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CMFRI Newsletter

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## गण दिवस, कृषक गोष्ठी एवं पुरस्कार समारोह



Awards function during ICAR Foundation Day Celebration

see page 15



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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**Published by**

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# DIRECTOR SPEAKS



Warm greetings to all.

The institute's unstinting and pioneering efforts in popularising sea cage culture technology is now bearing fruit with several fish farmers coming forward to

adopt the culture practices with our active technical support. The recognition to these efforts have come by way of Pandit Deen Dayal Upadhyaya Antyodaya Krishi Puraskar Award instituted by ICAR to a tribal fish farmer from Gujarat successfully practicing cage culture of marine fishes. This will motivate us to further extend the benefits of research and technologies developed disseminated to the fishers to improve their livelihoods and boost fish production in a sustainable manner. The institute has responded to stakeholder needs by coming out with the policy guidelines to address conflicts arising out of light fishing and Non-Detrimental Findings for sharks and rays to comply with requirements under CITES for international trade. Our Institute has won the Rajarshi Tandon Award for efficient implementation of the Official Language programmes for the seventh consecutive year which is a commendable achievement. As we have reached the last quarter of 2016, and look forward to prepare for a new year, let our past experiences guide us to reach even better heights of achievement.

**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 seven Research Centres located along the Indian coastline, catering to the marine fishery policy needs of all maritime states of the country.



# National and International recognition to sea cage farming promotion activities of ICAR- CMFRI



Shri. Hasanbhai receiving ICAR's Pandit Deen Dayal Upadhyay Antyodaya Krishi Puraskar award

The open sea cage farming model developed by ICAR-CMFRI has received national recognition, with a farmer associated with the institute bagging the prestigious Pandit Deen Dayal Upadhyay Antyodaya Krishi Puraskar (Zonal award) instituted by

ICAR. Mr. Hasanbhai Musangara Jumabhai, a fisherman of the tribal Sidi community from Gujarat received the award for his active involvement in the open sea cage farming guided by the Veraval Regional Centre of ICAR-CMFRI. The award comprised ₹ 50,000 and a

citation. Mr. Hasanbhai is the leader of a Fishermen Co-operative Society in Gujarat named *Bharat Admjuth Matsyodyog Mandali-Talala*. The society successfully utilized the indigenous open sea cage farming method developed by ICAR-CMFRI and popularized it among their community to increase the fish production. The award is given every year to recognize the contributions of marginal, small and landless farmers for developing sustainable, integrated models of farming or innovations in any field of agriculture.

Scientists offered the community farming demonstration, training and hands-on exposure of the farming, under the Tribal Sub Plan (TSP) outlay of the institute. The farming group was supported financially and technically by the institute every year since 2011. The sea cage farms, regarded as one of the largest in the country, comprises 22 galvanised iron (GI) cages of 6m diameter. The farmers who gained confidence to operate the farm by themselves have obtained four crops of lobsters and cobia, leading to improved livelihoods and increased fish production.

## Asian Fisheries Society's Gold Medal award

Dr. A. Gopalakrishnan, Director ICAR-CMFRI was awarded the coveted Gold Medal by the Asian Fisheries Society (AFS), an organisation devoted to the fisheries sector of the Asia-Pacific region. The award is in recognition of the institute's efforts for the successful conduct of the International Conference on Cage Aquaculture (CAA5) held at Kochi in November 2015.

In addition to the research activities, ICAR- CMFRI has been providing training programmes as well as a series of demonstrations of cage farming in all the maritime states to popularise this farming method among the fisherfolk. Under the guidance of ICAR-CMFRI, more than 750 cage culture initiatives with active participation of fishermen are underway in various parts of the country. Dr. A. Gopalakrishnan, who took charge as Director in 2013, received the Gold Medal and Citation



Dr. A. Gopalakrishnan, Director receiving the AFS award

from Prof. Shuolin Huang, President of the AFS, at the 11<sup>th</sup> Asian Fisheries and Aquaculture Forum (AFAF) held in Bangkok, Thailand. Besides, Dr. A.

Gopalakrishnan was also elected as India's representative in the Executive Council of the AFS at its 13<sup>th</sup> General Body meeting held in Bangkok.

## Consultative Meeting of Fisheries Institutes

The Department of Fisheries, Government of Kerala organized a consultative meeting of the research and academic institutes in the fisheries sector at the ICAR-CMFRI on 7<sup>th</sup> July 2016.

Smt. J. Mercykutty Amma, Hon'ble Minister for Fisheries, Government of Kerala presided over the meeting. She stressed the need for effectively disseminating the technologies being developed by the research institutes to the fishermen and fish farmer communities. She said that a committee of experts representing from all the fisheries research institutes functioning in the state will be formed to monitor the dissemination of the technologies to the targeted groups. Dr. A. Gopalakrishnan, Director, ICAR-CMFRI offered all support to the State government for the improvement of the fishery sector in Kerala and suggested that effective



precautionary measures by strengthening the curbs on fishing of juvenile fishes and regulations on fishing effort should be implemented. Directors and representatives from, ICAR-CIFT,

ICAR-CIFRI, ICAR-NBFGR, ICAR-KVK, MPEDA, CIFNET, NIFPHATT, Dr. A. Ramachandran, Vice Chancellor, KUFOS and officials from the Fisheries Department also attended the meeting.

## Stakeholder Consultations on NDF for CITES listed species of sharks and manta rays

Five shark species (oceanic whitetip shark; the porbeagle shark; scalloped, smooth and great hammerhead sharks) and all manta rays were added to the Appendix II of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) at Bangkok (Thailand), CITES CoP16 in 2013. All these, except the porbeagle shark are found in Indian waters. The effective date of the inclusion in Appendix II was on 14<sup>th</sup> September 2014. Appendix II includes species not necessarily threatened with extinction, but whose trade must be controlled in order to avoid utilization incompatible with their survival. International trade in specimens of Appendix II species is allowed only by the granting of an export or re-export permit certificate. In this

context a Non-Detriment Finding (NDF) document is part of CITES requirements for the trade of Appendix II listed species. It has to be prepared by a Scientific Authority considering the population status, distribution, population trend, harvest, trade information, other biological and ecological factors of the species concerned and advising that such export will not be detrimental to the survival of that species. Further, the Scientific Authority has to monitor both the export permits granted by that country and the actual exports of such specimens. Whenever the Scientific Authority determines that the export of specimens of any such species should be limited in order to maintain that species throughout its range at a level consistent with its role in the ecosystems in which it

occurs and well above the level at which that species might become eligible for inclusion in Appendix I, it shall advise the appropriate Management Authority of suitable measures to be taken to limit the grant of export permits for specimens of that species.

ICAR-CMFRI which was recognized as the Scientific Authority for India was asked by the Ministry of Agriculture to carry out the NDF study of the species mentioned above. Accordingly, the Demersal Fisheries Division completed the task and conducted a series of stake holders consultations in the different maritime states to present the outcome of the study and obtain stakeholders' opinions on the same. The stakeholder meetings were held at Visakhapatnam on 24<sup>th</sup> August, 2016. Thoothukudi on 26<sup>th</sup>



Stakeholders consultations at Thoothukudi



at Mumbai



at Chennai



at Veraval

August, 2016, Mumbai, Chennai and Mandapam on 27<sup>th</sup> August, 2016, Veraval on 29<sup>th</sup> August, 2016, Mangaluru on 1<sup>st</sup> September, 2016, Kochi on 8<sup>th</sup> September, 2016 and Thoothoor on 1<sup>st</sup> October, 2016. The meetings convened by ICAR-CMFRI were attended by fishermen, fisher union leaders, merchants and exporters associated with shark fisheries and representatives from NGOs, along with the officials from the State Fisheries Departments, Wildlife Departments, MPEDA and other Government agencies.

The stakeholders were briefed about the NDF, its necessity and how it



at Kochi

functions. The outcome of the NDF study was positive for the shark species with conditions for management improvement. For the manta rays, positive NDFs with mandatory conditions to monitor and regulate the fishery and trade, along with conditions to improve management were recommended. Fishermen and traders/exporters also shared their experience of fishing and trade in these species. Fishermen unanimously agreed that these species do not form targeted fisheries in India and are mostly obtained as by-catch. At all the centres, the stakeholders agreed to the recommendations included in the



at Thoothoor

NDF and expressed their willingness to share information of capture and trade details of the resources. They also stressed on the need to review the document after five years. A major action plan suggested is the setting up of a data sharing platform between all the stakeholders including researchers and management authorities to fill up the existing gaps in available data and evolve better species-specific management measures. All stakeholders also stressed the need for better awareness generation on the status and biological vulnerability of these resources.

*(Reported by Demersal Fisheries Division)*

## ICAR-CMFRI inks pact with M S University

ICAR-CMFRI being keen on boosting its research activities on marine biodiversity with a special focus on the Gulf of Mannar, signed a Memorandum of Understanding with the Manonmaniam Sundaranar University, Tirunelveli for collaborative research programmes and to develop adequate manpower for marine biodiversity research in the region. Dr. A Gopalakrishnan Director ICAR-CMFRI and Dr. K. Bhaskar Vice-Chancellor MSU signed the MoU. The Tuticorin Research Centre of ICAR-CMFRI will play an important role in the collaborative research programmes. With the MoU, ICAR-CMFRI, will become an approved



research centre of the University and both the institutions would be involved in developing collaborative research

projects and organizing seminars, conferences etc for the development of marine sciences.

## Marine Fisheries Census 2016: data entry in progress

The data entry regarding Marine Fisheries Census 2016 collected in February 2016, by around 3,000 enumerators on 11 lakh fishermen families spread across 4,250 marine fishing villages located in 73 districts is in progress. Nearly 100 staff are processing and entering the data sheets with counter checks by supervisors and scientists. These data inputs will be used for formulating the census reports for 9 maritime states and 2 Union Territories of India.

*(Reported by T. V. Sathianandan, Head, FRAD)*



## Automatic Weather Station procured

To enable weather forecasting, an 'Automatic Weather Station' (AWS) of meteorological grade was procured and installed through the NICRA project. The equipment customized to meet the long term weather forecasting requirements has data loggers, air temperature (AT) and relative humidity (RH) sensors, tipping bucket rain gauge, temperature humidity data logger, wind speed and wind direction sensors, 10 W solar panel with cable and battery along with mounting hardware accessories. AWS is now functional with data acquisition and recording being carried out periodically for all parameters. Software for automatic data download to computers is planned so as to make the process more smooth. Automatic Weather Station will be a significant asset for the institute to enable continuous weather forecasting as well as providing scientific advisory services using the weather data generated.



## Rich harvest of sea farmed cobia

Four teams of Association of Kovalam Progressive Fishermen, (AKPF) youth members each carried out the cage operations guided by the mariculture team at Kovalam Field Laboratory of ICAR-CMFRI, Chennai. Four GI cages of 6 m diameter were installed in the sea off Kovalam in April 2016 for cage culture of cobia. This was a joint initiative of the TN State Fisheries Department, FIMSUL II and AKPF under the technical guidance of ICAR-CMFRI. The cages stocked with 725, 650, 650 and 240 numbers of cobia fingerlings were harvested on 30<sup>th</sup> September, 2016

and 1<sup>st</sup> October, 2016, after completing 173, 156, 150 and 150 days of culture (DOC) respectively. The initial stocking sizes were 14-17 mm TL and 18-23 g weight and a survival of 68-88% was realized. The best results were from the cages with lowest stocking density. More than 75% of the fishes had attained >2 kg weight and the harvest was purchased by a seafood exporter based at Kanyakumari at ₹ 300 per kg for fish weighing >2 kg and ₹ 180 per kg for fish weighing 1-2 kg.

(Reported by Joe K Kizhakudan, Madras Research Centre)



Harvest of Cobia at Kovalam

## IMTA experiments initiated at Sippikulam

Two suitable sites were selected to demonstrate the Integrated Multi-Trophic Aquaculture (IMTA) model in sea cage farms at Sippikulam, Thoothukudi, under the "National Innovations in Climate Resilient Agriculture (NICRA) project. Sea bass (*Lates calcarifer*) seeds procured from Rajiv Gandhi Centre for Aquaculture, were reared in 2 tonne FRP

tank at stocking densities of 500 numbers per tank. After the two months of nursery rearing, the fingerlings will be stocked in GI sea-cage nets to carry-out the IMTA experiments.

(Reported by: C. Kalidas, L. Ranjith, P.P. Manojkumar, I. Jagadis & M. Kavitha, Tuticorin Research Centre)

## Successful harvest of sea cage farmed cobia at Mandapam

The Ramanathapuram district administration of Tamil Nadu had assisted 10 fishermen Self Help Groups (SHGs) to take up sea cage farming of cobia. One of the beneficiary groups initiated sea cage farming of cobia at Thangachimadam, Ramanathapuram District in the month of February 2016. Hatchery produced cobia fingerlings were stocked in two GI cages. During April-May, 2016 there was a high incidence of mortality due to outbreak

of *Vibriosis* but scientists provided necessary management advisories to contain the disease spread and as a result, 22% of the actual stocked cobia survived. After 6 months of culture period, a total of 746 kg of cobia fishes were harvested on 27<sup>th</sup> August 2016. The average weight of harvested fish was 2.5 kg which were sold at farm gate price of ₹ 350/kg and a gross revenue of ₹ 2,61,100 was realized. The total operational expenditure was ₹ 1,76,000

and the income over operating cost was ₹ 85,100. The cost : benefit ratio was 0.67, indicating 33% profit due to the farming inspite of the loss due to disease problems in the particular case.



Harvested cage farmed cobia

## Lobster culture in small iron frame net-cages

Undersized lobsters (*Panulirus homarus*) of 40 to 60 g each were stocked in four iron frame net-cages (2 m x 1.5 m x 1.5 m) in the sea off Sippikulam. The lobsters were fed with trimmed cuttlefish waste and clam. An Average Daily Growth (ADG) of 1.08 g with 90% survival was observed at the time of harvest. A total of 89 kg lobsters of Grade-I and Grade-II were harvested which fetched ₹ 2250 and ₹ 1700 per kg respectively. With the guidance by the institute for scientific farming practices a revenue of ₹ 1,75,000 from the 130 days culture was got.

(Reported by: C. Kalidas, L. Ranjith, P. P. Manojkumar, I. Jagadis & M. Kavitha)



Iron frame net-cage for lobster culture

## Unprecedented rough weather conditions off Kochi dislocates sea cage

Unseasonal rains and rough sea conditions affected the sea cage installed near Fort Kochi by ICAR-CMFRI in association with KLCA, Beach Unit, Fort Kochi. The cage which was installed in the sea in November 2015, was stocked with cobia, which were growing well and had attained 850 to 1300 g each when sampling was carried out on 5<sup>th</sup> June, 2016. On 16<sup>th</sup> June, 2016, the cage showed slight dislocation and hence harvest and safe removal of cage was planned for 17<sup>th</sup> June, 2016. However in the early morning itself the cage got dislocated and hit the sea wall which bent the cage and majority of fishes escaped while those few recovered were dead. The nets, two anchors and chain were



recovered along with the cage. The experience was tough for the fishermen group, but they were positive about

attempting cage culture again in the site.

(Reported by Imelda Joseph, Mariculture Division)

## Crab menace in tuna drift gill net fishery at Chennai

Multiday drift gill net fishery targeting oceanic tunas operates from the Kasimedu landing centre in Chennai. During July and August, the fishery was very good with the catch per boat being 4 to 20 t. But in September, the catch started decreasing and declined to only 1 to 2 t per boat. Almost 99% of the

tuna catch during this period was comprised by skipjack tuna and the rest by yellowfin tuna. One of the reasons attributed to the poor fishery in September was the occurrence of swarms of the deep sea pelagic crab, *Charybdis smithii*, which not only attacked the fishes but also damaged the

nets. The fishes were attacked mainly in the belly region that resulted in the entrails to come out. This was considered as spoil by buyers and hence commanded low prices. Around 25% of the fishes were affected and the nets were also severely damaged causing financial loss to the fishers.

ICAR-Central Marine Fisheries Research Institute, Mumbai Research Centre in collaboration with State fisheries department, Govt. of Maharashtra conducted Rapid Fishing Surveys to monitor the presence of Jelly fish and Sting rays as a precautionary measure to ensure safety of devotees on Mumbai beaches during Ganesh Idol Immersion ceremonies 2016. Total 11 fishing surveys were conducted at Girgaum Chowpatty, Dadar Chowpatty, Juhu Beach and Aksa Beach during 4<sup>th</sup> -13<sup>th</sup> September. The programme was co-ordinated by Dr. V. V. Singh, Mr. Ajay D. Nakhawa and Dr. Nilesh A. Pawar.

## Large by-catch of jelly fish in mud bank fisheries



*Jelly fish at Chettuva fishing harbour*

Extensive by-catches of jelly fish at Chettuva Fishing Harbour was observed during monitoring of the seasonal monsoon time mud bank fisheries. The heavy by-catch of jelly fish, was a vexing issue for fishermen who had to struggle to sort the fish for marketing from the catch after reaching the shore. Since there was no local market demand for jelly fish they were discarded.

*(Reported by: Vivekanand Bharti, Sijo Paul, K.G. Baby, Grinson George and T. V. Sathianandan)*

## Stranding of baleen whales



*Stranded baleen whale at Dhareshwar*

Three baleen whales were stranded along with Uttara Kannada Coast of Karnataka during July and August 2016. These strandings occurred on 1<sup>st</sup> August, 2016 at Ramanagandi (Dhareshwar), 27<sup>th</sup> August, 2016 at Holanagadde (Kumta taluk) and on 13<sup>th</sup> August, 2016 at Pavinkurve taribagilu of Honnavar taluk.

*(Reported by: Narayan G.Vaidya, Karwar Research Centre)*

## Research Highlights

### ICAR-CMFRI's recommendations on regulating light fishing accepted by the DADF

The widespread use of lights in purse-seine fishing in Goa and Karnataka has led to conflicts between traditional fisher groups and the operators of light fishing units. The traditional fishers claim that such fishing adversely affects the fishery resources due to excessive capture of large spawning adults. The conflict which was particularly severe in Goa, led to the Govt. of Goa issuing an order banning use of light in fishing practices within its territorial waters. Despite the ban, the controversies continued because of perceptions of new investment made by purse-seine fishermen going in vain. In Karnataka, there has been growing resentment against light fishing by light-fitted purse-seines. This new method of fishing has come at a time when the overall marine catches along southwest coast has declined by 17% and that in Goa by a steep 55%, mainly due to the decline in oil sardine catches, which is the mainstay of traditional fishers. Considering the seriousness of these inter-sectoral conflicts, a stakeholders meeting with the Department of Fisheries of the coastal

states of the west coast and fisheries research organisations was convened by the Department of Animal Husbandry, Dairying and Fisheries (DADF) on 16<sup>th</sup> August, 2016. ICAR-CMFRI later gave 10 recommendations in the form of a policy note which was accepted by DADF and in an Office Memorandum (F.No. 21001/3/2014-FY (Ind)) dated 29<sup>th</sup> August, 2016 guidance to all maritime states of India for effective management of light fishing was given. Salient points of the advisory are given below.

- Light fishing is not permitted in territorial waters (upto 12 nmi) with exception of traditional fishing practices (Dip net/trammel nets) in certain districts of Kerala.
- No light fishing by trawls, traps, pots and long line.
- No artificial lights in drifting FADs targeting tunas.
- Beyond territorial waters authorised fishing only with following limits for light fishery.
  - Only 20-25% of total purse seine fleet permitted to use light fishing.

- Purse seine mesh size to be >45mm and power of light <25KW.
- Only surface lights are allowed and no underwater lights to be employed.

- Light fishing by purse seines is to be restricted to 10 days in a month during fishing season.

- No purse seine operations with lights in April and May which is the spawning period of mackerel.
- Close monitoring of light fishing operation by enforcement wing of Fisheries Departments of respective maritime states.
- Fisheries Research Institutes to provide prompt research feed back regarding impacts and catch quotas.

Further details will be available in the ICAR-CMFRI publication *Fishing Using Light: How should India handle this new development*, Marine Fisheries Policy Brief - 4 (2016) based on the policy note prepared by the Institute.

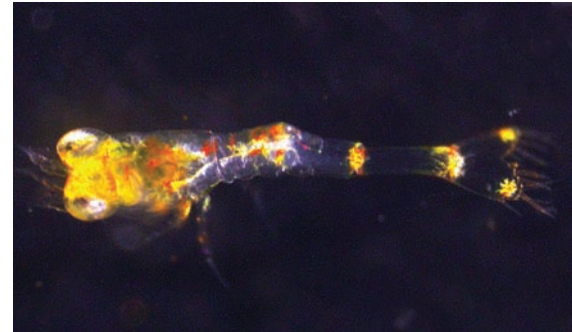
*(Reported by K. S. Mohamed, Head, Molluscan Fisheries Division)*

# Successful broodstock development and larval rearing of marine ornamental camel shrimp



Broodstock of camel shrimp

Successful broodstock development and larval rearing of *Rhynchocinetes durbanensis* commonly known as the camel shrimp or hinge-beak shrimp was achieved at the Vizhinjam Research Centre. This shrimp growing up to 4-5 cm in length belongs to the family Rhynchocinetidae. The shrimp has red and white lines on a translucent body and many white ocelli (spots) as well as a Y-shaped white mark on the upper front



First zoea



40 Day old zoea



Juvenile camel shrimp (60<sup>th</sup> day)

part of its carapace. The ovigerous females carry around 200 to 500 eggs. Eggs hatch out as zoea larvae with stalkless eyes. By 40<sup>th</sup> day it reaches zoeal stage with pleopod buds. By 60<sup>th</sup> day it moults into juvenile with adult

colouration and features. During the rearing period, larvae moulted several times before reaching the juvenile stage. This ornamental shrimp fetches about \$10 in the international market and in the local market also it is sold at ₹ 500-700

per piece. This research work was done under the AINP Mariculture project.

(Reported by : Anil M. K., Vizhinjam Research Centre)

## Nautilus spp. gets listed in CITES

The *Nautilus* spp. is now listed as 'protected' under Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) which in turn is expected to ensure that international trade in species does not threaten their survival. The Molluscan Fisheries Division provided available information on biology and life history of chambered nautilus *Nautilus* spp. to the Ministry of Environment, Forests & Climate Change and based on a proposal jointly submitted by India, United States, Fiji and Palau, they are now listed in the Appendix II of CITES.

## Rare occurrence of Keeltail Pomfret

A single specimen of *Taractes rubescens* (Jordan & Evermann, 1887) of family Bramidae having total length 90 cm and weighing 9.31 kg was collected from Cochin Fisheries Harbour, Kerala on 22<sup>nd</sup> September 2016. The fish was caught by a hook and line unit in the sea knoll area off Beypore. The specimen was an adult male.

(Reported by : Pelagic Fisheries Division)



## Record sized Arabian barracuda

A record sized *Sphyræna arabiansis* measuring 150.8 cm and weighing 21.3 kg was landed at Cochin Fisheries Harbour, on 1<sup>st</sup> October 2016. The specimen was caught by a multiday hook and line unit operated off Lakshadweep. The fish was a fully mature female with oozing eggs having gonads weighing of nearly 5 kg.

(Reported by: Pelagic Fisheries Division)



## Rare Parrot fish reported

The parrotfishes in the family Scaridae includes 10 genera. Among these, the genus *Chlorurus* is rare and only five species are reported from Gulf of Mannar. A single individual of *Chlorurus rhakoura* was found in the Pamban Landing Centre on 7<sup>th</sup> September, 2016, which was collected and preserved in the institute's museum collection of fishes.

(Reported by: R. Saravanan, I. Syed Sadiq and A. K. AbdulNazar, Mandapam Regional Centre)



Parrot fish *Chlorurus rhakoura*

## Studies on deep-sea squids

Analysis of deep-sea squid samples collected from the Southeastern Arabian Sea around Lakshadweep Islands by FV *Silver Pompano* during 11<sup>th</sup> - 16<sup>th</sup> January 2016 revealed that the squids *Histioteuthis miranda*, *Ctenopteryx sicula* and *Octopoteuthis rugosa* were the

first records from this region and were deposited with accession numbers in the Designated National Repository (DNR) at CMFRI, Kochi. Age and growth of these squids are being investigated from the statolith microstructures.

(Reported by: Molluscan Fisheries Division)



*Histioteuthis miranda*  
ACCN: DF 1.2.2.5



*Ctenopteryx sicula*  
ACCN: DG 2.6.2.6



*Octopoteuthis rugosa*  
ACCN: DF 2.5.2.5

## Sea ranching of cuttlefish and squid in Palk Bay

The fishermen of Dhanushkodi use bundled twigs of casuarina tree as a Fish Aggregating Device (FAD) in the shallow waters of Palk Bay around Dhanushkodi and Arichalmunai. These FADs attract spawners of cuttlefishes and squids which the fishermen target. Studies by the institute have already indicated that use of such FADs have devastating effect on stocks of cuttlefish through "recruitment overfishing". A recent initiative by Mandapam RC to hatch stranded egg masses for sea ranching has started at Munaikkadu in Palk Bay on 4<sup>th</sup> July 2016.

(Reported by: Mandapam Regional centre)



Sea ranching in progress

## Special assignments

Dr. R. Narayana Kumar, Head, SEETTD was nominated as Member of the Evaluation Committee of the Research Projects (2012-16) of the Rajiv Gandhi Centre for Aquaculture, Sirkazhi, Tamil Nadu.

Dr. P. Kaladharan, Principal Scientist was nominated as Expert to the School of Fishery Environment Governing council of the Kerala University of Fisheries and Ocean Studies (KUFOS) by its VC.

# Methodology workshop on 'Valuation and Impact Assessment'

The SEETT Division organized the Methodology Workshop on 'Valuation and Impact Assessment Studies' at Mandapam Regional Centre of ICAR-CMFRI during September 1-3, 2016. The Scientists of the Division delivered presentations on various methodological advancements in the field along with hands-on training to all the scientists of the Division, which will be useful for their research programmes. Review of various project activities was done and a brain storming session to identify the themes for new research projects to be taken up was also conducted.



(Reported by: R. Narayanakumar, Head, SEETTD)

Dr. Imelda Joseph, Principal Scientist & Head in Charge Mariculture Division participated in the 'First Newton-Bhabha Workshop on Female Leaders in Crop and Agricultural Sciences' organised by Department of Biotechnology (DBT), Government of India and Cambridge University, United Kingdom held during 4<sup>th</sup>-10<sup>th</sup> September, 2016 at Clare College, University of Cambridge, UK. There were 23 women participants from different ICAR organisations, State Agricultural Universities, and DBT. The workshop on Female Leaders in Science was conducted by hfp consulting (Germany). The objectives of the workshop were to help women fulfill roles as leaders in scientific research by strengthening their self-confidence and improving networking and negotiation skills in them.



## Exhibitions

CMFRI participated in the Krishi Mela conducted in connection with the "National Meet on prospects of coconut sector in India" at CPCRI, Kayamkulam from 29<sup>th</sup> to 30<sup>th</sup> September, 2016. The programme was inaugurated by Hon. Union Minister for Agriculture and

Farmers' Welfare Shri. Radha Mohan Singh on 29<sup>th</sup> September, 2016.

CMFRI participated in the Science exhibition at St. Peters College, Kolencherry from 22<sup>nd</sup> to 23<sup>rd</sup> September, 2016.

Karwar Research Centre of ICAR-CMFRI participated in the 'Krishi Mela' held from 24<sup>th</sup> - 27<sup>th</sup> September 2016 at University of Agricultural Sciences (UAS), Dharwad. The exhibition was inaugurated by Shri. Krishna Byre Gowda, Hon'ble Minister for Agriculture, Karnataka. Cage culture technologies developed by the institute were highlighted among the public through the exhibits.



Visitors to ICAR-CMFRI stall during the Krishimela at CPCRI



Science exhibition at Kolencherry



Stall at Krishi Mela in UAS

## Overall Champions in ICAR South Zone Sports Meet

The team from ICAR-CMFRI emerged as the overall winners in the ICAR Inter-Institute South Zone Sports Meet held at National Academy of Agricultural Research Management (NAARM) in Hyderabad. The ICAR-CMFRI team won the title in the second consecutive year securing 77 points. 25 ICAR institutes with headquarters in Kerala, Tamil Nadu, Karnataka, Andhra Pradesh and Telengana had participated in the 5-day meet. The ICAR-CMFRI team members won the events namely, football, volleyball, badminton doubles, 4x100 relay and high jump. The team was felicitated on its return to the Institute.

*(Reported by Grinson George, CMFRI sports team)*



*Sports team with the trophy*

Dr. Grinson George won the Dr.Hiralal Chaudhari Best Scientist Award and Dr. C. V. Kulkarni Best Young Scientist Award for the year 2015-16 at a function held in ICAR-CIFE, Mumbai on 11<sup>th</sup> August, 2016 and delivered the award commemoration lecture.



*Dr. C. V. Kulkarni Best Young Scientist Award*



*Dr. Hiralal Chaudhari Best Scientist Award to Dr. Grinson*

The Mangalore Research Centre of ICAR-CMFRI got the best paper award for most innovative application of GIS technology for smarter world, in the ESRI Regional user conference for Indian region held at Hyderabad on 4<sup>th</sup> August, 2016. The paper titled "GIS and its application in marine fisheries conservation and Management in India" was received by Ms. S. Shailaja and Mr. Subhankar, (Research scholars).

Dr. B. Johnson, Scientist, Mandapam Regional Centre of ICAR-CMFRI won the Young Investigator Award at the International Conference on Advances in Algal Biotechnology held from 10<sup>th</sup> to 12<sup>th</sup> August 2016 organized by School of Bio-Sciences and Technology, VIT University and Seaweed Research & Utilization Association.



*Young Investigator Award to Dr. B. Johnson*

The paper on "Cage Farming Heeded for Equal Opportunity in Aquaculture Development in Kerala, India" presented by Dr. Imelda Joseph in the session 'Gender and Fisheries' of 11<sup>th</sup> AFAF at Bangkok won the title "Highly Commended paper".



*Paper presentation by Dr. Imelda at 11<sup>th</sup> AFAF*

Dr. G. Maheswarudu, Principal Scientist and Head, Crustacean Fisheries Division received the 'Bharath Excellence Award' and Gold Medal for the year 2016, in New Delhi on 28<sup>th</sup> August, 2016 organised by the Friendship Forum.

Two women beneficiaries practicing organic farming of tomatoes in the backyard kitchen gardens and on the roof top using seaweed under the guidance of the Puri Field Centre of ICAR-CMFRI were awarded by Hon'ble Minister for Agriculture and Farmers Empowerment of Odisha. The award was presented to the women farmers during the 7<sup>th</sup> Srikhetra Krishi Fair-2016.

*(Reported by: Dr. Reeta Jayasankar, SIC, Puri Field Centre)*

### Training programme on Ecosystem Approach to Fisheries Management

ICAR-Central Marine Fisheries Research Institute and BOBP-IGO successfully conducted the training programme on 'Essential EAFM: Developing capacity in the ecosystem approach to fisheries management' during 30<sup>th</sup> August 2016- 3<sup>rd</sup> September 2016 at Kochi, Kerala. The inaugural function was held on 30<sup>th</sup> August 2016. The training workshop was



Trainers from BOBP with Director, CMFRI and trainees

inaugurated by Dr. E. G. Silas, former Director of CMFRI and former Vice Chancellor of Kerala Agricultural University. Dr. R. Narayana Kumar, Principal Scientist welcomed the gathering and Dr. Yugraj Yadava, Director, BOBP-IGO gave a brief overview of the programme. A total of 24 participants from 4 countries such as Bangladesh, Sri Lanka

and Maldives besides India attended the training programme. The valedictory function was held on 3<sup>rd</sup> September 2016 and certificate distribution was done by Dr. A. Gopalakrishnan, Director CMFRI. A Trainers' Training on EAFM was also given to 6 selected trainees during 5<sup>th</sup> to 6<sup>th</sup> September 2016.

(Reported by: Bobby Ignatius, SIC, HRD Cell)

### Training programme at Puri Field Centre

Puri Field Centre of ICAR-CMFRI organised a training cum workshop on fabrication and installation of HDPE cage for marine finfish farming under tribal sub plan (TSP) on 3<sup>rd</sup> September 2016 at Puri; Mr. Pinaki Misra Hon'ble Member of Parliament, Mr. Maheswara Mohanty, Odisha and Chairman, Nabakalebara Infrastructure Supervision Committee and Shri. Bishnupada Sethi, IAS, Commissioner cum Secretary, Fisheries, Govt. of Odisha also attended the function. In his presidential address, Mr.

Pinaki Misra highlighted the important issues being faced by the fisherfolk community of Odisha. Speaking on the occasion Dr. Reeta Jayasankar SIC, Puri Field Centre apprised that a total of 22 tribal people have been identified for the first phase of skill development on cage fabrication and the same group would be trained for second and third phases of the training in marine fin fish farming in cages so that they can eventually take up the complete venture by themselves.



Inauguration of the training programme at Puri

### Training programmes on Marine Sea Cage Farming

Training Programme on Marine Sea Cage Farming was conducted to the fishers and fisheries officials under FIMSUL-II project of State Fisheries Department, Tamil Nadu at the Regional Centre of ICAR-CMFRI, Mandapam, during 20<sup>th</sup>-22<sup>nd</sup>, September, 2016.

Mumbai RC of CMFRI conducted Training programme on "open sea cage culture" for 20 fishermen from villages of Bodani, Malvani, Pathvadi and Edvan villages of Maharashtra during 18<sup>th</sup>-25<sup>th</sup> July, 2016.

A three-days training program on

"Open sea Cage culture technology demonstration" was organized from 21<sup>st</sup> July, 2016 to 23<sup>rd</sup> July, 2016 wherein hands-on training on different aspects of open sea floating cage culture was imparted to 24 fishermen from Maharashtra.

### Skill development program for fisherwomen

A one-day skill development programme on "Brackishwater cage culture and allied activities" was organised at Karwar Research Centre of CMFRI in association with Coastal Development Authority, Mangaluru on 12<sup>th</sup> August 2016. A total of 63 women from different villages of Uttar Kannada district participated in the programme. This training programme involved lectures and practical classes in relation to site selection,

cage designing and mooring and brackish water cage farming. Mr. Nivedith Alwa, Chairman Coastal Development Authority, Mangaluru distributed the certificates to the trainees during the valedictory function.



## Financial Advisor of DARE/ICAR visits ICAR-CMFRI

Mr. Sunil Kumar Singh, Additional Secretary & Financial Advisor (DARE/ICAR) chaired the 'Third Interactive meeting on Financial Matters for the ICAR Institutes located in the Southern Region' at ICAR-CMFRI, Kochi on 23<sup>rd</sup> September 2016. Mr. Devendra Kumar, Director (Finance), Dr. A. K. Vasisht, ADG (Personnel), Smt Rashmi R. Rao and Shri O.P. Nagar, Deputy Directors (Finance), Shri Rajesh Sahay, SFAO and Mr. K. K. Sharma, F&AO from

ICAR headquarters besides the FAOs from 22 ICAR Institutes located in the South Zone attended the meeting. After addressing the participants, he also reviewed the South Zone Review Interactive Meet held on 25<sup>th</sup> April 2016 at NAARM, Hyderabad. The progress in the settlement of the outstanding audit paras, bank reconciliation related issues, budget, fund utilization, pension related issues and matters related to internal finance of the 22 ICAR Institutes in the

South Zone. Later, Mr. S. K. Singh also addressed the scientists of ICAR-CMFRI. He emphasized that funds available for research programmes should be spent in a timely and transparent manner following codal formalities and guidelines for financial procedures.

- Dr. V. V. Sugunan, Former ADG (Inland Fisheries), ICAR & Senior Consultant, National Fisheries Development Board (NFDB), Hyderabad visited Mandapam Regional Centre during 10-12 September 2016.



Dr. V. V. Sugunan visiting hatchery facilities

- Dr. J. K. Jena, Dy. Director General (Fisheries), ICAR, visited Mumbai RC on 18<sup>th</sup> July, 2016.

## Recreation Club

Onam was celebrated at Headquarters and Research Centres at Mangalore and Vizhinjam with active participation of all staff.



## ICAR-CMFRI bags Rajarshi Tandon Rajbhasha Puraskar

The ICAR-CMFRI has bagged Rajarshi Tandon Award instituted by the ICAR for the 7<sup>th</sup> time for the excellent Official Language activities among the Institutes situated in 'C' Region for the year 2014-2015. Dr. A.

Gopalakrishnan, Director received the Award from Shri. Parshottam Rupala, Hon'ble Union Minister of State for Agriculture & Farmers Welfare during the ICAR Foundation Day Programme organized at Vigyan Bhavan, New Delhi

on 16<sup>th</sup> July, 2016. Shri. Sudarshan Bhagat, Hon'ble Union Minister of State for Agriculture & Farmers Welfare and Dr. Trilochan Mohapatra, Secretary, DARE & Director General, ICAR were also present on the occasion.

## Hindi Chetna Mas celebration - 2016

To encourage usage of Hindi language by the staff members 'Hindi Chetna Mas-2016' was observed from September 1-29, 2016 at Headquarters. Various competitions for Hindi noting, drafting & terminology; Hindi crossword; quiz and news reading were conducted. The valedictory function of the event held on September 30 with Smt. Varsha Godbole, Regional Manager, National Insurance Company Ltd., Kochi as the Chief Guest Dr. R. Narayanakumar, Head, SEETT Division delivered presidential address. During the function, Shri. Navinkumar Yadav, Assistant Director (OL) read out the message from Shri. Radha Mohan Singh, Hon'ble Minister of Agriculture & Farmers' Welfare, Govt. of India and Shri. Rajnath Singh, Hon'ble Minister of Home Affairs, Govt. of India. The Rajbhasha Rolling Trophy was won by the Marine Biodiversity Division. Prizes for competitions and under incentive schemes were distributed. Shri C. Muraleedharan, Chief Administrative Officer welcomed the gathering and

Shri. Navinkumar Yadav proposed the vote of thanks.

The Hindi Week was observed at the Mandapam Regional Centre from 14<sup>th</sup> to 20<sup>th</sup> September, 2016 with various competitions for the staff members of the Centre. Dr. A. Saframma, Assistant Professor & Head, Department of Hindi, The American College, Madurai inaugurated the programme. Dr. A. K. Abdul Nazar, Scientist in Charge presided. Prizes were distributed to the winners of the competitions.

The Vizhinjam Centre organized the Hindi Fortnight Celebrations from 14<sup>th</sup> - 28<sup>th</sup> September 2016. With various competitions for the staff. Shri. K. G. Varghese, Chief Commandant, Coast Guard Station, Vizhinjam distributed prizes to the various winners of the Hindi competitions. At Mangalore Research centre Hindi Pakwada was celebrated during 14<sup>th</sup> to 22<sup>nd</sup> September 2016. Various competitions were conducted and all staff actively participated in the programmes. Hindi Fortnight was

observed at Karwar Research Centre from 16<sup>th</sup> to 30<sup>th</sup> September, 2016. At the Madras Research Centre it was celebrated from 19-24 September 2016. Dr. P. Laxmilatha, Scientist-in-Charge & Chairperson of the Official Language Implementation Committee of the Centre inaugurated the celebrations and staff of the Centre participated with great enthusiasm. Dr. R. Gopalakrishnan, Assistant Professor, Department of Hindi, University of Madras was the Chief Guest for the valedictory function and cash prizes/certificates were distributed to the winners of the competitions. Dr P. Hema Sankari, Dr. R. Geetha, and Smt. S. Anjali Devi received special awards for commendable work done in Hindi during the period 2015-2016.



Valedictory Function at Headquarters



Hindi Pakwada at Mangalore RC

The quarterly meeting of Official Language Implementation Committee of the ICAR-CMFRI was held on 25<sup>th</sup> July, 2016 under the Chairmanship of Dr. A. Gopalakrishnan, Director. Official Language activities for the quarter April-June, 2016 were reviewed and decisions were taken for further improvement.

## Hindi Workshops

A one day Hindi workshop on 'Spoken Hindi' was conducted for the officers and staff members of the ICAR-CMFRI Headquarters on 4<sup>th</sup> July, 2016. Smt. Jayasree, Pradhyapak, Hindi Teaching Scheme, Kochi conducted the class.

At Madras Research Centre, Hindi workshop on 'Spelling and pronunciation' conducted on 30<sup>th</sup> August 2016, by Smt. P. Sarwar Jehan Chida, Assistant Director (OL), BSNL, Chennai was attended by 42 staff members. Hindi workshop on

'Use of Hindi in daily life' conducted on 30<sup>th</sup> September 2016, by Dr. P. Saraswathi, Assistant Professor, University of Madras, Chennai was attended by 21 staff members of the Centre.

## Online portal- Krishi Vigyan Kendra Knowledge Network

The KVK Ernakulam has uploaded all the information related to institute for public in the National KVK portal-

Krishi Vigyan Kendra Knowledge Network. The information can be accessed by logging on to

<http://kvk.icar.gov.in/>. All relevant information pertaining to all KVKs in the country can be had from this portal.

## Skill Development Programme for fisherwomen

KVK Ernakulam, in association with the Society for Assistance to Fisherwomen (SAF), conducted a four-day skill development training programme in Production, Packaging and Marketing of fish products. Held at CMFRI, Kochi from 23<sup>rd</sup> to 27<sup>th</sup> August 2016 twenty four fisherwomen were trained in raw material selection, production, storage, packing, labeling, trade mark registration, mandatory licenses, waste utilization, test marketing and promotional activities. Senior officials of SAF participated in the interactive session.

*Demonstration of value addition of fish in the skill development programme*



## Training programme in Horticultural Mechanization

KVK Ernakulam and Regional Centre of ICAR-Central Institute of Agricultural Engineering (CIAE), Coimbatore jointly organized a one-day training programme in Horticultural Mechanization for women farmers on 29<sup>th</sup> June, 2016 at CMFRI, Kochi. An expert team from CIAE interacted with the trainees. Dr. A. Gopalakrishnan, Director, ICAR-CMFRI distributed certificates.

*Demonstration of potting mixture preparation during the training programme*



## Sales Melas

A total of 1400 farmers got the benefit from four sales melas for vegetable seeds and poultry chicks organized by the KVK Ernakulam at the CMFRI Headquarters in Kochi.

- **Dr. A. Gopalakrishnan**, Director attended the sixth meeting of the committee constituted to suggest Draft National Policy on Marine Fisheries under the chairmanship of Dr. S. Ayyappan, Ex-Director General, ICAR at New Delhi on 21<sup>st</sup> and 22<sup>nd</sup> July 2016.

Attended IJAS Review meeting and the first meeting of the Sub Group 5 (Live Stock and Aquaculture) of Task Force on Use of Technology for Agriculture Insurance under the Chairmanship of Dr. Dilip Kumar, Former Director/Vice-Chancellor, ICAR-CIFE on 29<sup>th</sup> July 2016.

Attended the meeting of the XIXth Governing Body of the State Fisheries Resource Management Society (FIRMA) at Government Secretariat, Thiruvananthapuram on 7<sup>th</sup> September 2016.

Attended 32<sup>nd</sup> Scientific Advisory Committee meeting of Rajiv Gandhi Centre for Aquaculture at MPEDA, Kochi on 27<sup>th</sup> September 2016.

Attended the meeting of Vice Chancellors, Directors and senior officers of Agricultural Institutions with Honourable Union Minister of Agriculture & Farmers Welfare, Govt. of India, New Delhi at CPCRI Regional Station, Kayamkulam on 29<sup>th</sup> September, 2016.
- **Dr. K.S. Mohamed**, Head, MFD attended 6th meeting of the committee constituted to suggest draft National Policy on Marine Fisheries held on 21<sup>st</sup> July, 2016 at Krishi Bhavan, New Delhi.

Gave a lecture on "Marine Fisheries Resources Conservation and Management" for newly recruited executive staff Kerala Fisheries Department 3<sup>rd</sup> August, 2016 at their Fisheries Training Centre, Aluva.

Attended the meeting to discuss the issues relating to use and regulation of LED lights (Light Emitting Diode) in fishing vessels held on 16<sup>th</sup> August, 2016 at Krishi Bhavan, New Delhi.

Attended the one day brainstorming workshop on "Effective implementation of Minimum Legal Size (MLS) in Fisheries, Kerala" organised by NETFISH on 26<sup>th</sup> August, 2016 at Kochi.
- **Dr. V. Kripa**, Head, FEMD organized the first Action Council Meeting on Marine oil spill as Member Secretary, working group on 8<sup>th</sup> July 2016.

Attended the International Maritime Seminar 2016 at K.M School of Marine Engineering, CUSAT on 5<sup>th</sup> August, 2016.

Attended the Academic Council meeting of KUFOS on 12<sup>th</sup> August, 2016.

Attended the Seminar conducted by the Punnapra Fishermen Development and Co-operative Society on 5<sup>th</sup> September, 2016 at Alappuzha and conducted an awareness programme on 'Impact of litter'.
- **Dr. R. Narayankumar**, Head, SEETTD attended the Fisheries Consultative Meeting with Central Research and Academic Institutes held on 7<sup>th</sup> July, 2016 at Kochi.
- **Dr. G. Maheswarudu**, Head, CFD attended the annual meeting of Board of Studies in Department of Marine Living Resource, Andhra University, Visakhapatnam held on 16<sup>th</sup> July, 2016.
- **Dr. T. V. Sathianandan**, Head, FRAD as committee member for establishing suitable site location for CMFRI Regional Research Centre, Digha, West Bengal interacted with the officials of Central and State Department at Digha during his visit from 6<sup>th</sup> to 8<sup>th</sup> September, 2016.
- **Dr. P. U. Zacharia**, Head, DFD attended the financial review meeting of NICRA project at CRIDA, Hyderabad from 15-17<sup>th</sup> September, 2016.
- **Dr. K. K. Joshi**, Head, MBD participated in a Radio Discussion in Hindi on 'Coastal Biodiversity and Environment' broadcast through Vigyan Bharati AIR, New Delhi on 27<sup>th</sup> July, 2016.
- **Dr. Prathibha Rohit**, SIC, Mangalore RC attended the Technical Committee Meeting of Karnataka Biodiversity Board on 7<sup>th</sup> July, 2016.

Attended meeting with Hon. Minister for State Fisheries and Youth Affairs with the Departments concerned with Marine fisheries at Vikas Bhavan, Bengaluru on 12<sup>th</sup> September, 2016
- **Dr. Veerendra Veer Singh**, SIC, Mumbai RC attended the meeting with JNPT officials to discuss the consultancy project at the proposed port site at Vadhvan, Maharashtra on 14<sup>th</sup> September, 2016.
- **Dr. P. Laxmilatha**, SIC, Madras Research Centre attended the project inception meeting on "Assessment and Integrating Restoration of Degraded Coral Reef Ecosystem with Sustainable Livelihood Options to Enhance Conservation and Livelihoods of Local Communities along the East of Coast of Tamil Nadu on 4<sup>th</sup> July, 2016 at Chennai.

Attended the meeting convened by the Commissioner of Fisheries, Chennai on 8<sup>th</sup> July, 2016 regarding World Bank assisted Coastal Project 'Disaster Risk Reduction Programme Fisheries Management for Sustainable Livelihoods' II (CDRRP-FIMSUL II).
- Attended the Stakeholders consultation meet held at Commissionerate of Fisheries, Chennai on 29<sup>th</sup> July, 2016.

Attended Tender Scrutiny and Evaluation Committee meeting (TS & EC) held by Commissionerate of Fisheries, Tamil Nadu Fisheries Department on 8<sup>th</sup> September, 2016 at Chennai.
- **Dr. M. K. Anil**, SIC, Vizhinjam RC attended meetings organized by National Fisheries Development Board (NFDB), Hyderabad during 4<sup>th</sup> - 6<sup>th</sup> August, 2016 and 23<sup>rd</sup> - 28<sup>th</sup> August, 2016.
- **Dr. Geetha Sasikumar**, Principal Scientist, attended the Scientific Cooperation Framework for Food safety workshop held on 12<sup>th</sup> July 2016 in New Delhi.
- **Dr. P. Kaladharan**, Principal Scientist, attended ICAAB-2016 (International Conference on Advances in Algal Biotechnology) at VIT University Vellore from 10-12<sup>th</sup> August 2016.

Attended Clean Sea India conference at Goa 22-24<sup>th</sup> September, 2016 as Invited speaker.
- **Dr. Reeta Jayasankar**, Principal Scientist, attended one day workshop on Marine Fishery Resources of Upper East Coast of India organised by Fishery Survey of India, on 5<sup>th</sup> August 2016, in Puri.
- **Dr. Shelton Padua**, Scientist, delivered a session on "Identification and Mapping of Paddy and Wetlands Using Geospatial Technologies" for the Assistant Directors and Agricultural Officers, Department of Agriculture at Collectorate Conference Hall, Kakknad on 16<sup>th</sup> July, 2016.
- **Dr. Grinson George**, Senior Scientist attended 32<sup>nd</sup> meeting of NCZMA, New Delhi on 19<sup>th</sup> August 2016.
- **Dr. Joe K. Kizhakudan**, Principal Scientist convened stakeholders/fishermen meets at Chemmencherry and Elanthope on 06.08.2016, Kovalam on 31<sup>st</sup> August, 2016 and 15<sup>th</sup> September, 2016 in connection with promoting cage farming activities by fishermen youth of the village. Stakeholders/fishermen meetings were convened at Senjiamannagar (Pulicat) on 2<sup>nd</sup> September, 2016 and 3<sup>rd</sup> September, 2016 and Vairavankuppam (Pulicat) on 3<sup>rd</sup> September, 2016 in connection with cage farming activities for Irula community members under TSP programme.
- **Dr. S. R. Krupesha Sharma**, Principal Scientist and **Mr. N. G. Vaidya**, Technical Officer participated in the 42<sup>nd</sup> half-yearly meeting of the TOLIC, Karwar on 30<sup>th</sup> June, 2016.

Workshop/Training/Conference etc.	Date and Venue	Participants
6 <sup>th</sup> International Conference on Algal Biomass, Biofuel and Bio products -2016	26 <sup>th</sup> - 29 <sup>th</sup> June, 2016 San Diego, USA	Dr. Reeta Jayasankar, Principal Scientist
18 <sup>th</sup> international Conference of International Institute for Fisheries Economics and Trade - IIFET 2016	11 <sup>th</sup> - 15 <sup>th</sup> July, 2016 at Aberdeen Exhibition and Conference Centre (AECC) Scotland, UK	Dr. Shyam S. Salim, Principal Scientist
11 <sup>th</sup> Asian Fisheries and Aquaculture Forum	2 <sup>nd</sup> - 7 <sup>th</sup> August, 2016 Bangkok, Thailand	Dr. A. Gopalakrishnan Director, Dr. R. Narayanakumar Dr. Imdelda Joseph, Dr. Rekha J. Nair Dr. Somy Kuriakose, (Principal Scientists) Dr. Ginson George, Dr. N. Aswathy (Senior Scientists)
International workshop "Colour and light in the Ocean from Earth Observation" (CLEO), hosted by European Space Agency,	6 <sup>th</sup> - 8 <sup>th</sup> September, 2016 held at ESRIN - FRASCATI - Italy	Dr. Ginson George, Senior Scientist
DBT sponsored "National training in Molecular Biology and Biotechnology for Fisheries Professionals	2 <sup>nd</sup> May, 2016 - 30 <sup>th</sup> August, 2016 ICAR-CIFE, Mumbai	Ms. Saloni Shivam, Scientist
Conference 'Management and conservation of seagrass ecosystem in India" organized by Ministry of Environment, Forests & Climate Change & GIZ-CMPA	12 <sup>th</sup> -13 <sup>th</sup> July, 2016 New Delhi	Dr. R. Jeyabaskaran, Senior Scientist
Public Procurement	25 <sup>th</sup> - 30 <sup>th</sup> July, 2016 NIFM, Faridabad  11 <sup>th</sup> -16 <sup>th</sup> July, 2016 NIFM, Faridabad	Mrs. Ponnamma Radhakrishnan, AAO Mr. A Padmanabha, Technical Officer  Mr. Ashish Chobey, AAO
Administrative Vigilance - I (code Avl-02) role of inquiry/ presenting officers	8 <sup>th</sup> - 12 <sup>th</sup> August, 2016 ISTM, New Delhi	Mrs. Meera K. N., AAO
Training programme on "Experimental data analysis"	24 <sup>th</sup> August - 6 <sup>th</sup> September, 2016 IASRI, PUSA, New Delhi	Mr. N. Anbarasu, Senior Technical Assistant Mrs. I. Santhosi, Senior Technician
Computer Application	18 <sup>th</sup> - 23 <sup>rd</sup> July, 2016 IASRI, New Delhi	Mr. Jayakumar C. V., Technical Assistant
Seminar on 'Periyar and Drinking water' organized by the Kerala Grama Swaraj Foundation	8 <sup>th</sup> September, 2016 Ernakulam	Dr. V. Kripa, Dr. P. Kaladharan, Dr. D. Prema (Principal Scientists) and Dr. Shelton Padua (Scientist)
Essential Ecosystem approach to fisheries management: Developing capacity in the Ecosystem approach to fisheries management & New Trainers Training Programme	30 <sup>th</sup> August - 6 <sup>th</sup> September, 2016 ICAR-CMFRI, Kochi	Dr. S. Lakshmi Pillai, Dr. U.Ganga, Dr. Sobha Joe Kizhakudan, Dr. Geetha Sasikumar, (Principal Scientists); Dr. Shubadeep Ghosh, Dr. V. Venkatesan (Senior Scientists); Mrs. Muktha, M., Mr. Subal Kumar Roul, Vivekanand Bharati, Mrs. Remya L., Dr. L Renjith, Mr. Ratheesh Kumar, Mrs. Anulekshmi Chellappan, Dr. Akhilesh K. V., Mr. K. Mohammed Koya, Mr. Vinaya Kumar Vase (Scientists), Mrs. S. Gomathy, (Senior Technical Officer) Mr. Retheesh T. B., Mr. SajiKumar K. K. Mr. Ragesh N. (Technical Assistants)
National Seminar on 'India and the ocean economy' organised by the Indian Council of World Affairs, New Delhi	11 <sup>th</sup> - 12 <sup>th</sup> July, 2016, New Delhi	Dr. P. S. Swathilekshmi, Principal Scientist
Seminar on 'Recent Trends in Agricultural Research Capacity, Investments and Outputs in India' organized by IFPRI - NAARM	17 <sup>th</sup> August, 2016, New Delhi	Dr. R. Narayankumar, Principal Scientist
One day Brainstorming workshop on effective implementation of MLS in fisheries in Kerala organised by NETFISH	26 <sup>th</sup> August, 2016, ICAR-CMFRI, Kochi	Dr. R. Narayankumar, Dr. G. Maheswarudu, Dr. C. Ramachandran, Dr. Josileen Jose, Dr. S. Lakshmi Pillai, Dr. V. P. Vipin Kumar (Principal Scientists) and Dr. P. Shinoj (Scientist)

<b>APPOINTMENTS</b>			
Name	Designation	Centre	w.e.f
1. Mr. Navinkumar Yadav	Assistant Director (Official Language)	ICAR-CMFRI Kochi	09.09.2016
<b>PROMOTIONS</b>			
Name & Designation	Promoted as	Centre	w.e.f
1. Mrs. C. Devaki, Upper Division Clerk	Assistant	ICAR-CMFRI, Kochi	01.07.2016
2. Mrs. P. Vineetha, Personal Assistant	Private Secretary	ICAR-CMFRI, Kochi	01.08.2016
<b>TRANSFERS</b>			
Name & Designation	From	To	w.e.f
1. Mr. Kishor Reghunath Mainkar Technical Officer	Alibag Field Centre	Ratnagiri Field Centre	07.07.2016
2. Mr. M. P. Jadhav Senior Technician	Ratnagiri Field Centre	Alibag Field Centre	05.07.2016
3. Mr. A. Santha kumar Skilled Support Staff	ICAR-CMFRI Kochi	Tuticorin Research Centre	20.07.2016
4. Mr. Palli Kalidasu Skilled Support Staff	ICAR-CMFRI Kochi	Visakhapatnam Regional Centre	22.07.2016
5. Mr. Bisun Bhaskar Skilled Support Staff	ICAR-CMFRI Kochi	Mangalore Research Centre	20.07.2016
6. Ms. Indira Divipala Scientist	Madras Research Centre	Visakhapatnam Regional Centre	27.07.2016
7. Mrs. S. Saradha Assistant	Madras Research Centre	Tuticorin Research Centre	01.08.2016
8. Dr. S. R. Krupesha Sharma Principal Scientist	Karwar Research Centre	ICAR-CMFRI, Kochi	15.09.2016
<b>RESIGNATION</b>			
Name & Designation	From		w.e.f
1. Mr. Alex T. Hezakiel Skilled Support Staff	Mandapam Regional Centre		14.07.2016
2. Mr. Sadik M. M. Skilled Support Staff	ICAR-CMFRI Kochi		11.08.2016

### RETIREMENTS ON SUPERANNUATION



**Mr. C. N. Chandrasekharan**  
Private Secretary  
31.07.2016  
ICAR-CMFRI Kochi



**Mr. Suresh Rumo Majalikal**  
Skilled Support Staff  
31.07.2016  
Karwar Research Centre



**Mr. S. Ganesan**  
Technical Officer  
31.08.2016  
Madras Research Centre



**Mr. Bijoy Krishna Burman**  
Senior Technical Assistant  
31.08.2016  
Contai Field Centre



*Lightfishing for squids*

*see page 8*



## **cadalmin**

CMFRI Newsletter

Cadalmin, the CMFRI Newsletter is a quarterly publication of the Central Marine Fisheries Research Institute, Kochi. The publication gives an insight into the major events of the quarter, besides highlighting the salient findings in the research front and dissemination of technological know-how to the farming community.