearl production in the black lip pearl oyster *Pinctada margaritifera* in Andaman & Nicobar Islands** under the Marine Living Resources and Ecology Programme of the Department of Ocean Development, New Delhi with funds to the tune of Rs. 130.08 lakhs for the 5 year project for initiating the production of the most valuable of pearls, the black pearls. The objectives of the project are: (1) Study of the spatial and temporal variation in the spatfall in selected areas of the A&N Islands and stock enhancement through spat collection from the natural beds; (2) Induced breeding, spawning, larval rearing and seed production of *P. margaritifera* in hatcheries through the establishment of a mini hatchery with a production capacity of 2 million spat/year and enabling the staff of the Dept. of Fisheries A&N

Islands to run the facility after the closure of the project; (3) Development of nucleus implantation technique and black pearl production through mariculture; (4) Stock replenishment of *P. margaritifera* through sea ranching and (5) Capacity building and employment opportunity generation to nominees of A&N Administration through training.

The project will be executed by scientists of the Molluscan Fisheries Division under the leadership of the Principal Investigator, Dr. Mohan Joseph Modayil, Director, CM-FRI. The project will have working partnerships with CARL, Port Blair and Department of Fisheries, Andaman & Nicobar Administration and will be implemented from the marine park area, close to Sesostri Bay, Port Blair.

- **Studies on marine mammals of Indian Exclusive Economic Zone and the contiguous seas** sponsored by the Department of Ocean

Development, Government of India under the Marine Living Resources and Ecology Programme with grant-in-aid of Rs. 110 lakhs to be executed by Dr. M. Rajagopalan, Principal Scientist as the Principal Investigator, will be carried out at Cochin, Veraval, Chennai and Mandapam centres of the Institute.

There are 23 species of cetaceans and one species of Sirenia in the seas around India. In order to fulfil the international objectives for protection, conservation and management of marine mammals as put forth by International Whaling Commission (IWC), United Nations Environmental Programme (UNEP) and International Union for Conservation of Nature (IUCN), the Institute will undertake the following programme under the project : (1) Prepare an inventory of the marine mammals and distribution atlases for whales, dolphins and dugongs in the Indian EEZ and the

contiguous seas; (2) study population characteristics such as age, migration, behaviour and reproduction; (3) quantify the pollutant load in the tissues of marine mammals and (4) create awareness on the endangered status of marine mammals and promote ecotourism.

- National Network Project on **Impacts, Adaptation and Vulnerability of Indian Marine Fisheries to Climate Change** to be executed by the Fishery Environment Management Division of the Institute with Dr. M. Rajagopalan and Dr. P.K. Krishnakumar as the Principal and Co-Principal Investigators. The Institute will get an initial financial support of Rs. 68 lakhs for its

research activities. The five year project will be carried out at Cochin, Mangalore, Chennai and Visakhapatnam Centres. The project aims (1) to document the current status of knowledge of climate change on marine fishery; (2) to identify marine fish species vulnerable to climate changes and the variations if any in the biodiversity pattern of primary and secondary producers and major fishery resources from the coastal waters of India; (3) to study the impact of climate changes on marine fisheries and sensitive areas such as mangroves and coral reefs; (4) to create database on key environmental parameters, indicators for tracking, future assessment and predic-

tion of the impact of climate changes; and (5) to identify adaptive measures.

- A three year project sanctioned by the DOD on **Predictive Modeling in Marine Fisheries** with Dr. M. Srinath as the Principal Investigator is aimed to develop suitable predictive models for the exploited stocks from the south west coast of India utilising the existing data on the exploited resources at the Institute and acquiring relevant climatic and oceanographic data from various agencies. This data component will be the input for model formulation and validation. Various univariate, multivariate and ARIMA models will be examined and after diagnostic checking and validation suitable forecast models will be developed.

ACADEMIC NEWS

- Five Research Scholars joined the M.F.Sc. Mariculture Programme in Cochin.

- 10 M.F.Sc. students are currently progressing with their research/course work for submission of

Dissertation under the Central Institute of Fisheries Education, Mumbai.

Ph.D. Awards

Scholar	Guide	Title of the Thesis
CENTRAL INSTITUTE OF FISHERIES EDUCATION (Deemed University)		
Ansy Mathew	Dr. G. Syda Rao, Principal Scientist	Nursery rearing of pearl oyster <i>Pinctada fucata</i> (Gould, 1850)
Pramila, S.	Dr. A.P. Lipton, Principal Scientist	Bacterial diseases and their management in chosen marine ornamental fishes
MANGALORE UNIVERSITY, MANGALAGANGOTHRI, MANGALORE		
Prathibha Rohit Scientist (SG)	Dr. S.L. Shanbhogue, Director of Instructions (Retd.), Mangalore Univ.	Fishery, biology and stock assessment of scads (<i>Decapterus</i> spp.) along the Karnataka coast

OFFICIAL LANGUAGE IMPLEMENTATION ACTIVITIES

National Seminar

To disseminate scientific developments in the official language, a National Official Language Seminar on 'Identification of New Research Issues on Marine Fisheries' was held during 30-31 January at the Institute Headquarters.

The Heads of Divisions of the Institute and scientists from CIFE, CIFT and CIBA presented papers on researchable issues in marine fisheries. Active discussions were held following all the 19 paper presentations. At the plenary session chaired by Dr. K. Devadasan the following needs were recommended to be implemented:

1. Fisheries to get priority and to be brought to the frontier areas
2. More funding and facilities to be given for Biotechnology
3. Technical session to be in Hindi
4. Increase in scientific staff at the institutes

5. Increase in contingency amounts for the in-house projects
6. Multidisciplinary approaches to be done in research
7. Procedural formalities for research to be simplified
8. Fisheries data base in simple Hindi to be prepared.

Workshops

Workshops were held for officers and staff of ministerial (14) and technical (24) cadres at Headquarters on 24th and 26th February respectively.

Inspections

Inspections were held on Official Language implementation activities at Madras Research Centre by Dr. Mohan Joseph Modayil, Director on 7 January; at Tuticorin Research Centre by Dr. L. Krishnan, Principal Scientist on 24 January and at CMFRI Headquarters, Cochin by Shri G.S. Tandi, Dy. Director, Dept. of O.L., Cochin on 17 March.

Committee Meeting

58th meeting of Official Language Implementation Committee of the Institute held on 22 March reviewed the progress achieved in the implementation of the official language of the Institute.

Hindi Website inaugurated

The website on Hindi implementation activities of the institute www.cmfri.com/hindi was inaugurated by Shri A.K. Saxena, Chief General Manager, BSNL on 30th January.

Working knowledge attained

The following employees successfully completed various courses in Hindi as indicated:

Shri K.S. Ajithkumar - Typing
Shri K.N. Murali - Stenography
Smt. Martha Mascrenas - Pragma

IN-HOUSE EVENTS

56th Foundation Day Celebrated

February 3rd, the birthday of the Institute was celebrated under the auspices of the Recreation Club. During the forenoon session, the Institute was open to the public wherein visiting our laboratories and viewing the touch screen and video show, the visitors mostly students from local schools and colleges were familiarized with our research and development programmes. The public meeting at evening presided over by our Director, Prof. (Dr.) Mohan Joseph Modayil was graced by retired staff and family members. The guest of honour, Dr. K. Gopakumar, former DDG (Fy.), ICAR released the in-house magazine, '*Tharangam*'. Chief Guest Dr. S.D. Tripathi, former Director, CIFE, Mumbai; Dr. D. Kapoor, Director NBFGR, Lucknow and Dr. K. Devadasan, Director CIFT offered felicitations. Children of the staff members and students made the cultural programme a wonderful event and made us proud of our cultural heritage.

DDG (Fisheries) visits CMFRI

Dr. S. Ayyappan, Deputy Director General (Fy.), ICAR, visited the Institute Headquarters at Cochin on 14 February. The honourable guest was taken to the laboratories of the various divisions and was apprised of the ongoing research activities. The DDG addressed the staff members and impressed upon them the key role the Institute plays in the fisheries sector as the depository of databases and the authority on recommending

regulations in biodiversity conservation issues and in understanding signals in forecasting accurately the trends in capture fisheries. Dr. Ayyappan also held discussions with the scientists of the Institute on their research programmes.

HRD programme organised by CMFRI

A six day training programme was conducted for officers from scientific, technical and administrative categories of the Institute (14) and five other Central Government organisations (8) at the Karapad Field Laboratory under the Tuticorin Research Centre from 20-25 January. The participants were guided to evaluate themselves, develop communication skills and taught ways and means to build interpersonal relations, solve problems and be effective leaders.

Computer literacy promoted

The technical and administrative staff (12 members) of Mangalore Research Centre successfully completed training in Computer Fundamentals, Windows, MS Office and Internet during January-February.

International Women's Day observed

At the Calicut Research Centre the International Women's Day was observed on 7th March. Dr. P.N.R. Nair, Scientist-in-Charge presided over the meeting which was formally inaugurated by Smt. Susheela Vijayaraghavan, Director, AIR (Retd.). A quiz

programme on women's issues was conducted followed by cultural programme.

On 10th March an exhibition was held at the Headquarters, wherein posters depicting great women who made a mark in various fields were displayed. Prof. (Dr.) Mohan Joseph Modayil presided over the meeting held in the afternoon and eminent social worker and Ex-Member Women's Commission, Kerala, Prof. (Smt.) Monamma Kokkad, addressed the staff members. The chief guest gave an inspiring speech on empowerment and social involvement of women. The importance of time management and the key role women have to play in moulding the character of children and imbibing in them the correct mind set essential for strong relations in the family and the society were stressed upon. Reminding women of the mental strength they are gifted with, Prof. Monamma Kokkad called upon them to be assertive of their rights and to contribute the best in them towards building up a prosperous nation.

National Science Day celebrated

Mr. Joice Abhraham & Mr. Mohamed Koya, won the first prize and Ms. Neetha Susan David & Mr. M. Vijayakumar, won the second prize in the quiz competition on the topic *50 years of DNA - The blue print of life* in connection with the National Science Day celebration on 28 February.

PERSONALIA

Visit Abroad

Dr. N. Gopalakrishna Pillai, Principal Scientist and Head, PFD was deputed to WorldFish Centre, Penang, Malaysia to participate in the Second Regional Workshop on *Aquaculture Technologies and Fishing practices in Asia* (ADB-RETA 5945) of ICAR-WorldFish Project "Strategies and options for increasing and sustaining fisheries and aquaculture production to benefit poor households in Asia" from 17th to 27th March.

Guests

KVK, Narakkal

- Dr. M.A. Kuttappan, Hon'ble Minister for Backward classes and Youth Development, Government of Kerala
- Shri T.M. Jacob, Hon'ble Minister for Irrigation, Government of Kerala
- Shri Gyanesh Kumar, I.A.S., District Collector, Ernakulam
- Shri Munambam Santhosh, Block Panchayat President, Vypeen

Mandapam Regional Centre

- The Hon'ble Minister of State for Agriculture Shri. Hukun Deo Narayan Yadav, Krishna

Bhavan, New Delhi

- Total visitors at this Centre was 6810 of which 6394 were students from 117 educational institutions.

Veraval Regional Centre

- Shri Manish Parekh, Principal, Shardagram College, Mangrol
- Shri R.J. Asari, Conservator of Forest, MNP Jamnagar
- Captain Devjibhai Fulbaria, Sea shell museum, Diu
- Shri Anilbhai Patel, Deputy Secretary, Port, Govt. of Gujarat

Tuticorin Research Centre

- Prof. B.L.K. Somayajulu and Prof. K. Ramesh, Physical Research Laboratory, Allahabad
- Prof. (Dr.) K.Y. Mohammed Salih, Department of Marine Biology, CUSAT, Cochin

Minicoy Research Centre

- Dr. S. Arul Raj, Head (Social Science), CPCRI Kasargod
- Shri I.G. Ibrahim Mamkhan, Chairman, Minicoy (Dweep) Island panchayath

Programme participation

Prof. (Dr.) Mohan Joseph Modayil, Director

- DPC meeting of Scientists of CIBA, Chennai as the nominee of the DDG(Fisheries), ICAR at CIBA, Chennai (8 January).
- Chaired the Second meeting of the IX IJSC of CMFRI at Madras Research Centre of CMFRI, Chennai (9 January).
- 8th Coastal Zone Management Authority Meeting of Govt. of Kerala at Science, Technology & Environment Department, Trivandrum (15 January).
- Meeting at Bombay Research Centre of CMFRI, Mumbai as directed by DDG(Fy), ICAR, along with CIFE officials (17 January).
- Took part in the village based programmes of TIFAC-CIFE, Mumbai (18 January)
- Held discussions with Hon'ble Members of the Board of Regents of University of Agricultural Sciences, Bangalore on collaborative research programmes between CMFRI and the University at CMFRI, Cochin (22 January).
- Research Advisory Committee of CMFRI at CMFRI, Cochin (4 February)

- Meeting at CMFRI, Cochin, with the Principal Advisor (Agriculture), Planning Commission, Govt. of India, along with the Financial Advisor, ICAR, DDG(Fy), ICAR and all Directors of ICAR Fisheries Research Institutes, for discussion on X Plan EFC Documents (13 February).
 - National Seminar on "Aquaculture issues and solutions" at CIFRI, Barrackpore, (23-26 February)
 - Visited Port Blair, Andamans and held discussions with CARI and Andaman Administration officials on project Blacklip Pearl Oyster Culture and Pearl Production in the Andaman Nicobar Islands along with the Advisor, DOD, Govt. of India, and Head, MFD, CMFRI (3-4 March).
 - Seminar organized by CIFT on "Fishing and fish processing Industry of Gujarat - present status and future needs" at CIFT, Veraval (7 March).
 - Second meeting of the Organizing Committee of International Symposium "Freshwater Prawns" at CMFRI, Cochin (10 March).
- Dr. N.G.K. Pillai**, Principal Scientist & Head, Pelagic Fisheries Division
- Joint meeting of Kerala Biodiversity Committee and Steering Committee of State Biodiversity Strategy and Action Plan at Thycad, Thiruvananthapuram (16 January)
 - Review workshop of the ADB sponsored WorldFish Centre Project "Strategies and options for increasing and sustaining fisheries and aquaculture production to benefit poor households in Asia" at CMFRI, Cochin (28-29 January).
 - Research Advisory Committee of CMFRI at CMFRI, Cochin (4 February)
 - Meeting at CMFRI, Cochin, for discussion on X Plan EFC Documents (13 February).
- Dr. M. Srinath**, Principal Scientist & Head, Fishery Resources Assessment Division
- Workshop on "Fishing Ban, Fish Famine and Livelihood Issues" at the Law College, Mangalore and presented a paper on 'Trends in Marine Fish Production of Karnataka' (15-16 March)
- Dr. R. Paul Raj**, Principal Scientist & Head, Physiology, Nutrition and Pathology Division
- Meeting on Formation of Networks on Fish Nutrition convened by Deputy Director General (Fisheries) at ICAR, New Delhi (21 January)
 - First Indian Pearl Congress and Exposition at Kochi (5-7 February)
 - Expert Committee meeting to fix standards for Aquaculture inputs at MPEDA, Cochin (28 February)
 - National Conference on Aquaculture Nutrition at CMFRI, Cochin (12-14 March)
 - Review Workshop of the NATP Coastal Agro-Ecosystem held at Central Tuber Crops Research Institute, Trivandrum (17-18 March)
- Dr. L. Krishnan**, Principal Scientist
- Training Co-ordinator for HRD Training for CMFRI staff at Tuticorin (20-25 January)
 - National Official Language Seminar on Identification of new Research Issues in Marine Fisheries and presented a paper on "Experimental integrated mariculture of fish, shellfish, sea cucumber, seaweeds - a model multispecies integrated farming practice suitable for our coastal ecosystems" (30-31 January)
 - Research Advisory Committee of CMFRI at CMFRI, Cochin (4 February)
 - Second meeting of the Executive Committee of FIRMA (22 February)
 - 58th Official Language Implementation Committee at CMFRI, Cochin (22 March)
- Dr. K.C. George**, Principal Scientist
- Meeting on Formation of Networks on Fish health management (including quarantine and certification) convened by Deputy Director General (Fisheries), at ICAR, New Delhi (28 January)
 - National Workshop on 'Shrimp disease control and coastal management' sponsored by MPEDA, NACA and Ministry of Agriculture at Chennai (5-6 March).
- Dr. P. Jayasankar**, Sr. Scientist
- Meeting on Formation of Networks on Fisheries Biotechnology convened by Deputy Director General (Fisheries) at ICAR, New Delhi (4 February)
 - National Symposium on 'Genetics and Gene Banking' at CIFE, Mumbai (29-30 March)
- Dr. K.K. Joshi**, Scientist (SS)
- National Official Language Seminar on Identification of new Research Issues in Marine Fisheries (30-31 January)
- Smt. Rekha J. Nair**, Scientist
- National Official Language Seminar on Identification of new Research Issues in Marine Fisheries (30-31 January)
 - National Conference on Aquaculture Nutrition at CMFRI, Cochin and presented a paper (12-14 March).
- Dr. P.K. Martin Thompson**, Scientist-in-Charge, KVK, Narakkal
- Xth plan programme meeting of the District Watershed Committee convened by District Collector, Ernakulam at Civil Station, Kakkanad (22 January)
 - Workshop on Grass root Level Support System for Agricultural development - District level Research Extension Interface organized by the Principal Agricultural Officer, Ernakulam at District Co-operative Bank Conference Hall, Kakkanad (24 January).
 - Meeting convened by Dr. M.A. Kuttappan, Minister for Backward classes and Youth development, Government of Kerala at the Conference Hall of Vypeen Block Development Office, Kuzhupilly. (7 February)
- Dr. A.C.C. Victor**, Principal Scientist
- Inaugural function of the "Artificial Reef and Fish Pickling Unit" organized by M.S. Swaminathan Research Foundation as part of the Project "Promoting alternative livelihoods for the poor in the Gulf of Mannar Region at Vellapatti village (2 February)
 - Review meeting of the AP Cess Revolving Fund Project "Commercial production of cultured pearls adopting onshore culture technology" at Mandapam Regional Centre (25 February)
 - Training workshop conducted by the Wildlife Warden, Gulf of Mannar Marine National Park to scientifically equip their staff members on different marine culture activities at Ramanathapuram (14 March)
 - NATP Review meeting at CTCRI, Trivandrum (17-18 March)
- Dr. A.C.C. Victor, Shri D.C.V. Easterson, Shri A. Chellam, Shri S. Dharmaraj**, Principal Scientists, **Shri E.M. Abdussamad**, Scientist (Sr. Scale) and **Smt. C.P. Suja**, Technical Officer
- First Pearl Congress and Exposition at CMFRI, Cochin and presented papers (5-8 February)
- Dr. A.C.C. Victor**, Principal Scientist, **Shri P. Livingston**, Sr. Scientist and **Shri D. Sundararajan**, Technical Assistant
- Town Official Language Implementation Committee meeting at Syndicate Bank, Tuticorin (24 January)
- Smt. P.S. Asha**, Scientist
- National Conference on Aquaculture Nutrition organized by NATP & CMFRI and presented a paper entitled "Effect of different microalgal food on the early development growth and survival of sea cucumber *Holothuria (Thalothuria) spinifera*" (12-14 March)
- Shri K.P. Said Koya**, Scientist-in-Charge, Minicoy Research Centre
- First Indian Pearl Congress & Exposition at International Hotel, Kochi and presented a paper (5-8 February)
- Dr. C. Muthiah**, Principal Scientist & Scientist-in-Charge, Mangalore Research Centre
- Workshop on "Fishing Ban, Fish Famine and Livelihood Issues" at Centre for Environmental Education Research and Advocacy, Bangalore at the Law College, Mangalore (15-16 March).
- Dr. N. Kaliaperumal**, Principal Scientist and **Dr. S. Kalimuthu**, Technical Officer
- Symposium on "Algae and Environment" organised by the Department of Environmental Sciences, Kerala University and Seaweed Research and Utilisation Association at Thiruvananthapuram (13-15 February)
- Shri P. Vijayagopal**, Scientist (SS)
- National Conference on "Aquaculture Nutrition" at Kochi and presented a paper on 'Energy requirement in shrimp' (12-14 March)
- Dr. K.V.S. Nair**, Scientist-in-Charge, Veraval R.C., **Shri Joe K. Kizhakudan**, Scientist, **Shri H.M. Bhint**, **Shri S.P. Makawana**, **Shri K.P. Chudasama** and **Shri G.N. Chudasama**, Technical staff
- "Rapid Impact Assessment Study" under the leadership of Dr. M. Rajagopalan & team from Kochi at Jamnagar (16-24 February)
- Dr. K.V.S. Nair**, Scientist-in-Charge, Veraval R.C., **Shri Joe K. Kizhakudan** and **Smt. Shobha Joe Kizhakudan**, Scientists
- Seminar on "Fishery and Fish Processing Industries of Gujarat - Present Status and Future Needs" at Veraval, conducted by SOFTI, CIFT, Veraval and presented papers on various issues (7 March)
- Dr. V.D. Deshmukh**, Principal Scientist
- Delivered a lecture and a practical session on 'Decapod Taxonomy' under NBDB to participants at CIFE, Mumbai (30 January)
 - Delivered a lecture on 'Sustainable development and management of marine fisheries in India' at Mumbai University, Dept. of Geography and Academic Staff College, Kalina, Mumbai (18 January)
 - Delivered a lecture on 'Cruise in Fisheries' for refresher course participants at Tata Institute of Social Sciences, Deonar, Mumbai (20 January)
- Dr. V.V. Singh**, Sr. Scientist
- National Seminar on Hindi at CIFE, Mumbai and presented a paper on 'Necessity of Integrated efforts for extension of fisheries technology' (in Hindi) (15-16 January)
- Shri S.G. Raje**, Scientist (SG)
- National Seminar on Hindi at CIFE, Mumbai and presented two papers 'Elasmobranch fishery: a beneficial business' and 'Traditional ways of forecasting cyclone and use of fishes in various ways in day to day life' (15-16 January)
 - Delivered a lecture and practicals at National Training Course on 'Taxonomy, Genetics and Gene Bank' at CIFE, Mumbai (5 February)

Obituary

Shri M. Radhakrishnan, Technical Assistant (T-3) at Cuddalore Field Centre expired on 10.01.2003.

Promotions

	Designation	Promoted post	Centre	w.e.f.
Shri Joseph Xavier Rodrigo	Tech. Officer (T-5)	Tech. Officer (T-6)	Tuticorin	01-07-2001
Shri K. Chittibabu	Tech. Officer (T-5)	Tech. Officer (T-6)	Visakhapatnam	01-07-2001
Shri Joseph Andrews	Tech. Officer (T-5)	Tech. Officer (T-6)	Vizhinjam	01-07-2001
Shri K. Ramasomayajulu	Tech. Officer (T-5)	Tech. Officer (T-6)	Kakinada	01-07-2001
Shri Edwin Joseph	Tech. Officer (T-5) (Librarian)	Tech. Officer (T-6)	Mandapam Camp	01-01-2002
Shri T.K. Sudhakaran	Sr.Tech.Assistant (T-4)	Tech. Officer (T-5)	Cochin	01-01-2000
Smt. E.K. Uma	Sr. Hindi Translator (T-4)	Tech. Officer (T-5)	Cochin	29-06-2001
Shri K. Diwakar	Sr.Tech.Assistant (T-4)	Tech. Officer (T-5)	Tuticorin	06-09-2001
Shri V.A. Narayanankutty	Sr.Tech.Assistant (T-4)	Tech. Officer (T-5)	Cochin	26-12-2001
Shri K. Chacko	Projector Operator (T-3)	Projector Operator (T-4)	Cochin	01-01-2000
Shri K. Narayana Rao	Tech.Assistant (T-3)	Sr.Tech.Assistant (T-4)	Visakhapatnam	01-01-2001
Smt. G. Shylaja	Tech.Assistant (T-3)	Sr.Tech.Assistant (T-4)	Cochin	10-06-2001
Smt. E. Sasikala	Hindi Translator (T-3)	Sr. Hindi Translator (T-4)	Cochin	29-06-2001
Shri T. Chandrasekhara Rao	Tech.Assistant (T-3)	Sr.Tech.Assistant (T-4)	Kakinada	01-01-2002
Shri R.V.D. Prabhakar	Jr. Tech. Assistant (T-2)	Tech. Assistant (T-3)	Visakhapatnam	03-10-2001
Shri M. Rajkumar	Field Assistant (T-1)	Jr. Tech. Assistant (T-2)	Chennai	22-04-2001
Shri G.D. Nataraja	Field Assistant (T-1)	Jr. Tech. Assistant (T-2)	Mangalore	05-07-2001
Shri S.V. Subba Rao	Field Assistant (T-1)	Jr. Tech. Assistant (T-2)	Visakhapatnam	31-03-2001
Shri G. Kingsley,	Driver (Boat) (T-1)	Driver (Boat) (T-2)	Tuticorin	06-12-2001
Shri M. Asokan	Painter-cum-Polisher (T-1)	T-2	Mandapam Camp	26-07-2001
Shri M. Krishnan	Binder (T-1)	T-2	Cochin	29-06-2001
Shri K. Jerald Raja	SSGr.I (Khalasi)	LDC	Cochin	05-03-2003
Shri K. Ganesan	SSGr.III (Fieldman)	SSGr.IV (Fieldman)	Cochin	24-02-2003
Shri M. Soundarapandian	SSGr.I (Safaiwala)	SSGr.II (Safaiwala)	Tuticorin	24-02-2003
Shri L. Sathan	SSGr.III (Safaiwala)	SSGr.IV (Safaiwala)	Mandapam Camp	26-02-2003
Shri Subhash K. Naik	SSGr.II (Messenger)	SSGr.III (Messenger)	Karwar	06-03-2003

Transfers

	Designation	From	To
Shri S. Chandrasekhar	Sr. Tech. Assistant (T-4)	Nellore F. Centre	Madras Res. Centre
Shri M. Bose	Sr. Tech. Assistant (T-4)	Mandapam Regl. Centre	Cuddalore F. Centre
Shri V.S. Gopal	Tech. Assistant (T-3)	Madras Res. Centre	Nellore F. Centre
Shri S. Selvanidhi	Field Assistant (T-1)	Nellore F. Centre	Madras Res. Centre
Shri A.N. Mohanan	Tech. Officer (T-7-8)	KVK, Narakkal	Cochin HQ
Shri P.M. Aboobaker	Tech. Officer (T-6)	Cochin HQ	KVK, Narakkal
Inter-Institutional transfers			
Shri T.G. Tippetwamy	Tech. Assistant (T-3)	CMFRI, Cochin	NIN, Hyderabad

Retirements

	Designation	Centre	w.e.f.
Dr. V. Sriramachandra Murty	Head, DFD	CMFRI, Cochin	31-01-2003
Shri P.E. Sampson Manickam	Principal Scientist	CMFRI, Cochin	31-01-2003
Shri K. Soman	Tech. Officer (T-5)	Calicut Res. Centre	31-01-2003
Shri M. Ibrahimsa	SSGr.IV(Lab. Attendant)	Mandapam Regl. Centre	31-01-2003
Shri S. Arulsamy	SSGr.III (Messenger)	Mandapam Regl. Centre	28-02-2003
Voluntary Retirement			
Shri S. Muthusamy	Sr. Scientist	Cochin HQ	01-02-2003
Shri P. Raghavan	Photographer (T-6)	Cochin HQ	01-01-2003
Shri P. Karuppayya	Watchman	Mandapam Regl. Centre	01-03-2003

Published by : **Prof. (Dr.) Mohan Joseph Modayil**, Director, CMFRI, Kochi-682 014.

Telephone: 2394867. Fax: 91-484-2394909. E-mail: mdcmfri@md2.vsnl.net.in. Website: www.cmfri.com

Editor: **Dr. (Smt.) Geetha Antony**, Technical Officer

Secretarial Assistance : **Smt. N.R. Letha Devi**.

Glimpses of Events



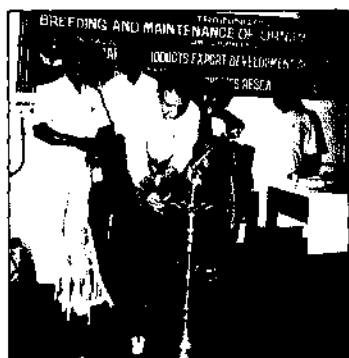
श्रीमती कृष्णा भट्टनागर, प्रधान सलाहकार (कृषि), योजना आयोग और श्री. गौतम बसु, अतिरिक्त सचिव एवं वित्तीय सलाहकार (डेयर / भा कृ अनु प) मुख्यालय में मोलस्क मात्स्यिकी प्रभाग का निरीक्षण करते हुए
Smt. Krishna Bhatnagar, Principal Advisor (Agri.), Planning Commission and Shri Gautam Basu, Additional Secretary and Financial Advisor (DARE/ICAR) visiting the Molluscan Fisheries Division laboratory at Headquarters



माननीय कृषि राज्य मंत्री श्री हुकुम देव नारायण यादव संस्थान के मंडपम क्षेत्रीय केंद्र में मुआइना करते हुए
Hon'ble Minister of State for Agriculture, Shri. Hukumdeo Narayan Yadav, visiting the Mandapam Regional Centre of the Institute



डॉ. एस. अय्यप्पन, उपमहा निदेशक (मा.) डॉ. मोहन जोसेफ मोडायिल, निदेशक, सी एम एफ आर आइ के साथ मुख्यालय मकान के निर्माण कार्य का निरीक्षण करते हुए
Dr. S. Ayyappan, DDG (Fy.) along with Dr. Mohan Joseph Modayil, Director CMFRI inspecting the progress of the construction of Headquarters building



संस्थान के कालिकट अनुसंधान केंद्र में सी एम एफ आर आइ और एम पी ई डी ए द्वारा संयुक्त रूप से आयोजित अलंकार मछली पालन पर प्रशिक्षण कार्यक्रम का उद्घाटन

Inauguration of the Training Programme on Ornamental Fish Culture jointly organised by CMFRI and MPEDA at the Calicut Research Centre

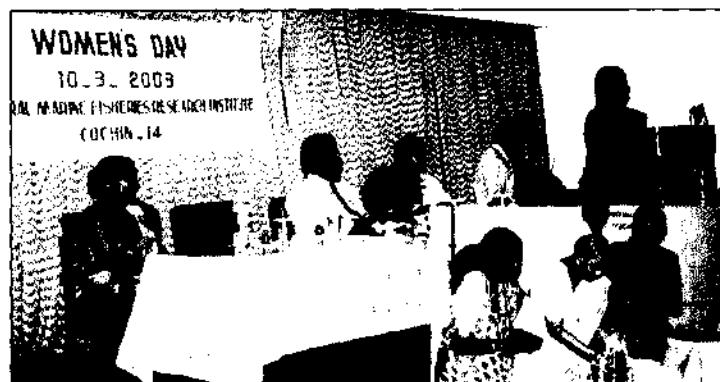


संस्थान के स्थापना दिवस की खुली बैठक में मंचासीन विभिन्न व्यक्तियों का दृश्य
Dignitaries on the dais at the public meeting on the **Institute Foundation Day**



कालिकट अनुसंधान केंद्र में कुदुम्बश्री कार्यक्रम के अंदर आयोजित शंभु पालन प्रशिक्षण का तकनीकी सत्र

Technical session in progress at the **Training in Mussel Culture** under the Kudumbashree programme at the Calicut Research Centre



अंतर्राष्ट्रीय महिला दिवस - कोचीन : मुख्य अतिथि प्रोफसर (श्रीमती) मोनम्मा कोक्काड सभा का संबोधन करती हुई; कालिकट : श्रीमति सुशीला विजयराघवन कार्यक्रम का उद्घाटन करती हुई
International Women's Day Programme: at Cochin chief guest, Prof. (Smt.) Monamma Kokkad addressing staff members; at Calicut Smt. Susheela Vijayaraghavan inaugurating the function

घटनाओं की झलक



व्यय वित्त समिति का दृश्य : बाएं से दाएं ओर - श्री गौतम बसु, अतिरिक्त सचिव एवं वित्तीय सलाहकार (डेयर एवं भा कृ अनु प), श्रीमती कृष्णा भटनागर, प्रधान सलाहकार (कृषि), योजना आयोग, डॉ. एस. अय्यप्पन, उप महा निदेशक (मा.) और श्री. ए.एस. सेठी, अवर सचिव (वित्त)

Expenditure Finance Committee Meeting in progress. From L to R: Shri Gautam Basu, Additional Secretary and Financial Advisor (DARE/ICAR) Smt. Krishna Bhatnagar, Principal Advisor, (Agri.) Planning Commission, Dr. S. Ayyappan, DDG (Fy.) and Shri. A.S. Sethi, Under Secretary (Fy.)



डॉ. एस. इज़ेड क्वासिम, भूतपूर्व सदस्य, योजना आयोग, भारत सरकार प्रथम भारतीय मोती सम्मेलन में उद्घाटन भाषण करते हुए

Dr. S.Z. Qasim, Former member, Planning Commission, Govt. of India, delivering the inaugural address at the **First Indian Pearl Congress** held at Cochin



जलजीव कृषि पोषण पर राष्ट्रीय सम्मेलन के उद्घाटन कार्यक्रम के विशिष्ट व्यक्तियों का दृश्य : डॉ. एस.डी. त्रिपाठी (बाएं से चौथा) भूतपूर्व कुलपति, सी आई एफ ई ने सम्मेलन का उद्घाटन किया Dignitaries at the inauguration of the **National Conference on Aquaculture Nutrition**. The Conference was inaugurated by Dr. S.D. Tripathi, Former V.C., CIFE (IV left)



कुमारी चंचल, फ़िल्मी कलाकार सी एम एफ आर आई द्वारा कोचीन में 6 फरवरी, 2003 को आयोजित मोती प्रदर्शनी का उद्घाटन करती हुई

Ms. Chanchal, cine actress, inaugurating the **Pearl Exposition** organised by CMFRI at Cochin on 6 February



विश्वमछली - भा कृ अनु प परियोजना की अनुवीक्षण कार्यशाला के भागीदार डॉ. मोहन जोसफ मोडयिल, निदेशक, सी एम एफ आर आई के साथ

Participants of the **Review Workshop of WorldFish-ICAR Project** with CMFRI Director, Dr. Mohan Joseph Modayil



श्री ए.के. सक्सेना, प्रधान महा प्रबंधक, भारत संचार निगम लि. एरनाकुलम राष्ट्रीय राजभाषा संगोष्ठी में कर्मचारियों का संबोधन करते हुए

Shri. A.K. Saxena, Principal General Manger, BSNL, Ernakulam, addressing the staff at the inaugural function of the **National Official Language Seminar**