



No. 143 October - December 2014 ISSN 0972-2386



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CMFRI Newsletter

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Dr. A. Gopalakrishnan, Director, welcomes Hon'ble Union Minister for Agriculture Shri. Radha Mohan Singh

see page 9



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

Agrisearch with a human touch

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



Warm greetings to you all as we enter the new year 2015. It is also a time to take stock of our achievements during the past year and plan ahead. The certification process by the Marine Stewardship Council (MSC), UK for the Short neck clam fishery at Ashtamudi Lake was completed successfully giving a boost to our efforts at developing sustainable marine fisheries that also protect the ecosystem. This success tastes

sweet as it is the first fishery certified for sustainability in India and only the third in Asia. The official release of the all India marine fisheries landings data, which henceforth will be an annual feature is another praiseworthy initiative. This enables access to data on marine fish landings collected using a scientific multistage stratified random sampling method developed by the Institute, to all stakeholders including State Fisheries Departments who can now concentrate more on fishery management and monitoring activities that requires priority attention in the various maritime states. On the mariculture front, the Integrated Multi-Trophic Aquaculture (IMTA) trials using high value finfish and seaweed at Mandapam has been very successful and this paves the way for developing the first full-fledged integrated marine fish farm in the country that will help to boost marine fish production in the long run. We are in the 50th commemorative year of the International Indian Ocean Expedition (IIOE) in which Indian researchers contributed significantly. Hence it was apt time that the Institute along with the Marine Biological Association of India successfully hosted the International Symposium "Marine Ecosystems: Challenges and Opportunities MECOS 2" in which many scientists and researchers around the globe participated. I am also glad that the Swachh Bharat message has been taken up wholeheartedly and with active participation by the entire CMFRI staff to spread the message of cleanliness and to achieve the aim of Clean India by 2019 envisaged by the Govt. of India.

Things have not been entirely rosy as the cyclone *Hudhud* left vast devastation in its trail when it hit the coast of Visakhapatnam on 12th October, 2014. The damage to the offshore fish farming cages and the broodstock kept in these cages was a serious setback which has to be addressed in the coming days. The extensive damage to the office and hatchery buildings as well as the green cover in the campus has to be recouped. During this year, along with our work to promote successful capture and culture fisheries research it shall be our endeavour to develop new products especially with regards to diagnostic aids in fish pathology and nutraceuticals from fish.

Let me conclude with best wishes for a happy and successful new year 2015 to each one of you.

A. Gopalakrishnan
Director

About 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.

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.



Asian Fisheries Society (AFS)

ICAR-Central Marine Fisheries Research Institute (CMFRI) &

Asian Fisheries Society Indian Branch (AFSIB)

announce



5th International Symposium on Cage Aquaculture in Asia

CAA5

November 11-14, 2015, Kochi, Kerala, India



Dr. A. Gopalakrishnan, Director, delivers welcome address

CMFRI research support leads to India's first Marine Stewardship Council (MSC) certified fishery

The Marine Stewardship Council (MSC) is a global, non-profit and independent organization working to reverse the decline in global fish stocks through the use of market incentives. The MSC's fishery eco-labelling and certification programme allows consumers to identify and support environmentally responsible fishing practices through purchasing decisions. Consumer support for sustainable fishing in the market place leads to economic benefits for well-managed fisheries and long-term sustainability of fisheries, ensuring secure livelihoods and continuous availability of fish for food. With its seal of approval on more than 6% of all wild-caught fish, MSC is the world's biggest eco-label for sustainable seafood. If a fishery is successfully certified against the MSC Standard, products from the fishery can be sold



MSC certificate being handed over to Ms. Thankachi Prabhakaran, President of Thekkumbhagam Panchayat by Dr. David Agnew, Director of Standards, MSC, London

with the MSC's unique ecolabel, which identifies seafood as coming from a well-managed fishery.



Fisherman with handful of Short necked clam catch

Very few fisheries from the developing world are eco-labeled, mainly because of the lack of clear management objectives and regulatory frame-work. The initiatives of CMFRI in studying and managing the Short neck clam (*Paphia malabarica*) fishery of Ashtamudi Lake since the 1990s helped the WWF, India in

identifying this small-scale fishery as an ideal candidate for MSC certification. After three years of relentless hard work, perseverance and innovation, the WWF and CMFRI together have finally achieved a landmark in Indian fisheries by obtaining MSC certification for the Short neck clam fishery of Ashtamudi Lake, Kerala. This is a remarkable achievement in many ways - it is the first MSC certification in India, the third in Asia (after Vietnam and the Maldives) and one of the very few in tropical waters. Benefits of certification include potential for premium prices, access to new markets, preferred



Postage stamp released in connection with the MSC certificate launch event

supplier status, potential to attract ethical investment in the fishery or funding for local community social and economic infrastructure, improvements in management of fisheries and public recognition of



MSC Expert Committee at the short-neck clam fishing site in Ashtamudi Lake

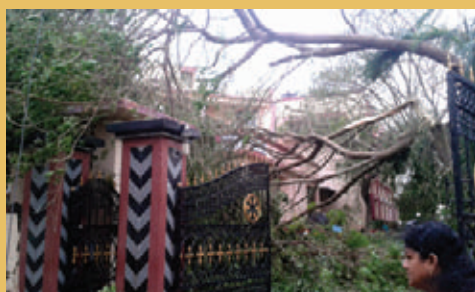
fishery conservation efforts. The MSC certification exercise demonstrates the power of collaboration between partners and the importance of a new council-based management system for clam fishery governance.

During the certificate launch function on 5th November 2014 in CMFRI, Kochi, Dr. A. Gopalakrishnan, Director, CMFRI welcomed the gathering. Ms. Leena Nair, Chairperson, MPEDA, Mr. Hem

Pande, Additional Secretary, Ministry of Environment and Forests (MoEF) and Mr. Ravi Singh, CEO and Secretary General, WWF-India gave speeches. The MSC certificate was handed over by Dr. David Agnew, Director of Standards, MSC, London to Ms. Thankachi Prabhakaran, President, Thekkumbhagam Village Panchayat. Dr. K. Sunil Mohamed, Head, Molluscan Fisheries Division (MFD) proposed vote of thanks.

Visakhapatnam RC of CMFRI badly hit by cyclone Hudhud

On 12th October, 2014 at around 2 pm Visakhapatnam was very badly hit by Hudhud a high intensity cyclonic storm making landfall at wind speeds in excess of 206 km/h. It caused heavy damage



Uprooted trees on the office premises

to the office and hatchery complex of the Regional centre of CMFRI. Most of the big trees in the front side of the premises fell down damaging the embankments on the sides of the road. The garden and lawn maintained in front of the mariculture hatchery were completely destroyed as big trees fell down.



Damaged outdoor algal culture shed

The outdoor algal culture unit built recently in the year 2012, to meet the huge demand of algae by shrimp farmers and hatcheries along the north-east coast of India was also badly damaged. The polypropylene sheets covering the outdoor algal culture unit and its shutter door blew away and was completely broken. The poles supporting the roof of the shed became bent in several places. No outdoor algal culture work can be carried out presently. The vehicle shed, pump house and most of the electrical fittings around the office premises also got damaged.



Damaged fishing boats in Visakhapatnam Fisheries Harbour



Damaged fishermen houses on the beach side

MBAI and CMFRI organize the International Symposium “Marine Ecosystems: Challenges and Opportunities” - MECOS 2



Inauguration of the MECOS-2 by Dr. Trevor Platt in the presence of other dignitaries

The International Symposium "Marine Ecosystems: Challenges and Opportunities" (MECOS 2) was organized jointly by the Marine Biological Association of India (MBAI), Kochi and CMFRI from 2nd to 5th December, 2014 at the Dream Hotel, Kochi. The symposium was inaugurated by Prof. (Dr.) Trevor Platt, Fellow of the Royal Society, Plymouth Marine Laboratory (PML) and Executive Director, Partnership for the Observation of the Global Oceans (POGO), United Kingdom. The symposium was attended by scientists, researchers, and teachers working on marine resources and related fields from all over the world. A total of 309 abstracts were presented in six tracks/

harvest and post-harvest, Marine biotechnology, and Livelihood and economics. Six invited keynote speakers contributed papers. Other presenting authors were from 60 affiliations that included research institutions, universities, colleges and NGOs. The Book of Abstracts is available in the MBAI website (www.mbai.org.in).

At the inaugural ceremony Dr. K. Sunil Mohamed, Secretary, MBAI and Convener, MECOS 2 welcomed the gathering. The presidential address was made by Dr. A. Gopalakrishnan, Director, CMFRI and President, MBAI. The former Presidents of MBAI, Dr. E.G. Silas, Dr. P.S.B.R. James, Dr. V. N. Pillai, Dr. G. Syda Rao and Dr. Madan

Best Poster, Dr. M. Devaraj Memorial Award for the Best Paper and Young Marine Biologist Award, which carried cash prizes (₹10,000/-), certificates and citations.



Inaugural address by Prof. (Dr.) Trevor Platt



Key note address by Dr. Rudolf Hermes, Chief Technical Adviser, FAO

sessions, viz., Marine fisheries and management, Aquaculture production systems, Marine biodiversity, Climate change and ecosystem assessment, Responsible



Keynote address by Dr. C.N. Ravishankar, Director, CIFT

Mohan, ADG (Marine Fisheries), Indian Council of Agricultural Research (ICAR) gave felicitation addresses. Dr. V. Kripa, Co-Convener, MECOS 2 proposed the vote of thanks.

The second Dr. S. Jones Memorial Prize was awarded to Dr. I.S. Bright Singh of Cochin University of Science and Technology (CUSAT) for outstanding contributions to marine biology and fisheries, from the chief guest Dr. Trevor Platt.

Based on the recommendation of the Evaluation Committee, the MBAI granted three awards viz. Dr. Reghuprasad Memorial Award for the



Key note address by Dr. Rashid Sumaila, Director and Professor of Fisheries Economics, University of British Columbia, Canada



Dr. Srinivasa Gopal, Former Director, CIFT, receiving memento from Dr. Narasimham, Former Principal Scientist, CMFRI



Dr. I. S. Bright Singh, receiving the second Dr. S. Jones Memorial Prize

International Indian Ocean Expedition Commemorative Celebrations



Front row (L to R): Dr. V.N.Pillai, Dr. Naveen Shah, Dr. S. W. A. Naqvi, Dr. G. Subbaraju, Dr. E.G. Silas, Dr. M. Sakthivel, Dr. N.R. Menon, Dr. Rosamma Stephen, Dr. C.B. Lalithambikadevi, Dr. Vijayalakshmi R Nair, Dr. Saramma U. Panampunnayil
Back row (L to R): Dr. K.S. Mohamed, Dr. A. Gopalakrishnan, Dr. Rami Reddy, Dr. K.V.K. Nair, Dr. C. Sankarankutty, Dr. T. Balachandran, Dr. K.K. C. Nair, Dr. Jacob George, Dr. V. Kripa

A special programme to commemorate the 50th Anniversary year of the International Indian Ocean Expedition (IIOE) was organized on 4th December, 2014 at CMFRI, Kochi. Dr. V. Kripa, Head, Fishery Environment Management Division welcomed the gathering. Dr. S.W.A. Naqvi, Director, National Institute of Oceanography (NIO), Goa and Dr. A. Gopalakrishnan, Director, CMFRI gave felicitations and presented mementos to all the esteemed IIOE participants and Contributors (1960 - 65). A special talk on 'Current Status of Indian Ocean Oceanographic Research' was delivered by Dr. S.W.A. Naqvi. Dr. K. Sunil Mohamed, Head, Molluscan Fisheries Division proposed the vote of thanks which was followed by cultural programmes and dinner.



Dr. E.G. Silas, former Director, CMFRI, receiving the IIOE memento from Dr. S.W.A. Naqvi, Director, NIO



Dr. K. S. Mohamed proposes vote of thanks



Get-together organized in CMFRI campus



Successful implementation of IMTA

Harvest of cobia and seaweed

The Mandapam Regional Centre of CMFRI had been developing technologies for the seed production of high value finfish and farming techniques such as sea cage farming. The seed production technologies of cobia and silver pompano was standardized and their farming methods were also successfully demonstrated. One of the anticipated issues while expanding the sea cage farming is the environmental degradation and consequent disease problems. In this context, the idea of bio-mitigation along with the increased biomass production which can be achieved by integrating different groups of commercially important species with varied feeding habits was considered. This concept, known as Integrated Multi-Trophic Aquaculture (IMTA) has importance at global level.

The scientists took the initiative to impart this concept of integrated farming to the fishermen group of Munaikadu village who were already practising commercial level seaweed farming. The centre had given three numbers of low cost cages of size 4.5 m × 4.5 m × 3.5 m to be stocked with cobia fingerlings at the rate of 100 numbers per cage. The seed material (720 kg) for the seaweed was also supplied for integrating with the cages. Cobia fingerlings (average 20 cm length and 50 g weight) were stocked during the first week of April



Handing over of the harvest of seaweed and cobia

2014. A total of 12 numbers of seaweed rafts (12 × 12 feet) at the rate of 60 kg of seaweed per raft were integrated with the cobia cages during second week of September 2014. The daily feeding of the stocked fishes with trash fishes, maintenance of cages and the required watch and ward were done entirely by the fishermen group. The harvest was made on 30th October 2014.

A total of 652 kg of cobia was harvested. Their length ranged from 59 to 83 cm and weight from 1.8 to 4.2 kg (average weight 3.25 kg). The farm gate price of cobia was ₹ 210 per kg. The total seaweed harvested was 2,700 kg wet weight which was kept as seeding material for the next crop. It was observed that the seaweed rafts integrated with cobia cages had a better average yield of 225 kg per raft compared to 150 kg per raft in those which were not integrated.

The harvest was handed over to the traders by Dr. M. Karthikeyan, Deputy Director (Fisheries), Tamil Nadu. Dr. Vaibhav Manthri, Scientist-in-Charge, CSMCRI - Marine Algal Research Station, Mandapam gave the felicitation address. Dr. G. Gopakumar, Scientist-in-Charge and Head, Mariculture Division of CMFRI presided over the harvest programme and created awareness about the benefits of integrated farming.

It is felt that this practice is effective both in terms of increasing the production and also for alleviating the organic load to the environment due to fish farming. The present success can be considered as the initial step towards the development of a full-fledged integrated marine fish farm at Munaikadu village. This will become first of its kind in the country where seaweed, mussel/oyster, lobsters, high value marine food fishes and ornamental fishes can be farmed together.

(Reported by Mandapam Regional Centre)

Finfish culture in small-scale indigenous cages

Fishermen youth of Cuddalore, Chinna Kuppam in Kancheepuram district, Tamil Nadu, successfully completed one cycle of fish culture in a small scale indigenous cage (3' x 2' x 2'). The cage had been operated by them in the backwaters

adjoining the village as an initiative for alternate livelihood option after having been trained in different aspects of cage culture of fishes through the Kovalam Field Laboratory of CMFRI. About 45 kg live seabass, 5 kg live cobia and 1 kg of black pomfret were

harvested on 17.11.2014. Value realized by the youth from the harvest was ₹ 20,000/- The fishes were marketed live for sport fishing activities.

(Reported by Dr Joe K. Kizhakudan, Kovalam Field Laboratory, Madras RC)

Pompano culture

Culture of Pompano, *Trachinotus blochii* was initiated for the first time in Malabar with farmers participation under the technical guidance from scientists of the Mariculture Division of Calicut RC.

On 23.12.2014 the Vaishak Fish Farm at Atholi near Kozhikode having a pond of size 40 x 20 x 2 m was stocked with 5000 numbers of hatchery produced Pompano seeds in the nursery enclosure, transported from Mandapam Regional Centre of CMFRI. Culture is in progress.



Pompano farm at Atholi, Kozhikode

Floating laboratory launched

A floating laboratory was launched on 7.10.14 in the marine cage farm of the Karwar Research Centre to facilitate routine environment and health monitoring work of the marine farm.



Open sea cage culture under TSP

On 30th and 31st December 2014, two 6 m diameter GI circular cages were successfully launched in open sea off Dahanu under the Tribal Sub Plan Project. This will benefit tribal fishers in Dahanu

Fishermens Co-operative society, Dahanu, Dist. Palghar. The cages are stocked with lobster seed. Dr. Imelda Joseph, Chairperson, TSP project, Dr. G. Maheswarudu, Head, Crustacean Fisheries Division, Mr. Rakesh Kumar,

Chief Administrative Officer and Mrs. Shobha V.K., Asst. Administrative Officer visited the site 06.01.2015 for assessment of progress of the project and review of the TSP project activities.



TSP team at cage site off Dahanu



TSP assessment team from CMFRI with fishers of Dahanu society



Dr. A. Gopalakrishnan, Director, CMFRI, welcomes Hon'ble Union Agriculture Minister Shri. Radha Mohan Singh



Interface meeting in progress

Hon'ble Union Minister for Agriculture visits CMFRI

The State level Interface Meeting on Agriculture and Allied sectors was held at CMFRI, Kochi on 6th November 2014. The interactive meeting with the various ICAR Research Institutes, State Agricultural Universities and KVKs functioning under ICAR was convened to discuss the issues related to research and outreach activities that would benefit farmers and the agriculture and allied sectors. The meeting was presided by the Honourable Union Agriculture Minister Shri Radha Mohan Singh. Mr. K. Babu, Minister for Fisheries, Mr. K. P. Mohanan, Minister for Agriculture, Govt. of Kerala, Mr. Subrata Biswas, IAS and Mr. V. Muraleedharan, State BJP President. Dr. P. Rajendran, VC, Kerala Agricultural University, Thrissur; Dr. B. Ashok, IAS, Kerala Veterinary and Animal Sciences University, Dr. B. Madhusoodana Kurup, VC, Kerala University of Fisheries and Ocean Studies, Kochi and representatives from ICAR research institutes like CPCRI, CTCRI, IISR, NBPGRI, CMFRI, CIFT, CIFRI, NBFGR, Sugarcane Breeding Institute, KAU and KVKs from Thrissur, Alappuzha and Ernakulam



CMFRI activities being explained to Shri. Radha Mohan Singh, Hon'ble Union Minister for Agriculture

districts of Kerala were present at the meeting.

The Union Agriculture Minister in his interactions highlighted that farmers of this country should benefit from research activities conducted by ICAR institutes and emphasized the importance of reducing post-harvest losses, adoption of environment friendly technologies like water harvesting, solar energy and providing

adequate manpower in research and outreach activities. The Union Minister was honoured with a 'Ponnada' by Dr. A. Gopalakrishnan, Director, CMFRI. On this occasion, a book and 4 pamphlets published by CMFRI were also released by the Hon'ble Minister. Meeting ended with a vote of thanks by Dr. Leela Edwin, Head, Fishing Technology, Division, CIFT.



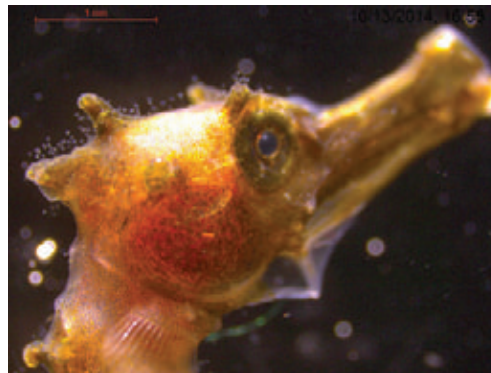
Hon'ble Union Agriculture Minister interacts with officials at the Interface Meeting

Protozoan *Vorticella* sp. infection in fry of spotted seahorse *Hippocampus kuda* Bleeker, 1852

The spotted seahorse (*Hippocampus kuda*) is being reared in the ornamental fish hatchery at the Vizhinjam Research Centre using Green Water technique. Sea horse larvae were fed with hatchery produced marine copepods *Temora turbinata* and *Pseudodiaptomus serricaudatus*. During rearing, mortality was observed in one tank from 9th day onwards. Detailed examination revealed heavy infestation of *Vorticella* sp. all over the body surface. Freshwater dip for one minute and bath treatment of Chloroquine diphosphate @10mg/l for 2 hours yielded better survival but



Dead sea horse juveniles



Seahorse fry infected with *Vorticella* sp.



Vorticella sp. from infected sea horse

treatment beyond these periods were found stressful and reduced the survival. Survival was better in the tanks treated with Chloroquine

diphosphate (93.3%) than those treated with fresh water dip (76.67%). This is the first report of *Vorticella* sp. infection in seahorses.

Humphead wrasse *Cheilinus undulatus* landed at Beypore Fisheries Harbour

The Humphead wrasse or Napoleon wrasse *Cheilinus undulatus* is one of the largest reef fishes in the world. It belongs to the family Labridae. It is characterized by thick fleshy lips, and a hump on its head above the eyes which becomes more prominent as the fish ages. The fish was caught from 150 meters depth by a boat operated about 100 km south west of Kozhikode. The total length of fish was 110 cm and



Humphead wrasse *Cheilinus undulatus* landed at Beypore Fisheries Harbour

weighed 16.5 kg. The fish was sold for ₹ 1500.00 at the landing centre.

This is the first report of this species from this area.

(Reported by Calicut RC)

Record size barracuda, *Sphyraena jello* Cuvier, 1829 landed

A specimen of Pickhandle barracuda, *Sphyraena jello*, measuring 161 cm and weighing 17 kg was landed at Veraval fishing harbor on 16th December, 2014. The largest specimen so far landed along Indian coast measuring 150 cm total length was reported by Pillai and Menon

(2000). The maximum size reported in the Fishbase is 152.5 cm. The species forms a minor fishery all along the Indian coast mainly in the maritime states of Tamil Nadu, Kerala, Andhra Pradesh and Gujarat. The fish was caught from 80 m depth nearly 115 km off Veraval.



Record sized *Sphyraena jello*

(J. P. Polara, Vinaya Kumar Vase & Mohammed Koya K., Veraval R. C.)

Deep-sea exploratory fishing on-board FORV Sagar Sampada

During the exploratory deep-sea fishing cruise conducted along the southwest coast from 24-11-2014 to 10-12-2014 certain observations of various fishes caught were recorded. In the Kochi transect $9^{\circ} 40.86' \text{N}$ $75^{\circ} 38.92' \text{E}$ covered on 29.11.14 bulk catch of the deep sea swarming crab *Charybdis* spp. was recorded with an estimated 4 tonnes caught in the High Speed Demersal Trawl- Crustacean Version (HSDT-CV) net operated at 200 m depths. In the Trivandrum transect off $8^{\circ} 26.55' \text{N}$ $76^{\circ} 25.29' \text{E}$ around 10 tonnes of the ribbonfish *Trichiurus auriga* Klunzinger, 1884 was caught in the High Opening Trawl net (HOT) operated at 185 m depths on 6-12-14. The catch was so heavy that the cod end broke during the hauling process allowing most of the catch to escape. Compared to *T. lepturus* (largehead hairtail) which has a broad



Vampire squid *Vampyroteuthis infernalis*

geographical range covering tropical and temperate seas this species has a more restricted distribution in the Red Sea and Indian Ocean. It is also a relatively smaller sized species that becomes mature at around 21 cm size compared to the size at first maturity around 45 cm reported for *T. lepturus* which commonly reaches 100 cm size. The size range of fishes caught were 12 -17 cm and were all with immature or maturing stages of gonad development.

UNDP - FAO pelagic fishery surveys have indicated high concentration of ribbonfishes in the upper slope regions of the south west and south east coast earlier.

The Vampire Squid (*Vampyroteuthis infernalis*) is the single living representative of the group known as the Vampyromorpha and combines morphological features associated with octopuses as well as the squids and cuttlefishes. It reportedly occurs at depths where sunlight is limited or entirely absent, oxygen content is low, and temperatures range from about 2° to 6°C . Light production from large, paired, complex photophores at the bases of the fins, from organs at the tips of all eight arms, and from luminous fluid released by the arm tips has been reported which along with its colouration and teeth earn it its name as vampire squid. The present specimens were obtained at depths of 350 m off Valappad ($10^{\circ} 29.837' \text{N}$ $75^{\circ} 23.693' \text{E}$) on 9-12-14.

(Reported by Ganga.U,
Pelagic Fisheries Division)



Huge catch of the deep-sea swarming crab *Charybdis* spp.



Pearly hairtail *Trichiurus auriga*

Floating carcass of Indo-Pacific Humpback Dolphin sighted off Kochi

The area off Kochi is one of the favorite habitats of dolphins and it is understood that there is a resident population. Sighting of dolphins in this area and in the bar mouth region during high tide is common. Though we have observed beached carcasses along Kerala coast, floating carcass has not been observed so far in the cruises undertaken in the region since 2009. During the regular cruise onboard FRV *Silver Pompano*, a dead Indo-Pacific Humpback dolphin *Sousa chinensis* (Osbeck, 1765) was sighted on 18th November, 2014 at 24 metre depth off Cochin (10° 02' 26''N; 76° 04' 32''E). The length of



the adult dolphin was about 2 metre and the reason for the death was not known.

(Reported by R. Jeyabaskaran, T. V. Ambrose, John Bose & M. Gishnu, Fishery Environment Management Division, Kochi)

Post-mortem of beached blue whale

A team of scientists headed by Dr. M. Sakthivel of Mandapam Regional Centre conducted post-mortem analysis of the blue whale washed ashore at Valai, one of the twenty one islands in the Gulf of Mannar region, on 3-1-2015. Local

fishermen had alerted the Forest Department on the whale carcass, who arranged for its post-mortem analysis. The whale which measured 16.2 m in length and 4.4 m in circumference was weighing six to seven tonnes. It was diagnosed that

it was a recently weaned calf, about two years old and had probably died due to head injuries. DNA samples of tissue were taken and the skeleton was preserved for display in the marine museum of the centre.

(Reported by Mandapam Regional Centre)



Post-mortem of the blue whale carcass washed ashore

CMFRI-ATIC & KVK sales counter opened

The CMFRI-ATIC (Agricultural Technology Information Centre) and Krishi Vigyan Kendra (KVK) sales counter was inaugurated by Dr. R. Narayanakumar, Head, SEETT Division on 10.11.14. It aims to supply quality inputs primarily to the farmers in the district for safe farming and to inspire them to follow Good Agricultural Practices (GAP). The products manufactured and marketed by the KVK of CMFRI for organic farming like Panchagavya, Aminoplus, neem oil, neem cake, Organo excel, Neem-de-Pest,



Dr. R. Narayanakumar, Head, SEETT Division lighting the lamp during the inauguration of the ATIC-KVK sales counter

Vegetable top up, Banana top up, fruit fly trap, Pheromone trap (vegetables), Pheromone trap (mango), vegetable seeds, fish Pearl plus feed etc. are available for sale. The products developed by the institute, posters, CDs and other publications are also sold through the counter.

Exhibitions

CMFRI participated in several exhibitions during the period

- Public Information Campaign Exhibition organized by the Press Information Bureau (PIB), Government of India at Karuvarakundu, Malappuram District, Kerala from 01.12.2014 to 03.12.2014.
- Swasraya Bharat 2014 organized jointly by Kerala Agricultural University, Central Plantation Crops Research Institute, (ICAR) and the Central University of Kerala, at the College of Agriculture, Padannakkad, Nileshwar, Kasaragod from 14.10.2014 to 19.10.2014.
- International Symposium of Plantation Crops PLACROSYM XXI, organized by IISR, Kozhikode from 10.12.2014 to 12.12.2014.
- CMFRI exhibition stall at 10th IFAF, NBFGR, Lucknow during 12th-15th November 2014.
- CMFRI exhibition stall at MECOS-2, held at Dreams Hotel, Kochi during 2nd-5th December 2014.



Dr. S. Ayyappan, DG, ICAR at the CMFRI stall during the 10th IFAF

The leading Indian Journal in the field of Fishery Science since 1954

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International Impact Factor 0.195
NAAS rating 6.2

Vigilance Awareness Week observed

Vigilance Awareness Week was observed at HQ and Regional/ Research centres from 27th October to 1st November 2014.

Prof. (Dr.) Trevor Charles Platt, FRS joins CMFRI

Prof. (Dr.) Trevor Charles Platt FRS joined as Jawaharlal Nehru Science Fellow (JNSF), Department of Science & Technology (DST), Govt. of India at CMFRI, Kochi on 7th November 2014. He has been working on biological oceanography for over 25 years and has developed a specific interest in primary production of the Northern Indian Ocean. He inspired a number of Indian students through the POGO-SCOR fellowship scheme during his tenure as Visiting Professor at the National Institute of Oceanography (NIO), Kochi and his lectures in

various international training courses. He was also the founding Co-Chairman of ChloroGIN and SAFARI (Societal Applications to Fisheries and Aquaculture of Remotely-sensed Imagery) and the International Ocean-Colour Coordinating Group (IOCCG) (1995-2005). He is also the former Chairman of Joint Global Ocean Flux Study (JGOFS) and currently the Executive Director of Partnership for Observation of Global Oceans (POGO). He hopes to contribute to research on the relation between ocean chlorophyll levels and fishery yields during his tenure here.



Mad Crab - an awareness programme on plastic pollution

Plastics and non-biodegradable wastes form the most important threat to the marine ecosystem in the 21st century. Plastics have become indispensable to mankind, but they need to be used safely and carefully. Sea is the ultimate sink of plastics discarded carelessly on the roads or elsewhere via creeks, rivers / estuary and beaches. With exposure to sunlight and rain, plastics break down into micro-plastics, which fishes and other marine organisms intake accidentally. The toxic chemicals in the plastic thus reaching the fishes ultimately reach back into humans who relish seafood.

In order to convey the gravity of this situation and its consequences, the Fishery Environment Management Division arranged an installation art in the Mahatma Gandhi Beach, Fort Kochi. It was the sculpture of a huge mud crab prepared with debris like plastics and discarded fishing nets collected from the beach and sea during one week. The installation work started on 15th December 2014 was completed on 29th December 2014. Named as MAD CRAB it occupied a ground area of 400 sq.ft having a size of 17 ft height and 19 ft width. It was inaugurated for exhibition on 30th December 2014, by Dr. A.Gopalakrishnan, Director, CMFRI. It will remain on the beach till 28th February, 2015, with the objective of creating awareness against



'Mad Crab' art installation at Fort Kochi Beach

discarded plastics as well as to convey the message of responsibility to the citizens, for keeping our beaches and environment clean and protect our marine habitat and fisheries. From December 15th to 1st of January, more than 10 events took place, at Fort Kochi Beach in connection with Biennale and Kochi Carnival and the public who took part in these events, were also viewing MAD CRAB on the beach. The activities organized in connection with the MAD CRAB awareness programme also included the collection of plastics and other discarded materials from beaches by the public and students and contributing them for completion of the art installation. This way community participation was also ensured during the groundwork of the sculpture. About thirteen artists such as Pramod Krishna, Antony Felix, Manoj Perumbavoor, Arun Kadammanitta, Radeep Erumeli, Najeeb, Naushad and others were involved in the creation of the sculpture. The Institute also prepared posters for this awareness program named "BEWARE!!! CRAB!" and exhibited them around the MAD CRAB. The venture was also supported by M/S. Liquefied Natural Gas Terminal, Ernakulam District Tourism Promotion Council, Joy Alukkas group and the Heritage Conservation Society, Fort Kochi.

(Reported by Fishery Environment Management Division)



Public participation at 'Mad Crab' art installation

TOLIC Awards for CMFRI

The Institute bagged the Rajbhasha Rolling Trophy (1st Position) of Kochi Town Official Language Implementation Committee for the best implementation of Official Language during 2013-14 at a function held at Income Tax Office, Kochi on 05.12.2014. The Rolling Trophy (III Position) for Best Hindi House Magazine (2013-14) the *Newsletter - Cadalmin* was also bagged by the institute. Various programmes / competitions were held under the Joint Official Language Celebrations - 2014 during 24 to 28 November, 2014 held at Income Tax Office, Kochi in which officers / staff participated and secured prizes.

Official Language inspection

Shri. Manoj Kumar, Assistant Chief Technical Officer, Hindi Section, ICAR inspected the Official Language activities of Veraval Regional Centre of CMFRI on 09.01.2015. Shri Mohamed Koya, Scientist in Charge, Shri. Chandramouli Sharma, Asst. Administrative Officer, Shri. M.M. Vanvi, Assistant and Smt. E.K.Uma, Asst. Chief Tech. Officer (Hindi), CMFRI Headquarters, Kochi attended the inspection meeting. After the inspection, a workshop on Official Language Policy was also conducted for the staff members of the Centre.

Hindi workshops: A Spoken Hindi workshop was held for the staff members of CMFRI Headquarters, on 18.12.2014. Dr. Santosh Alex, Sr. Technical Officer (Hindi) conducted class. Total 20 officers / staff attended the workshop.

A Brainstorming session on "How to improve the use of Hindi in Office work?" was held at Madras Research Centre of CMFRI, Chennai on 18.12.2014. Dr. K. Vijayakumaran, Scientist in Charge and 35 officers/ staff members attended the programme.



CMFRI team receiving trophy from Shri P. R. Ravikumar, Director General of Income Tax, Kochi for Best OL implementation at the Joint Official Language Celebrations - 2014



Competition winners with Director, CMFRI

Rajbhasha Award for Karwar RC

Karwar Research Centre of CMFRI bagged (I Position) under Karwar TOLIC for outstanding performance in Official Language implementation for the year 2013-14.



The first prize for excellent performance in official language implementation among Central Government offices at Karwar for the year 2013-14 being received by Dr. S.R. Krupesha Sharma

OLIC Meeting

The quarterly meeting of the Official Language Implementation Committee of the Institute was held on 31.12.2014 under the Chairmanship of Dr. A. Gopalakrishnan, Director, CMFRI, Kochi. Official Language implementation activities for the quarter October-December, 2014 were reviewed and decisions were taken for further improvement.

NICRA - IDLAM Training Programmes

A one day training workshop for 15 enumerators identified for the Component III IDLAM (Integrated

District Level Adaptation and Mitigation) under the National Innovations on Climate Resilient Agriculture (NICRA) was conducted on 30th August 2014 in CMFRI, Kochi.

The Veraval Regional Center of CMFRI, organized two awareness programmes on "Effect of climate

change on marine fisheries of Gujarat and Adaptation and Mitigation strategies" at Veraval Regional Center of CMFRI, Veraval on 20th October, 2014 (20 participants) and at Nawabander, Gujarat on 25th November, 2014 (80 participants) for marine fisheries stakeholders and fishermen.

Interaction programme for government teachers at Veraval

Regional Center of CMFRI, Veraval conducted one day interaction meeting for the Teachers of Government Schools of Veraval on "Work Culture and Research &

Development Programmes in a Government Research Institute" on 17th October, 2014 as part of the Annual Training Programme organized by the District Institute of

Education and Training, Dept. of Education, Govt. of Gujarat. Around 45 teachers of different disciplines participated in the programme.

Stakeholders meeting on marine capture fisheries

A stakeholder's meet on Marine Capture Fisheries was held at the Madras RC of CMFRI, Chennai on 11th December 2014. Around 40 stakeholders, such as fishermen from villages including Kasimedu, Nochikuppam, Ururkuppam, Alcotkuppam, Neelankarai, Kovalam and Chemmencherry participated in the meeting. Shri. L.A.G. Julius Edward, Assistant Director of Fisheries, Neelankarai was the chief guest for the programme. Dr. K. Vijayakumaran, Principal Scientist & Scientist-in-Charge highlighted the objectives of the meeting. Dr. M. Sivadas, Principal Scientist presented the current status of marine fisheries of Tamil Nadu. Important aspects discussed during the meet included the problems due to the high number of fishing boats being operated at



Stakeholders' meeting on Marine Capture Fisheries in progress

present, importance of mesh size regulation, discharge of effluents into the water bodies, installation of more number of artificial reefs, cage culture, sea ranching and effect of fishing ban. Officials from MPEDA, FSI, NETFISH, Deputy Director and

Inspector of Fisheries of Puducherry, Editor of Kadalar journal and representatives from International Collective in Support of Fishworkers (ICSF) and South Indian Federation of Fishermen Societies (SIFFS) also participated in the deliberations.

World Food Day celebrated

World Food Day was commemorated on 16 October 2014 by the Madras Research Centre in collaboration with (CIBA), by jointly organizing the "Farm Innovators' Day"

programme. Certificates were distributed to the nineteen young fishers who had participated in an interactive training workshop 'Moving Towards Sustainable Fisheries'

conducted during 14-15 October 2014 at the Kovalam Field Laboratory of CMFRI. An innovative shrimp farmer, Shri. J. Sivagnanam shared his success story on the occasion.

Journal Club of CMFRI

The newly launched Journal Club convened a special talk on "Animal cloning" on 7 January 2015. Dr. Prabhat Palta, Principal scientist, Animal Biotechnology Centre, National Dairy Research Institute who had pioneered research on cloning of dairy animals in India resulting in Pradhan and Garima (cloned buffalo calves), delivered the talk which was attended by over 102 members. Meeting was co-ordinated by Dr. Shyam Salim, Senior Scientist.

Director & Staff

ICAR - Central Marine Fisheries Research Institute (CMFRI)

Kochi

salute

Dr. K. Alagaraja

on being the most widely cited
CMFRI Scientist on Google Scholar

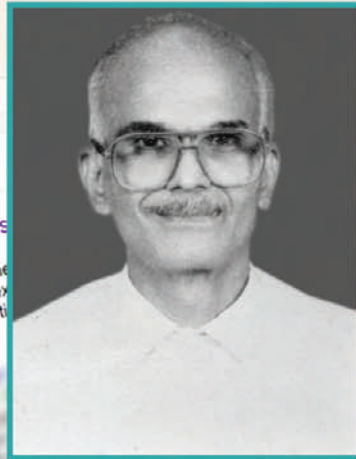
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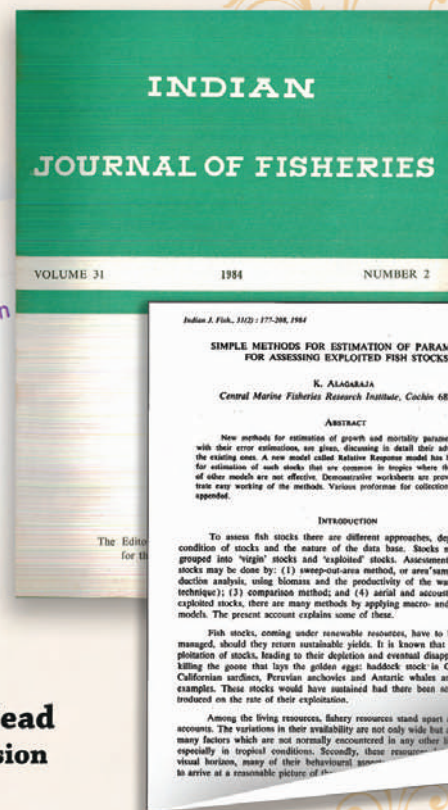
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Simple methods for estimation of parameters for assess
K Alagaraja - Indian Journal of Fisheries, 1984 - eprints.cmfri.org.in
New methods for estimation of growth and mortality parameters, together
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Dr. K. Alagaraja
Principal Scientist & Former Head
Fishery Resources Assessment Division
CMFRI



Indian Council of Agricultural Research
Central Marine Fisheries Research Institute
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FAO-BOBLME projects on conservation of seahorse and sea cucumber launched

The inception workshop of two FAO-BOBLME Projects "Participatory management for conservation of seahorses in the Gulf of Mannar, south-east coast of India" and "An evaluation of the current conservation measures on sea cucumber stocks in Palk

Bay and Gulf of Mannar of India" was conducted at the Mandapam Regional Centre of CMFRI, Mandapam Camp on 27th December 2014. Dr. E. Vivekanandan, Senior Advisor of the Projects, Dr. G. Gopakumar, Former Principal Scientist & Scientist-in-charge,



Inauguration of the Inception Workshop

Mandapam Regional Centre of CMFRI, Dr. K.K. Joshi, Head, Marine Biodiversity Division, Commandant H.H. More, Coast Guard Station, Mandapam, scientists from CMFRI, researchers from CAS in Marine Biology, Annamalai University, representative from Gulf of Mannar Biosphere Reserve Trust (GOMBRT), and representatives from NGOs including MS Swaminathan Research Foundation (MSSRF) and DHAN foundation participated in the Workshop. Over forty coastal fishermen and traders who were involved in the trade of seahorse and sea cucumber prior to the ban in 2001 also participated and gave their inputs.

Swachh Bharat Abhiyan Initiatives in CMFRI

The Prime Minister's "Swachh Bharat Abhiyan" campaign was taken up at the headquarters and various regional and research centres actively. At HQ the Swachh Bharat oath was

administered to all staff on October 2, 2014 followed by cleaning of campus and surrounding areas. Several programs were subsequently conducted to create awareness and

spread the message of cleanliness with voluntary service by staff. Cleaning of office and work place is undertaken at HQ on all Tuesday afternoons for two hours from 1400 - 1600 hrs.



Swachh Bharat oath taking at HQ on Gandhi Jayanthi Day



Cleaning of premises by Director and Staff



Staff participating in cleaning drive at Ponjikara Village, Mulavukad Panchayat



Distribution of plastic bins for waste collection



Swachh Bharat oath taking at Mumbai RC



Cleaning of campus at Calicut RC

10th Indian Fisheries and Aquaculture Forum (IFAF)

Director and Scientists participated in the 10th Indian Fisheries and Aquaculture Forum (IFAF) held at NBFGR, Lucknow during 12-15th November, 2014.

Following teams won Best Poster awards

- Jayasankar, J., Mini K.G., Somy Kuriakose, Wilson T. Mathew and Grinson George for the paper entitled "Spatio- Habitual modeling of commercially exploited marine fishery resources of Indian EEZ- Possibilities, Challenges and Workarounds".
- Suja, C.P. for the presentation entitled "In-vitro nacre formation in green mussel *Perna viridis*".

MECOS 2

Following team of scientist won awards at the international Symposium "Marine Ecosystems: Challenges and Opportunities" (MECOS 2) organized jointly by the Marine Biological Association of India (MBAI), Kochi and Central Marine Fisheries Research Institute (CMFRI) from 2nd to 5th December, 2014 at Kochi

- Sathianandan T.V., K. Sunil Mohamed, Somy Kuriakose, K.G. Mini, A.P. Dinseshbabu, Grinson George, Sindhu K. Augustine and Manjeesh won the **Dr. Reghuprasad Memorial Award for the Best Poster**



Dr. Sathianandan T.V., Principal Scientist receiving Dr. Reghuprasad Memorial Award for the Best Poster



Dr. A. Gopalakrishnan, Director, CMFRI receiving the AFSIB-IFAF Triennial Shield from Dr. J.K. Jena, Convenor, 10th IFAF, Lucknow and Chairman, Asian Fisheries Society - Indian Branch (AFSIB) for the successful conduct of 9th IFF at Chennai by CMFRI in 2011

Reghuprasad Memorial Award for the Best Poster entitled "Geospatial distribution and species diversity in fished taxa along the Indian coast".

- Joe K. Kizhakudan, K.K. Philipose, R. Sundar, V. Joseph Xavier, C. Manibal and R. Ponniah won the **Dr. M. Devaraj Memorial Award for the Best Paper** titled "Open sea cage aquaculture –inviting fisher youth to farming in Kovalam, Tamil Nadu"



Dr. Joe K. Kizhakudan, Senior Scientist receiving Dr. M. Devaraj Memorial award for the Best Paper Presentation

- Purushottama. G. B., B. N. Katkar, C. Anulekshmi, S. Ramkuma, K. Syamala, S. G. Raje, B. Paramita Sawant, Sujitha Thomas, V. D. Deshmukh and V. V. Singh won the **Young Marine Biologist Award** for their paper entitled "Age, growth, mortality and biological study of thin-spine sea catfish *Plicofollis tenuispinis* (Day, 1877) from Mumbai, northwest coast of India".

Best Poster awards

- Jayasankar J, K. G. Mini, Grinson George, T. V. Ambrose and Sindhu K. Augustine for poster entitled "On a hybrid modeling approach for studying propensity dynamics of marine fishery resources in south western EEZ of India"
- Geetha Sasikumar, G. Sampathkumar, S.P. Karamathulla and M.U. Shivappa for poster entitled "Reproductive aspects of incirrate octopus *Amphioctopus neglectus* (Nateewathana & Norman, 1999) exploited in eastern Arabian Sea"
- Suja, N and K. S. Mohamed for poster entitled "GIS-based aquaculture site suitability study for clam farming in Vembanad Lake"
- Vinod K., Rani Mary George, G. Gopakumar and N. Ramamoorthy for poster entitled "Propagation of soft coral *Sinularia kavarattiensis* (Octocorallia: Alcyonacea) at Mandapam, southeast coast of India"
- Sandhya Sukumaran, Wilson Sebastian, A. Gopalakrishnan, P. U. Zacharia and K.K. Vijayan for poster entitled "Genetic diversity of Indian oil sardine *Sardinella longiceps* evaluated using mitochondrial control region sequences"

Dr. S. Ayyappan, Secretary, DARE & Director General, Indian Council of Agricultural Research, New Delhi visited ICAR-Mumbai RC of CMFRI on 07.11.2014.

Shri. Amjad Tak, IAS, Secretary (Fisheries), Govt. of Goa along with Dr. Shamila Monteiro, Director, Directorate of Fisheries, Goa visited the marine farm and nursery rearing facility of the Karwar Research centre on 13.11.2014.

Dr. Rashid Sumaila, Professor of Fisheries Economics and Director, University of British Columbia, Canada visited CMFRI headquarters on 6.11.2014 and interacted with Director and scientists.



Dr. S. Ayyappan, DG, ICAR interacts with staff at Mumbai RC



Dr. K. K. Phillipose, SIC, Karwar RC explaining hatchery details to the dignitaries



Dr. Rashid Sumaila with Director and Scientists at CMFRI

QRT visits

Quinquennial Review Team (QRT) for the Review Period of 2009-14 consisting of Chairman Prof. (Dr.) N. R. Menon, Dr. K.N. Prabhudeva, Dr. A. D. Diwan, Dr. T. Balasubramanian (Members) and Dr. V. Kripa, Member-Secretary visited Tuticorin Research Centre on 27th and 28th October, 2014; Veraval Regional Centre on 9th and 10th December, 2014 and Mumbai RC on 11th December 2014. They interacted with scientists and staff on ongoing research activities and made valuable suggestions on future research thrust areas in marine fisheries.

Udupi mussel farmers benefit from RKVY Scheme for the first time



Mussel farms in Karnataka set up with financial support from RKVY programme

Mussel culture in Karnataka has been taken up by the Rashtriya Krishi Vikas Yojana (RKVY) Programme of the Government of Karnataka. Under its purview, financial assistance of

₹ 40,000 per mussel farmer was sanctioned for the fabrication of mussel racks. At present 29 farmers have adopted farming of the green mussel *Perna viridis* by rack and rope method in Udupi district.

KVK products and services showcased

KVK participated in the "Global Agro Meet International Conference and Exposition on Value Added Agriculture and Food Processing" held at Adlux International Convention Centre, Angamaly, Ernakulam during 6-7 November 2014. The programme was organized by the Department of Agriculture, Government of Kerala in association with Kerala State Industrial Development Corporation (KSIDC) and Confederation of Indian Industry (CII). The meet inaugurated by Hon'ble Union Minister for Agriculture Shri. Radha Mohan Singh was a platform for farmers, entrepreneurs, officials, industrialists and the public to meet and interact regarding agriculture and food processing. KVK's stall showcased various technologies and products for Good Agricultural Practices (GAP) and safe farming.



Dr. A. Gopalakrishnan, Director, CMFRI in the KVK stall during the Global Agro Meet

Technology Meet

KVK participated in the Technology Meet organized by Agricultural Technology Management Agency (ATMA), Ernakulam at Mahatma Gandhi Town Hall, Aluva during 28th - 29th October, 2014.



Shri. V. K. Ebrahim Kunju, Minister for public works, Govt. of Kerala visiting KVK stall at the sixth India International Food and Agri-Aqua Expo held at Kerala University of Fisheries and Ocean studies, Kochi held during 30th October to 3rd November, 2014.

Capacity building of differently abled youth

As part of its Farmers Field School programme, a one month capacity building programme exclusively for differently abled youth on "Scientific vegetable seedling production" at Cottolengo house near Palluruthy, Ernakulam started on 1.11.2014. Practical lessons on seedling raising in a polyhouse sanctioned to Cottolengo last year from State Horticulture Mission is being done. Nearly 5000 number of seedlings of Tomato, Brinjal, Chilli, Capsicum, Cabbage, Cauliflower, Okra and Cowpea would be ready towards the end of the programme. The participants would be trained on seedling marketing also.

Entrepreneurship development in tapioca processing

One day training on tapioca processing at Vengola, Ernakulam on 5th November 2014 was organised as part of its Entrepreneurship Development Programme (EDP). The programme was inaugurated by Shri. M.M. Avaran, President, Vengola Grama Panchayath. More than 100 candidates including farmers, Kudumbashree self help group members and officials participated. Dr. Sajeew M.S., Principal Scientist from ICAR-Central Tuber Crops Research Institute (CTCRI), Thiruvananthapuram highlighted scope of preparing a spectrum of products from cassava including

noodles, pasta, variety of snack foods, starch etc. and the approximate budget required for setting up of small scale tapioca processing industry. An exhibition of cassava products was also arranged. In the second phase of the programme select candidates will be taken to the Techno-incubation centre on tuber crops functioning at CTCRI to get practical experience in the product manufacturing process.

Seedling sales mela organised

A vegetable seedling sales mela was organised at CMFRI during 26th to 28th November and 15th December. More than 10000 good quality seedlings of tomato, brinjal, chilli, cabbage and cauliflower were distributed to 500 farmers in the programme.

- **Dr. A. Gopalakrishnan**, Director chaired the 6th meeting of the 12th IJSC of CMFRI at Calicut Research Centre of CMFRI, Kozhikode on 1st October, 2014. Attended 35th meeting of the Board of Management, Kerala Veterinary and Animal Sciences University at Pookode, Wayanad on 30th October, 2014. Hosted ICAR-SAU Interface Meeting (Kerala Region) on 6th November 2015 at CMFRI chaired by the Hon'ble Union Minister of Agriculture Shri. Radha Mohan Singh. Participated in the 10th Indian Fisheries & Aquaculture Forum at NBFGR, Lucknow on 13th & 14th November, 2014. Presentation and discussion on Vision 2050 held at Krishi Bhavan in the meeting chaired by the Hon'ble Secretary, DARE and DG, ICAR, New Delhi on 19th November 2014. Cage Harvest Mela organized by CMFRI, Kochi at Poothotta, Ernakulam district on 23rd December 2015. Visited the Visakhapatnam Regional Centre of CMFRI from 25th to 27th October, 2014.
- **Dr. K. S. Mohamed**, Head, MFD attended the Workshop on "Marine Ecosystem Characterization-India" sponsored by BOBLME from 20-22 October at NIO, Goa
- **Dr. P. U. Zacharia**, Head, DFD attended the 12th Technical Monitoring Committee meeting of the Central Sector Scheme on "Strengthening of Database and GIS for the Fisheries Sector" of DAHD & F at Guwahati on 07.11.2014. Delivered an invited lecture on the topic 'Climate change, Marine Fisheries and Food Security', at National Seminar on 'Fisheries and Aquaculture: Prospects in Kerala' held on 1st December 2014 at Newman College, Thodupuzha, Idukki, Kerala.
- **Dr. P. U. Zacharia**, Principal Scientist and **Dr. (Mrs.) Rekha J. Nair**, Senior Scientist attended CMLRE-RAC meeting on 23.12.2014 at CMLRE, Kochi.
- **Dr. V. Kripa** Head, FEMD and Member Secretary, QRT attended the QRT Meeting at Veraval Regional Centre and Mumbai Research Centre during 9-11 December, 2014.
- **Dr. A. P. Lipton**, Principal Scientist and **Smt. K. N. Saleela**, Scientist participated in FAO - TCP Project meeting organized by Tamil Nadu Fisheries Dept. at Nagercoil on 2.09.2014.

Overseas Deputations

- **Dr. E. Vivekanandan**, Emeritus Scientist, CMFRI and **Dr. K. K. Joshi**, Head, Marine Biodiversity Division attended the second workshop on the Ecosystem Characterisation of the Bay of Bengal Large Marine Ecosystem held at Bangkok, Thailand from 3rd to 5th November 2014. Over thirty scientists, including experts from the eight countries and region, participated in the workshop whose aim was to consolidate and validate the information collected by the CSIRO project team on BOBLME.



- **Dr. K. S. Mohamed**, Head, MFD was deputed for the meeting of Technical Advisory Board (TAB) of the Marine Stewardship Council (MSC) at Paris, France on 11th to 12th December 2014.
- **Dr. Prathibha Rohit**, Principal Scientist and Scientist-in-Charge, Mangalore Research Centre of CMFRI participated in the 17th Scientific Committee meeting of IOTC at Seychelles from 8-12-2014 to 12-12-2014.
- **Dr. Rekha J. Nair**, Senior Scientist, CMFRI, Kochi was invited to attend the 9th International Flatfish Symposium co-sponsored by the National Oceanic and Atmospheric Administrations' Alaska Fisheries Science Center and the International Pacific Halibut Commission during 3-14 November 2014 at Seattle, USA. A paper titled "An Overview On The Fishery And Taxonomy of Flatfishes of India" co-authored with Dr. A Gopalakrishnan was presented at the Symposium on 10.11.2014.
- **Dr. S. Lakshmi Pillai**, Senior Scientist attended 10th working party on Eco-systems and By-catch (WPEB10) held at Tokyo, Japan during 27-31st October, 2014.



- **Dr. M. K. Anil**, Principal Scientist attended the workshop on "Dissemination of technology generated by the central research agencies functioning in Kerala" held on 9.11.2014 at SAMETI, Thiruvananthapuram.
- **Dr. K. Vijayakumaran**, Principal Scientist, participated in the General Programme for Scientists at the Administrative Staff College of India, Hyderabad during 17-28 November 2014 sponsored by the Dept. of Science and Technology, Government of India, New Delhi.
- **Smt. K. N. Saleela**, Scientist and **Shri. K. K. Suresh**, (T-5) participated in meeting regarding ring seine operation along Thiruvananthapuram coast at District Collectors Chamber, Thiruvananthapuram on 22 November, 2014.
- **Dr. Veerendra Veer Singh**, Principal Scientist & SIC, Mumbai RC, participated in the ICAR-23rd Western

Regional Committee Meeting No. VII at Raipur, Chhattisgarh from 17th to 18th October 2014.

Participated in Indo Norwegian Workshop for Working group on Fisheries and Aquaculture at Taj Mahal Palace Hotel, Mumbai on 30 October 2014.

- **Dr. R. Narayanakumar**, Head, SEETTD attended the CMFRI VISION 2050 document presentation of CMFRI held at Krishi Bhavan, ICAR, New Delhi on 19.11.2014

RFD Mid-Term Review Meeting of the Fisheries Research Institutes held at Fisheries Division, ICAR, New Delhi 20.11.2014

Dr. P. S. Swathilekshmi, Senior Scientist attended and participated in the meeting conducted by the State Fisheries Resource Management Committee (FIRMA) in association with the State Fisheries Department, Government of Kerala and presented a talk on the Indigenous Technical Knowledge of Marine Fisher folk on 27-12-2014 at Kochi.

Attended the meeting of FAO-TCP: Organisation of Thematic workshops on Development of Strategy and Action Plan for Fishers Livelihood Enhancement and Diversification during 7-8 January, 2015 at Chennai.

Participated in the Awareness meeting on Mariculture Technologies conducted by the Central Marine Fisheries Research Institute of Mangalore Research Centre for the Tribals of Udupi district under the Tribal Sub Plan, on 3-1-2015.

- **Dr. U. Ganga**, Senior Scientist

The CMFRI sports team participated in different events of the ICAR South Zone Sports Meet 2014, held at ICAR-Indian Institute of Horticultural Research (IIHR), Bengaluru during October 13th -18th, 2014. The CMFRI team comprised 40 members which was led by Dr. Shyam Salim and Shri. C. Jayakanthan as team managers. The team won the overall 3rd position at the Meet.



participated as Chief Scientist on-board FORV *Sagar Sampada* (cruise 332) from 24th November to 10th December 2014.

Attended CMLRE-RAC meeting on 23.12.2014 at CMLRE, Kochi.

- **Dr. Shoba Joe Kizhakudan**, Senior Scientist participated in the Third National Mission Meeting on Conservation of Sharks-India (NMCSI-3) organized by the Association of Deep Sea going Fishermen (ADSGF), Bay of Bengal Programme - Inter-Governmental Organization (BOBP-IGO) and Humane Society International (HSI) on 20th November 2014.

- **Dr. T. M. Najmudeen**, Senior Scientist delivered an invited lecture on the topic "Recent developments in marine fisheries and mariculture at Post Graduate Department of Aquaculture & Fishery Microbiology, MES College, Ponnani, on 24.11.2014.

- **Dr. Prathibha Rohit**, Principal Scientist and Scientist-in-charge Mangaore, RC, **Dr. A. P. Dineshbabu**, Principal Scientist, **Dr. P. S. Swathilekshmi**, **Dr. Sujitha Thomas**, **Dr. Geetha Sasikumar** and **Dr. Rajesh K. M.**, Senior

Scientists attended the interaction and evaluation session with the officials of the Biodiversity Board, Government of Karnataka on Access, Benefit Sharing (ABS) project on 21-11-2014 at the College of Fisheries, Mangalore.

- **Dr. R. Jeyabaskaran**, Senior Scientist participated and presented a project proposal on 'Marine Mammals' before the Scientific and Technical Advisory Group for the CMPA project; organized by the MoEFCC and GIZ at New Delhi on 7.10.2014.

Participated as resource person in the workshop on Living Resources of Palk Bay and Gulf of Mannar organized by the IUCN-MFF and MSSRF on 12.11.2014 at Thoothukudi, Tamil Nadu.

Participated in the Terminal Workshop on IUCN/MFF Regional Project on Gulf of Mannar held on 22-23 December 2014 at New Delhi.

- **Dr. P. S. Swathilekshmi**, Senior Scientist and **Mrs. K. Syamala**, Scientist attended CAFT training programme "Gender mainstreaming and development" organized by CIFE, Mumbai from 12.12.2014 to 23.12.2014.

Personnel

APPOINTMENTS

Name	Designation	Centre	w.e.f
1. Shri. Solanki Mukesh Jeshabhai	Lower Division Clerk	Veraval R.C.	12.12.2014
2. Smt. M. Valaramathi	Lower Division Clerk	Mandapam R.C.	15.12.2014
3. Shri Rohit A. Chavda	Lower Division Clerk	Veraval R.C.	16.12.2014
4. Smt. Sreeja N. P.	Lower Division Clerk	CMFRI, Kochi	16.12.2014
5. Shri. R. Saravanan	Lower Division Clerk	Mandapam R.C.	17.12.2014
6. Shri PandyaJatinkumar Jethalal	Lower Division Clerk	Veraval R.C.	17.12.2014

PROMOTION

Name & Designation	Promoted as	w.e.f	Centre
1. Shri D. Pugazhendi, Senior Technical Officer	Assistant Chief Technical Officer	02.11.2012	CMFRI Hqrs.
2. Smt. K.K. Sujatha, Lower Division Clerk	Upper Division Clerk	27.11.2014	CMFRI Hqrs.
3. Shri A. Yesudhas, Lower Division Clerk	Upper Division Clerk	27.11.2014 (AN)	Tuticorin RC

TRANSFERS

Name & Designation	From	To	w.e.f
1. Shri. V. C. Subhash, Assistant Administrative Officer	Mangalore RC	Vizhinjam RC	17.12.2014
2. Shri. V. K. Manu, Senior Technical Assistant (Programme Assistant- Computer)	KVK of CMFRI, Narakkal	CMFRI, Kochi	01.01.2015

INTER-INSTITUTIONAL TRANSFERS

Name & Designation	From	To	w.e.f
1. Shri K. S. Sreekumaran, Assistant Finance & Accounts Officer	CIFT, Kochi	CMFRI Kochi	07.11.2014 (AN)
2. Ms. Rakhi Kumari, Scientist (on probation)	CMFRI Hqrs., Kochi	CIFA, Bhubaneswar	04.11.2014
3. Shri. Trivish Suresh Mayekar, Scientist (on probation)	CMFRI Hqrs., Kochi	NBFGR, Lucknow	04.11.2014
4. Shri. Md. Aklakur Scientist (on probation)	CMFRI Hqrs., Kochi	CIFE, Mumbai	31.10.2014

MEETINGS

1. The 6th meeting of the 12th IJSC of CMFRI was held on 01.10.2014 at Calicut RC of CMFRI, Calicut
2. The 76th meeting of the Institute Management Committee of CMFRI was held on 21.10.2014 at CMFRI, Kochi.

ASSUMPTION OF CHARGE

Dr. Abdul Nazar A. K., Senior Scientist took charge as SIC, Mandapam Regional Centre with effect from 1.12.2014.

Dr. G. Gopakumar retires



Dr. G. Gopakumar, Principal Scientist, Head-in-Charge, Mariculture Division and Scientist-in-Charge, Mandapam Regional Centre of CMFRI retired from service on superannuation on 30-11-2014. Appointed in the first batch of Agricultural Research Service (ARS) on 30-12-1976 he became one of the renowned marine fisheries scientists in India with significant research contributions in the field of mariculture. His major achievements include the breeding, seed production and farming of food fishes like cobia *Rachycentron canadum* and silver pompano, *Trachinotus blochii*, the breeding and seed production of a dozen species of marine ornamental fishes which are in demand in the international trade and rotifer research as live feed for larviculture besides the popularisation of marine aquarium technology. Earlier he had actively researched the live bait resources used by pole and line fishermen to capture skipjack tuna at Lakshadweep. He headed the Mariculture Division for ten

years since its inception in 2004, till his superannuation. His team building and motivation for productive research contributed to significant achievements in the seed production and farming of many high value finfish species during his tenure. His vision was to provide technology backup to establish mariculture as a significant contributor of seafood production in India. He was the Principal Investigator in a National Agricultural Technology Project (NATP) on marine ornamental breeding, a Co-PI in National Agricultural Innovation Project (NAIP) on cobia and a Centre co-ordinator in the Mariculture component of National Innovations on Climate Resilient Agriculture (NICRA) project. An All India Network project (AINP) on Mariculture conceived and submitted by him was approved by ICAR and is currently waiting for implementation. As the Scientist-in-Charge of Mandapam Regional Centre of CMFRI from 2006 till his superannuation, he had a significant role in upgrading the research facilities and other infrastructure at the Centre. The Recirculation Aquaculture System (RAS), National Marine Finfish Broodbank, Marine Hatchery Complex, Mariculture Complex, Sea Cage Farm, Environmental Chamber, Marine Research Aquarium, International Trainees Hostel, Laboratory cum Office Building, RO plant and the compound wall for the eighty acre campus were the major infrastructure developed during his tenure. He has more than 75 research papers in national/international journals and several conference papers/book chapters/teaching resources to his credit. He was deputed for training in RIA - I at Vietnam in breeding and seed production of finfish. He had participated in more than ten scientific cruises in the Exclusive Economic Zone (EEZ) of India. He has served as the Member- Secretary, Institute Research Council; Member, Institute Management Committee and in several other high level committees constituted in the Institute from time to time. The exemplary service and achievements of Dr. G. Gopakumar in CMFRI was gratefully remembered and feted at the Institute Research Council meeting held in June 2014.

Retirements



Smt. S. Parisa

Assistant

31.10.2014, Mandapam RC



Smt. M.R. Beena

Technical Officer

31.10.2014, CMFRI, Kochi



Shri M.P. Sivadasan

Technical Officer

31.10.2014, Calicut RC



Shri K.T. Thomas

Technical Officer

31.10.2014, Vizhinjam RC



Shri S. Ramachandran Nair

Technical Officer (Motor Driver)

30.11.2014, Vizhinjam RC



Shri P.P. Pavithran

Technical Officer

30.11.2014, Calicut RC



Shri A.Y. Mestry

Senior Technical Assistant

30.11.2014, Mumbai RC



Shri K. Thankappan

Skilled Support Staff

30.11.2014, CMFRI, Kochi



Shri A. Sivadasan

Skilled Support Staff

30.11.2014, Calicut RC

Nominations / Special Assignments of Dr. A. Gopalakrishnan, Director, CMFRI

- Member, Institute Management Committee (IMC), National Academy of Agricultural Research Management (NAARM), Hyderabad - as per ICAR letter F.No. Edn. 5-3/2014-A&P dated 30 May 2014 for a period of 3 years from 29.05.2014.
- Member, Board of Management (BoM), Central Institute of Fisheries Education (CIFE), Mumbai - as per ICAR Order No. Fy/1/8/2014-IA.VI dated 07 August 2014 for a period of three years with effect from 04.08.2014.
- ICAR Representative, Board of Management (BoM) of Kerala Veterinary and Animal Sciences University (KVASU), Pookkode, Wayanad - as per ICAR Order No. F.No. 17(2)/2009-EPD, dated 15.09.2014, with effect from 02.09.2014 for a period of three years.
- ICAR Representative, Board of Management (BoM) of Kerala University of Fisheries & Ocean Studies (KUFOs), Panangad, Kochi - as per the ICAR Order F.No. 17(2)/2009-EPD dated 12 November 2013 for a period of three years with effect from 12 November 2013.
- Expert Member, Committee for Construction of Bio-Security Laboratory and Quarantine Facility at Central Island Agricultural Research Institute (CIARI), Port Blair, Andaman & Nicobar Islands - as per the ICAR Order F.No. 20-4/2013-IA.V, dated 18 September 2014.
- Member, Scientific Advisory Committee (SAC) Rajiv Gandhi Centre for Aquaculture (RGCA), Sirkali, Tamil Nadu, as per the letter RGCA/9-3/MEET/2014-15, dated 20th May 2014 for a period of three years.
- Panel Member, Scientific Panel of Fish and Fisheries Products, Food Safety and Standards Authority of India (FSSAI) (Govt. of India) - as per letter F.No. 65/SP&SC/Standards/2012-FSSAI dated 26 March, 2014 for a period of three years.
- Member, Institute Management Committee (IMC), National Bureau of Fish Genetic Resources (NBFGR), Lucknow - as per ICAR Order F.No. 7-1/2013-IA.VI dated 31 May 2013 for a period of three years with effect from 29 January 2013.
- Member, Advisory Committee, Zoological Survey of India (ZSI - Ministry of Environment, Forests and Climate Change, Govt. of India), Kolkata as per Office Order No. 172/2014 dated 25 September 2014, until further orders.
- Member, Indo-Sri Lanka, Joint Committee on Fisheries Officials from India to look into the aspects of Fishermen, MoU and Mutual Co-operation, Ministry of Agriculture, Department of Animal Husbandry, Dairying and Fisheries (DAHD&F), Govt. of India, Order No. F.No. 27017/4/1998 Fy (T-5) (IC), dated 19 August 2014.
- Chairman, Technical Committee (TC) to Review the Duration of the Trawl Ban Period and to suggest further measures to strengthen the Conservation and Management Aspects - as per the Ministry of Agriculture, Govt. of India vide its order F.No. 30035/15/97-Fy. (T-1) dated 07 May 2013, with effect from 01 August 2013.
- Elected as Vice-Chairman, Asian Fisheries Society Indian Branch (AFSIB) on 14 November 2014 for a period of three years.
- Member, Grievance Committee, Kerala, Veterinary and Animal Sciences University (KVASU), Pookkode, Wayanad - as per Order No. G.A. -D/0282/2015 dated 20.02.2015.
- Member, ICAR - GB as per the Order No. 6(2)/2006-Gov.Cell, Dated 21.01.2015 and Letter of DG, ICAR No. D.O. No. 6(2)/2006-Gov.Cell, dated 22.Jan. 2015 for a period of three years from 10.01.2015 to 09.01.2018.
- Ex-Officio Member, Management Council (MC), Kerala, Veterinary and Animal Sciences University (KVASU), Pookkode, Wayanad as per Notification No. KVASU/GA-D/426//2011, dated 14.01.2015 for a period of three years.
- Member, Board of Studies (Zoology), Maharaja's College (Autonomous), Ernakulam, Kochi 682011, as per the letter No. B6/993/2015 dated 10 March 2015 for a period of three years.
- Member, Expert Group to review Schedule-I of the Wildlife (Protection) Act 1972 as per the Ministry of Environment, Forests and Climate Change (Wildlife Division), Govt. of India Order F. No. 1-11/2015 WL dated 26.3.2015



1. *Broodstock Development and Seed Production of Silver Pompano Trachinotus blochii* (2014) Nazar, A. K. A., Jayakumar, R., Tamilmani, G., Sakthivel, M. and Gopakumar, G. (CMFRI Pamphlet No: 19/2014)
2. *Cage Farming of Cobia Rachycentron canadum* (2014) Tamilmani, G., Nazar A. K. A.; Jayakumar, R. Sakthivel, M. and Gopakumar, G. (CMFRI Pamphlet No: 20/2014)
3. *Farming of Silver Pompano Trachinotus blochii in coastal aquaculture ponds* (2014) Jayakumar, R.; Nazar, A. K. A., Tamilmani, G., Sakthivel, M. and Gopakumar, G. (CMFRI Pamphlet No: 22/2014)
4. *The Bane of Juvenile Fish Catches* (2014) Ganga, U., Jinesh, P. T., Prakashan, D., Abdussamad, E. M. and Rohit, Prathibha (CMFRI Pamphlet No: 23/2014)
5. *Hatchery Technology for Perna viridis spat production* (2014) Laxmilatha, P., Pattnaik Phalguni, Rao, T Nageswara, Rao, M. Prasada and Padmajarani, S. (CMFRI Pamphlet No: 29/2014)
6. *Fishing Vessel Silver Pompano-A CMFRI-NICRA Initiative* (2014) Zacharia, P. U., Shyam, S. Salim, George, Grinson and Najmudeen, T. M. (CMFRI Pamphlet No: 31/2014)
7. *CMFRI Research Vessel R.V. Cadalmin-I* (2014) Zacharia, P. U., Shyam, S. Salim, Najmudeen, T. M., George, Grinson, Nandakumar, A., Anilkumar, P. S. and Rethesh, T. (CMFRI Pamphlet No: 32/2014)
8. *Livelihood Status of Fishers in India* (2014) Sathiadhas, R., Shyam, S. Salim and Narayanakumar, R. Central Marine Fisheries Research Institute, 348 p.
9. *Vipinkumar, V. P., Asokan, P. K., Mohamed, K. S. and Gopalakrishnan, A. (2014) Success Story of Women's Self Help Groups in Mussel farming in Kadalundi.* (Video English, Hindi and Malayalam versions)



Asian Fisheries Society (AFS)
ICAR-Central Marine Fisheries Research Institute (CMFRI) &
Asian Fisheries Society Indian Branch (AFSIB)
announce

5th International Symposium on Cage Aquaculture in Asia CAA5

November 11-14, 2015, Kochi, Kerala, India



Programme

11-13 November, 2015 : Registration and Opening of the Symposium, Technical Sessions and Trade Show

14 November, 2015 : Post-Symposium Tours

Venue

The venue for the CAA5 will be **Dream Hotel**, Kadavanthra, **Kochi, Kerala, India** which is located in the heart of the city. Kochi International Airport (COK) has direct flight service from Southeast Asia, the Middle East and other South Asian countries.

How to Register

Delegates can register online by following the guidelines given in the symposium website (<http://caa5.net>). However, spot registration is permitted at the venue during the symposium.

Registration Fees

Stages	International (US\$)	National (₹)
Early bird (Up to 31 July, 2015)	AFS Members : 250	AFS Members : 10,000
	Non Members : 300	Non Members : 12,000
After July 31, 2015	AFS Members : 300	AFS Members : 12,000
	Non Members : 350	Non Members : 15,000
	Students : 150	Students : 5,000
	Observers/ Companion : 150	Observers/ Companion : 5,000

Exhibition & Trade Show

The CAA5 is accompanied by an international trade show which will feature major fisheries research institutions, aquaculture related industries and their products and services.

Major Themes

- ★ **Production Systems**
 - Potential Species
 - Grow-out
 - Site
 - Harvest
 - Design and Engineering
- ★ **Breeding & Seed Production**
 - Hatchery Technology
 - Genetics
- ★ **Nutrition and Feed**
- ★ **Health and Environment Management**
- ★ **Economics, Livelihood and Policies**

Abstract Submission

Abstracts are invited under five major themes and can be submitted online. For details visit website <http://caa5.net>

Dates to Remember

Early Registration:

From 1st April, 2015 to 31st July, 2015

Submission of Abstract:

From 1st April, 2015 to 31st July, 2015

Symposium date:

From 11th to 14th November, 2015

Contact

Dr. A. Gopalakrishnan

Convener CAA5 & Director, CMFRI
Central Marine Fisheries Research Institute
P.B. No. 1603, Ernakulam North P.O.
Kochi 682 018, Kerala, India.
Telephone: +91-484-2394867
Fax: +91-484-2394909; 2396685
Email: caa5cmfri@gmail.com

Web : <http://caa5.net>

New Year 2015

New Year 2015 Celebrations at HQ was organised on 1.1.2015 by Recreation Club, CMFRI. The New Year address to the staff by Dr. A. Gopalakrishnan, Director was followed by a program of Human Chain Formation outside the Institute to generate awareness on the Swachh Bharat programme and the need to create a clean, green and healthy India. This was followed by cleaning of the surrounding premises.



New Year Celebrations at CMFRI led by Dr. A. Gopalakrishnan, Director, CMFRI and Heads of Divisions



Release of Calendar 2015



Cleaning of campus



Human chain formation to spread awareness on Clean India Campaign

XII Plan EFC approved

Administrative approval for XII Plan EFC (2012-2017) of CMFRI, Kochi by DARE and sanction of ICAR with an overall outlay of Rs. 12803.00 lakhs (Rupees twelve thousand eight hundred and three lakhs only) including Rs. 460 lakhs (Rupees four hundred and sixty lakhs) for TSP and Rs. 4215 lakhs (Rupees four thousand two hundred and fifteen lakhs) for All India Network Project (AINP) was conveyed to CMFRI vide letter No. Fy.3/6/2013-IA.VI dated 31/10/2014. Other highlights are the approval of the new research centre proposed at Digha (West Bengal) and two field centres at Paradeep (Odisha) and Mandvi (Gujarat)

MSC certified Short neck clam fishery in the Ashtamudi Lake

see page 3



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.