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Newsletter of ICAR-Central Marine Fisheries Research Institute

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News Highlights

In the latest ranking of the Indian Council of Agricultural Research (ICAR) ICAR-Central Marine Fisheries Research Institute (CMFRI) has won the first position in the category of Fisheries and Animal Science institutes in the country. The ranking was based on the institute's performance in research and other activities during the period 2019-2021. Among 93 institutes under all divisions of Crop Science, Horticultural Science, Natural Resource Management, Agricultural Engineering, Animal Science and Fisheries Science in ICAR, it achieved the third position. Efforts to popularise mariculture

ICAR-CMFRI ranks first among Fisheries & Animal Science research institutes in India



activities through marine fish farming in cages, seaweed farming, technology development for breeding of commercially important fishes, research initiatives to develop nutraceutical products from marine organisms, inputs for making relevant policies for sustainable marine

fisheries, studies on socio-economics aspects in the fisheries sector and extension activities were major activities the institute undertook during the period. Director Dr. A. Gopalakrishnan, congratulated the entire ICAR-CMFRI family on the achievement ♦

Natural Remedy for non-alcoholic fatty liver disease

A nutraceutical for preventing non-alcoholic fatty liver disease (NAFLD) has been developed by ICAR-CMFRI. The product, LivCure extract, is from natural bioactive components extracted from seaweed using an eco-friendly methodology. The Pre-clinical trial showed the product's potential to inhibit hydroxymethyl glutaryl reductase and other pleotropic target receptors associated with dyslipidemia and pathophysiology leading to NAFLD.

For commercial production of the nutraceutical, ICAR-CMFRI inked a pact with M/S. Emineotech, a private limited company dealing with health products. The product is expected to hit the market within four months and will be made available on Amazon, Flipkart and other leading e-commerce platforms for online sale, apart from physical market networks across the country.

Reported by: Kajal Chakraborty, Marine Biotechnology, Fish Nutrition and Health Division ♦



It is a proud moment for ICAR-CMFRI which has been ranked first among the Fisheries and Animal Science Institutes functioning in ICAR, for the period 2019-2021. The particular period was challenging because of the covid pandemic and hence this achievement is significant for the entire ICAR-CMFRI family. Sustained efforts to popularize sea farming technologies and conservation of marine resources have taken effect. Sea ranching activities for pearl oyster in the Gulf of Mannar and extending biofloc technologies for empowering fish farmer community were successful. The efforts to promote a healthy and sustainable marine fisheries should continue through appropriate technology transfers and training programmes.

With best wishes

A. Gopalakrishnan

Director, ICAR-CMFRI



Biofloc fish farming initiative to promote employment, livefish market and entrepreneurship development



ICAR-CMFRI has initiated Biofloc fish farming in 5 villages without access to marine or brackish water source, under its SCSP and TSP programme. This has opened up a livelihood option for local women and needy farmers in Ernakulam, Thrissur, Kottayam, and Idukki districts. The farmers belonging to the self-help group Sreelekshmi of Cheranalloor village, Five star SHG Vengola Village (Ernakulam), Jelarani SHG of T V. puram Village (Kottayam), Team Trust and Green Fish SHG, Elapally Village (Idukki), and Sky heaven fisheries, Venkitangu Village, Thrissur were given hands on training on various aspects of

biofloc farming with Gift Tilapia seeds provided besides other accessories. Dr.A. Gopalakrishnan, Director, ICAR-CMFRI visited the biofloc unit at Cheranalloor, Ernakulam and interacted with the farmers. Compared to other fish farming methods, management of biofloc units is easier and many farmer groups are coming forward to adopt the technology. It can promote the live fish market and entrepreneurship development among farmers.

Reported by Rema Madhu, K. Madhu, T. G. Sumithra, K. Mridula Mohan, K. S. Abhilash, Manual Isaac, M. P. Mohandas, and N. H. Harikrishna ♦

Sea ranching to rejuvenate natural Pearl oyster beds in Gulf of Mannar

Sea-ranching of five lakh hatchery-produced pearl oyster (*Pinctada fucata*) spat of 5 mm size was done in select areas in the Gulf of Mannar on 15th September 2022 by the Tuticorin Regional Station of the ICAR-Central Marine Fisheries Research Institute (CMFRI). Also, two cages of different sizes with settled spat were deployed for the regular monitoring of sea-ranched pearl oyster spat for its growth at this location. Aimed at restoring the depleted population of pearl oysters in the region and further finetune the process, this stock replenishment measure was initiated by the Shellfish Fisheries Division, ICAR-CMFRI. District Collector K. Senthil Raj inaugurated the sea ranching near 'Tharaipaar' close to Tsunami Nagar, Thoothukudi, Tamil Nadu. This activity should enhance the livelihood of coastal fishers including fisherwomen in the coming years.

Tuticorin was popularly known as "Pearl City" as it was an important centre for pearl production and trade since time immemorial. However, in 1961 the pearl fishery was completely banned by the Department of Fisheries to protect the drastically dwindling pearl oyster stocks. Anticipating disruption in supply chains of natural marine pearls which have huge

demand, Tuticorin Regional Station of ICAR-CMFRI initiated research work on cultured pearl production and perfected the technology in 1973. The local fishers especially women fishers from Sippikulam village of Thoothukudi district were trained by ICAR-CMFRI for the entrepreneurship development in pearl culture technique through funded research programmes. The hatchery produced spat could also be raised to adult stages and used for pearl culture. ICAR-CMFRI has earlier done sea ranching of pearl oyster spat in the *paars* or natural pearl oyster beds, but uncontrolled fishing activities in these areas prevented the population from attaining a healthy stock status position. This time, ICAR-CMFRI is planning to rejuvenate the *paars* of Gulf of Mannar through sea ranching programme, supported by dedicated research monitoring to assess its survival and sustainability through time. The participating fishers from the Tsunami colony, who are descendants of pearl fishers and presently engaged in chank fishery have also expressed their interest in carrying out pearl culture activity with the scientific support of ICAR-CMFRI.

Reported by M. Kavitha, P. S. Asha, M. K. Anil, P. Gomathi, P. Laxmiltha, C. Kalidas, L. Ranjith, and D. Linga Prabu ♦



Pearl oyster Eye spot stage



FRP tank with settled spats of Pearl oyster



Pearl oyster Spats collected for ranching



Ranching of spats by Tuticorin District collector



Ranching of spats by Tuticorin District collector



Indian pompano fish harvest under Scheduled Tribes Component

Harvest of cage cultured Indian pompano was carried out under Tribal Sub Plan (TSP) Component at Peddapalem Village, Krishna District, Andhra Pradesh during 5 -12, July, 2022. Six GI cages installed in Krishna Backwaters at Peddapalem Village and managed by

a three groups from Kammanamolu, Gullamoda, Peddakammavaripalem villages in Nagayalanka Manada of Krishna District were harvested. Stocked in February 2022 with nursery reared Indian pompano of 10.0 ± 3.0 g in weight @ 15 numbers/ m^3 they were fed four times a day at 8.0

to 3.5% of body weight according to size. The fishes were reared to an average size of 420.0 ± 50.0 g for 165-170 days and 2380 kg fish were harvested at an average production of 400.0 kg per cage, on 7 July, 2022. Sold at farm gate price of ₹300/kg to buyers from Karnataka and Tamil Nadu the cages managed by beneficiaries of Yenadi community under TSP component has generated lots of interest and satisfaction in beneficiaries.

Reported by Sekar Megarajan, Ritesh Ranjan, Biji Xavier, Shubhadeep Ghosh, Jeyasree Loka, Vamsi Balla and Shiva Ponnaganti | Visakhapatnam Regional Centre ♦

Amyloodinium infestation in indoor culture systems for John's snapper

Amyloodinium, a dinoflagellate ectoparasite has been reported in a wide range of marine and estuarine fish. It produces a powdery or velvety appearance on infected fish which is commonly referred to as "marine velvet," velvet disease, or amyloodiniosis. Fish mortality due to amyloodinium infestation has been observed in larval and nursery rearing system of John's snapper (*Lutjanus johni*). In larval rearing (>0.5 g in size), the infected larvae showed sudden mortality, with symptoms of sluggish movement and reduced appetite before death. The nursery reared (8.0 to 12.0 g in size), fingerlings with amyloodinium infestation in gill and body surface exhibited white patches on body surface and after gathering near the air stones, eventually died. Initial mortality due to infestation was between 50-60% and 5-10% for larval and nursery stages, respectively, but reached 100%, when not treated properly. Continuous fresh water treatment for 10-15 minutes helped to reduce parasite load in the infected fishes.

Reported by Ritesh Ranjan, Sekar Megarajan, Biji Xavier, J. Loka, Shubhadeep Ghosh, G. Sampath Kumar | Visakhapatnam Regional Centre ♦

New species of hagfish described



A new species of hagfish, *Eptatretus wadgensis* sp. nov., was described from the Wadge Bank area, Lakshadweep Sea. Specimen were fished from a depth of ~250–300 m and landed in deep sea shrimp trawler bycatch at Sakthikulangara Fisheries Harbour, Kollam. The Wadge Bank hagfish differs from its congeners by its unique combination of body characteristics and genetic makeup which includes six gill pouches and apertures, the number of which is a defining character for classifying hagfishes, and a distinguishing teeth pattern; of between 44-48 tooth cusps present in the two tooth plates of the four specimen examined, with three teeth having their cusps fused together in each tooth plate. Also 9–10 single cusps are

present in the anterior region of the tooth plates and 7–8 in the posterior region. The total number of slime pores along the side of the body ranges between 67 and 69 and genetically, it forms a distinct clade from other hagfish species, when the COI and 16sRNA gene sequences were compared. Results were published in the international taxonomic journal Zootaxa (5162 (2): 120-134) and holotype and three paratypes are deposited in the Marine Biodiversity Museum, ICAR-CMFRI, Kochi and gene sequences with NCBI.

Reported by A. X. Treasa Augustina, Miriam Paul Sreeram, Sandhya Sukumaran, K. M. Sreekumar, Anjaly Jose and K. K. Joshi | Marine Biodiversity and Environment Management Division & Marine Biotechnology, Fish Nutrition and Health Division ♦

Olive Ridley turtle washed ashore at Puri beach



On 24th July 2022, a carcass of an Olive Ridley turtle (*Lepidochelys olivacea*)

was found on Puri Sea beach. The turtle was found to have external injury marks

on the left side of the abdominal region, which was suspected to be caused by an accidental collision with mechanised trawl gears. The carapace length of the semi-decomposed turtle was 68 cm and it weighed approximately 22 kg. Olive Ridelys are listed in Schedule I of the Wildlife (Protection) Act, 1972 in India for their conservation. The species has most recently been assessed as “Vulnerable” in the IUCN Red List of Threatened Species and the illegal trade of the animal is well regulated as it comes under Appendix-I species under CITES (Convention on International Trade in Endangered Species of Wild Flora and Fauna), and is also listed in the CMS (Convention on Migratory Species).

Reported by Swatipriyanka Sen, Menaka Das, Gyanaranjan Dash, Rajesh Kumar Pradhan, Biswajit Dash and Madhumita Das ♦

Worm Sea Cucumber *Synaptula media* reported from Dhanuskodi water, Palk Bay



During the routine field survey in the Dhanuskodi coastal waters of Palk Bay, a live specimen of worm sea cucumber was collected and identified as whiteline

worm sea cucumber *Synaptula media* Cherbonnier & Féral, 1984.

Synaptula media is a species of sea cucumber in the family Synaptidae. It is found in shallow waters, distributed in the tropical Indo-Pacific region. It has dark brown to grey colour with white lines and a long thin body with ten pinnate tentacles.

The tentacles of *S. media* surround the mouth and are used in surface feeding. They also lack tube feet, radial canals of the water-vascular system, with only the circumoral ring present.

Reported by S. Thirumalaiselvan & Dr. R. Saravanan, Mandapam Regional Centre ♦

Unusual unicellular green alga reported during survey

During the regular monitoring of shoreseine operation at Dhanushkodi, in October 2022 the unicellular green alga *Acetabularia* sp. was collected from the landings. *Acetabularia* sp. is possessing features that might be considered organs—‘roots, stems and

leaves’. They can reach upto 6 cm in height, and have a slender stalk with a lobate umbrella like cap for attachment to rocky surfaces. A slender stalk that is usually attached to a rock surface by a rhizoid and which ends in a lobate umbrella-like cap.

Reported by Dr. R. Saravanan and S. Thirumalaiselvan, Mandapam Camp ♦



Awards for ICAR-CMFRI 2020-2022



ICAR AWARDS

Best Institute Annual Report

2020-2021

ICAR Institutes' Ranking

2019-2020 & 2020-2021

First (Fisheries & Animal Science Institutes)

Third (across all ICAR institutes)

Government of India

Gold Open Digital India Awards
Data Champion 2020 for ICAR-KRISHI
Team

Best Hatchery MSR Hatchery,
Award by NFDB technically supported
by ICAR-CMFRI



Asian Fisheries Society Indian Branch (12th Indian Fisheries and Aquaculture Forum, 2022)

Prof. H. P. C. Shetty Award

Dr. Sandhya Sukumaran

Dr. T. V. R. Pillay Award

Dr. Ritesh Ranjan and team

Shri J. V. H. Dixitulu National Award

Dr. Sekar Megarajan and team

Dr. M. C. Nandeesh Award

Shri Prasad, fish farmer, Upunda

AFS Young Scientist Award

Dr. P. Abdul Azeez

Best Oral Presentation (Aquaculture)

Dr. Sekar Megarajan

Best Oral Presentation (Aquatic Biodiversity,
Stock Assessment)

Dr. Joe K. Kizhakudan

Best Poster Presentation (Fisheries Economics
and Extension)

Dr. Shyam S. Salim and team

Appreciation Award

Shri P. R. Abhilash



Government of Kerala

Thozhil
Shreshtha
Award

Shri P. M. Dinil Prasad
(2022), Cage fish farmer
associated with ICAR–
CMFRI Project funded
by NFDB



Official language implementation

Kshetriya Rajbhasha Award (for South and Southwest Region) 2021- 2022 from Ministry of Home Affairs, Govt. of India

Kochi Town Official Language Implementation Committee Award 2020-2021 (First Prize)

In-house magazine (Kochi TOLIC) for 2020-2021 Matsyagandha (First Prize)

Commendation Certificate for Official Language Implementation (2021-2022), Ministry of Home Affairs, Govt. of India - Smt. E.K.Uma



Stall awards

Best Stall Award, 1st Indian Fisheries Outlook, ICAR-CIFRI

2022

Best Stall Award (Second Prize), Asian Fisheries Society Indian Branch (12th Indian Fisheries and Aquaculture Forum) 2022



Individual recognitions

The Asian Fishery Society Gold Medal Award

Dr. A Gopalakrishnan, Director (2022)

VASVIK (Vividhlaxi Audyogik Samshodhan Vikas Kendra) Industrial Research Award

Dr. A Gopalakrishnan, Director (2022)

National Academy of Agricultural Sciences (NAAS) Associate (2022)

Dr.Eldho Varghese

Dr. C. M. Singh Award for overall best performance among Ph.D students of ICAR-IVRI

Dr.Sumithra T.G.

Dr. C. V. Kulkarni Best Young Scientist Award

Dr. Sekar Megarajan (2021-2022)

Young Scientist Award, National Academy of Agricultural Sciences

Dr. Reshma Gills (2022)

Netaji Subhas-ICAR International Fellowship

Reshma K. J. (2022)

Jawaharlal Nehru Award for PG Outstanding Doctoral Research in Agricultural and Allied Sciences

Dr. Anusree M. (2022)

Young Scientist Award Society of Fisheries and Life Sciences, College of Fisheries, Mangaluru, Karnataka

Dr. Loveson Edward L. (2022)

Dr. Vinay Kumar Vase (2022)

Indian pompano fish harvest under Scheduled Caste Component



Two consecutive harvest of cage cultured Indian pompano was carried out under Scheduled Caste Component (STC) Component in Krishna Backwaters, Nagayalanka Mandal, Krishna District, Andhra Pradesh during 6th to 10th July, 2022. GI cages were installed in Krishna Backwaters at Marripalem and Peddapalem Villages and fishes were reared to an average size of 450.0 ± 50.0 g for 150-160 days. On 6th July, 2022, harvested fish was 2350 kg fish with an average production of 470.0 kg per cage. These were sold at farm gate price of ₹300 per kg to buyers from Karnataka and Goa and profit was shared among beneficiaries.

Reported by Sekar Megarajan, Ritesh Ranjan, Biji Xavier, Shubhadeep Ghosh, Jeyasree Loka and Narasimhulu Sadu | Visakhapatnam Regional Centre ♦

Distribution of bivalve harvest income to the SCSP beneficiaries

Aimed at uplifting the living standards of the Scheduled Caste families in coastal areas, the ICAR- Central Marine Fisheries Research Institute (ICAR- CMFRI) extended scientific, technical and financial support in Mussel farming to 10 Scheduled Caste families in Kodungallur Municipality, Thrissur, under the Scheduled Caste Sub Plan (SCSP) Project of ICAR-CMFRI. The farmed mussels were harvested and sold through

ATIC. An amount of ₹1, 00,000/- was handed over to the SCSP beneficiaries by Dr. P. Laxmilatha, Head, Shellfish Fisheries Division in a function presided by Shri. K. S. Shivaram, the Ward Councilor of Kodungallur Municipality held at Chalakulam, Kodungallur on 10th August, 2022. Dr. Vidya. R, Scientist and Shri P. S. Alloydious, Technical Officer of Shellfish Fisheries Division were present in the function ♦



Focus on Fish Health Management in Aquaculture

As a part of the National Campaign on 'Fish Health Management in Aquaculture,' a talk on 'Fish disease management in cage aquaculture' was organised by Tuticorin regional station and 'fish health management' by Mangalore Regional Centre. Dr. P. Rameshkumar gave a talk on "Vibriosis and its Management in Mariculture" in the event organised by Mandapam Regional Centre on 29 July, 2022 ♦



National Campaigns celebrating Azadi ka Amrit Mahotsav



In connection with the national celebrations initiated by the Union Government on the 75th Anniversary of Indian independence under '*Azadi Ka Amrit Mahotsav*', programmes related to fisheries and aquaculture were organised

in various regional stations and centres of ICAR-CMFRI. A national campaign on 'non-conventional aquaculture systems' was held at Headquarters on 27th July 2022 in virtual mode. Speaking on the occasion, Dr. A. Gopalakrishnan, Director, ICAR-CMFRI mentioned about the geo-referencing of 342 suitable farming sites for seaweed cultivation in the country sprawling over 24167 ha with a production potential of 9.7 million tonnes (wet weight) per year. The practice of Integrated Multi-trophic Aquaculture (IMTA) which enables cage farming of fishes and bivalves along with seaweed in coastal waters will boost acceptance of eco-friendly sea farming technologies across the coastal states. Mr. Abhiram Seth, Managing Director, AquAagri Processing Ltd. expressed an interest in collaborating with ICAR-CMFRI for commercial-level micro-propagation-based seaweed seed production. The meet also highlighted the importance of bivalve farming, another non-conventional aquaculture practice where, several women self-help groups are engaging with bivalve farming under the guidance of the ICAR-CMFRI. Dr Brien Roberts, Aquaculture Research Scientist from Australia, and Arun Aloysius, Curatorial Supervisor of Dubai Aquarium and Underwater Zoo also delivered lectures at the event. Dr. P. Laxmilatha, Head I/C, Shellfish Fisheries Division and Dr. V. R. Suresh, Head I/C, Mariculture Division also spoke on the occasion.



Among others, Visakhapatnam Regional Centre organized an awareness programme for the farming community about the scope of diversified livelihood options available with the non-conventional aquaculture systems on 27th July, 2022. Dr. Subal Kumar Roul, Digha Regional Station, organised a programme for fish farmers at Deulbatta Village in Ramnagar (Purba Medinipur), West Bengal. Tuticorin regional station organised an online webinar on 27 July, 2022 where Dr. C. Kalidas and Ms M. Kavitha from ICAR-CMFRI and Shri R. Rexion, fish farmer-entrepreneur gave talks. Veraval Regional Station also organized a 'stakeholders' interaction meet (*gosthi*)' on the occasion where Ms Mayuri Thakar, Superintendent of Fisheries, Gujarat State Fisheries Department gave details of government schemes for fishers and fish farmers ♦





International Coastal Cleanup Day

International Coastal Cleanup Day was observed by the ICAR-Central Marine Fisheries Research Institute (CMFRI) at its Headquarters in Kochi and in various Regional Centres and Regional Stations on 17th September 2022. The event, which included cleanup drives and awareness initiatives, focused on encouraging people

to rid of garbage plaguing beaches and coastal waters aimed at trash-free seas. Awareness was also created among the public about preserving and protecting the world's oceans and waterways.

Marine biodiversity and Environment Management Division of ICAR-CMFRI, Kochi organized a vessel-based cleanup

drive in coastal waters off Kochi deploying the Institute Vessel FV Silver Pompano and a Beach Cleanup Drive at Fort Kochi. Visakhapatnam Regional Centre organized "Fishing for Litter at Sea" aiming to remove marine litter from the seabed caught in the nets during fishing activities and disposed of safely on land. Mandapam Regional Centre organised beach cleanup activity at Pirappanvalasai beach, Ramanathapuram District which is one among the 75 beaches



listed by the Government of India for the cleanup activity for the "Swachh Sagar, Surakshit Sagar/Clean Coast Safe Sea" campaign. Calicut Regional Station organised the drive at Konadu beach on the day. Veraval Regional Centre joined hands with Indian Coast Guard, Veraval along with participants from several local schools and colleges. Mangalore Regional Centre and Research Stations in Mumbai, Karwar and Chennai also observed the day in a befitting manner ♦

Official Language Events



(DARE) & Director General, ICAR, Shri Rajiv Gauba, Cabinet Secretary, Govt. of India were displayed on the Notice Board. Mandapam Regional Centre organised a workshop on 15.09.2022 with the topic "Constitutional Provisions for the Official Language" with a lecture by Shri A. Sreenivasan, Rajbhasha Adhikari, Divisional Railway Managers Office, Madurai. Workshops on spoken Hindi and various competitions were conducted at Headquarters and other centres of the institute. Prizes were distributed to the winners of competitions and Hindi Incentive Schemes (Govt. of India & ICAR-CMFRI Scheme) for doing original work in Hindi in the valedictory function held on 30th September 2022 ♦

Hindi Fortnight Celebrations 2022

To encourage the use of Hindi language among the institute staff while carrying out their office work, Hindi Fortnight was observed from 14th to 28th September, 2022 with various programmes, at headquarters and regional centres and stations. The messages of Shri Amit Shah, Hon'ble Minister of Home Affairs, Shri Narendra Singh Tomar, Hon'ble Minister of Agriculture & Farmers' Welfare, Shri Kailash Choudhary, Hon'ble State Minister for Agriculture & Farmers' welfare, Dr. Himanshu Pathak, Secretary



ICAR-CMFRI attends the Expert Advisory Panel of FAO-CITES

The *7th FAO-CITES Expert Advisory Panel for the Assessment of the Proposals to Amend Appendices I and II of CITES Concerning Commercially-Exploited Aquatic Species* was convened by FAO, Rome during 18-22 July 2022. Dr Shoba Joe

Kizhakudan, Principal Scientist, Finfish Fisheries Division, Madras Regional Station of ICAR-CMFRI was deputed to participate as a member in the Expert Advisory Panel. It was tasked with assessing each CITES species proposal put forth for consideration

at the CITES Conference of Parties (CITES CoP19) in Panama during 14-25 November 2022. In addition, Expert Panel participants discussed technical aspects of the proposal in relation to biology, ecology, trade and management issues, as well as, to the extent possible, the likely effectiveness for conservation. The meeting served to bring together fisheries management, species, and trade experts who evaluated each of the proposed species against the criteria set forth by CITES, to qualify for listing in its Appendices. The resources deliberated upon included 20 sharks+45 look-alike species of sharks, 2 freshwater sting rays, 6 guitarfishes, one family of sea cucumbers and one species of ornamental fish. The Expert Panel report can be accessed at <https://www.fao.org/documents/card/en/c/cc1931en/> ♦



Campaign on Emerging Aquaculture Systems and Practices

As part of the National Campaign the Mandapam Regional Centre organized an awareness cum training on 'Integrated Multi-Trophic Aquaculture (IMTA)' on 11th July, 2022 where thirty seven fishers from Ramanathapuram district participated. Visakhapatnam Regional Centre organized National Fish Farmers Day programmes with the theme 'Emerging Aquaculture Systems and Practices' on 11 July, 2022. Madras Regional Station held programmes in online mode. Veraval Regional Station invited fishers and fish farmers from coastal areas of Gujarat and awareness on emerging systems and practices in aquaculture such as integrated multi-trophic aquaculture systems for production of high value fish, shellfish and seaweed was created ♦



Focus on sustainable fisheries and biodiversity conservation

The National campaign on '*Participatory Management for Sustainable Fisheries and Biodiversity Conservation*' held on 4th August 2022 in virtual mode had Dr. Anil Mohapatra, Scientist-E & Officer-in-Charge, Estuarine Biology Regional Centre, Zoological Survey of India, Gopalpur-on-Sea, Ganjam, Odisha, deliver a talk on "Marine Biodiversity and Conservation: Indian Prospective". Dr. Subal Kumar Roul, Digha Research Station, coordinated the programme. Tuticorin Regional Station, Thoothukudi organized a virtual talk on 04.08.2022 by Dr. N. Jayakumar, Associate Professor, Fisheries College & Research Institute (TNJFU), Thoothukudi with the topic "Integration of Conservation, Biodiversity and Sustainability in fisheries". Visakhapatnam Regional Centre organized a technical talk on 'Bloom forming Jellyfishes, its Diversity and Fisheries: Andhra Pradesh Perspective' by Dr. Pralaya Ranjan Behera. Veraval Regional Station organized a webinar with a talk on 'Participatory Management for Conservation of Whale Shark' by Shri Farukhka H. Bloch, Manager, Whale Shark Conservation Project, Wildlife Trust of India, Veraval ♦

Customized year-round seaweed stock for seaweed farmers

In view of the emerging importance of seaweed farming, seaweed stock retention attempts have been made along the Kutch coast of Gujarat State through a farmer participatory approach at two locations off Sekhadiya bundar, Mundra. Water quality parameters, accessibility and control over the farming site were considered as the preliminary criterion for site selection. *Gracilaria edulis* species airlifted from Lakshadweep through a customized stock transportation technique and *Kappaphycus alvarezii* stock available along Veraval were stocked in the wet lab for conditioning and later shifted to the selected sites. The farmers trained in seaweed handling, stocking and farm management have taken it up further with 10 rafts installed by the farmer reared during monsoon and post-monsoon season.

Reported by Suresh Kumar Mojjada, D. Divu, P. Abdul Azeez, H. M. Bhint and K. Mohammed Koya ♦

Puri Field Centre celebrates International whale shark Day



International Whale Shark Day was observed on 30th August 2022, at Pentakata fishermen community hall in Puri with an aim to spread awareness about the conservation of whale sharks along the Odisha coast. The fishermen were briefed about the global decline in the population of whale sharks, reasons behind it and the need for their conservation. The fishermen were encouraged to release the entangled whale sharks from their fishing nets immediately. They were also sensitized about the ecological role of whale sharks. A semi-structured informal interview was conducted with the fishermen to collect information about the whale shark. Around 30 fishermen and staff of the Puri Field Centre of ICAR-CMFRI attended the meeting.

Reported by Swatipriyanka Sen, Rajesh Kumar Pradhan, Gyanaranjan Dash, Madhumita Das, Biswajit Dash and Menaka Das ♦

Finfish Stock Assessment workshop conducted

A training on Tropical Finfish Stock Assessment was conducted by the Finfish Fisheries Division (FFD), ICAR-CMFRI, for Fisheries Resource Management scientists at ICAR-CMFRI Headquarters, Kochi during 16-27 August 2022, in hybrid mode. The program was inaugurated by Dr. A Gopalakrishnan, Director, ICAR-CMFRI on 16th August 2022, and was attended by Sri. Sanjay Pandey, Asst. Commissioner (Fisheries) Dept. of Fisheries,

Govt. of India, Heads of Divisions at ICAR-CMFRI Headquarters and scientists of Finfish and Shellfish Fisheries Divisions of ICAR-CMFRI. The training program was hands-on with each participant working on common data analysis protocols and applied to individual species-specific data that they had collected at their respective locations. This was followed by a Brainstorming Session on Indian Marine Capture Fisheries Research on 27 August,

2022 with active participation of scientists from the two Capture fisheries divisions of the institute, the Finfish Fisheries Division and Shellfish Fisheries Division. Detailed discussions were held on the need for Biological Stock Assessment routines, scale of assessment, data collection and analysis protocols, issues faced and strategies to be adopted. Certificates of participation were presented to the participants in the valedictory function ♦



Stakeholder workshop for ensuring sustainable fisheries held

The stakeholder workshop on *Kerala Marine Fisheries and Sustainable Development* held on 5th July 2022 was attended by representatives of various fishermen association, scientists from ICAR-CMFRI and ICAR-CIFT, and officials from the Department of Fisheries, Govt. of Kerala and NETFISH-MPEDA. The workshop called for strict measures to curb juvenile fishing for maintaining sustainability and need for uniform implementation of the MLS regulation

across the coastal states of the country. Dr. T. M. Najmudeen, Dr. N. Aswathy, (ICAR-CMFRI), Dr. M. V. Baiju, ICAR-CIFT and N. K. Santhosh of NETFISH- MPEDA made scientific presentations. M. S. Saju, Joint Director of the State Fisheries Department and T. V. Jayan, Secretary of Traditional Fishermen Forum spoke on the occasion.

Stakeholder meet was also organised at Mandapam Regional Centre under the In-house project '*Resource Assessment*

and Management Framework for Sustainable Marine Fisheries of Tamil Nadu and Puducherry' was held on 2nd July, 2022. Representatives of fisher organisations, boat owners, fish traders, Assistant Director of Fisheries, Mandapam and Rameshwaram, and institute staff attended the meeting where presentation of salient research findings during the year was presented by Dr. Vinothkumar R., Dr. Remya L. and Dr. Rajkumar M. ♦

Har Ghar Thiranga celebrated

In connection with the national celebrations initiated by the Union Government on the 75th Anniversary of Indian independence under '*Azadi Ka Amrit Mahotsav*', programmes were organised in various regional stations and centres of ICAR-CMFRI.



Exhibitions



Madras Regional Station of ICAR-CMFRI organized an Exhibition Stall at the "International Conference of Seaweed 2022" conducted by NCSCM at Anna University at Chennai during 28-29 September 2022. Various nutraceutical and other products developed from seaweeds by the scientists of ICAR-CMFRI were displayed.

Digha Regional Station of ICAR-CMFRI participated in the exhibition in the '25th National Agriculture Exhibition' held from 24th to 27th August 2022 at Central Park Maidan, Salt Lake City, Kolkata organised by 'Central Calcutta Science & Culture Organisation for Youth'.

The exhibition on the theme of "Self-reliant India: Progress, Prosperity and Sustainability" showcased various products and technologies developed by the institute. On behalf of the institute, Dr. Subal Kumar Roul, Scientist-in-Charge, Digha Regional Station of ICAR-CMFRI received the token of appreciation for the exhibition stall put up.



Calicut Regional Station of ICAR-CMFRI had put up a stall to showcase the activities of the Institute at the 'Vallikunnu Fest' – 'Cultural-Educational-Health-Agriculture-Commerce' Exhibition for the benefit of students and general public which evinced keen interest and won the best stall award. It was organized at Vallikunnu by the Vallikunnu Grama Panchayath, Malappuram District from 31st August to 7th September 2022 ♦



News Bytes



Shri Rahul Kumar Reddy, IAS, Asst. Secretary, Department of Fisheries, Ministry of Fisheries, Animal Husbandry & Dairying visited the Mandapam Regional Centre of ICAR-CMFRI on 27th August, 2022 to study the cage Farming, seaweed Farming and sea ranching activities of this region ♦

Personnel

Probation Clearance

Name of the employee & place of Posting	Name of the post	Date of appointment In the post	Date of clearance of probation period
Smt. Annies Mary Paulose	Assistant	31.07.2019	31.07.2021
Shri Sunil Raj K. S.	Assistant	02.09.2019	02.09.2021
Shri T. K. Sumesh	Assistant	02.01.2020	03.01.2022
Shri R. Kumaran	LDC	03.09.2019	03.09.2021
Shri S. Srinivasulu	LDC	11.09.2019	11.09.2021
Shri Biju George	LDC	02.09.2019	02.09.2021



Smt. P. Sreeletha
Chief Technical Officer
31.07.2022



Smt. K. Ramani
Assistant Chief Technical Officer
31.07.2022



Shri P Muthukrishnan
Technical Officer
31.07.2022



Smt. M. Rameswari
Assistant Administrative Officer
31.08.2022



Shri T. K. Antony
Skilled Support Staff
30.09.2022

Division Mergers

In consonance with revised cadre strength for scientists and Heads of Divisions by ICAR, Division merger and renaming in ICAR-CMFRI w.e.f June 1, 2022 is as under.

Pre-merger Divisions	Post-merger Divisions
Marine Biotechnology Division (MBTD)	Marine Biotechnology, Fish Nutrition and Health Division (MBFNHD)
Marine Biodiversity Division (MBD)	Marine Biodiversity and Environment Management Division (MBEMD)
Fishery Environment Management Division (FEMD)	
Pelagic Fisheries Division (PFD)	Finfish Fisheries Division (FFD)
Demersal Fisheries Division (DFD)	
Molluscan Fisheries Division (MFD)	Shellfish Fisheries Division (SFD)
Crustacean Fisheries Division (CFD)	
Fishery Resources Assessment Division (FRAD)	Fishery Resources Assessment, Economics & Extension Division (FRAEED)
Socio Economic Evaluation & Technology Transfer Division (SEETD)	
Mariculture Division (MD)	Mariculture Division (MD)

Appointment

Name	Name of the Post	Place of Duty	Date of Joining
Smt. Remya Unnikrishnan	Technician (T1)	Chennai Regional Station of ICAR-CMFRI	05.07.2022 (FN)

Inter-Institutional Transfer

Name & Designation	From	To	w.e.f.
Dr. Saju George , Principal Scientist	ICAR-KVK-Gonikoppal, IIHR, Bengaluru	ICAR-CMFRI Headquarters, Kochi	05.07.2022(FN)
Dr. Rathi Bhuvanewari G , Scientist	ICAR- Central Institute of Fisheries Education, Mumbai	Vizhinjam Regional Centre of ICAR-CMFRI, Vizhinjam	24.08.2022(FN)
Shri Vicky Kumar Prajapati , Skilled Support Staff	Mumbai Regional Station of ICAR-CMFRI.	ICAR-NBFGR, Lucknow	31.08.2022 (AN)

Intra Institutional Transfer

Name & Designation	From	To	w.e.f.
Shri Kodi Srinivasaran , Sr. Technical Assistant	Karwar Regional Station of ICAR-CMFRI	Visakhapatnam Regional Centre of ICAR-CMFRI	16.08.2022
Smt. Sini M. B , Technician	Madras Regional Station of ICAR-CMFRI, Chennai	Vizhinjam Regional Centre of ICAR-CMFRI.	16.08.2022
Shri Y. V. S Suryanarayan , Technical Officer	Srikakulam Field Centre of ICAR-CMFRI	Karwar Regional Station of ICAR-CMFRI.	16.08.2022

MACP Awarded

Name & Designation	w.e.f
Smt. P. K. Anitha , Private Secretary.	3 rd MACP 01.08.2021
Smt. Leela C. A. , Assistant Administrative Officer	3 rd MACP 09.11.2021
Smt. Manjusha G. Menon , Assistant.	3 rd MACP 09.11.2021
Shri Ancil Perera , Skilled Support Staff.	3 rd MACP 05.08.202



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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