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CMFRI Newsletter

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Launch of Network Programme on ornamental fishes

see page 3



हर कदम, हर उमर
किसानों का हमसाफर
भारतीय कृषि अनुसंधान परिषद

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Indian Council of Agricultural Research
CENTRAL MARINE FISHERIES RESEARCH INSTITUTE
P.B. No. 1603, Ernakulam North P.O., Kochi - 682 018, Kerala, India

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DIRECTOR SPEAKS



The recent launch of two programmes aimed at realising the immense potential of the fisheries sector, namely, the network project on breeding of ornamental fishes and the multivendor e-commerce website is notable. The anticipated outcomes are increased employment opportunities and allied economic benefits through ornamental fish breeding and the development of value-chain in marine fish sales, respectively. In tune with the goal of ensuring sustainability of Indian marine fisheries sector, the MSC certification process is progressing well and it is expected that some of the commercially important

crustacean and molluscan fishery resources in India will complete the certification process soon. For the first time, open sea cage culture of orange spotted grouper has been successfully demonstrated off Visakhapatnam and become an iconic event in the history of Indian mariculture. Farmers trained in mariculture activities at the various centres of the institute are also becoming successful entrepreneurs and getting recognition for their efforts. These developments are a motivation for the institute to further focus on means to increase income and livelihood options in the marine fisheries sector. Notably, the institute was also selected for the Rajarshi Tandon award for excellent official language implementation activities among the ICAR institutes. My best wishes to all to attain further heights of success and bring glory to our institute.

A. Gopalakrishnan
Director

About ICAR-CMFRI

The Central Marine Fisheries Research Institute, Kochi, is a premier research Institute under the Indian Council of Agricultural Research, devoted to research and training in marine fisheries and mariculture.

ICAR-CMFRI has three Regional Centres viz., Mandapam Camp, Visakhapatnam and Veraval and eight Research Centres located along the Indian coastline, catering to the marine fishery policy needs of all maritime states of the country.



All India Network Programme on ornamental fish breeding and culture launched



Innaugural address by Dr. Jena, DDG, ICAR

In a major effort to develop the ornamental fish industry in the country, an all India network project on ornamental fish breeding and culture was launched by Dr. Joykrushna Jena, Deputy Director General (Fisheries and Animal Sciences), ICAR at a function held in ICAR-CMFRI on 28th July 2018. The joint research initiative is mainly aimed at developing adequate technologies in breeding, seed production and culture of freshwater and marine ornamental species and helping maintain the sustainability of the industry. Seven ICAR fisheries research institutes namely, Central Institute of Freshwater

Aquaculture (CIFA) Central Inland Fisheries Research Institute (CIFRI); National Bureau of Fish Genetic Resources (NBFGR); Central Institute of Brackishwater Aquaculture (CIBA); Central Institute of Fisheries Education (CIFE); and Directorate of Coldwater Fisheries Research (DCFR) are partnering in the project with the ICAR-CMFRI being the leading institute.

Speaking on the occasion, Dr. J. K. Jena stressed the need for having a strong linkage between researchers and industry partners in the ornamental fish sector in the country to fully realise the potential

of India in this sector. The project focuses on developing a value chain approach with ensured product quality and overseas access to the ornamental fish industry in India. It will also generate employment opportunities as establishment of regional hatchery units and satellite hatcheries under public-private partnership (PPP) mode is one of the expected outcomes of the project. Dr. A. Gopalakrishnan, Director ICAR-CMFRI, Dr. C. N. Ravishankar, Director ICAR-CIFT and Dr. Debajit Sarma, Director, ICAR-DCFR, Bhimtal also spoke on the occasion.

Progress in MSC certification of Indian marine fisheries

MSC Pre-assessment of 5 trawl caught species from Kerala - *Metapenaeus dobsoni*, *Parapenaeopsis stylifera*, *Uroteuthis duvauceli*, *Sepia pharaonis* and *Amphioctopus neglectus* was done during 28-31 August 2018. Auditors from Control Union Pesca, UK interacted with all stakeholders including scientists of ICAR-CMFRI and

made site visits to Cochin Fisheries Harbour and Neendakara-Sakthikulangara Fishing Harbours in Kollam district. Training for Level 3 MSC auditors including scientists of the institute was held at ICAR-CMFRI, Kochi during 1-3 September 2018 by MSC and Control Union Pesca. The gillnet caught blue swimmer crab fisheries in Palk Bay

moved into MSC pre-assessment status. Dr Josileen Jose presented details of the fishery management plan for the species to auditors from SCS Global at the Mandapam Regional Centre of the institute on 10 and 11 October 2018. Dr K.S. Mohamed led the discussions and participated in the site visit and stakeholder meetings.

Multivendor E-commerce website for fish farmers launched



Team NICRA at the launch of E-commerce website launch

As an adaptation strategy for coping with adverse climatic events, aiming for fishermen income improvement and retain youth in the fisheries sector, ICAR-CMFRI through National Innovations on Climate Resilient Agriculture (NICRA) project has developed a multivendor E-commerce website hosted as www.marinefishsales.com and associated android application 'marinefishsales' for use in mobile phones. The web application was released by Dr. Trilochan Mohapatra, Hon'ble Director General, ICAR & Secretary DARE, Govt. of India during the sixth NICRA annual review meeting held at NASC, New Delhi. Contrary to typical E-commerce

ventures where single firm or company is major profit beneficiary, the developed e-platform envisions multiple fishermen self-help groups (SHGs) as beneficiaries. This may be the first instance that a Government institution in fisheries sector facilitates the E-commerce solution, to address climate change adversities at the grass root level, through income improvement and livelihood security improvement. Various fishermen SHGs can register as vendors (fishers and farmers) based on their fish products and update their stock availability under pre-approved categories and products, which shall be displayed in the website and associated mobile app. Customers can

place orders and subsequently the registered fisher/farmer shall be notified through email and SMS, upon which the quality products within the pre-assigned time frame shall be delivered, thereby enabling direct product sale between customers and SHGs. Around 35 fishers/farmers have already registered in the website as vendors and trial sales to public are ongoing. The Govt. of Himachal Pradesh has also expressed interest in this concept and accordingly it has been agreed to train 3 officials of the Department of Fisheries, Himachal Pradesh under NICRA project at ICAR-CMFRI, Kochi.

Cadalmin™ Anti-hypothyroidism extract from seaweed released

Cadalmin™ Anti-hypothyroidism extract (Cadalmi™ ATe), a nutraceutical product with activity against hypothyroid dysfunctions from seaweeds has been released by the Hon'ble Union Minister of Agriculture, Shri Radha Mohan Singh on 16th July 2018 in the gracious presence of the Director General of ICAR, Dr. Trilochan Mohapatra at a function in New Delhi on the occasion of ICAR Foundation Day.

Cadalmin™ ATe provides a unique blend of 100% natural marine bioactive ingredients with anti-hypothyroidism principles extracted from seaweed, with an ecofriendly "green" technology. The



bioactive leads concentrated in Cadalmi™ ATe were found to stimulate

thyroid releasing hormone and increase the activity of selenodeiodinase to produce metabolically active thyroid hormones tetraiodothyronine (T_4) and 3, 5, 3'-triiodothyronine (T_3). Preclinical trials showed no toxicity related significant changes in renal or hepatic functions, hematological indices and serum biochemical parameters in the experimental subjects. The results also demonstrated a lack of test substance-related general organ or systemic toxicity and hypoglycaemic disorders following oral administration at a dose as high as 2×10^3 mg/kg/d.

Reported by : Kajal Chakraborty,
Marine Biotechnology Division)

Maiden harvest of cage cultured orange spotted grouper and Indian pompano from marine cages off Visakhapatnam

The harvest function of the open sea cages organized by the Visakhapatnam Regional Centre was inaugurated by Dr. A. Gopalakrishnan, Director in the presence of Dr. G. Gopakumar, Emeritus Scientist & Former Head of Division, Mariculture and Dr. Imelda Joseph, Head of Division, Mariculture. The harvest was from two HDPE cages of 6 m diameter and 4 m depth moored in the sea using 14 mm long linked alloy steel chain and concrete iron blocks. Around 1000

numbers of grouper advanced fry measuring 3 cm in length stocked in one cage in the month May, 2017 after 15 months of grow-out reached on an average 2.5 kg in weight. With survival of more than 80%, the yield obtained from one cage was around 2 tonnes. In another cage, around 3000 numbers of Indian pompano advanced fry measuring 5.25 cm and 2.5 g were stocked in the month of August, 2017. The fishes were fed with pelleted feed with net and cage frame

cleaning and net exchange performed at monthly intervals. After 12 months of grow-out, the fishes reached on an average 0.75 kg in weight and survival of more than 90%, the yield obtained from one cage was close to 2 tonnes. The fishes were sold to State Fisheries Development Corporation, West Bengal. This first reported harvest of Indian pompano and orange spotted grouper from open sea cages in India became an iconic event in the history of Indian mariculture.



Dr. A. Gopalakrishnan, Director flagging off the fish harvest



Harvested grouper from cage

Participatory farming of orange spotted grouper in Kerala

Nursery rearing of orange spotted grouper seeds brought from Visakhapatnam Regional Centre of ICAR-CMFRI was carried out at Vizhinjam Research Centre and stocking in the cages was done in last week of August 2017. The first group of cage was at Chemmakkad where the stocking density was 10 numbers/m³ and size of

fish was 11.5 cm which were initially fed with pellets and later with low value fishes. Second group was at Prakkulam where only low value fishes were used as feed. Fishes were harvested from 29th June, 2018. Shri. L. Anil, President of Perinad Grama Panchayat, Kollam inaugurated the harvest. Dr. G. Gopakumar, Emeritus Scientist & Former

Head of Mariculture Division, ICAR-CMFRI was also present. In the 10 months culture period survival rate was only 60% due to isopod infection and natural mortality. Average weight at harvest was 0.95 kg at Chemmakkad and 1.25 kg at Prakkulam with average production per cage being 102 and 135 kg respectively.

Harvest Mela of cultured seaweed



A harvest mela of cultured seaweed was held on 14th August 2018 at Mullakadu Coast, Thoothukudi District. Operated under the NICRA project the venture aimed to combat the effect of climate change through seaweed farming as well as project an alternate high revenue generating avenue to the fishermen. In a span of 30-35 days the farmers got nearly fivefold growth of seaweed from the seeded material. Thiru. R. Amal Xavier, Joint Director of

Fisheries, Tamil Nadu flagged off the harvest mela. Shri. K. Vijayapandian, District Development Manager, National Bank for Agriculture and Rural Development (NABARD) was the Guest of Honour. Seaweed farmers and entrepreneurs of Thoothukudi district attended the function where farmers shared their experience in seaweed mariculture.

(Reported by: Tuticorin Research Centre)

National Fish Farmers' Day celebrated

The institute celebrated the National Fish Farmer's Day on 10th July 2018 by organising various programmes. The Tuticorin Research Centre organized an awareness campaign on seaweed culture where monolines, seed materials and other accessories were distributed to 25 selected fishers in Tuticorin district for conducting Integrated Multi-Trophic Aquaculture (IMTA) practices under the NICRA project.

Karwar Research Centre conducted harvest mela of cage farmed seabass at Nagnathwada, village in Karwar, Uttara Kannada. Around 200 kg of seabass was harvested after a farming period of four months by the fishermen group trained by the scientists of the Centre. The fishermen involved were also felicitated on the occasion.

Fish harvest at Nagnathwada



Fish farmers supported by ICAR-CMFRI get recognition

The adoption of sea cage farming technology of the institute has helped the fishermen in Tamil Nadu to receive state-level recognition for their accomplishments. Eight fishermen were honoured for their achievements at the 'Kisan Samridhi Mela' held during 24th to 26th August 2018. Organized by the Sugarcane Breeding Institute, Coimbatore the function was inaugurated

by Shri S. P. Velumani, Minister of Municipal Administration and Rural Development (Govt. of Tamil Nadu). Shri Udumalai K. Radhakrishnan, Minister for Animal husbandry (Govt. of Tamil Nadu) also attended the function. The progressive farmers supported by the Agricultural, Veterinary & Fisheries universities and their research centres, ICAR Research Institutes and their

research centres in Tamil Nadu were felicitated zone wise.

Functioning under the technical guidance of the Mandapam Regional Centre of ICAR- CMFRI, three fishermen from Ramanathapuram district Shri L. Mohamed Noogu, Shri V. Nagathass and Shri P. Thomnic won the State-Level Best Farmer Award while cage farming entrepreneurs Shri Seeni Mohaideen and Shri. L. Ajmal Khan from Ramanathapuram district, won the State Level Best Entrepreneur Award. Supported by the technical expertise from the Tuticorin Research Centre of ICAR- CMFRI, Shri M. Murugan and Shri R. Rexon also won the State Level Best Farmer Award. Shri R. Govind, President, Association of Kovalam Progressive Fishermen, supported by the technical expertise from the Madras Research Centre of ICAR-CMFRI was recognized as the Progressive Fish Farmer.



Shri. P. Thomnic receiving Best Farmer Award from Dr. K. Ramasamy, Vice-Chancellor, Tamil Nadu Agricultural University, Coimbatore

The Association of Kovalam Progressive Fishermen (AKPF), a group

of enterprising fisher youth in Kancheepuram district supported by the Madras Research Centre also won the Best open sea cage fish farming group award declared by the State Fisheries Department on the occasion of the National Fish Farmers' Day. This youth group has become a model for several villages in the districts of Thiruvallur, Chennai and Kancheepuram to form of more such groups.

Felicitated fishermen and entrepreneur supported by ICAR-CMFRI



NFDB-funded cage farming project rolled out

A major project to launch 500 cage fish farming units in Kerala supported by the National Fisheries Development Board (NFDB), Hyderabad has been initiated. The project envisions subsidy and technical support to the farmers to conduct cage fish farming across the coastal districts in the state. The project was formally launched in Nettoor in Ernakulam district by Sree Bhadra Kudumbasree unit comprising 10 members. Stocking of 1500 and 500 fingerlings of seabass and pearl spot respectively, in four cages was done. Maradu Municipality Chairperson Sunila Sibi inaugurated the event. Dr. A.



Cage farming project launch at Nettoor

Gopalakrishnan, Director, ICAR-CMFRI, Dr. Imelda Joseph, Mariculture Division

and Ajitha Kumar, Ward Councillor spoke on the occasion.

Revenue generation through sale of fish fingerlings and ornamental fishes

During July to September 2018, a revenue of ₹ 3,83,995 was

generated through sale of fingerlings cobia, silver pompano and ornamental

fishes by Mandapam Regional Centre.



Spawning, hatching and larval rearing of sucker shark

Echeneis naucrates commonly known as live sucker shark it maintained in the marine aquarium for the last 3 years started showing courtship display and breeding behaviour during the middle of June 2018, and within one week started laying eggs. Fertilized eggs were obtained via the volitional spawning of broodstock



Adult *Echeneis naucrates*

and the eggs hatched out within 65 hours of spawning. A batch spawner, it spawned continuously for 26 days with the eggs large sized and clearly visible to naked eye.



E. naucrates eggs

A diel spawning periodicity, with spawning every evening was recorded. The larvae were successfully reared to juvenile stage (40 days). This is first report of larval rearing of live sucker shark from egg to juvenile stage in captivity.

(Reported by: Ambarish P. Gop, Surya S, Gomathi P, M.K Anil & Raju B)



Juvenile (40 dph) sucker shark

Heavy landings of Hilsa shad along Odisha coast

Heavy landings of Hilsa shad was observed at almost all landing centres along Balasore, Bhadrak, Jagatsinghpur and Kendrapada coast of Odisha in July and August 2018. The fishes in size range of 18-35 cm total length and 100-1200 g total body weight were auctioned at landing centres. During the period of highest catch, prices plunged to ₹ 170-180/kg and 600-700/kg for medium and large sized fishes respectively due to the lack of enough storage facilities. Most of the catches were transported to Kolkata, Bengaluru and Chennai.

(Reported by Subal Kumar Roul, Puri Field Centre)



Heavy landings of Hilsa shad at Balasore

Unusual fish landings in Karnataka

During second week of September 2018, huge shoals of white sardine were observed on Shambavi Estuary at Mulki in Dakshina Kannada District of Karnataka which were caught in large numbers using gill nets. According to local fishermen, this is the first time in the history that such a huge quantity has

been landed in a span of 10-15 days. An economically important species and a delicacy in coastal Karnataka it fetches ₹ 150 - 300/ kg but in this scenario of glut, market price drastically fell to about ₹ 4/kg. In another instance the shore seine operated at Yermal Thenka got unusually high catch on 27 September

2018 leading to a festive mood for the coastal fishers of the region. A single unit of shore seine landed nearly 1.5 tons of fish comprising mainly of croakers, mackerel, anchovies (*Thryssa*), white pomfrets, whitefish and several species of carangids. The catch was transported to Malpe and auctioned

Pond culture of orange spotted grouper and Indian pompano in Andhra Pradesh

Nursery rearing of orange spotted grouper and Indian pompano has been initiated at Bavederappally, Nagayalanka Mandal in Krishna District of Andhra Pradesh under National Fisheries Development Board (NFDB) sponsored project on demonstration for pond culture of orange spotted grouper and Indian pompano in salt affected area of Andhra Pradesh. A total of six earthen ponds will be stocked with orange spotted grouper and Indian pompano equally. The advanced fry of 16500 numbers of each species has been stocked in hapa (2 x 2 x 2 m) with 1 cm mesh size. From an initial 1.5 gm weight these have attained an average of 12.5 gm with the pelleted feed (45% crude protein & 10% crude fat), after 45 days of the rearing in hapa. The stocked fishes showed 98.5% survival in hapa. Upon reaching 15 g the fish fingerlings will be released into the pond directly for grow out culture at the stocking density of 2500 numbers /acre. Advanced fry of orange



Hapas set up for pond culture

spotted grouper (3 g) were stocked in earthen ponds in hapa (2x2x2 m) with 1 cm mesh size and were fed artificial diet of 45% protein. Upon reaching 15 g in weight, the fish fingerlings will be stocked

in three earthen ponds for grow out culture.

(Reported by: Sekar Megarajan, Ritesh Ranjan, Shubhadeep Ghosh Biji Xavier, Biswajit Dash and P. Shiva. Visakhapatnam Regional Centre)

Successful demonstration of low cost fixed cage culture at Nagnathwada, Karwar

Under the aegis of Karwar Research Centre successful cage culture of Asian seabass, *Lates calcarifer* was carried out at Nagnathwada, Karwar, Uttara Kannada using low cost fixed cages by a Fishermen group. They were trained and facilitated for carrying out the cage culture by providing cages of 6 x 4 x 2 m made with galvanized iron frames suspended from long casuarinas poles erected on the estuarine bottom. The nets were placed

about 0.5 m above from the estuarine bottom. The 4 m depth nylon net cage was hung from the frame in such a way that at lowest low tide 1 m water will be retained near the cages and almost 1 m of the net will be always exposed above the water level in order to prevent the escapement of the fishes. The cages were stocked with 700 numbers of nursery reared Asian seabass fingerlings of 30 g size in February and by July have reached

an average marketable size of 465 g in 132 days. The fishes were fed with low value fishes collected by the fishermen themselves at 6 % of their body weight daily in two rations. The harvest time was planned such that fishes can fetch a better market price during the seasonal monsoon fishing ban period. A total production of 203 kg was obtained from the cage with a survival of 75% and the average weight of each fish about 465 g.

Marine mammal recordings

A single specimen of Indo pacific finless porpoise *Neophocaena phocaenoides* in semi-putrified condition

was recorded at Pentakota Fish Landing Centre (19° 48' 0.8892" N, 85° 50' 48.138" E), Puri, Odisha. It measured

120 cm in total length (tip of the snout to notch of the tail fluke) and had blackish colouration.

(Reported by Subal Kumar Roul, Puri Field Centre)

Fishers from Malpe lead the way in practising management measures for sustainable fisheries

In a major move towards achieving long-term sustainability in the marine fisheries sector fishers from Malpe, a major fishing village in Udupi District in coastal Karnataka have voluntarily adopted some of the major orders issued by the Department of Fisheries, Govt. of Karnataka. Implementation of ban orders against bull-trawling and fishing using any sort of light, was minimal due to lack of infrastructure and adequate manpower in the Fisheries Department. However, unanimous decision of fishers to

voluntarily abstain from bull trawling as well as fishing using lights from the beginning of the fishing season (August 2018) and abide by the regulations put forth by the Department of Fisheries emerged. It was also a move to reduce the landings of small sized fish which can be used by fish meal plants only and causes growth overfishing. Big banners displaying the decision of the Union members with strict warning to all active fishers to follow the decision taken were displayed at the Malpe fishing Harbours

a few days before the commencement of fishing after the seasonal monsoon fishing ban. Further, to ensure good value for the fish landed, especially the thread fin breams that are caught in huge quantities during August-September, a catch quota per boat was also initiated. The thread fin breams of any size are in good demand in Surimi plants, and when landed in huge quantities, the price falls. Therefore, to fetch a steady price, a catch limit of 10 t per trip (of 7 days duration) was fixed for the multiday trawlers.

Estimated loss due to monsoon flood in Kerala

Several women self-help groups (SHGs) involved in oyster farming in Ernakulam district lost their farms owing to recent monsoon flood. About 20 farms are involved in oyster farming and their loss was estimated as ₹ 3.94 lakhs. Unit value of oyster farm without stock (structure only) was estimated at ₹ 7000 and Unit value of oyster farm with stock as ₹ 35,000.

The Ashtamudi Lake short-neck clam

(*Paphia malabarica*) fishery in southern Kerala which is a small-scale, low-volume coastal fisheries with a niche export market having the unique distinction as the first MSC certified fisheries in India was also impacted. The fishery is managed in a participatory manner by the Ashtamudi Clam Governance Council (ACGC) chaired by the District Collector. These are euryhaline bivalves that need moderate amount of salinity for growth

and reproduction. Quadrant samples taken from several locations (clam beds) in the Ashtamudi Lake 15 days after the flood showed 50% mortality in all clam beds due to prolonged exposure to freshwater conditions. The estimated total loss to fishers is ₹ 7.17 crores on account of loss of fishing days and significant loss in stock biomass.

(Reported by Molluscan Fisheries Division)

Training programmes

- Five batches of training Programme on 'Open Sea Cage Culture and Mariculture' under the Skill Development Programme of National Fisheries Development

Board (NFDB) were completed at Mandapam Regional Centre of ICAR-CMFRI during July to September 2018. A total 250 participants of fishers from different fishing villages

of Ramanathapuram district of Tamil Nadu benefitted through the training. Dr. M. Sakthivel and Dr. Johnson, B., coordinated the training programme.

- The training programme on 'Sea-cage Farming of Cobia' under the technology up-gradation scheme of NFDB was held at Mandapam Regional Centre for the fisheries officials of State Fisheries Departments representing Tamil Nadu, Gujarat and West Bengal during 25-27 September 2018. Dr. M. Sakthivel & Dr. Johnson, B., coordinated the training programme.



Trainees of skill development programme with scientists of Mandapam Regional Centre



Trainees from the fisheries department

- Under National Innovations on Climate Resilient Agriculture (NICRA) project, selected villages in Ramanathapuram district of Tamil Nadu were adopted to develop them into Climate Smart Village. As a part of capacity strengthening and technology targeting, 'Training on 'Marine Ornamental Fish Culture' and 'Integrated Multi Trophic Aquaculture (IMTA)' was organized at Mandapam Regional Centre during 27-28 September 2018 in which 100 fishers participated.

(Reported by: Mandapam Regional Centre)



Training under NICRA Project

- A 3-day NFDB-sponsored Skill Development training programme on 'Open Sea Cage Farming and Mariculture' for fisher youth of Chennai district was conducted at Fisheries Information Centre, Kasimedu, Chennai during 09-11 July 2018. The programme was inaugurated by Mr. Ravichandran (AD Fisheries, Chennai District) and was attended by 50 fishers from six villages in Chennai district.

(Reported by: Madras Research Centre)

- Three training programmes of six days duration each on "Live Feed Production for Marine Finfish and Shellfish" was conducted with financial assistance from (NFDB), Hyderabad during July to September 2018 period at Visakhapatnam. The participants included entrepreneurs, academicians, researchers, students and fish / shrimp hatchery technicians from eight states of India. The main aim of this programme was to develop a trained manpower in the

industry for carrying forward live feed production technology, which is vital for the success of any finfish / shellfish hatchery.

(Reported by: Visakhapatnam Regional Centre)

- On The Job (OJT) training programme on 'Advances in mariculture techniques' was conducted for the Fisheries vocational higher secondary students through Agricultural Technology Information Centre (ATIC) from 24th - 29th, September, 2018. Dr. N. Aswathy, Senior Scientist and Smt. K. P. Salini, Senior Technical Officer coordinated the programme. 50 students belonging to coastal fisherfolk

AMITY University, Uttar Pradesh was organized from 1st to 30th June, 2018, at Mandapam Regional Centre of ICAR-CMFRI. Dr. R. Saravanan and Mr. S. Chandrasekar, co-ordinated the training programme.

- Training for the Fisheries Resource Management students from Central Institute of Fisheries Education (ICAR-CIFE), Mumbai was conducted during 15-29 September 2018 at Mandapam Regional Centre of ICAR-CMFRI. Dr. R. Saravanan, Mr. M. Rajkumar, and R. Vinothkumar, coordinated the training programme.
- The ICAR-Vizhinjam Research Centre of CMFRI conducted a



Certificates awarded to students after OJT training

communities from the Vocational higher secondary schools of Kadamakkudy and Thevara in Ernakulam district benefitted from the programme.

(Reported by N.Aswathy, Manager, ATIC)

- Internship training programme for the students B.Sc., (Marine Sciences) of

Training Programme on 'Marine ornamental fish keeping and Aquarium Management' from 19 to 28 September 2018 to 20 participants of the NGO-Friends of Marine Life. The training consisted of Hands on sessions, lectures, interactive discussions and field visits.



Training on marine ornamental fish keeping

Zonal Workshops for Fisheries Survey staff held

- FRAD zonal workshops were organized during 2nd - 5th July 2018 at ICAR-CMFRI, Kochi (for southwest coast); 16th - 19th July 2018 at Visakhapatnam Regional Centre (for

northeast coast); 30th July - 2nd August 2018 at Mumbai Research Centre (for northwest coast) and 25th - 28th September 2018 at Chennai Research Centre, (for southeast coast). Updating

the identification of marine fish and introduction of online data entry from landings centres using electronic tablets for staff involving in marine fish landings data collection was done.



Participants in the workshop at Headquarters



Participants in the workshop held at Visakhapatnam



Participants in the workshop held at Chennai



Participants in the workshop held at Mumbai

- A 2-day review workshop under FIMSUL - II, Component - III "Estimation of Marine Fish landings in Tamil Nadu with enhanced sampling coverage" was conducted at the Madras Research Centre of CMFRI

from 4-5 July 2018. All the activities including trainings, validation issues and the six-monthly results were discussed. The FIMSUL Data collection App "ENMEEN" was released by the Director, ICAR-CMFRI through video conferencing during the workshop. Sixty three participants, including Tamil Nadu Fisheries Department officials and Data Collection Assistants attended the workshop.

- A 5-day workshop on 'Fortification of knowledge base on methodologies' under the project "Implications of recruitment dynamics and spatio-temporal stock assessment of marine prawns of India for fisheries management" was conducted at the Madras Research Centre from 06-10



Workshop organised on crustacean fishery resources

August 2018. The methodologies adopted for measuring spawning stock size and recruitment and assessing the impact of fishing on stock besides statistical analysis of the database developed was made during the workshop.

(Reported by: Crustacean Fisheries Division)



Release of the data collection app ENMEEN

- Dr. K. Vijayakumaran, Principal Scientist conducted an Interactive Co-learning Workshop on "Philosophy, Methods and Ethics in Science" at the School of Industrial Fisheries, Cochin University of Science and Technology, Kochi during 25-27 July 2018 which was attended by 18 young researchers.



Participants of the co-learning workshop with trainer

- An HRD Writeshop - cum - Training Programme on "Tropical Marine Finfish Seed Production and Farming Technology" was organised at Visakhapatnam Regional Centre from 14th to 16th of August. Dr. A. Gopalakrishnan, Director, Dr. G. Gopakumar, former Principal

Scientist, ICAR-CMFRI and Dr. Imelda Joseph and all scientists from Mariculture Division of the centre were present. The writeshop was primarily aimed at publishing a book on "Tropical Marine Finfish Breeding and Seed Production" and a training manual/hand booklet on "Seed Production and Farming of Marine finfishes" within a month's time.

- A stakeholders' meeting was conducted under the in-house project "Resource Assessment and



Stakeholders' meeting in progress

Management Framework for Sustainable Marine Fisheries of Tamil Nadu and Puducherry", on 18 July 2018 at Fisheries Information Centre Kasimedu, Chennai involving the fishermen, State fisheries officials, Central Govt. officials, scientists and technical personnel of ICAR-CMFRI, Chennai. The salient results of the work carried out in the project were presented to the stakeholders and their feedback received for further action.

MoU signed with Department of Fisheries, Kerala

A Memorandum of Understanding was signed on 16th July, 2018 between ICAR-CMFRI and Directorate of Fisheries, Govt. of Kerala. Under this MoU, transfer of technology of hatchery production of pompano seed in State Department hatcheries by ICAR-CMFRI, Kochi is planned.



Signing of MoU with the fisheries department, GoK

Formation of Green Brigade to fight marine debris menace

The Fishery Environment Management Division organized a collective of volunteers to fight the problem of marine debris that adversely affects the healthy functioning of the marine ecosystem. It was formally inaugurated by Dr. A. Gopalakrishnan, Director, ICAR-CMFRI on 25th July 2018. The function was attended by Smt. Viji Shajan, President, and other Board Members of the Mulavukad Grama Panchayath, Dr. Madhusoodanan, NSS Co-ordinator, St. Alberts College, Ernakulam; all Heads of the Divisions and staff of ICAR-CMFRI and other volunteers.



Launch function of the Green Brigade at Headquarters

Awards and Recognitions

- Dr. Eldho Varghese, Scientist, Fishery Resources Assessment Division received the Lal Bahadur Shastri Outstanding Young Scientist Award (Year 2017) of ICAR in the Subject Group of Social Science. An agricultural statistician, Dr Eldho bagged the award for his research in

cost-efficient designs for product and process optimisation in agricultural and fisheries experiments. The award includes a challenge project for three years with budgetary provision of ₹ 30 lakhs and a foreign training, in addition to an award of ₹ 1 lakh and citation.



Dr. Eldho receiving the award from Shri. Radha Mohan Singh, Hon' Union Minister of Agriculture

- Dr. Kajal Chakraborty working in the Marine Biotechnology Division of the Institute won the Rafi Ahmed Kidwai award in recognition of his research in the area of marine bioprospecting, especially to develop various nutraceutical products from seaweeds. An organic chemist, he has developed nutraceuticals for arthritis, diabetes and cholesterol which have been patented or out-licensed for commercial production. The award includes an amount of ₹ 5 lakh along with citation.
- Smt. Muktha M, Scientist, Vishakapatnam Regional Centre was awarded Ph.D degree from the Department of Zoology, Andhra University on 28th August 2018. She worked under the guidance of Dr. G Maheswarudu, Principal Scientist ICAR-CMFRI and Prof. K Sree Ramulu, Dept. of Zoology, Andhra University on her thesis titled "Some studies on biology and stock assessment of the longtail butterfly ray *Gymnura poecilura* (Shaw, 1804) off Visakhapatnam, western Bay of Bengal".



- Dr. R. Saravanan, Scientist won the Best Success Story award for the contribution 'Green Rameswaram Project' in the National Conference on Marine Debris COMAD 2018 organised by the Marine Biological Association of India during 11-12 April 2018.



- Dr. Anusree V. Nair won the Jawaharlal Nehru award for her PhD research work 'Bioprospecting of novel antimicrobial metabolites from *Bacillus subtilis* MBTD CMFRI BA37 and *Pseudomonas aeruginosa* MBTDCMFRI PS04 of tropical estuarine habitats of Cochin, India and its application in fish health management'. It involved isolation of potential pro-biotic bacteria from marine environments and its application in the shrimp larval feed as substitutes to antibiotic usage in aquaculture practices. This work was carried out under the guidance of Dr. Vijayan K. K., Principal Scientist and former Head MBTD. She is currently working in the Marine Biotechnology Division of the institute.



- ICAR-CMFRI Team Excellence Award 2018 for Research was conferred to Visakhapatnam Regional Centre of ICAR-CMFRI in recognition of the dedicated effort of the Scientist - in - charge and staff of the centre towards "Successful Breeding, Seed Production and Larval Rearing of *Epinephelus coioides* and *Trachinotus mookalee* and in formulation of the "Policy Guidance on Marine Fisheries of Andhra Pradesh".



Dr. Shubhadeep Ghosh, Scientist - in - charge, receiving the ICAR-CMFRI Team Excellence Award 2018 for Research from Dr. A. Gopalakrishnan, Director

Madras Research Centre

Shri Chhabilendra Roul, IAS, Hon'ble Special Secretary (DARE) & Secretary, ICAR visited the Madras Research Centre on 01 September, 2018, and interacted with the scientists and staff. All the staff members also attended a joint meeting for ICAR-CIBA and ICAR-CMFRI staff conducted by the Hon'ble Secretary.

Mangalore Research Centre

- Dr. Chandra Gowda, Director, ICAR Agricultural Technology Application Research Institute (ATARI), Bengaluru, visited the centre on 26th September, 2018
- Dr. S. K. Saxena, Director, Export Inspection Agency, New Delhi, visited the centre on 28th September, 2018.

Karwar Research Centre

- Mr. Prasanna K. Patgar, Regional Director (Environment), Department



Staff of Madras Research Centre with Mr. C. Roul, IAS

of Forest environment and Ecology, Parisar Bhavan, Habbuwada, Karwar., Mr. Dinesh kumar Y. K. Regional Director (Environment), Department of Forest environment and Ecology, Mangalore. Mahesh kumar, Assistant Director (Fisheries), CRZ office Mangalore. and Dr. Prakash Mesta, Scientist, Energy and Wetland Research Group, Center of Ecological Science Field Station,

Kumta visited on 2nd July, 2018.

- Dr. R. Suresh, Advisor, Agriculture Skill Council of India, Mr. Sunil M Nayak, Chief of the Doordarshan National production team, visited Karwar Research Centre of ICAR-CMFRI for video coverage of the activities of the centre on the topic 'Skilling in Fisheries and Aquaculture by ASCI' on 17th September, 2018 and 20th September, 2018.

Recreation Club activities

The staff recreation club of Mandapam Regional Centre organized Independence Day celebrations with various cultural events and competitions after which prizes were distributed. It also organized free Ayurvedic Health

Campaign with the support of Dr. Balamurugan, Ayurvedic Physician from Aringnar Anna Government Hospital of Indian Medicine in Arumbakkam, Chennai on 1st September 2018. More than 120 persons were

benefitted through the campaign. Free medicines were also distributed to the members.

(Reported by Staff Recreation Club, Mandapam Regional Centre)



Independence Day celebrations



Health Campaign organised



Recreation Club Day was celebrated at Madras Research Centre on 29th September 2018. Dr. P. Laxmilatha Scientist-in-Charge and patron of the club released the logo of the Centre's recreation club and prizes were distributed to the winners of the various competitions held.

Recreation Club day celebrated at Madras Research Centre

CMFRI wins Rajarshi Tandon Award

CMFRI bagged Rajarshi Tandon Award for the ninth time for the excellent Official Language activities among the Institutes situated in 'C' Region for the year 2016-2017. The award was distributed during the ICAR Foundation Day celebrations organized in New Delhi on 16th July 2018. Dr. A. Gopalakrishnan, Director, ICAR-CMFRI and Shri Navin Kumar Yadav, Assistant Director (OL) received the Award from Hon'ble Minister for Agriculture and Farmers' Welfare Shri Radha Mohan Singh. Shri Gajendra Singh Shekhawat, and Shri Parshotam Rupala, Hon'ble State Ministers for Agriculture and Farmers' Welfare and Dr. Trilochan Mohapatra, Secretary, DARE & Director General, ICAR were also present on the occasion.



Director receiving the Rajarshi Tandon Award from Hon'ble Union Agriculture Minister

Rajbhasha Gaurav Puraskar

Dr. A. Gopalakrishnan, Director, ICAR-CMFRI and Dr. Imelda Joseph, Principal Scientist and Head In Charge, Mariculture Division bagged prestigious Rajbhasha Gaurav Puraskar

2017-2018 for Non-Hindi Speaking Region for their Hindi article 'Mariculture technologies for doubling of income of fishermen' published in the in house Hindi Magazine 'Matsyagandha'. They received

the Award from Shri M. Venkaiah Naidu, Hon'ble Vice President of India during Hindi Day Programme organized at Vigyan Bhavan, New Delhi on 14th September, 2018.



Dr. A. Gopalakrishnan receiving the award from Shri. Venkaiah Naidu, Hon'ble Vice President of India



Dr. Imelda Joseph receiving the award

Hindi workshops

Karwar Research Centre organized workshop on 29th September 2018 which dealt with 'Principal Directions of Official Language Act'. Hindi

workshop on general grammar and usage of Hindi language in daily functioning of office matters was organized on 18th August 2018. Hindi

workshop on spoken Hindi was conducted at Tuticorin Research Centre on 27th September, 2018.

Visit of the Second Sub-Committee of the Committee of Parliament on Official Language

The Second Sub-Committee of the Committee of Parliament on Official Language inspected the implementation of the Official Language policy of the Union at Visakhapatnam Regional Centre of ICAR-CMFRI on 8th September, 2018. The committee was chaired by Dr. Prasanna Kumar Patsani, Hon'ble Member of Parliament (Lok Sabha), who was also the convenor of the programme. The other distinguished members of the committee included Dr. Sunil Baliram Gaikwad, Hon'ble Member of Parliament (Lok Sabha); Shri Pradeep Tamta, Hon'ble Member of Parliament (Rajya Sabha) and Shri Sushil Kumar Gupta, Hon'ble Member of Parliament (Rajya Sabha). The other offices where inspection took place were Cyclone Warning Centre, Air India Limited and National Thermal Power Corporation. The committee was welcomed by Dr. A. Gopalakrishnan, Director, ICAR-CMFRI; Dr. Prem Kumar, Principal Scientist, ICAR Headquarters and Dr. Shubhadeep Ghosh, Scientist - in - charge, Visakhapatnam Regional Centre of ICAR-CMFRI. An exhibition of all publications in Official Language were displayed, in addition to the posters, products and live material depicting the major achievements of the institute. The



Handing over of the Report by visiting committee at Visakhapatnam Regional Centre

committee critically reviewed and inspected the implementation of Official Language and expressed their satisfaction in the successful implementation of Official Language. Dr. A. Gopalakrishnan, Director, ICAR-CMFRI thanked all the committee members for their wholehearted support and co-operation. Other officials who attended the inspection were Shri C. Muralidharan,

Chief Administrative Officer, ICAR-CMFRI; Smt. Seema Chopra, Director, Official Language; Dr. Indira Divipala, Scientist, Visakhapatnam Regional Centre of ICAR-CMFRI; Shri Navin Kumar Yadav, Assistant Director, Official Language, ICAR-CMFRI; Shri Manoj Kumar, Technical Officer, Official Language and Smt. E. K. Uma, Assistant Chief Technical Officer, Official Language, ICAR-CMFRI.



Inspection meeting in progress



Dr. A. Gopalakrishnan, Director receiving a book on Rajbhasha from the Convenor and the Chairman of the Parliamentary Committee on Official Language

Celebrating Hindi Day

Hindi Day was observed at Headquarters on 14th September, 2018. Messages on Hindi Day issued by

competitions for the staff. At Mandapam Regional Centre various competitions in Hindi translation, essay writing, noting

certificates were distributed to the winners of different competitions.

"Hindi Pakhwada" was celebrated



Valedictory function of Hindi Week at Madras Research Centre



Participation of staff in various competitions at Veraval Regional Centre

Hon'ble Home Minister Shri Rajnath Singh, Hon'ble Agriculture and Farmers' Welfare Minister Shri Radha Mohan Singh and Secretary, DARE & Director General of ICAR Dr. Trilochan Mohapatra were circulated among staff members.

Hindi Week 2018 was also celebrated at the various centres of the institute by organizing various

and drafting, technical terminology usage were held during 14th to 24th September, 2018. Shri Ranvir Singh, Assistant Director (HTS, South), Department of Official Language, Ministry of Home Affairs, was the Chief Guest at the valedictory function held on 20 September 2018 at Madras Research Centre where cash awards, prizes and

during period of 14th to 29th September at Veraval Regional Centre and at Karwar Research Centre from 29th September to 13th October, 2018. Various competitions were also held at Mangalore Research Centre during 14th to 22nd September 2018 and at Tuticorin Research Centre from 12th to 20th September, 2018.

Exhibitions

Veraval Regional Centre participated in 8th 'Asia's Prime Exhibition on Agriculture Technology' (Agri Asia) organized by Agriculture, Farmers

Welfare & Co-operation Department, Government of Gujarat on 7th - 9th September 2018 in Gandhinagar, Gujarat.



Visitors at ICAR-CMFRI stall in Agri-Asia exhibition

Exhibition on marine ornamental fishes, marine fisheries and cage farming activities was conducted on the occasion of visit of 15th Central Finance Commission to review District Developmental activities in Fisheries and allied subjects at Hyatt Palace, Rameswaram during 7th - 8th September 2018. Dr. R. Saravanan, Shri.M.Sankar, Dr. M. Sakthivel and Dr. K. K. Anikuttan Scientists, co-ordinated the exhibition.

(Reported by: Mandapam Regional Centre)

Vizhinjam Research Centre organized its exhibition stall showcasing the technologies of the institute to the public in the premises of the Malankara Catholic College, Kaliyikkavilai, Kanyakumari District, Tamil Nadu, from 6th - 8th September, 2018.

Activities of Swachhta Hi Seva 2018

The institute observed the 'Swachhta Hi Seva 2018' programme from 15th September to 2nd October 2018 with active participation of all staff in Headquarters and regional research centres. Staff of Mandapam Regional Centre conducted the cleanliness drive from 15th September, 2018 to 2nd October, 2018 under the leadership of Dr. R. Jayakumar, Scientist in-Charge. Waste collection drives in institute's residential quarters, Marine Fish Farm in Munaikadu village, campus cleaning at Kendriya Vidyalaya, Mandapam Camp; Swachhta Hi Seva Awareness Campaign from Ariyankundu village to Dr. A.P.J. Abdul Kalam National Memorial, Peikarumbu, Rameswaram Island; awareness campaigns with folk songs, street plays and dance performance; door to door

meetings at Samathuvapuram village; segregation of non-biodegradable and biodegradable wastes and compost pit making, near Marine Fisheries Post office; Awareness creation & cleaning activities at Dhanuskodi near Old church and Arichalmunai beach, Rameswaram island and distribution of pamphlets related to cleanliness, sanitation and hygienic practices in Tamil to local residents and tourists was done.

Staff of Mangalore Research Centre under the leadership of Dr. Prathibha Rohit, Scientist in-Charge, cleaned the office campus, public places including fisheries harbours and beaches. Besides cleaning activities, awareness campaigns, preparation for planting vegetables and maintenance of vegetable garden within the office complex, installation of vermi

compost tanks and biogas unit for disposal of fish waste were made. Veraval Regional Centre staff contributed with beach cleaning at Somnath temple vicinity with special emphasis on plastic removal in collaboration with ICAR-CIFT and Indian Coast Guard. Demonstration was given on sanitation and hygiene among school children at Government schools (Bhidia and Jaleswar), where majority of students are from the fishermen community. A drawing competition with a theme 'Swachhta' for school children was also organized. The Puri Field Centre organized awareness rally on restrictions on use of plastics on 18th September, 2018 from Gundicha Mandir to Puri Beach. On 2nd October, plantation of valuable plants were done with the support of all staff of Puri Field Centre.



Karwar Research Centre team after beach clean up



Planting saplings at Puri Field Centre



Awareness campaign at APJ Abdul Kalam memorial by Mandapam Regional Centre



Segregation of plastic waste



Spreading concept of recycling waste for agriculture production in selected villages by Mangalore Research Centre



Versova beach cleaning drive by Mumbai Research Centre



Mullakkadu Beach cleaning drive by Tuticorin Research Centre



Awareness Talk on Health and Hygiene for school students organized by Veraval Regional Centre

Responsible fish vending promoted

KVK is promoting responsible fish vending that ensures fish delivered to consumers are safe-to-eat and the markets are clean and healthy. The KVK conducts regular training programmes to fish vendors on safe-to-eat fish sourcing, cleaned fish supply, waste to manure

conversion and hygienic vending. It also extends technology backstopping to set up healthy and clean safe-to-eat fish markets. One of such markets named *Vishavimukta malsya vipani* is functioning at Kalamukku fish harbour, Vypeen. A training was conducted on 18th July 2018

for fish vendors sponsored by Fish Farmers Development Agency (FFDA), Ernakulam. KVK has also extended technical backstopping to the online fish vendors promoted in the NICRA project functioning at ICAR-CMFRI, Kochi.

Entrepreneurship development programme on Pearl spot seed production

Subsequent to the success of producing Pearlsport seeds in a participation mode with farmers in KVK's Satellite Production Centres (SPCs) across the district, an Entrepreneurship

development programme was conducted for 74 selected farmers to develop further SPCs in their farms. The programme was held during 31st July to 2nd August 2018 at ICAR-CMFRI, Kochi with funding

support of National Fisheries Development Board (NFDB), Hyderabad. KVK's annual production of Pearl spot seed is 1.75 lakhs from 7 SPCs with each farmer receiving handsome returns.

Satellite Production Centre for carp fingerlings becomes operational

The KVK commenced supply of Jayanthi Rohu fish fingerlings from one of its Satellite Production Centre (SPC) located near Kothamangalam, Ernakulam. The KVK sourced spawn of

Jayanti rohu (improved variety of Rohu) from ICAR-Central Institute of Freshwater Aquaculture, Bhubaneswar and reared for 2 months till fingerling stage in the SPCs with a buyback agreement for the

farmers. A Jayanti rohu seed sales mela was also organized by KVK during 26th to 30th September 2018 and 15,000 fingerlings of 5-8 cm size could be sold.

ICAR-CMFRI takes over the administrative control of KVK-Lakshadweep

Consequent to the decision of ICAR to hand over the administrative control of the KVK-Lakshadweep to the ICAR-CMFRI, with effect from 22nd May, 2018 the institute has taken over the charge from the ICAR-Central Island

Agricultural Research Institute (CIARI), Port Blair. The KVK-Lakshadweep was managed by the Department of Agriculture, Administration of the U.T. of Lakshadweep since its inception in 1999 till it was handed over to the ICAR-CIARI, Port Blair in 2016. Action plan drawn up

by the Institute focusses on helping the Islands to efficiently tap the regions unique agricultural resources such as coconuts and high value oceanic tunas.

- Training workshop on 'Ecosystem assessment and fisheries modeling' organised as part of the International Project - LENFEST Benchmarks for ecosystem assessment : Indicators for practical ecosystems based fisheries management organised by CSIRO, Australia was held during 24-28 September, 2018 at ICAR-CMFRI, Kochi.
Dr. K. S. Mohamed, Dr. T. V. Sathianandan, Dr. R. Narayanakumar, Dr. Somy Kuriakose, Dr. Eldho Varghese, Dr. P. Shelton, Dr. P. Shinoj, Dr. U. Ganga, Dr. Sujitha Thomas, Dr. Geetha Sasikumar, Dr. K. G. Mini, Dr. P. U. Zacharia, Dr.

Josileen Jose, Dr. S. Lakshmi Pillai, Dr. T.M. Najmudeen, Dr. K.M. Rajesh, Dr. Livi Wilson, Dr. Rekhadevi Chakraborty and Mr. Vinaya Kumar Vase, participated in the workshop

- Dr. Grinson George attended International Training Programme on "Regional Ocean Governance Framework, Implementation of the United Nations Convention on The Law of The Sea (UNCLOS) and Its Related Instruments in The Southeast Asian Seas and The Indian Ocean" at Hua Hin, Prachuap khirikhan, Thailand during 1-28 July 2018.

- Dr. Srinivasa Raghavan V., Scientist participated in the Hands-on training programme, "Aquaculture Genomics and Bioinformatics" held at ICAR-Central Institute of Brackishwater Aquaculture, Chennai from 27th August - 1st September 2018.
- Dr. N. Aswathy attended the 3 days training on 'Marketing and Network Linkages for Agri-Startups' held at MANAGE, Hyderabad during September 10th - 12th, 2018
- Shri. Rajan Kumar, attended ten days short course on "Advance statistical methods and computational software for fisheries research and management" at ICAR-Central Institute of Fisheries Technology, Kochi from 17th to 26th July, 2018.
- Shri. K. Ramasamy, Tech.Asst attended the training programme on Automobile maintenance, Road Safety and Behaviour Skills during the period from 17th-23rd July 2018 at CIAE, Bhopal.
- **Ms. Zulekha**, Steno-III, participated in the training programme on 'Enhancing efficiency and behavioural skills' from 24th-29th September, 2018 organised by ICAR-NAARM, Hyderabad at ICAR-CIFE, Mumbai.



Participants in the Lenfest Training Workshop

Programme participations

- **Dr. A. Gopalakrishnan**, Director participated in the 90th Foundation Day of ICAR and Award ceremony held on 16th July, 2018 in New Delhi.

Attended the Cadre Review meeting chaired by DG, ICAR along with Secretary, ICAR, Deputy Director General (FS) and Director (P) in AP Shinde Symposium Hall, NASC Complex, Pusa, New Delhi.

Attended the meeting under the Chairmanship of Secretary, DARE & DG, ICAR to share the experiences of participants of "Senior Executive Development Programme (SEDP) on Developing Effective Organizational Leadership for Senior Officers of ICAR" organized by ASCI, Hyderabad in coordination with ICAR-NAARM on 23rd July, 2018 in Krishi Bhavan, New Delhi.

Attended the Writeshop-cum-training programme on "Tropical Marine Finfish Seed Production and Farming Technologies" On 14th August 2018.

Participated in inspection of Parliamentary Committee on Official Language

conducted on 8th September 2018 at Visakhapatnam RC of CMFRI.

- **Dr. K. S. Mohamed** attended the meeting with the Secretary, DADF, New Delhi on 'Ecosystem based fisheries management' on 26th September 2018.
- **Dr. K. S. Mohamed, Dr. T. V. Sathianandan, Dr. Prathibha Rohit and Dr. A. P. Dineshbabu** attended the 3rd Meeting of the Expert Committee for revalidation of potential fishery resources in the Indian EEZ held on 17th July 2018 at Chennai Zonal Base of Fishery Survey of India, Chennai.
- **Dr. K. S. Mohamed, Dr. T. V. Sathianandan and Dr. K. Vijayakumaran** attended the Fourth Meeting of the Expert Committee for 'Revalidation of Potential Fishery Resources in the Indian EEZ Committee' on 30th and 31st July, 2018 at Chennai Zonal Base of Fishery Survey of India, Chennai.

Also attended the final Meeting of the Expert Committee on 7th September 2018.

- **Dr. P. U. Zacharia** attended the interactive meeting regarding initiating collaborative research on climate change and food security at Kerala Veterinary and Animal Sciences University, Pookode, Wayanad on 25th July 2018.
- **Dr. Prathibha Rohit** attended as the Fisheries Expert the Scientific Advisory Committee meeting of KVK on 25th September 2018, KVK Campus, Mangaluru.
- **Dr. Prathibha Rohit and Dr. A. P. Dineshbabu** participated in the fishermen stakeholder meeting under the chairmanship of District Commissioner, Udupi and elected members of the legislative members of Udupi District on the ban on Bull trawling and light fishing, held on 27th July, 2018 at DC Office, Udupi.

Participated in the 'Skill enhancement in Marine Sector (SEMS) for sustainable Export opportunities: Enhanced Official Controls by State and UT's Fisheries Departments' organized by Export Inspection Council, Ministry of

Commerce & Industry, Govt. of India at ICAR-CMFRI, Mangalore Research Centre, 24-28 September 2018

- **Dr. A. P. Dineshbabu, Dr. Sujitha Thomas, Dr. K. M. Rajesh and Dr. G. B. Purushottama** participated in the programme of Department of Forest, Ecology and Environment, Karnataka State for evaluating possibilities of coastal and marine developmental programs to be implemented to improve the livelihood of coastal population along Karnataka Coast as a part of ICZMP phase II during 2-4 July, 2018.
- **Dr. R. Narayanakumar** participated in a Brainstorming Workshop on Development of Proforma for Ranking of ICAR Institutes, at National Academy of Agricultural Research Management, Hyderabad on 20th July 2018.
Attended FAO/BOBP expert meeting on Methodologies for conducting fishing fleet techno-economic performance reviews at Chennai on 18-20 September 2018.
Attended as Member, the IMC meeting of ICAR-CMFRI at Kochi on 30th August 2018.
- **Dr. J. Jayasankar** presented the progress of the FIMSUL-II Component-III activities in the review meeting with World Bank Officials held at Tamil Nadu Fisheries Department Office during 9-13 July, 2018 and 24-25 September, 2018.
- **Dr. P. U. Zacharia and Dr. T. M. Najmudeen** attended the sixth Annual review meeting of NICRA Project at NASC, New Delhi during 7th to 8th August 2018.
- **Dr. Bindu Sulochanan** presented "Marine litter pollution" in Environment Awareness Programme 'Beat the Plastic Pollution' organised by Mangalore Refinery and Petrochemicals Limited on 10th July 2018.
- **Dr. Geetha Sasikumar**, attended meeting convened by Chief Conservator of forest, Mangalore for discussing CMFRI research inputs for proposing an Eco-smart Coastal Village for Dakshina Kannada District on 10th September 2018 at Mangalore.
- **Dr. P. Laxmilatha**, Scientist-in-Charge, Madras Research Centre attended a meeting with the Director of Fisheries, Puducherry on 03 August 2018, for a discussion regarding finalization of MOU for the project proposal on bivalve farming and implementation of open sea cage culture programme in UT of Puducherry under Centrally Sponsored Schemes on Blue Revolution.

Attended a meeting at the Department of Fisheries, Chennai on 18th August 2018 to discuss the skill development training programmes proposed to be jointly imparted by the Tamil Nadu Skill Development Corporation to marine and inland fishermen/fisherwomen as an alternative livelihood activity to improve the socio-economic status.

- **Dr. P. Laxmilatha and Dr. R. Narayanakumar**, attended the 2nd Techsurge 2018 meeting on Technologies and Innovations for Sustainable Fishing (Safety, Security, Navigation, Technology) and made a presentation on Fishery Management and Safety at Sea, at Marine Technology Society-India Section, Chennai on 10th August 2018.
- **Dr. P. Laxmilatha and Dr. M. Sivasdas**, attended a Regional Level Co-Management Committee meeting on 21 August 2018 at the State Fisheries Department, Chennai.
- **Dr. R. Narayanakumar, Dr. J. Jayasankar, Mr. D. Pugazhendi and Mr. N. Rudhramurthy** attended a meeting held with World Bank Fisheries Consultant under FIMSUL - II project to review the progress of work on bivalve farming, fisheries database development, work plan & market survey report on bivalves, at the Directorate of Fisheries, Chennai on 10th July 2018.
- **Dr. R. Narayanakumar and Dr. Joe K. Kizhakudan** participated in a brainstorming session on Start-up India programme in aquaculture sector ICAR-CIBA, Chennai on 16th July 2018.
- **Dr. Jayasree Loka** attended Board of studies meeting in Department of Marine Living Resources, Andhra University, Visakhapatnam on 20th July, 2018
- **Dr. B. Johnson** participated in the discussion on 'Working out Fisheries Development Plan' at Port Blair, Andaman & Nicobar Island on 6th September 2018.
Attended the meeting 'to discuss on seaweed culture and commercialization of seaweed products' at Krishi Bhawan, New Delhi on 18th July 2018 convened by DADF.
Participated in the workshop on Development of proforma for ranking of ICAR institutes held at ICAR-NAARM on 20th July, 2018.
- **Mr. Vivekanand Bharti** attended progress review meeting for SAMUDRA program (Satellite-based Marine Process Understanding, Development, Research and Application for blue economy) at

Space Application Centre (SAC) Ahmedabad on 10th July 2018.

- **Dr. M. K. Anil**, attended the meeting of the officials of the Maharashtra Government on the setting up of Multispecies Hatchery Complex at Sindhudurg, Maharashtra on 11th September, 2018.
- **Dr. K. N. Saleela** participated in an interactive meeting with Managing Director and CEO, Vizhinjam International Seaport Ltd on 22nd September, 2018 to discuss Impact of dredging on shore seine fishery along the coastal waters of Vizhinjam, Kerala.
- **Dr. P. S. Asha and Dr. C. P. Suja** attended the District Level Biodiversity Committee meeting organized by the Tamil Nadu Forest Department at Thoothukudi on 5th July, 2018.
- **Mr. D. Linga Prabu** attended the "State level Steering Committee Meeting for the Conservation and Management of Mangroves, Wetlands and Coral Reefs" on 12th July, 2018 in the office of Principal Chief Conservator of Forests & Chief Wildlife Warden, Tamil Nadu Forest Department, Chennai.
- **Dr. P. S. Asha** attended the National consultation workshop on seacucumbers at Wildlife Institute of India, Dehradun on 3rd September, 2018.
- **Dr. S. Lakshmi Pillai** attended the stakeholders meeting of Seafood Exporters Association of India (SEAI) at Willingdon Island, Kochi on 28th August 2018.
- **Dr. L. Ranjith** attended National workshop on "Rapid Response Plan for the Management of Coral Reef Ecosystems of India" at Tuticorin on 23rd & 24th August 2018 organized under GEF-UNDP-GOI NATCOM project.
- **Mr. M. Sankar** participated in the workshop on 'Genomic and proteomic Analysis for Improvement of Productivity in Farm Animals' conducted during 6th - 10th August 2018 at Bioinformatics centre & ARIS Cell, Madras Veterinary College, Chennai.
- **Dr. R. Saravanan** participated in the International Workshop on Gobioid Fishes at Vivekananda College, Kanyakumari during 10-11th August 2018.
- **Shri Navin Kumar Yadav**, Assistant Director (OL), Smt. E.K. Uma, ACTO (Hindi Translator) and Smt. Vandana V., Technical Assistant (Hindi Translator) attended Official Language Seminar on 'Progressive use of Official Language' conducted at ICAR-CIFT, Cochin on 23rd July 2018.

PROMOTIONS

Name & Designation	Promoted as	Centre	w.e.f
Dr. Nilesh Anil Pawar, Senior Technical Officer	Assistant Chief Technical Officer	Mumbai Research Centre	20.10.2016
Mr. Mahendrakumar D. Fofandi, Senior Technical Officer	Assistant Chief Technical Officer	Veraval Regional Centre	22.10.2016
Dr. Vikas P. A., Senior Technical Officer (SMS-Fisheries)	Assistant Chief Technical Officer (SMS-Fisheries)	KVK of ICAR-CMFRI	07.12.2016
Mr. C. D. Manoharan, Personal Assistant	Private Secretary	ICAR-CMFRI, Kochi	02.07.2018
Ms. M. R. Sreedevi Junior Accounts Officer	Assistant Finance & Accounts Officer	ICAR-CMFRI, Kochi	12.07.2018

TRANSFERS

Name & Designation	From	To	w.e.f
Dr. A. K. Abdul Nazar, Principal Scientist	Mandapam Regional Centre	Madras Research Centre	13.08.2018

INTER-INSTITUTIONAL TRANSFER

Name & Designation	From	To	w.e.f.
Dr. Abdul Gafoor V. M., Senior Technical Officer (SMS-Poultry & Animal Science)	ICAR-CIARI, Port Blair	KVK of ICAR-CMFRI, Lakshadweep	01.06.2018
Dr. Reshma Gills, Scientist	ICAR-IARI, New Delhi	ICAR-CMFRI, Kochi	09.07.2018

RESIGNATION

Name	Designation	w.e.f	Centre
Mr. Midhunraj N.K.	Technician	15.09.2018 (AN)	Vizhinjam Research Centre
Mr. Bisun Bhaskar	Skilled Support Staff	29.09.2018 (AN)	Mangalore Research Centre

RETIREMENTS ON SUPERANNUATION



Dr. Veerendra Veer Singh

Principal Scientist &
Scientist-in-Charge,
30.09.2018

Mumbai Research Centre of CMFRI



Mr. C. Unnikrishnan

Technical Officer
30.09.2018
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Mr. C. K. Sajeev

Assistant Chief Technical Officer
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OBITUARY

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*Institute illuminated on the occasion of
Independence Day Celebrations 2018*



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