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News Highlights

Cage farming demonstration with Indian pompano launched in Odisha

Shri Pratap Chandra Sarangi, Union Minister of State for Fisheries, Animal Husbandry & Dairying and Ministry of Small and Medium Enterprises, Government of India launched a Project on 'Cage Culture Demonstration of Indian Pompano (*Trachinotus mookalee*)' of ICAR-CMFRI at Bahabalpur, Odisha. The project is funded by the National Fisheries Development Board, Hyderabad. Shri Sarangi highlighted various developmental schemes framed by

Headlines



Union Minister for Fisheries, Animal Husbandry & Dairying visits ICAR-CMFRI

Shri Giriraj Singh, Hon'ble Union Minister for Fisheries, Animal Husbandry & Dairying visited the Mandapam Regional Centre

of ICAR-CMFRI on 23 January 2021. During his interactions with sea cage farmers, seaweed farmers and marine ornamental fish seed rearing SHGs of Ramanathapuram and Thoothukudi districts in Tamil Nadu, he stressed the need for promoting mariculture to increase the fish production and improve the livelihoods of Indian

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the Government of India under the *Pradhan Mantri Matsya Sampada Yojana*



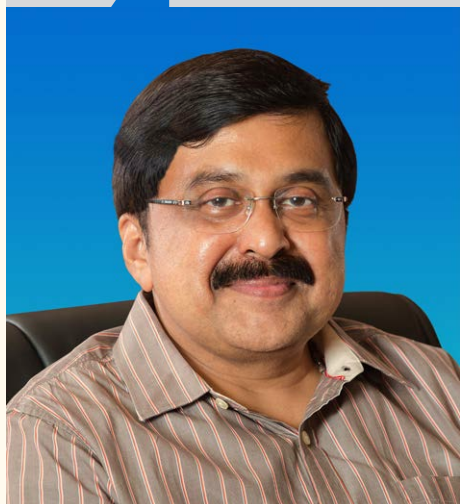
(PMMSY) scheme and expressed hope that the Marine Cage Farm at Chandipur-Bahabalpur would become a model demonstration farm to help the farmers understand the benefits of cage fish farming. Dr. J. Balaji, Joint Secretary (Marine Fisheries), and Shri Sagar Mehra, Joint Secretary (Inland Fisheries), from the Ministry of Fisheries, Animal Husbandry & Dairying, Government of India were present on the occasion. Dr. C. Suvarna, Chief Executive, National Fisheries Development Board, Hyderabad, senior officials of Government of India, Government of Odisha and ICAR institutes participated in the event ♦

Director Speaks

Amid the challenges posed by the COVID 19 pandemic, the institute has strived to carry out its various mandated activities. It is indeed satisfying that mariculture programmes provided livelihood avenues to the fishermen community even amidst the pandemic. Several outreach activities and awareness programmes about the *Pradhan Mantri Matsya Sampada Yojana* and allied fisheries development related schemes were carried out at various centres. With breakthrough in breeding of Picnic seabream, there is scope for a diversified mariculture species basket. The Marine Mammal Watch programme was launched and marine cage farming demonstration in new locations were set up. We can sincerely hope that these initiatives will serve the cause of marine fisheries sustenance and development.

With best wishes

A. Gopalakrishnan
Director, ICAR-CMFRI



News Highlights

Indian pompano harvested from coastal ponds and cage farms in Andhra Pradesh



Harvest of coastal pond farmed Indian pompano and orange spotted grouper was held on 11.03.2021 at Komaragiriapatnam, East Godavari district, AP. Cage farmed Indian pompano and orange spotted grouper were harvested on 12.03.2021 at Visakhapatnam. As part of an R & D

project funded by the National Fisheries Development Board, the Visakhapatnam Regional Centre of ICAR-CMFRI is carrying out several methods of culturing these two prime mariculture species at different sites. Dr. C. Suvarna, IFS, Chief Executive, NFDB was present on the occasion ◆

Farmed oysters harvest under SCSP program

The initial harvest of farmed oysters from farms in Mulki Estuary operated by

the Scheduled caste beneficiaries selected under Sub-Plan Scheme was made on 10 March 2021. The officials and elected representatives of Mulki Town Panchayat and Fisheries Department, Dakshina Kannada participated in the event ◆



Women fish farmers benefit from open water cage culture project



Cage farming activities were initiated by five women beneficiaries at Kottappuram, Thrissur district with funding support under the CMFRI-NFDB Project on “Open water cage culture in selected districts of Kerala and Karnataka” during 2020-2021. The harvest of fishes such as Asian seabass, red snapper and pearl spot stocked in more than a dozen cages installed in the area was conducted on 31-03-2021. Each snapper which was reared in cages for a period of 10 months had attained 2.0 to 3.0 kg and earned good market price. The scientists and staff of the mariculture Division at Kochi participated in the inauguration of cage harvest.

(Reported by: Mariculture Division) ◆

Extending entrepreneurship support to transgenders in fisheries sector under SCSP

The institute has extended support to Athidhi Achuth, a transgender belonging to the Scheduled Caste community from Kerala, to turn entrepreneur in fisheries by providing a modernised fish vending stall in Kochi city under the Scheduled Caste Sub Plan (SCSP) scheme of the Government of India. With the official launch of the fish vending stall on 15th March 2021,

ICAR-CMFRI also provided fresh and live fishes for the first sale arranged from cage fish farms and biofloc units of SC & ST beneficiaries. By helping the fish farmers in the SC community to sell without the influence of middlemen quality fresh and live fish at reasonable rates to the general public livelihoods are ensured for all stakeholders. The function was

inaugurated by the cine artists Shri Harisree Ashokan and Ms. Molly Kannamally and attended by several public figures and well-wishers. Dr. K Madhu, Chairman of the SCSP&TSP programme in ICAR-CMFRI handed over the key of the stall to Athidhi. ICAR-CMFRI has been providing training in cage fish farming and allied activities to several beneficiaries across the country, to make them small-scale entrepreneurs and has focused on transgender members in the second phase of implementing the SCSP scheme ◆



Research Highlights



Innovative seeded mussel ropes

Innovations in Longline farming of mussels give encouraging results

Longline mussel farming trials were conducted at Kanyakumari to standardize culture techniques in open-sea conditions. Several innovations were made in the culture methods, such as; custom made combination rope with an inner nylon core, and an outer layer of coir rope was used as the branch lines. The internal nylon core will provide better breaking strength so that ropes of length more than 5 m could be used, improving the productivity per rope, and the outer coir layer provided more surface area, which is fibrous for the better attachment of mussels and reducing slippage of mussels. Another innovation was the replacement of mosquito netting for seeding with

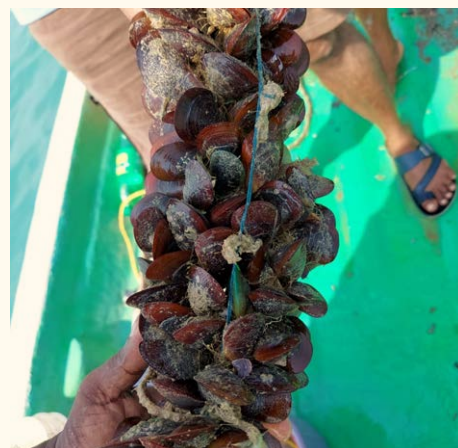
custom made cotton netting, which can cope with rapid weathering in the rough sea condition till the seed attaches firmly to the rope. The mosquito netting with low weathering strength usually resulted in the loss of seed due to slippage and non-attachment. The present netting guaranteed the proper attachment of seed mussels in the rope, increasing the production. An outer mesh covering the seeded rope was also used to prevent predation by fishes and crabs, and it also helped in recovering the fallen off mussels—this need to be used only in places where predation is high. The trials were successful, and mussels showed better attachment and growth ♦



Seeding of mussel ropes



Mussel seeds showing good attachment and growth during monitoring



Harvested mussel

Women beneficiaries supported under NICRA-SCSP

The Madras Regional Station of ICAR-CMFRI extended support to 55 women beneficiaries of Kottaikadu village in Chingleput district, Tamil Nadu, under the SCSP component of NICRA project. The women fish for oysters in nearby creeks using small

country crafts and wading in neck-deep waters during the daytime for nearly 6 hours. The oysters are shucked and the meat sold locally for their living. A time-consuming and laborious process, most of them constantly sustain injuries on their hands and feet in the process. To

lend a helping hand, the beneficiaries identified following discussions with the village leaders were given field accessories like customized gloves, shucking knives and socks to carry out their fishing and shellfish processing activities in a safe manner.

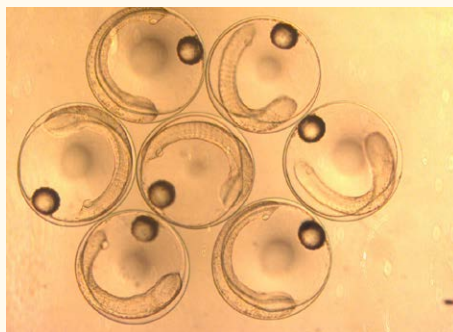
First successful hatchery seed production of Picnic seabream in India



Acanthopagrus berda

Picnic seabream or black seabream, *Acanthopagrus berda* is an important food fish with high economic value, having strong disease resistance and high growth rate. Carnivorous in nature it feeds mainly on echinoderms, worms, crustaceans, molluscs and small fishes and is a protandrous hermaphrodite. Price of this fish in local markets of India is about ₹ 470 per kg. Fishes collected from Karwar region were reared in the Marine cage farm of the Karwar Regional Station of ICAR-CMFRI. Special maturation diets and regular ovarian biopsy was carried out to select matured fishes for breeding programme. Matured fishes were available during September to March and females with ripe ovary and males with oozing milt were shifted to the Marine hatchery complex.

Successful breeding and seed production was achieved for the first time in India in February 2021 through induced breeding techniques using Salmon GnRH –Analogue hormone (OVAFISH, Bhoomi Aqua International, India) as the inducing agent. The fishes spawned after 36 hours of inducement and the pelagic eggs hatched after 22 to



Somite stage of fertilised egg



Fish Larvae (14 DPH)



Fish Larvae (0DPH)



Fish larvae (24 DPH)

24 hours at a temperature of 28 to 30°C. Fecundity was 0.25 million per female (450 g) and 86% of the eggs hatched after 24 hours. Experimental larval rearing was carried out in 100 litre tanks with various live feed organisms such as copepods, rotifers and Artemia; stocking

100 eggs per litre. Metamorphosis of the larvae initiated in 24th day post hatch (DPH) with 9 % survival in a tank.

(Reported by: Suresh Babu, P. P., A.Anuraj, Jayasree Loka, P.Srinivasa Rao, S.M.Sonali, N.D. Praveen and N. G. Vaidya, Karwar Regional Station) ◆

Symbiotic relationship of porcelain crab with bubble-tip anemone

A cryptic, commensalistism porcelain crab (*Neopetrolisthes maculatus*) association on the bubble-tip anemone (*Entacmaea quadricolor*) was observed during a sea anemone collection along the Gulf of Mannar region. Porcelain crabs or false crabs are anomuran crustaceans belonging to family Porcellanidae. The species of the genus *Neopetrolisthes* (*N. maculatus* (H. Milne Edwards, 1837), *N. alobatus* (Laurie, 1926) and *N. spinatus* Osawa & Fujita, 2001) are well known for their remarkable spot patterns and for being symbiotically associated with a number of sea anemones. Earlier studies reveal that *N. maculatus* (recorded as *Petrolisthes ohshimai* in Miyake, 1937) in association giant sea anemone, *Stichodactyla* (recorded as



Stoichactis sp.) was recorded from the Gulf of Mannar (Sankarankutty, 1963). Kumaralingam et al. (2015) reported the association of *N. spinatus* with large sea anemone, *Heteractis crispa* from the Andaman Islands. The present study reveals that out of 10 different bubble-tip anemones symbiotic relationship was noticed only in two individuals.

(Reported by: L. Ranjith, C. Kalidas, M. Kavitha, D. Linga Prabu & P. S. Asha) ♦



Recommendations for the Ring Seine fisheries in Andhra Pradesh.

Acting on the request from Government of Andhra Pradesh, a technical report 'Recommendations on the usage of Ring Seines in Andhra Pradesh' was submitted to the Department of Fisheries on 25.01.2021. The report was prepared by Dr. Shubhadeep Ghosh, Dr. H. M. Manas, Dr. M. Muktha, Dr. Indira Divipala and Dr. F. Jasmin (ICAR-CMFRI) along with committee members of ICAR-CIFT, Visakhapatnam and CIFNET, Visakhapatnam.

Technology support extended for multispecies marine finfish hatchery

A multi species marine finfish hatchery has come up in Kakinada, Andhra Pradesh with technology support by the Mandapam Regional Centre of ICAR-CMFRI and funding support of the National Fisheries Development Board, Hyderabad. Broodstock development of marine finfishes such as Cobia, Silver pompano, Indian pompano and Asian Seabass are in progress. Dr. C. Suvarna, IFS, Chief Executive, NFDB, Hyderabad visited the hatchery MSR Aqua Pvt. Ltd. located at Konapapapeta,

Kakinada on 11th March, 2021. Shri. C. S. Venugopala Krishna, Hon'ble Minister for Backward Classes Welfare, Andhra Pradesh, inaugurated the Recirculatory aquaculture system (RAS) facility established for the broodstock development of these premium marine fishes for mariculture. Dr. R. Jayakumar, Head-in-Charge, Mandapam Regional Centre, Dr. Shubhadeep Ghosh, Head-in-Charge, Visakhapatnam Regional Centre and Shri. G. Rathinaraj, Executive Director, NFDB were present ♦

Outreach



Hatchery produced marine ornamental fish *Pseudanthias marcia*

Mariculture training programmes under ICAR-DOF Convergence

Six national training programmes under an ICAR-Department of Fisheries (DOF) Convergence model were organised by the Vizhinjam Regional Centre of ICAR-CMFRI during January to March 2021 period. This programme created much awareness about the mariculture practices and the ongoing schemes aimed at developing the fisheries sector under the *Pradhan Mantri Matsya Sampada Yojana* (PMMSY). In total, 1478 participants from different states of India, including a few participants from the middle east and southeast

Asian countries. Training programmes focused on marine finfish seed production and farming, marine ornamental fish production; breeding, seed production and farming of green mussel and image (mabe) pearl production. All participants were given e-certificates.

Seed production and farming technologies for Green mussel, a bivalve with high consumer appeal, especially on the west coast of India, was first developed in the country by ICAR-CMFRI. Recently Vizhinjam Regional Centre standardized

the mass seed production technology and developed a cost-effective nursery rearing system for Green mussel. This paved the way for initiatives for the development of hatcheries in states like Maharashtra and Kerala to supply good quality mussel seed to farmers from captive hatchery systems instead of depending on an erratic supply from wild stocks. Vizhinjam Regional Centre has also achieved success in development of seed production technologies for prime marine ornamental fishes such as Anthias, clownfishes and damselfishes. The marine pearl culture programme started in 1972 by the institute succeeded in technology development for spherical pearl production. Subsequently innovative technologies for designer image pearls were tried with good results and the training programme focused on extending this technology among interested stakeholders. With the target of increasing marine fish production through mariculture to 4 to 5 million t several fisheries development schemes are operating in the country. Vizhinjam Regional Centre also has focused on broodstock development and seed production technologies for prime aquaculture species such as Pompanos and Emperor fishes and participants of the training programme were also apprised of these ♦



Mass seed production using upwell- downwell technology for Green Mussel



Designer Mabe pearl pendants



Hatchery produced juveniles of *Lethrinus lentjan*, a prime food fish species for mariculture

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fishermen. Dr. A. Gopalakrishnan, Director, ICAR-CMFRI welcomed the Hon'ble Minister and accompanying officials and briefly explained the various achievements of the institute in promoting mariculture as an alternative livelihood option for the fishers. Dr. R. Jayakumar Head in Charge, Mandapam Regional station offered the vote of thanks.

The Union Minister also visited the facilities such as marine finfish hatchery, marine ornamental fish seed production unit and the NFDB funded National Marine Fish Brood Bank functioning at the Mandapam Regional Centre. With the support of Indian Coast Guard, a visit to the sea cage farming sites in the Gulf of Mannar was also arranged. Dr. Rajiv Ranjan, IAS, Secretary, Ministry of Fisheries, AH&D; Dr. J. Balaji, IAS, Joint Secretary (Fisheries) Department of Fisheries; Dr. K. Gopal IAS, Principal Secretary, Animal Husbandry, Dairying & Fisheries, Govt. of Tamil Nadu; Shri J. Jayakanthan IAS, Commissioner of Fisheries, Govt. of Tamil Nadu; Shri. Dinesh Pon Raj Oliver IAS, District Collector, Ramanathapuram;





Marine Mammal Watch Programme launched

A research cruise for assessment marine mammal population of the EEZ was jointly launched by ICAR-CMFRI, the Marine Products Export Development Authority (MPEDA) and the Fishery Survey of India (FSI). This joint initiative of the three major central agencies functioning under different ministries assumes significance in the wake of emerging seafood trade-related challenges faced by the fishermen targeting high-value resources and the export market sector in India. According to the National Oceanic and Atmospheric Administration (NOAA), USA, seafood exporting countries should not allow intentional killing of marine mammals in commercial fisheries and strictly adhere to norms laid out in Marine Mammal Protection Act (MMPA) of their country. For countries exporting fish and fish products, the US has given a five-year exemption period starting January 1, 2017 to develop regulatory programs by assessing marine mammal stocks, estimating by-catch, calculating by-catch limits and reducing total by-catch. The cruise organized by Dr. R. Jeyabaskaran, Principal Investigator, ICAR-CMFRI is aimed at closely observing and monitoring of marine mammal stocks and includes collection of oceanographic parameters. The cruise was flagged off by Shri. K S Srinivas, IAS, Chairman, MPEDA in the presence of Dr A Gopalakrishnan, Director, ICAR-CMFRI and Dr L Ramalingam, Director General, FSI.

Dr. B. Meenakumari, former DDG, ICAR and Chairperson RAC, ICAR-CMFRI, Dr. V. Kripa, Member Secretary, Coastal Aquaculture Authority, Shri. G. Rathinaraj, Executive Director, NFDB and Shri K. Muraleedharan, Member of Institute Management Committee, ICAR-CMFRI were present at the programmes organised.

Leaflets on the Govt. of India's *Pradhan Mantri Matsya Sampada Yojana* (PMMSY), beneficiary oriented scheme for promoting sea cage farming, marine ornamental fish breeding & rearing and seaweed farming were released on the occasion. The 'Jellysafe' kit developed to protect from jellyfish sting attacks were also distributed to fishermen. Beneficiaries of NFDB funded projects, received seeds of cobia and marine ornamental fish from the minister while seaweed seedlings were given to seven women SHGs functioning under Central Government's SCSP programme implemented in the institute ♦

Research Highlights

An emerging fishery for Whelks

In Thoothukudi, gastropods are targeted by skin diving whereas in gillnet and trawl net these resources are landed as a by-catch. Since February 2021, the fishermen of Therespuram have commenced the exploitation of *Babylonia* spp (*Babylonia zeylanica* and *B. spirata*) using special nets. Rings of 45 cm diameter and made of 10 mm mild steel rod are fixed with 10 mm meshed nylon net, forming a conical bag net. Decomposed fish are attached as baits to a 10 mm nylon rope across the ring. A single boat carries around 100 such units which are fixed on the main rope at an equal distance of 10 feet and operated for 20 to 30 minutes per haul. The stinky fish waste attracts the whelks to feed on it which get trapped in the net. A maximum of 20 hauls can be carried out per day and average catch ranged from 0.5–5 kg per haul. A boat with 7 fishers can exploit 500 to 1500 kg of *Babylonia* and around 100 boats are engaged in this area with an average catch of 500 kg/ unit/day. The landing price is fixed at about 60 per kg at Thoothukudi and these are sent to Kerala from where it is exported to foreign countries.

(Reported by M. Kavitha, L. Ranjith, C. Kalidas and D. Linga Prabu) ♦



Outreach to stakeholders in marine fisheries sector under PMMSY

Seventeen awareness cum outreach programmes on *Pradhan Mantri Matsya Sampada Yojana* (PMMSY) were organized by the Mandapam Regional Centre of ICAR-CMFRI during December 2020 to March 2021. Among the 3185 participants, 1682 were fishermen and

1503 fisherwomen who benefitted through this programme. Along with PMMSY schemes, awareness on mariculture technologies like sea cage farming, marine ornamental fish seed rearing, seaweed farming, marine biodiversity conservation, responsible

fishing, sea safety, marine pollution & CITES listed elasmobranch species were also given by the scientists of the centre. Officials from the state fisheries department also participated in the programmes.

Puri Field Centre of ICAR-CMFRI



organised training programme in collaboration with the Odisha State Fisheries department on 'Sustainable and Responsible Fishing' on 24 March, 2021 at Paradeep Fisheries Harbour, Odisha. 52 participants including fishers, traders, boat owners, auctioneers, officials from fisheries department, coast guard, marine police and Odisha Marine Fish Producers Association (OMFPA) and NETFISH-MPEDA, Bhubaneswar; attended the meeting.



Online Training programme with the theme of 'Artificial reefs in coastal fisheries management' was conducted on 15.02.2021 for 22 fishermen participants by Madras Regional Station with Dr. Joe K. Kizhakudan and Dr. Shoba J. Kizhakudan, as Course Co-coordinators. Training on the various aspects of oyster farming was arranged by the Mangalore Regional Centre for farmers in Kundapura on 20 March 2021.

(With inputs from Mangalore & Mandapam Regional Centres; Madras Regional Station and Puri Field Centre) ◆

MoU for research collaboration on deep-sea fauna signed

ICAR-Central Marine Fisheries Research Institute signed an MoU with Centre for Marine Living Resources and Ecology, Ministry of Earth Sciences, for research collaboration in exploration and assessment of deep-sea fauna in Indian EEZ.



Online training programmes organised under ICAR-DOF convergence

Visakhapatnam Regional Centre conducted training programmes of contemporary interest to stakeholders and aimed at promoting marine fisheries production and sustainability. These included 'Breeding and seed production- grouper' on 11-12.02.2021 with 153 participants ; 'Awareness to curb IUU fishing' on 25-26.02.2021 and 'Sustainable and Responsible Marine Fisheries' on 15-16.03.2021 with 50 participants each. All scientists and technical personnel of the centre attended the program. Tuticorin Regional station, Thoothukudi organised training programme on "Sea cage culture" during 29th and 30th January 2021 in Tamil & 22 and 23 February 2021 in English .

Carcasses of Olive Ridley washed ashore at Visakhapatnam

On 22nd January 2021, four decomposed carcasses of turtle and a porpoises were observed within a one km stretch on the Eden beach near Bheemunipatnam, Visakhapatnam. The turtles identified as Olive ridley, *Lepidochelys olivacea* from the intact scute pattern on carapace of specimens which ranged from 63 to 75 cm carapace length. The porpoise identified as *Neophocaena phocaenoides* measured 76 cm. During nesting seasons in the month of November to March, Olive Ridley turtles migrate along the coast of Tamil Nadu and Andhra Pradesh for reaching the mass nesting beaches in Odisha and the coastal waters of Andhra Pradesh forms part of the migratory route. Both species categorized as Vulnerable on the IUCN Red List (IUCN, 2020) are listed in Appendix I of CITES (Convention on International



Trade in Endangered Species of Wild Flora and Fauna) as well as Schedule I of the Indian Wildlife (Protection) Act, 1972. As per the Andhra Pradesh Marine Fishing Regulation Act (APMFRA), 1994 trawlers are mandated to use Turtle Excluder Device (TED). Andhra Pradesh Forest Department and National Thermal Power Corporation (NTPC) Ltd jointly initiated the 'Sea turtle Conservation Project' under the 'Corporate Social Responsibility and Sustainable Development Initiative'. Community Based Sea Turtle Protection and Conservation

Programme has been taking place for the past 21 years jointly by the Andhra Pradesh Forest Department and Visakha Society for Protection and Care of Animals to protect and conserve the sea turtles. Village level sea turtle protection committees are also constituted at each Nesting Beach Zone for the protection of turtles and hatchlings during the annual nesting period.

(Reported by: Pralaya Ranjan Behera, Loveson L Edward, H.M. Manas and Shubhadeep Ghosh, Visakhapatnam Regional Centre) ♦

World Water Day celebrated

World water day was celebrated in ICAR-CMFRI on 22nd March 2021. In the programme organised at Mangalore Regional Centre, Mr. Kirtikumar, Environmental Officer, Karnataka State Pollution Control Board spoke about measures adopted for protection of natural water bodies and released the poster on

the theme 'Valuing water', prepared by the Regional Centre. This was followed by a presentation by Dr. Bindu Sulochanan, Principal Scientist, on the role of ocean in water dynamics. At Madras Regional Station, a quiz programme on the topic of water conservation and allied was conducted for staff and prizes were distributed to the winners. Dr. K. Phani Prakash, Joint Director of Fisheries, Visakhapatnam was the chief guest in the function organised at Visakhapatnam Regional Centre. Observing

Covid protocols elocution competition for the staff on the topic 'Save water, and it will save you' and online quiz competition circulated through social media for awareness creation among the students, fishermen associations, research scholars and staff of other fishery institutions, in which about 140 participants took part with zeal was organised. A technical talk on the topic 'Save Water, It's our Lifeline' was also delivered by Dr. Loveson Edward, scientist at the centre ♦





To propagate use of Hindi in science publications, a National Scientific Hindi Webinar was organized with the topic 'Seaweeds for Blue Economy' by ICAR-CMFRI on 9th March, 2021 at Kochi. Dr. B. Meenakumari, Former DDG (Fisheries) was the Chief Guest. Dr. A. Gopalakrishnan, Director, ICAR-CMFRI presided. Dr. Paul Pandian, Commissioner of Fisheries, Ministry

of Fisheries and Animal Husbandry and Dr. P. Pravin, ADG (Marine Fisheries) were Guests of Honour. Smt. Seema Chopra, Director (OL) ICAR, New Delhi delivered felicitation. The abstracts of papers compiled were released on the occasion.

(Reported by: Hindi Cell & Fishery Environment Management Division) ♦

Foundation Day celebrated

The 74th Foundation Day of ICAR-CMFRI was celebrated on 3 February, 2021 by the various regional centres and stations of the institute following COVID 19 protocols. At the Mandapam Regional centre, a cultural programme was organized with Shri. K. Muraleedhran, Institute Management committee member of ICAR-CMFRI as the chief guest and prizes distributed to the winners of competitions held during

Hindi Day celebration. An 'Open House' for the Staff and family members of Indian Coast Guard Station, Mandapam and Indian Naval Station- INS Parundu, Uchipuli, Ramanathapuram District was also organized. At Madras Regional Station the Chief Guest Dr. C. Sylendra Babu, IPS, Director General of Police, Director, Fire & Rescue services, Chennai inaugurated the function and addressed the staff members ♦



World Hindi Day celebrations

Every year 10th January is celebrated as World Hindi Day to commemorate the anniversary of the first World Hindi Conference held in Nagpur on January 10, 1975 to promote Hindi language worldwide. The Official Language Implementation Committee (OLIC) of the Mandapam Regional Centre of ICAR- CMFRI conducted Cartoon and Hindi vocabularies contests for the children of staff of Mandapam Regional Centre staff on 11th January 2021 following safety protocols during COVID 19 pandemic.

Regional Official Language Award for CMFRI

ICAR-Central Marine Fisheries Research Institute, Kochi bagged Regional Official Language Award of Department of Official Language, Ministry of Home Affairs for the period 2019-20 among the Central Govt. Organizations in South-West Region ♦

SAC Meeting of KVK

The 2nd Scientific Advisory Committee (SAC) meeting of Krishi Vigyan Kendra (KVK)-Lakshadweep was held at State Guest House, Agatti on 28 February, 2021. Aimed at working out strategies for agriculture and allied sector development in the islands the meeting was chaired by Dr. V. Venkatasubramanian, Director, ICAR-ATARI, Bengaluru. Dr. Jiju P. Alex, Director, Directorate of Extension, Kerala Agricultural University, Thrissur, extension officers from the state departments, entrepreneurs, subject matter specialists of KVK and others were present. The meeting highlighted work on crop diversification, bio-control of pests initiated by KVK in the island. Dr. P. N. Ananth, Head, KVK-Lakshadweep presented the SAC report.

Exhibition

Display of the products/services and books/publications of ICAR-CMFRI was arranged by the Puri Field Centre at the International Conference Agri Vision-2021 held during 14-16, March 2021 at Institute of Life Sciences, Bhubaneswar, Odisha, India. The honourable minister Shri Pratap Chandra Sarangi, Hon' Minister of State for Animal Husbandry, Dairying and Fisheries and Micro, Small and Medium Enterprises, Government of India, visited the stall.



International Women's Day celebrated

International women's day was celebrated on 8 March 2021 at Headquarters and regional centres with honouring of women achievers in the marine fisheries field. At Headquarters, Ms. Subi Suresh, TV and Media personality delivered an online talk and two progressive fish farmers and entrepreneurs, Ms. Raji George, and Ms. Smija M. B., who were instrumental in empowering women to carve niches for themselves in challenging marine fish farming sector were honored. Mangalore Regional Centre felicitated three successful fisherwoman entrepreneurs in the marine fisheries sector. At Madras Regional Station, a motivational talk by Ms. Preethi Baburajan, Operation Manager–Treasury Operations, Shell Oil Company Chennai was arranged ◆



Distinguished visitors

Dr. C. Suvarna, IFS, Chief Executive, National Fisheries Development Board (NFDB), Hyderabad visited the Mandapam Regional Centre on 05th February 2021 and reviewed the NFDB funded projects. She also interacted with sea cage farmers, seaweed farmers and marine ornamental fish seed rearing SHGs of Ramanathapuram and Thoothukudi districts and participated in the sea ranching of the Green tiger shrimp (*Penaeus semisulcatus*) seeds in Gulf of Mannar. She visited Munaikadu village in Palk Bay to observe the seaweed farming, sea cage farming and Integrated Multi Trophic Aquaculture (IMTA) activities and interacted with progressive fisherwomen farmers involved in these activities.



Prof. Sunil Kumar Singh, Director, CSIR – National Institute of Oceanography (NIO), Goa along with a team of scientists and research scholars visited the Karwar Regional Station on 1st

March 2021 to observe cage farming activities, hatchery technologies and seed production protocols successfully implemented by ICAR – CMFRI in recent years ♦

Personnel

Programme participation

Dr. A. Gopalakrishnan, Director, attended the Directors' meeting with Dr. J. K. Jena, Deputy Director General (FS), ICAR, KAB-II, New Delhi via webinar on 15.02.2021

Attended meeting organized by Ministry of Environment, Forests and Climate Change, chaired by the Addl. Director General of Forests (WL) & Director, Wildlife Preservation regarding marine fauna conservation activities and policies on 16.02.2021

Attended the Virtual Launch ceremony of Research Innovation Network Kerala (RINK) by Dr. K M Abraham, Chairman–Kerala Development and Innovation Strategic Council (KDISC) on 24th February 2021.

Attended the 26th meeting of the National Committee on introduction of Exotic Aquatic species into Indian waters held on March 2,

2021 under the Chairmanship of Joint Secretary (Inland Fisheries) through Video Conference.

Attended the Research Advisory Committee meeting held on 04th & 05th March, 2021. Dr. B. Meenakumari, Former DDG, ICAR & Chairperson, RAC and Dr. Pravin Puthra, ADG (Marine Fisheries), ICAR were present during the Review of the Research work done at ICAR-CMFRI, Kochi.

Attended meeting with Marine Stewardship Council officials on 09.03.2021 regarding Marine Stewardship Council Certification of fisheries.

Dr. Prathibha Rohit attended the XIIth Scientific Advisory Committee (SAC) meeting of ICAR-Krishi Vigyan Kendra, Dakshina Kannada Mangalore on 23.1.2021 at College of Fisheries Campus, Mangaluru.

was nominated to attend the following: 4th online session of IOTC Working Party on Implementation of Conservation and

Management Measures session of the Working Party (WPICMM04) during 15-17 February 2021; Management Strategy Evaluation (MSE) Task Force of the Working Party on Methods of IOTC during 1-5 March 2021; Special Session of the IOTC (SS4) during 8-12 March 2021 and seventh session of the Technical Committee on Allocation Criteria (TCAC07) during March 22-25, 2021

Dr. A. P. Dineshbabu delivered an online talk on "Application of GIS in marine fisheries resources mapping and marine fisheries management" on 02-03-2021 under NHEP (National Agricultural Higher Education Project), ICAR, New Delhi.

Dr. Rajesh K. M. delivered a talk on 'Climate change – Perspectives for Fisheries Sector' in workshop on "Mainstreaming Climate Change in Development Processes" organized by NABARD on 23.03.2021 at Bankers Institute of Rural Development (BIRD), Mangaluru.

Awards & recognition



Dr. Kajal Chakraborty, Principal Scientist, Marine Bio-technology Division, ICAR-CMFRI was selected for Biotech Product, Process Development and Commercialization Award 2020 of the Department of Biotechnology, Government of India



Ms. L. Remya, Scientist was awarded PhD degree (Aquatic Environment Management) from ICAR-Central Institute of Fisheries Education on 03rd March, 2021.

Retirements



Shri R. V. D. Prabhakar

Technical Officer

31.01.2021

Visakhapatnam Regional Centre



Shri Raghunadhan K.

Administrative Officer

28.02.2021

ICAR-CMFRI, Kochi



Shri T. P. Renilkumar

Skilled Support Staff

31.03.2021

Karwar Regional Station

Promotions

Name & Designation	Promoted as	w.e.f
Smt. L. Saritha Stenographer Grade-III	Personal Assistant	01.01.2021
Shri Ganesh Bhatkal Technical Officer (Retd.)	Senior Technical Officer	01.01.2019
Shri Gouri Sankara Rao Technical Officer	Senior Technical Officer	22.06.2019

Voluntary Retirement

Name	Designation	w.e.f
Dr. P. P. Manojkumar	Principal Scientist	01.01.2021
Shri C. P. Umasankar	Upper Division Clerk	02.02.2021

Resignation

Name	Designation	w.e.f
Shri Ashish Chobey	Assistant Administrative Officer	10.03.2021
Shri Bhatt Bhargav H.	Technician	25.03.2021

Transfer

Name & Designation	From	To	w.e.f.
Dr. C. P. Suja , Principal Scientist	Tuticorin Regional Station	ICAR-CMFRI, Kochi	01.02.2021
Shri Indranil Mukherjee , Technician	Digha Regional Station	Kakdwip Data Collection Point	22.03.2021

Inter-Institutional Transfer

Name & Designation	From	To	w.e.f.
Dr. P. Natarajan Ananth , Senior Scientist	ICAR-CIFA, Bhubaneswar	KVK (Lakshadweep)	20.01.2021
Dr. A. R. Anuja , Scientist	ICAR-IASRI, New Delhi	ICAR-CMFRI, Kochi	28.01.2021
Dr. Vivekanand Bharti , Scientist	ICAR-CMFRI, Kochi	ICAR Research Complex for Eastern Region, Patna	30.01.2021
Ms. R. Bavithra , Scientist	ICAR Research Complex for Eastern Region, Patna	ICAR-CMFRI, Kochi	01.02.2021
Dr. J. Charles Jeeva , Principal Scientist	ICAR-CIWA, Bhubaneswar	Visakhapatnam Regional Centre of ICAR- CMFRI	18.02.2021
Shri C. H. Rama Rao , Skilled Support Staff	ICAR-CIARI, Port Blair	Visakhapatnam Regional Centre of ICAR- CMFRI	12.03.2021



ICAR-CMFRI

The Central Marine Fisheries Research Institute is a premier research institute under the Indian Council of Agricultural Research and focusses on research and training in marine fisheries and mariculture.

Cadalmin is the quarterly newsletter of ICAR-CMFRI. This publication gives an insight into the major events of the institute, besides highlighting the salient research findings for the benefit of various stakeholders in the marine fisheries sector.

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