



CIFT

Newsletter



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National Seminar on Chitin in Agriculture, Medicine and Allied Fields

ICAR-CIFT, Kochi, the Society of Fisheries Technologists (India), Kochi, National Academy of Agricultural Sciences (NAAS), Kochi Chapter and Indian Chitin and Chitosan Society (ICCS), Erode jointly organized a one day Seminar, "Chitin in agriculture, medicine and allied fields" on 29 September, 2015 at ICAR-CIFT, Kochi. Chitin is the second most abundant natural biopolymer in nature, which is mainly derived from crustaceans like shrimp, crabs, krill, and lobsters. The research on the advanced uses of chitin and chitosan in medical, cosmetic, industrial, textile and drug delivery is progressing all over the world. The main objective of the Seminar was to bring together researchers from academia and industry to share their knowledge on the path breaking technologies and developments related to the biopolymers, 'chitin and chitosan' and to scientifically and commercially address the scientific and economic issues faced by Indian chitin industry.

Dr. C.N. Ravishankar, Director, ICAR-CIFT while addressing the gathering indicated that a seminar on chitin and chitosan is very important, since in India alone a substantial quantity of shellfish waste is discarded annually. In the recent years this figure has increased substantially with the introduction of vannamei shrimp culture.



Inaugural session in progress (L to R: Dr. K. Ashok Kumar, Dr. C.N. Ravishankar, Dr. S.D. Sawant and Dr. A.A. Zynudheen)



हर कदम, हर डगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

Agr search with a human touch

भाकृअनुप - केन्द्रीय मात्स्यिकी प्रौद्योगिकी संस्थान

सिफ्ट जंक्शन, मत्स्यपुरी पि. ओ., कोच्चि - 682 029

ICAR - Central Institute of Fisheries Technology

CIFT Junction, Matsyapuri P. O., Kochi - 682 029

*Release of the Symposium proceedings*

The Seminar included technical presentations and panel sessions for providing a platform for researchers and professionals from the industry to enhance their technical knowledge, share ideas and form new business ideas. Eminent

personalities working on chitin in different fields delivered lectures. The sessions were chaired by Dr. T.K. Srinivasa Gopal, (Former Director & Emeritus Scientist, ICAR-CIFT). Dr. A. Gopalakrishnan, Director, ICAR-CMFRI, Kochi was the Special Invitee for the Seminar. Dr. S.D. Sawant, Director, ICAR-NRC Grapes, Pune, Dr. K.G. Ramachandran Nair (Retd. Head of Division, Fish Processing, ICAR-CIFT), Dr. S. Meenakshi (Gandhigram Rural Institute), Dr. Jayakumar, Dr. Raja Biswas (Amrita Center for Nanosciences and Molecular Medicine, Kochi), Shri K. Mohanan (MATSYAFED), Dr. Suseela Mathew (ICAR-CIFT) and Shri Vikram Sudhakar (Marshall Marine Products, Erode) delivered lectures on various aspects of chitin. Dr. A.A. Zynudheen, Convener & HOD I/c, Fish Processing proposed the vote of thanks. The Seminar witnessed participation of 150 researchers and entrepreneurs from across the country.

Ready to Eat Food Processing Unit Inaugurated

M/s. Vinayaka Foods and Beverages, a Ready To Eat (RTE) food processing unit established at Eloor, Kochi was inaugurated by Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR, New Delhi on 12 August, 2015. In his inaugural address, Dr. Ayyappan lauded the efforts taken by ICAR-CIFT for establishing the factory and wished M/s Vinayaka all the success in their new venture. Dr. K. Gopakumar, Former DDG (Fisheries) & Former Director, ICAR-CIFT and Dr. M.K. Mukundan, Former Head, QAM Division, ICAR-CIFT highlighted

the importance of ready to eat foods in their felicitation addresses. Shri R. Venugopal, Chairman, Tripunithura Municipality, Shri C.N. Sundaran, Leader of Opposition, Tripunithura Municipality and Adv. Thomas, Ernakulam District President of BJP addressed the gathering.

Dr. C.N. Ravishankar, Director, ICAR-CIFT appreciated M/s Vinayaka family for their entrepreneurial spirit and praised their determination in establishing the RTE food manufacturing unit. Earlier, ICAR-CIFT, Kochi had signed a

*Dr. S. Ayyappan inaugurating the unit**Dr. Ayyappan visiting the processing plant**Dr. Ayyappan giving his remarks in the inaugural session*

Memorandum of Understanding with M/s Vinayaka Foods and Beverages, for the technology transfer of Ready To Eat products. The technological support for the production

of 13 RTE vegetarian dishes which are safe for consumption was provided by the Fish Processing Division of ICAR-CIFT, Kochi.

ICAR-CIFT Launches Coconut Wood Canoe for Artisanal Fisheries

Wood has been a preferred boat building material for small scale fisheries sector in India, despite the advent of new materials. The increasing scarcity of the conventional boat building timbers like Jungle jack or 'Aini' (*Artocarpus hirsuta*), Punna (*Calophyllum inophyllum*), Mango (*Mangifera indica*) etc., has necessitated the search for alternate materials. Coconut wood as an alternative material has been zeroed in considering its availability, especially in coastal states and islands of the country.

India is the third largest producer of coconut in the world. Coconut palm is known as the 'Tree of life' which is widely grown in states like Kerala, Karnataka and Tamil Nadu. The outermost high density portion of coconut palm is hard, durable and possesses good physical and mechanical properties, which can be an alternative for conventional boat building timbers. About 0.30 cubic meter usable wood can be obtained from a palm aged about 60 years.

The construction of the coconut wood canoe was carried out under a project titled "Techno-Economic Feasibility of Coconut Wood Canoes for Small Scale Fisheries Sector in the South West Coast of India and Lakshadweep" funded by the Coconut Development Board (Government of India), Kochi. The project demonstrated that chemical preservative treatment can improve the durability of coconut wood considerably under various environmental conditions. The preservative treatment on the coconut wood panels were standardized based on the BIS standards to enhance its physical and mechanical properties. Afterwards, a canoe of dimensions 9.0 m L_{OA} , 1.50 m breadth and 0.70 m depth was constructed for use by the artisanal fisheries sector, operated with a 9.9 hp OBM. The canoe can accommodate 8-10 people at a time and is suitable for gillnet, ring seine and hook and line operations. Coconut wood canoe is about 40% cheaper than the preferred 'Aini' wood canoe.

The canoe was officially launched by Dr. Madan Mohan, ADG (M. Fy.), ICAR, New Delhi at Chellanam on 8 July, 2015. The canoe was handed over to the Kannamali Cheriya Kadavu Fishermen Development Welfare Co-operative Society for field trails by Dr. E.G. Silas, Former VC, KAU, Thrissur. Speaking on the occasion Dr. Madan Mohan said that the association between the organizations like CDB, ICAR-CIFT and Fishermen Societies will go a long way in promoting technologies in the sector. Dr. Silas observed that once the canoe is operational, the feedback from fishermen must be



Handing over the agreement document (L to R: Dr. Leela Edwin, Dr. C.N. Ravishankar, Shri P.B. Francis, Dr. E.G. Silas and Dr. Madan Mohan)



Dignitaries on the canoe



Trial run by fishermen

used to fine tune the technology. Dr. Leela Edwin, PI of the project welcomed the gathering and gave a brief about the technology development process. Dr. C.N. Ravishankar, Director, ICAR-CIFT gave the Presidential Address and spoke about the continuing service of the Institute to the fisheries sector. Shri P.B. Francis, President of the Fishermen Co-operative Society offered felicitations. Shri M.V. Baiju, Senior Scientist proposed vote of thanks.



Training Programmes

Kochi

1. Food processing and packaging technologies (1-27 July)
2. Characterization of *Staphylococcus aureus* from aquatic environment (6 April - 4 July)
3. Production of chitin and chitosan (13-14 July)
4. HACCP concepts (13-17 July)
5. Retortable pouch processing of fishery products (16 July)
6. Analytical instruments viz. GC, HPLC and AAS (16-21 July)
7. Development of value added fish products (20-22 July)
8. Processing and packaging of food products (22 July - 12 August)
9. Antioxidant potential of fish protein hydrolysate prepared by pepsin treatment from cobia discards (5 May - 7 August)
10. Functional properties of fish protein hydrolysate



Total quality assurance in seafoods (Mumbai) - Trainees and faculty

prepared by pepsin treatment from cobia discards (5 May - 7 August)

11. General protocols and specific isolation techniques for pathogenic microorganisms (3-7 August)
12. Microbial analysis of water as per IS: 1622 (19-21 August)
13. Identification of bacteria of public health significance and water analysis (17-19 September)
14. Production of chitin and chitosan (30 September - 1 October)

Visakhapatnam

1. Hygienic preparation of smoke cured fish employing COFISKI (6 August)
2. Laboratory techniques in microbiological examination of seafood (25 August - 5 September)

Veraval

1. Hygienic handling of fresh and dry fish, sun and solar drying, storage and packaging (14-18 August)

Mumbai

1. Total quality assurance in seafoods (21-25 July)



Laboratory techniques in microbiological examination of seafood (Visakhapatnam) - Trainees and faculty

Outreach Programmes

During the quarter the following outreach programmes were conducted by the Institute:

1. TSP training programme on Responsible fishing technique for reservoir fisheries at Ukai, Songadh Taluk, Surat during 2-3 July, 2015.
2. Fishermen interactive session at Moothakunnam, Ernakulam on 4 July, 2015.
3. Awareness programme on Responsible fishing using BRDs at Malvan, Maharashtra on 6 July, 2015.
4. Training cum demonstration on Hygienic handling of fish and preparation of salt cured fish at Mangamaripeta, Visakhapatnam on 16 July, 2015.
5. Training cum demonstration on Harvest and post harvest technologies at Siltiguda, Rayagada district, Odisha on 20 July, 2015.
6. Training cum transfer of technologies (ToT) programme for tribal fisherfolk at Usgaon, Thane district, Maharashtra on 20 July, 2015.



7. Training cum transfer of technologies (ToT) programme for tribal fisherfolk under TSP at Shrivardhan, Raigad district, Maharashtra during 28-30 July, 2015.
8. Training programme on Square mesh fabrication at Vengurla, Maharashtra on 12 August, 2015.
9. Training programme on Square mesh fabrication at Malvan, Maharashtra on 13 August, 2015.
10. Training cum demonstration programme on Hygienic preparation of dry cured fish employing CIFT designed solar fish drier at Kodikallavalasa, A.P. on 13 August, 2015.
11. Training programme on Square mesh fabrication at Devgad, Maharashtra on 14 August, 2015.
12. One day workshop on Product acceptability studies and awareness at Umladkhur village, Meghalaya on 27 August, 2015.
13. One day workshop on Product acceptability studies and awareness at ICAR Complex for NEH Region, Umiam, Meghalaya on 29 August, 2015.
14. Training cum demonstration on Harvest and post harvest technologies at Surampalem village, East Godavari district, A.P. on 11 September, 2015.
15. Awareness programme on Fish and shellfish diseases for fish farmers at Kodungalloor, Thrissur district, Kerala on 14 September, 2015.
16. Training on Production of value added fishery products at Mysore, Karnataka during 23-24 September, 2015.
17. Workshop on Hygienic handling and preparation of value added fish products at Matsyadarshini, Hyderabad on 28 September, 2015.

Participation in Exhibitions

During the quarter the Institute participated in the following exhibitions:

1. Agricultural exhibition held at Pipra Kothi, Motihari, Bihar during 20-21 August, 2015.
2. Matsyamela and Krishimela held at UAS, Dharwad during 27-30 September, 2015.
3. Exhibition held in connection with the International conference on Science and Geopolitics of Arctic and Antarctic held at New Delhi during 29-30 September, 2015.



Matsyamela at UAS, Dharwad

Tribal Sub Plan Programmes

Training cum demonstration on Responsible fisheries and Value addition:

Under the Tribal Sub Plan (TSP) of ICAR-CIFT, Veraval Research Centre has handed over six FRP canoes to the tribal fisherfolk of Ukai, Gujarat. The canoes are light weight, durable, easy to operate and can be used for cast net and gillnet operations. The canoes will be helpful to the fishermen involved in subsistence fishery in reservoirs. Scientists from the Centre has also organized training cum skill development programmes on "Responsible fishing techniques for reservoir fisheries" and "Development of value added products from locally available fishes". About 70 tribal fisherfolk participated in the programme conducted during 2-3 July, 2015 in association with Department of Fisheries, Govt. of Gujarat.

The function was officially inaugurated by Shri Ratan Ahir, Member of Taluk Panchayat Committee, Songadh. Shri N.F. Patel, Deputy Director of Fisheries, Dept. of Fisheries, Surat, Gujarat presided over the function. Shri Sameer Bhai, Assistant Superintend of Fisheries, Ukai Fisheries Station, Dr. D. Divu,

Scientist, ICAR-CMFRI, Regional Station, Veraval, Shri Bhamatiya Bhai, President, Tribal Fishermen Society, Ukai, Smt. S. Remya and Smt. V. Renuka, Scientists, ICAR-CIFT Research Centre, Veraval offered felicitations. Dr. G.K. Sivaraman, Scientist-Incharge of the Centre welcomed the gathering and Dr. K.K. Prajith, Scientist, proposed vote of thanks.

The canoes were handed over to the tribal fishermen of Shri Tokarwa Vibhag Matsyodyog Sahakari Mandali Ltd., Uchal, Tapi and Shri Songadh Taluka Matsyodyog Sahakari Mandali Ltd., Ukai, Serula, Tapi by the dignitaries. In the Technical Session Dr. Prajith, Scientist, Shri J.B. Paradva and Shri H.V. Pungera, Technical Officers demonstrated the fabrication of improved gillnets, rigging details etc. Importance and need of responsible fishing techniques was narrated with special reference to reservoir fisheries. Twenty five fishermen from two Tribal Fishermen Societies attended the training programme. During the programme, nylon multifilament nets (150mm, 120mm mesh sizes), PP ropes (4mm), plastic floats and cement sinkers were distributed.

On the second day, a training programme on Preparation of value added fishery products was conducted. About 43 tribal fisherwomen actively participated in the programme. Preparation of fish pickle, fish ball, fish cutlet etc. from freshwater fishes was demonstrated by Smt. Remya and Smt. Renuka, Scientists. Smt. V. Susmitha, Shri K. Ajeesh and Shri Yogesh Kripalani, Tech. Assistants provided technical assistance and Smt. Pushpa Chudasma, SSS assisted in the demonstration. Scientists also explained the basics of various aspects of best post harvest practices and hygienic handling of fish and fishery products for quality improvement.



Shri Ratan Ahir inaugurating the programme



Distribution of fishing gear materials to the fishermen



Demonstration of preparation of value added fishery products

Training cum Demonstration Programme at Siltiguda, Odisha:

The Visakhapatnam Research Centre of ICAR-CIFT conducted a one day Training cum Demonstration on "Harvest and Post Harvest Technologies" on 20 July, 2015 at Siltiguda, Rayagada district, Odisha. This was a follow-up of an earlier programme held on "Employment of eco-friendly fishing gears and preparation

of value added products with low cost fish" conducted at the same village for the same beneficiaries during 30 March - 1 April, 2015. Lectures were delivered and demonstrations were given on value added fish products like fish fingers. Perforated fish washing bowl, fish frying bowl and one gas stove were given on 'gratis'. The programme was conducted in collaboration with Department of Fisheries, Government of Odisha. Dr. M.M. Prasad, Principal Scientist, Dr. P. Viji and Kum. Jesmi Debbarma, Scientists lead the programme and technical assistance was provided by Shri G. Bhushanam, Technician and Shri S. Ganik, SSS. From the Department of Fisheries Govt. of Odisha the programme was coordinated by Shri Rana, Fishery Extension Officer under the supervision of Shri Hemantha Kumar, District Fishery Officer, Rayagada.



Value added fish products prepared by trainees



Handing over of gas stove on 'gratis'



Resource persons with trainees



Programme at Shrivardhan, Maharashtra:

Mumbai RC of ICAR-CIFT has conducted three days Training cum Transfer of Technology programme for tribal fisherfolk under Tribal sub-plan of Govt. of India at Shrivardhan, a marine fishing village in Raigad district of Maharashtra during 28-30 July, 2015. The programme was conducted in collaboration with the Adiwasi Koli Macchimar Vividh Karyakari Sahakari Sanstha Maryadit, Shrivardhan (a registered Society at Danda Koliwada, Raigad district with 162 members) for transferring the suitable technologies developed by the institute to the tribal fisherfolk for betterment of their livelihood.

The Society buy and sell fish on commission basis from other fishermen. It has a diesel pump for supplying subsidized diesel to the boats of member fishermen. The Society has also entered into an agreement with Sagarputra Konkan Macchimar Sahakari Sangh Ltd. to sell all export quality fish at pre-decided price.

The programme started with a welcome address by Shri Milind Bhatkar, AAO followed by an explanation on the role of ICAR-CIFT under TSP for the socio-economic upliftment of the tribal fisherfolk in rural India by Smt. Priyanka S. Vichare, Tech. Asst. Shri Pandurang Chaule, President of the Society expressed his views and expectations from the programme. Dr. L.N. Murthy, Scientist Incharge of the Centre in his address explained the fisherfolk about the importance of value added products and their market opportunities and the importance of hygienic fish drying yard in the Society area. Participants clarified their doubts during the interactive session.

A demonstration of the solar fish dryer installed on the Society building terrace was also conducted. Fisherwomen expressed positive response towards the demonstrated technology. Demonstration of hygienic handling of fish to the participants was also conducted. Hands on training on fish pickle preparation and packaging was also imparted.

On the second day, preparation of battered and breaded fish products like fish fingers and fish cutlets was done. On



Demonstration of solar fish dryer

the third day equipments such as insulated fish boxes, insulated fish bags, sealing machines, hand operated meat mincers, digital weighing balance etc. were distributed by Dr. L.N. Murthy along with other team members. Dr. A. Jeyakumari, Scientist and Shri T.A. Waghmare, Senior Tech. demonstrated the operation of hand operated meat mincer. Smt. Priyanka Vichare explained the use of insulated fish boxes and insulated fish bags. Shri Pandurang Chaule gave his feedback about the programme. The programme ended with the closing address by Dr. L.N. Murthy.



Preparation of value added product



Distribution of input materials

Workshop at Kodikallavalasa, Andhra Pradesh:

ICAR-CIFT Visakhapatnam Research Centre organized a one day Workshop, "Hygienic preparation of cured fish employing ICAR-CIFT solar drier" at Kodikallavalasa, Pedagadda Reservoir, Vizianagaram district, Andhra Pradesh on 13 August, 2015. The programme benefited 80 tribal fishers which included substantial number of women fishers. In the inaugural address Dr. G. Rajeswari, Scientists Incharge of the Centre explained about the TSP and other activities undertaken by ICAR-CIFT for the development of freshwater fisheries sector both in harvest and post harvest aspects. In his address Dr. M.M. Prasad, Principal Scientist and Nodal Officer NEH TSP programmes said that ICAR-CIFT is keen on sustainable development of fisheries in hinterlands especially



post harvest sector. He said harnessing solar energy in the form of solar drier is best suited for hinterland areas for dry curing of fish. A demonstration was given on hygienic handling and dry curing of fish with ICAR-CIFT solar drier. At the end Dr. Rajeswari formally handed over the keys of solar drier to the beneficiaries. She also briefed the press on design and fabrication of different eco-friendly fishing gears for sustainable development of reservoir fisheries.



Dr. Rajeswari addressing the trainees



ICAR-CIFT coracle in fishing operations

Programme at Surampalem Reservoir, Andhra Pradesh: Training cum demonstration on "Harvest and post harvest technologies" was held at Kothada Village, Surampalem Reservoir in Rampachodavaram Mandal of East Godavari district, Andhra Pradesh on 11

September, 2015 under TSP. In the inaugural session Dr. M.M. Prasad, Principal Scientist talked on developmental activities undertaken by ICAR-CIFT in the form of TSP programmes for the benefit of fishers belonging to ST groups. Dr. U. Sreedhar, Principal Scientist explained about ICAR-CIFT's foldable fish traps, FRP coracles and gillnets with appropriate mesh size that will help in escape of juveniles. Dr. B. Madhusudana Rao, Senior Scientist explained about different value added products developed at the Institute employing scientific methods for better quality and shelf life. Shri Ramathirtham, A.D.F., East Godavari district while addressing the beneficiaries emphasized on taking advantage of different technologies and inputs offered by ICAR-CIFT for the benefit of tribal fishers. President of the Kothada Village Shri Kunjam Ramanna Dora, Surpanch Shri Kunjam Parameswara Dora and the Ward Member Smt. Bujji also participated in the programme. Afterwards a demonstration of different fishing gears and preparation of value added fish products namely pickles, pakoda and cutlets were conducted. At the end of the programme a feedback session was held and all the beneficiaries (40 nos.) have submitted a memorandum to the Scientist Incharge stating their needs of foldable fish traps for the benefit of tribal fishers residing in adjoining villages. Field visit was undertaken by the resource persons to assess the use of FRP coracle that was given on gratis to the tribal fishers. The tribal fishers desired that the coracle needs proper seating arrangement while in operation and also preferred small FRP boats owing to submerged tree stumps that obstruct operation of coracle during fish harvesting activities.



Participants and faculty of the programme

Workshop on Hygienic Preparation of Smoke Cured Fish

A one day workshop on "Hygienic preparation of smoke cured fish employing COFISKI" was held at Visakhapatnam Research Centre of ICAR-CIFT for the benefit of 29 women fishers of Meghalaya and officers of Department of Fisheries, Govt. of Meghalaya on 6 August, 2015. The programme conducted in collaboration with Institute of Livelihood Research and Training, Hyderabad started with an

introduction of ICAR-CIFT activities in relation to development of NEH states by Dr. G. Rajeswari, Principal Scientist and Scientist Incharge. Dr. S.S. Tobrez Nasar, Vice Dean, Institute of Livelihood Research and Training spoke on need for development of fisheries and improvement of livelihood conditions of fishers especially those residing in interior places. Dr. M.M. Prasad, Principal Scientist and Nodal



Officer, NEH and TSP programmes explained about the different models of COFISKI's developed at ICAR-CIFT Visakhapatnam Research Centre that are healthier, fuel saving and women friendly. Dr. U. Sreedhar, Principal Scientist talked on different fishing gears developed at ICAR-CIFT for fast flowing rivers of NEH states. Dr. B. Madhusudana Rao,



Dr. S.S. Tobrez Nasar, Vice Dean, ILRT, Hyderabad handing over foldable fish trap to a trainee

Senior Scientist spoke on the importance of hygiene in handling fish. After the inauguration, all the trainees were given hands on training on hygienic smoke curing of fish employing COFISKI. All the trainees demanded more number of COFISKI's in their respective areas. The trainees were given five insulated fish bags, two foldable fish traps and two nylon monofilament nets on gratis.



Resource persons with trainees of Meghalaya

Awareness Programmes on Hygienic Handling of Fish

An awareness programme on 'Hygienic handling of fish and value added product development' was held at Umladkar and Thangbuli villages of Meghalaya on 27 and 29 August, 2015. Visits were undertaken to fish smoke curing areas of the region and technological needs were assessed for production of smoke cured fish, better quality and shelf life. It was followed by exposing the trainees on fish pickle, fish

wafers, fish masala powder, fish soup powder and seaweed nutritional drinks. Similar programme was also conducted at ICAR Complex for NEH Region, Barapani on 29 August, 2015.

Another one day Workshop on Hygienic handling and value addition to fish was conducted at Matsyadarshini, TSFCOF Ltd., Hyderabad on 28 September, 2015. In the inaugural session of the programme, Dr. M.M. Prasad, Principal Scientist delivered a talk on Importance of fish in human nutrition, hygiene and its importance in day-to-day life. Dr. Sarala Devi, Deputy Manager, TSFCOF Ltd. requested the participants to develop entrepreneurial skills with the help of ICAR-CIFT. The inaugural session was followed by a demonstration of different value added products and sensory evaluation of the same.



Fish soup powder under preparation



Demonstration on value added fish product in progress

Participation in Agriculture Technologies Exhibition at Pipra Kothi, Bihar

On 20 and 21 August, 2015 agricultural technologies developed at ICAR-CIFT were exhibited by Visakhapatnam Research Centre of ICAR-CIFT at Pipra Kothi, near Motihari, Bihar. Detailed information on value added fish products and

other technologies developed at the Institute were given to the visitors during the exhibition. Dr. S. Ayyappan, Hon'ble DG, ICAR and Secretary, DARE, Govt. of India, New Delhi visited the Institute stall and interacted with the Scientists.



Dr. Ayyappan was appraised on ICAR-CIFT activities. The exhibition was inaugurated by Hon'ble Minister for Agriculture Shri Radhamohan Singh. In his address to the farmers the Hon'ble Minister stressed on the importance of fish in human nutrition, development of aquaculture in the region and



Dr. S. Ayyappan, Hon'ble DG, ICAR and Secretary, DARE, Govt. of India interacting with Dr. M.M. Prasad and Dr. U. Sreedhar

intensifying the efforts for sustainable development of fisheries in the region. During the exhibition technical sessions were held simultaneously and scientists of different institutes addressed the farmers and also attended to the different queries raised by the farmers.



Shri Radhamohan Singh, Hon'ble Minister for Agriculture addressing the farmers during the exhibition

Skill Development in Post Harvest Fisheries

ICAR-CIFT Visakhapatnam Research Centre conducted one day training on skill development in post harvest fisheries for the benefit of women fishers of Mangamaripeta on 16 July, 2015. The programme was organized in collaboration with an NGO, OXFAM. Dr. M.M. Prasad, Principal Scientist of the Centre presided over the function. In his address, Dr. Prasad told that fish harvested from cleaner environments and with better post harvest handling will have better quality, safety, shelf life and also fetch better price. A demonstration on hygienic handling of post harvest fish and salt curing was also held. The programme benefited 60 women fishers. Shri G. Bhushanam, Technician provided assistance in the programme.



Practical demonstration in progress

Foreign Delegation Visits ICAR-CIFT, Kochi

As part of the U.S.-India-Africa Triangular International training programme on "New Dimensions in Agricultural Extension Management for Extension Functionaries" four foreign dignitaries from Kenya and Liberia visited ICAR-CIFT, Kochi on 12 August, 2015. The visiting team comprised of Ms. Muhonja Ruth, Senior Fisheries Officer (Kenya), Mr. Komu Simon Mulwa, Principal Fisheries Officer (Kenya), Mr. Y. Sumo Andrew, Sectional Head, Marine Artisanal Fisheries, (Liberia) and Mr. McMillan Wilmot, Fisheries Inspector Supervisor, Department of Technical Services (Liberia) along with Dr. N. Balasubrahmani, Dy. Director, MANAGE, Hyderabad. They visited various laboratories, Pilot plant and ATIC of the Institute and had interactions with the scientists.



The delegates visiting the laboratories of the Institute



With M/s Foodex Village, Kochi

ICAR-CIFT, Kochi signed a Memorandum of Understanding with M/s Foodex Village, Vytilla, Kochi to provide technical advice and assistance for production of fish gravy paste.

With M/s Vinayaka Foods and Beverages, Kochi

Another consultancy agreement was signed with M/s Vinayaka Foods and Beverages, the multiservice organization functioning at Kochi. The MoU was signed for the technology transfer on Ready To Eat (RTE) products. The Fish Processing Division of ICAR-CIFT will provide technology for the optimization of process conditions for the production of 12 ready to eat products including popular sweet dish, 'Palada Payasam' and different vegetable curries. The consultancy includes optimization of process time and temperature for desired Fo values and sterility tests for the optimized products. ICAR-CIFT will also provide training and support to M/s Vinayaka Foods for the establishment of a processing unit exclusively for the production of RTE products. The MoU was signed on 6 July, 2015 at ICAR-CIFT



Dr. C.N. Ravishankar, Director, ICAR-CIFT handing over the MoU to Shri M. Anantharaman

ICAR - CIFT, Kochi signs Consultancy Agreements

and the signatories were Dr. C.N. Ravishankar, Director, ICAR-CIFT and Shri M. Anantharaman, Managing Partner, M/s Vinayaka Foods and Beverages.

With M/s Green Living Agribusiness Pvt. Ltd., Kochi

Yet another consultancy agreement was signed with M/s Green Living Agribusiness Pvt. Ltd., Kochi to establish production and retailing of hygienically dressed and packed fresh fish in Kerala, under the business model developed by NAIP-RHSSP project on Value chain of pelagic fisheries. The signatories of the MoU were Dr. C.N. Ravishankar, Director, ICAR-CIFT and Shri Francis, MD, M/s Green Living Agribusiness Pvt. Ltd.



Dr. C.N. Ravishankar, Director, ICAR-CIFT handing over the MoU to Shri Francis

Publications

Research Papers

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10. Visnuvinayagam, S., Binsi, P.K., Viji, P. and Thriveni Adiga (2015) - Monitoring of pathogenic bacteria in fish processing unit. *Beverages and Food World* **42(7)**: 35-37.
11. Visnuvinayagam, S., Viji, P., Binsi, P.K., Chakrabarti, R., Thriveni Adiga, Joshy, C.G. and Lalitha, K.V. (2015) – Effect of monsoon on sulphite reducing *Clostridia* levels in fish from retail outlets in Maharashtra, *Fish. Technol.* **52(3)**: 198-201.

Brochures

1. Eco-friendly hybrid solar drier for hygienic preservation of fish (In Marathi) by Murthy, L.N., Visnuvinayagam, S. and Jeyakumari, A. (2015)
2. Palm impression technique for popularizing hygiene literacy among fish handlers (In Marathi) by Murthy, L.N., Madhusudana Rao, B., Visnuvinayagam, S. and Jeyakumari, A. (2015)
3. Insulated fish bags to preserve quality of iced fish and to minimize post harvest losses (In Marathi) by Murthy, L.N., Madhusudana Rao, B., Visnuvinayagam, S. and Jeyakumari, A. (2015)

Meeting of the Vigilance Study Circle

The Annual General Body Meeting (AGM) of the Vigilance Study Circle, Kerala Chapter was held on 23 September, 2015 at ICAR-CIFT, Kochi. The first session of the meeting was chaired by Shri Satyaki Rastogi, Chief Vigilance Officer, State Bank of Travancore and President, VSC-K. The Chapter decided to celebrate 'Vigilance Awareness Week' during 26-31 October, 2015. As part of Vigilance Awareness Week, it was decided to conduct a social outreach programme, 'Elocution competition' jointly by all organizations in the study circle. In the second session of the AGM the Chief Guest was Shri P.J. Joy, CVO, State Bank of India who gave the key note address. Shri M.G.A. Raman, Patron, VSC-K gave an inspiring speech on the need for ethics in administration. Dr. C.N. Ravishankar, Director, ICAR-CIFT felicitated the meeting. Shri Satyaki Rastogi also offered felicitation in the function. He gave a presentation on Overview - Procedures and Process Central Vigilance Commission. The presentation came to an end with an interactive session. Besides CVOs, vigilance officers and guests from various central government organizations, Heads of Divisions, Senior Administrative Officers, Administrative Officers, Finance and Accounts Officer, Assistant Administrative Officers and staff of the Purchase Section of ICAR-CIFT attended Session II and participated in the discussion. Earlier Shri S. Narayanan, Chief Manager, Vigilance, BPCL, Kochi Refinery welcomed the gathering and Shri J. Vinayan presented the report in which he explained about vigilance study circle and its functions.



Inaugural session in progress



A section of the participants

Dr. Leela Edwin, Vigilance Officer of ICAR-CIFT proposed formal vote of thanks and the meeting came to an end with national anthem.

Hindi Chethanamas

Kochi : ICAR-CIFT, Kochi celebrated "Chethanamas 2015" during 12 August to 11 September, 2015. Different competitions like word writing for Sections and Divisions, Quiz competition, Essay writing, Slogan writing, Cross word writing, 'Matsyadarshan', Street play on social issues, News reading, Advertisement etc. and Hindi workshops were conducted during the month-long celebrations.

A two day Hindi workshop was conducted during 15-16 September, 2015 as part of the Chethanamas celebrations. Shri K. Ravinder Kumar, Manager (OL), SBT, Zonal Office was the resource person for the Workshop. He conducted classes for the technical staff (T1 to T4) and also for the young scientists.

The valedictory function of Chethanamas was held on 22 September, 2015. Dr. P. Radhika, Professor & Head, P.G. Research Centre, Dakshin Bharat Hindi Prachar Sabha, Kochi was the Chief Guest. She spoke about the importance of Hindi as Official Language and lauded the efforts made by ICAR-CIFT in implementing Official Language. The Institute House Journal "Jhalak" was released by the Chief Guest during the function. The meeting was presided over by Dr. C.N. Ravishankar, Director. The Chief Guest gave away the prizes to the winners. Earlier Dr. T.V. Sankr, HOD I/c, QAM welcomed the gathering and Shri P.J. Davis, Senior Administrative Officer and Incharge OL Section proposed the vote of thanks. Cultural programmes followed the valedictory function.



Release of 'Jhalak' (L to R: Dr. T.V. Sankar, Dr. C.N. Ravishankar, Dr. P. Radhika and Shri P.J. Davis)



Rajabhasha Puraskar to Smt. Asha Gopalan

Celebrations

Visakhapatnam : The Visakhapatnam Centre celebrated 'Hindi Saptah' during 14-21 September, 2015. Many competitions such as writing missing alphabet for Skilled Support Staff, identification of spotter and writing it in Hindi, Antaksharai, singing, Quiz and drama competition were organized on the occasion. Dr. B. Mohini, Senior Professor, Hindi Department, School of Distance Education, Andhra University, Visakhapatnam was the Chief Guest of the closing ceremony on 21 September. Dr. G. Rajeswari, SIC presided over the meeting. Winners of the competition were presented with certificates and prizes.



Dr. B. Mohini delivering the Chief Guest's address

Mumbai : At Mumbai Research Centre a Hindi Workshop was conducted on 22 August, 2015. Smt. Susmitha Bhattacharya, Deputy Director, OL Implementation Committee, Navi Mumbai explained the importance of Unicode in the implementation of Hindi in organizations.



Smt. Susmitha Bhattacharya conducting the workshop

Veraval : At Veraval Research Centre Hindi week celebration was conducted during 7-14 September, 2015. The programme was inaugurated by Dr. G.K. Sivaraman, SIC of the Centre. He created an awareness about the importance of Official Language in the official work and also gave a note on Official Language policy and the target percentage which



should be maintained in work so as to fulfill the assurances given to the Parliamentary Committee. Dr. A.K. Jha, Scientist welcomed the chair and the audience. Smt. S. Remya, Scientist gave the felicitation speech.

Various competitions were conducted during the period which included Quiz competition, Essay writing, Antakshari, Drawing, Elocution, Hindi recitation and Hindi song competition.

On 14 September, 2015, the valedictory function was inaugurated by Dr. G.K. Sivaraman and the event started with a pleasant speech on Hindi. Dr. K.R. Sreenath, SIC, ICAR-CMFRI Veraval Centre was the Guest of honour. Prizes were distributed to the winners. Vote of thanks was given by Kum. Nimmy S. Kumar, Tech. Asst. The event concluded with cultural programme by the employees.



Cultural programme

'National Sadbhavana Diwas'

'National Sadbhavana Diwas' was observed on 20 August, 2015 at Headquarters in connection with the

observance of 'Communal Harmony Fortnight'. The Director and staff of the Institute assembled in the lobby of the Institute and took the Sadbhavana Day Pledge.

World Tribal's Day

As part of World Tribal's Day, Dr. M.M. Prasad, Principal Scientist has undertaken visits to different places of Visakhapatnam district namely Chintapalli, Paderu, Araku and Anantagiri. Discussions were also held with Dr. A.K. Singh, Director, DGFR to include new fish varieties precisely Chocolate Mahsheer owing to the low temperature conditions existing all through the year in the areas.

'Onam'

The state harvest festival of Kerala, "Onam" was celebrated at ICAR-CIFT, Kochi on 25 August, 2015 with pomp and gaiety. Floral carpet competition was held in the morning followed by traditional 'Sadya' (feast). Shri Thusahar, Idea Star Singer Winner was the Chief Guest of the afternoon function. A cultural programme also followed.



Shri Thusahar inaugurating Onam celebrations

Visitors

Veraval

Shri Manish Choudhury, Deputy Advisor (Agri Division), NITI AYO, Govt. of India, New Delhi visited the Centre on 4 September, 2015. Invited representatives from the Fish Processing Industry Association, Boat Owner's Association, Gujarat State Fisheries Department, Regional Centre of ICAR-CMFRI and ICAR-CIFT, Veraval had detailed discussions about the ongoing project activities, fish processing industrial activities etc.

Kochi

Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR, New Delhi visited the Institute on 13 August, 2015 and Dr. S. Dam Roy, Director, ICAR-CIARI, Port Blair, Andamans & Nicobar Islands on 5 August, 2015.



Dr. Ayyappan being greeted by Dr. Ravishankar



Dr. Ayyappan along with the staff of the Institute

Swachh Bharat

Kochi

As a part of 'Swachh Bharat Mission', a cleaning campaign was carried out in the premises of ICAR-CIFT Residential Complex and Office on 2 October, 2015. Coconut saplings were also planted on the occasion.



Cleaning the premises



Planting of coconut sapling

Viskhapatnam

'Swachh Bharat Abhiyan' was conducted during 25 September to 11 October, 2015 wherein the cleaning drive included library, office building, residential complex and campus premises.



Cleaning of residential premises at Visakhapatnam

Veraval

On the auspicious day of Gandhi Jeyanti, all the scientists and staff members of Veraval Research Centre assembled together in the morning and took oath. The office building, laboratories and premises were cleaned. The programme ended with light refreshment arranged in the office campus and closing note of SIC of VRC. In his closing note SIC has emphasized the importance of cleanliness and told how these small efforts will make big change in the society.

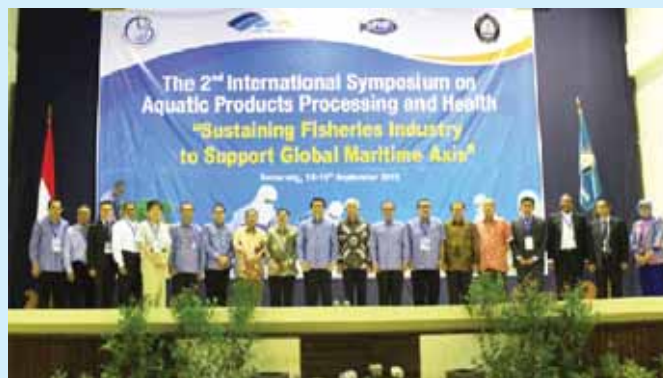


Cleaning in progress at Veraval



Deputation Abroad

Dr. C.N. Ravishankar, Director was deputed abroad to Indonesia to attend the 2nd International Symposium on Aquatic Products Processing and Health-2015 organized by Department of Fish Products Technology, Diponegoro University and Ministry of Marine Affairs and Fisheries at Semarang, Central Java, Indonesia during 13-15 September, 2015. Dr. Ravishankar also delivered an invited talk on "Recent advances in processing and packaging of fishery products" in the Symposium.



Dr. Ravishankar (Fourth from left) along with other invited speakers

ICAR-CIFT Scientist Participates in Sagar Sampada Cruise

Dr. R. Raghu Prakash, Principal Scientist participated as a Chief Scientist in Cruise No. 344 (Leg-1) of FORV Sagar Sampada from 4 to 25 September, 2015. The Cruise was a multi-disciplinary research cruise onboard FORV Sagar Sampada undertaken for assessment of myctophid resources along Central Indian Ocean, development of its harvest and post harvest technologies and MMME (Phytoplankton and Zooplankton studies) covering latitudes between 8° N to 17° S and longitudes 57° E to 73° E. The Cruise spanning 22 days covered 36 stations located between 8° N to 5° S latitude and 73° to 65° E longitude. The main objective of the Cruise was to undertake a preliminary survey to understand distribution and diversity of myctophids with environment productivity studies. CTD data and MET data were collected to co-relate the different studies with the hydrographical parameters and environmental parameters. Water samples were also collected for studies on primary productivity, nutrients and metagenomics. Fishing operations were conducted with Cosmos and 45 m mid water nets using

Thyborne otter board. The catch of 132 kgs was represented by fishes, shellfishes, crustaceans, cephalopods and gastropods. Fishes were identified on-board using standard keys (Smith's sea fishes and FAO fish identification sheets). The Cruise concluded at Port Louis.



Identification and sorting of myctophids collected

Radio Talks

The Scientists and Technical Officers of the Institute gave the following radio talks during the period under report:

1. Dr. U. Sreedhar, Principal Scientist - The use of remote sensing for fishing industry (In Telugu), AIR, Visakhapatnam on 4 September, 2015.
2. Dr. B. Madhusudana Rao, Senior Scientist - Interview on Residues of antibiotics in shrimp exports - Problems and precautions (In Telugu), AIR, Visakhapatnam on 2 August, 2015.
3. Dr. M.S. Kumar, Chief Tech. Officer - Role of BRDs in elimination of bycatch in trawling and conservation of biodiversity (In Telugu), AIR, Visakhapatnam on 21 September, 2015.

Personnel News

Participation in Seminars/Symposia/Workshops etc.

- **Dr. C.N. Ravishankar**, Director – Lab Research Council Meeting, DFRL, Mysore (17 July)
- **Dr. C.N. Ravishankar**, Director – ICAR Foundation Day Celebrations and National conference of Krishi Vigyan Kendras, Patna (25-26 July)
- **Dr. C.N. Ravishankar**, Director – 2nd International

Symposium on Aquatic products processing and health 2015, Central Java, Indonesia (13-15 September). Dr. Ravishankar also delivered an invited talk on “Recent advances in processing and packaging of fishery products” in the Symposium.



Dr. Ravishankar delivering the lecture

- **Dr. C.N. Ravishankar**, Director – Inauguration of Cold Chain Facility of Karnataka State Fisheries Federation, Mysore (24 September)
- **Dr. C.N. Ravishankar**, Director, **Dr. U. Sreedhar**, Principal Scientist and **Smt. V.P. Souda**, JRF - International Conference on ‘Science and geopolitics of Arctic-Antarctic’, New Delhi (29-30 September). They also delivered the following invited lectures in the Conference:
 1. Potentials and prospects of krill utilization – Dr. C.N. Ravishankar
 2. Distribution of deep sea trawl resources from the Exclusive Economic Zone (EEZ) of India and prospects of exploring untapped deep sea resources from Central, Southern Indian Ocean and Antarctic seas – Dr. U. Sreedhar



Conference in progress. Third from left is Dr. Ravishankar and the last is Dr. Sreedhar

- **Dr. Suseela Mathew**, Principal Scientist and HOD, B&N, **Dr. A.A. Zynudheen**, Principal Scientist and HOD I/c, FP, **Dr. K.V. Lalitha**, Principal Scientist and HOD I/c, MFB, **Dr. T.V. Sankar**, Principal Scientist and HOD I/c, QAM, **Dr. R. Anandan**, ICAR National Fellow and Principal Scientist, **Dr. Saly N. Thomas**, **Dr. K. Ashok Kumar**, **Dr. V. Geethalakshmi**, **Dr. Femeena Hassan**, **Dr. J. Bindu**, **Dr. P. Muhamed Ashraf**, Principal Scientists, **Dr. George Ninan**, **Dr. Toms C. Joseph**, **Dr. K.K. Asha**, **Dr. S.K. Panda**, Senior Scientists, **Dr. C.O. Mohan**, **Shri C.G. Joshy**, **Dr. V. Murugadas**, **Dr. P.K. Binsi**, **Dr. N.S. Chatterjee**, **Smt. S.J. Laly**, **Dr. Pankaj Kishore**, **Shri S. Sreejith**, **Kum. H. Mandakini Devi**, **Shri Anuj Kumar**, **Dr. K. Elavarasan**, **Kum. K. Sarika**, **Kum. E.R. Priya**, **Shri Devananda Uchoi**, **Shri C.S. Tejpal**, **Kum. Lekshmi R.G. Kumar**, Scientists, **Smt. P.K. Shyma**, **Smt. K.B. Beena**, Asst. Chief Tech. Officers, **Dr. B. Ganesan**, Sr. Tech. Officer, **Shri T. Mathai**, **Smt. N. Lekha**, Sr. Tech. Assts, **Shri Rahul Ravindran**, Tech. Asst., **Smt. Anu Mary Jose**, Technician, **Kum. Divya K. Vijayan**, **Kum. R. Jayarani**, SRFs, **Kum. Deepa K. Vijayan** and **Kum. K. Shyni**, JRFs - Seminar on Chitin in agriculture, medicine and allied fields, ICAR-CIFT, Kochi (29 September)
- **Dr. Leela Edwin**, Principal Scientist and HOD I/c, FT – First consultation on Safe boat design and boat building on FAO standards, Chennai (29-30 July). Dr. Leela Edwin made the Key Note address on ‘Safe and energy efficient boats’ in the Meeting.
- **Dr. Leela Edwin**, Principal Scientist and HOD I/c, FT – Fifth Advisory Committee meeting of the project on Green fishing systems for tropical seas, ICAR-CIFT, Kochi (17 August)
- **Dr. Leela Edwin**, Principal Scientist and HOD I/c, FT, **Dr. Nikita Gopal**, Principal Scientist and HOD I/c, EIS, **Dr. P. Pravin** and **Dr. J. Bindu**, Principal Scientists – Workshop on Preparation of fisheries developmental plan for Lakshadweep Integrated Island Management Plan, ICAR-CMFRI, Kochi (15-16 September). Dr. Bindu also presented a paper entitled, “Post harvest and marketing: Current scenario and way forward” in the Workshop.
- **Dr. Leela Edwin**, Principal Scientist and HOD I/c, FT, **Dr. Saly N. Thomas**, **Dr. K. Ashok Kumar**, **Dr. J. Bindu**, Principal Scientists, **Shri P.K. Mahato**, Research Associate, **Shri James J. Pulikottil**, **Smt. K.A. Sayana**, **Smt. Leena Raphael**, SRFs and **Shri Vishnu M. Venugopal**, Project Assistant – National seminar on Moving towards the second blue revolution: Recent advancements in fisheries sector, CIFNET, Kochi (7 August)
- **Dr. T.V. Sankar**, Principal Scientist and HOD I/c, QAM –

National seminar on Biosciences in the genomic era, SN College, Cherthala (2-3 July). Dr. Sankar also delivered an invited talk on “Food safety with reference to consumers” in the Seminar.

- **Dr. T.V. Sankar**, Principal Scientist and HOD I/ c, QAM – Meeting of FAD 12, BIS, ICAR-CIBA, Chennai (12 July)
- **Dr. T.V. Sankar**, Principal Scientist and HOD I/ c, QAM – Meeting of Shadow Committee for Codex on Fish and fishery products, ICAR, New Delhi (31 July)
- **Dr. G. Rajeswari**, Principal Scientist and SIC, Visakhapatnam – Board of studies meeting of Department of Zoology and Department of Marine Living resources, Andhra University, Visakhapatnam (16 July)
- **Dr. G. Rajeswari**, Principal Scientist and SIC, Visakhapatnam – Workshop on Fisheries and aquaculture, Dr. Lankapalli Bullayya College, Visakhapatnam (25 August). Dr. Rajeswari also delivered a lecture on ‘Recent trends in harvest technology’ in the Workshop.



Dr. Rajeswari delivering talk on Harvest technologies

- **Dr. G. Rajeswari**, Principal Scientist and SIC, Visakhapatnam – Training programme on Geospatial analysis of natural resources management using statistical tools, ICAR-NAARM, Hyderabad (2-11 September)
- **Dr. G. Rajeswari**, Principal Scientist and SIC, Visakhapatnam, **Dr. R. Raghu Prakash**, **Dr. U. Sreedhar**, Principal Scientists and **Dr. B. Madhusudana Rao**, Senior Scientist – Workshop on Deep sea fishing, Visakhapatnam (6 July)
- **Dr. G. Rajeswari**, Principal Scientist and SIC, Visakhapatnam, **Dr. M.M. Prasad**, **Dr. R. Raghu Prakash**, Principal Scientists, **Smt. Arathy Ashok**, **Dr. P. Viji** and **Kum. Jesmi Debbarma**, Scientists – Interactive training workshop on Moving towards sustainable fisheries, Visakhapatnam Reg. Centre of ICAR-CMFRI (28-30 July). They also delivered the following invited lectures in the Workshop:
 1. Energy saving in fisheries – Dr. G. Rajeswari
 2. Sustainable post harvest utilization of fish – Dr. M.M. Prasad
 3. Safe navigation, seamanship and security – Dr. R. Raghu Prakash
 4. Livelihood enhancement options and its ICT's in fisheries – Smt. Arathy Ashok
- **Dr. G.K. Sivaraman**, Senior Scientist and SIC, Veraval – Annual review meeting of Ministry of Food Processing Industries, New Delhi (24 August)
- **Dr. L.N. Murthy**, Senior Scientist and SIC, Mumbai – Interactive training workshop, ICAR-CMFRI Regional Station, Mumbai (12-14 September). Dr. Murthy also gave a talk on ‘Sustainable post harvest utilization of fish’ in the Workshop.
- **Dr. L.N. Murthy**, Senior Scientist and SIC, Mumbai and **Dr. B. Madhusudana Rao**, Senior Scientist – Meeting of the CFC-FAO project on Promotion of processing and marketing of freshwater fish products in India, MPEDA, Kochi (16 September)
- **Dr. M.M. Prasad**, Principal Scientist – National seminar on Aquaculture in North East region: Realities, potentials and challenges, St. Anthony's College, Shillong (25-26 August). Dr. Prasad also delivered an invited talk on “Development of small scale fish producers in NEH region states: Role of low cost processing and packaging” in the Seminar.
- **Dr. M.M. Prasad**, Principal Scientist – One day workshops on Product acceptability studies and awareness, Umladkhur village, Meghalaya (27 & 29 August)
- **Dr. M.M. Prasad**, Principal Scientist – Mid term review meeting of ICAR Regional Committee No. II, ICAR-CIFRI, Barrackpore (19 September)
- **Dr. P. Pravin**, Principal Scientist – Workshop of Nodal Officers of ICAR Research data repository for Knowledge Management, ICAR, New Delhi (4-5 August)
- **Dr. P. Pravin**, Principal Scientist – International workshop on Resources conservation and livelihood opportunities in coastal Tamil Nadu, TNAU, Coimbatore (19-20 August). Dr. Pravin also delivered an invited talk on “Trawling – A fishing gear perspective” in the Workshop.
- **Dr. P. Pravin**, **Dr. M.P. Remesan**, Principal Scientists and **Shri M.V. Baiju**, Senior Scientist – Meeting for stakeholders for regulating marine fishing, ICAR-CMFRI, Kochi (16 July)
- **Dr. M.P. Remesan**, Principal Scientist and **Shri M.V. Baiju**, Senior Scientist – Meeting on Conservation issues, Ernakulam (30 July)
- **Dr. M.P. Remesan**, Principal Scientist and **Shri M.V. Baiju**, Senior Scientist – One day workshop on Issues



in mechanized fishing, ICAR-CMFRI, Kochi (20 August)

- **Dr. V. Geethalakshmi, Dr. U. Sreedhar**, Principal Scientists and **Dr. V.R. Madhu**, Senior Scientist – International training on Fishery stock assessment and ecosystem modeling, INCOIS, Hyderabad (16-22 September)
- **Dr. Femeena Hassan**, Principal Scientist – Technical sub committee meeting of Council for Food Research and Development, Kochi (24 August)
- **Dr. U. Sreedhar**, Principal Scientist – Training programme on Hygienic handling of fish, TTDC, Pendurti, Visakhapatnam (23 August). Dr. Sreedhar also delivered a talk on “Hygienic ways of handling fish” in the Programme.
- **Dr. U. Sreedhar**, Principal Scientist – Orientation programmes on BNP’s, biosecurity and disease management in aquaculture, ICAR-CMFRI Regional Station, Visakhapatnam (23 August).
- **Dr. U. Sreedhar**, Principal Scientist – Orientation course for Lecturers, Andhra University, Visakhapatnam (25 August). Dr. Sreedhar also delivered a talk on, “Deep sea resources” in the Programme.
- **Dr. U. Sreedhar**, Principal Scientist – International Shark Day Celebrations, Kakinada (30 August). Dr. Sreedhar also delivered a talk on “Whale shark conservation” in the Programme.



Dr. Sreedhar delivering the lecture

- **Dr. S. Ashaletha**, Principal Scientist – International conference on Good governance in agricultural extension, Centre for Good Governance, Hyderabad (3-4 September). Dr. Ashaletha also presented a paper entitled, “Techno-preneurship through public-private partnership and good governance in fisheries – A success story” by S. Ashaletha, M. Nasser and K.V. Lalitha in the Conference.
- **Dr. S. Ashaletha**, Principal Scientist – Meeting with Kerala State Coastal Area Development Corporation and State Fisheries Department regarding Scaling up of small scale kiosks of ‘Fish Maid’ products, Thiruvananthapuram

(September)

- **Dr. R. Raghu Prakash**, Principal Scientists and **Smt. Arathy Ashok**, Scientist – Interactive training workshop on Moving towards sustainable fisheries, Chennai (12-14 August). They also delivered the following invited lectures in the Workshop:
 1. Safe navigation, seamanship and security – Dr. R. Raghu Prakash
 2. Energy saving in fisheries – Dr. R. Raghu Prakash
 3. Livelihood enhancement options and its ICT’s in fisheries – Smt. Arathy Ashok
- **Dr. J. Bindu**, Principal Scientist – National workshop on Food and global warming, CFDT, Chennai (30-31 July). Dr. Bindu also delivered an invited talk on “Non-thermal food processing to reduce global warming with special reference to HPP” in the Workshop.
- **Dr. P. Muhamed Ashraf**, Principal Scientist – Indo-EU concluding workshop on Marine ecosystems and climate change, Kochi (30-31 July)
- **Dr. P. Muhamed Ashraf**, Principal Scientist – Review meeting on Southern Ocean programme projects, NCOAR, Goa (11 August)
- **Dr. George Ninan**, Senior Scientist – National consultation on Rainbow trout farming: Prospects and challenges for strategic development, ICAR-DCFR, Bhimtal (20-21 September). Dr. Ninan also presented a paper entitled “Processing and value addition of rainbow trout” in the Symposium.
- **Dr. B. Madhusudana Rao**, Senior Scientist – Training programme on Aquaculture inspection and sampling, CITD, Bhimavaram (9-11 July)
- **Dr. Toms C. Joseph**, Senior Scientist – Re-Echo Seminar on Acute hepatopancreatic necrosis diseases (AHPND), NBFGR, Lucknow (14-15 September)
- **Dr. S.K. Panda**, Senior Scientist – 7th Meeting of the Scientific Panel on Fish and fishery products, New Delhi (19 August). Dr. Panda also presented the five vertical standards developed on fish and fishery products in the Meeting.
- **Dr. K.K. Asha**, Senior Scientist – Training programme on Management representatives of ISO 9001 quality management systems and allied management systems, KSPC, Kochi (8-9 July)
- **Dr. C.O. Mohan**, Scientist – Symposium on Corrugated packaging for perishable goods, Panaji, Goa (3 September). Dr. Mohan also presented a paper on “Corrugated board for fish packaging” in the Symposium.



- **Dr. S. Visnuvinayagam**, Scientist – Annapurna World Food Conference, FICCI, Mumbai (14 September)
- **Shri Ankur Nagori**, Scientist and **Shri C.R. Gokulan**, Asst. Chief Tech. Officer – Energy management sensitization programme and best practices case sharing workshop, Kochi (22 August)
- **Shri S. Sreejith**, Scientist – Governing Body meeting of NIFAM, Thiruvananthapuram (6 July)
- **Smt. S.J. Laly**, Scientist – Workshop on Periyar river pollution, CUSAT, Kochi (1 August)
- **Dr. A.R.S. Menon**, Chief Tech. Officer – Training programme on Knowledge management and knowledge sharing in organizations, IIPA, New Delhi (7-11 September)
- **Dr. M.S. Kumar**, Chief Tech. Officer – Farm and Home Unit Rural Programme Sub Committee Meeting, AIR, Visakhapatnam (3 September)
- **Shri C.K. Sukumaran, Smt. G.N. Sarada and Smt. Jaya Das**, Assts. – Training programme on ERP and pay roll, ICAR-IASRI, New Delhi (24-26 September)

Personalia

Appointments

1. Kum. Nimmy S. Kumar, Tech. Asst., Veraval RC of ICAR-CIFT

Promotions

1. Shri R. Anil Kumar, Administrative Officer, ICAR-CIFT, Kochi as Senior Administrative Officer

Transfers

1. Smt. U. Parvathy, Scientist, ICAR-CIFT, Kochi to Mumbai RC of ICAR CIFT

Retirements

1. Shri K.V.S.S.S.K. Harnath, Asst. Chief Tech. Officer, Visakhapatnam RC of ICAR-CIFT
2. Shri K.K. Narayanan, Tech. Officer, ICAR-CIFT, Kochi
3. Shri U. Alagumalai, Tech. Officer, Visakhapatnam RC of ICAR-CIFT
4. Shri V.A. Sudhakaran, Tech. Asst., ICAR-CIFT, Kochi

Resignation

1. Shri Anand Priya Kushwaha, Asst., ICAR-CIFT, Kochi

