ICAR-CIFT Newsletter

भाकृअनुप-केमाप्रौसं समाचार पत्र

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From the Director's Desk

Warm greetings from ICAR-CIFT, Cochin!

As you are all aware that presently, the soaring fuel prices in India, has not only led to an unpreced-ented rise in market price of fishes, but put Indian fisheries sector under great stress as it is compounded by depleting fish resources due to many factors. So, there is need of urgent action by the scientific community to bring forth new innovative technologies to make the sector economically viable and sustainable. In this regard, it is my immense pleasure to inform that ICAR-CIFT has come up with some path-breaking initiatives in the recent past that can bring a transformation in the domain of fish harvesting by reducing the operation cost of fishing to a substantial extent.

As of today, more than 72000

निदेशक के डेस्क से

भाकृअनुप केमाप्रौसं कोचिन से शुभकामनाएँ

मौजूदा स्थिति में भारत में इंधन के बढते दाम से मत्स्य के बाजार मूल्य में अभूतपूर्व वृद्धि हुई है और कई कारणों से मत्स्य संपदाओं में भी गिरावट आई है. अत: वैज्ञानिक समूह को इस क्षेत्र को आर्थिक रूप से व्यवहार्य और संपोषणीय बनाने के लिए अभिनव प्रौद्योगिकियों पर जोर देने की जरूरत है. इस संबंध में यह सूचित करते हुए मुझे खुशी हो रही है कि भाकृअनुप- केमाप्रौसं ने हाल ही में कुछ पथ प्रदर्शक पहल की है जिससे कई हद तक मत्स्य के प्रचालन दाम को कम करके मत्स्य पैदावार के क्षेत्र में रूपांतरण संभव हो सकता है.

आज भारत में 72000 से ज्यादा यंत्रीकृत यान प्रचलित है इनमें से 35000 ट्रालर हैं और 20000 से ज्यादा गिल नेटर हैं जिसका इंजन

भाकृअनुप- केन्द्रीय मात्स्यिकी प्रौद्योगिकी संस्थान
सिफ्ट जंक्शन, मत्स्यपुरी, पी.ओ., कोच्चि - 682 029
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mechanized fishing vessels are operating, in Indian Coast out of which about 35000 are trawlers and more than 20000 are gillnetters with engine power ranging from 10 hp to 600 hp, which conduct multiday fishing. In addition, nearly 1000 long liners also conduct multiday long lining for fish catching. As a result of which large quantity of diesel is being consumed by these multiday fishing vessels at an average rate of 80 to 150 liters fuel daily per fishing vessels. This leads to high carbon emission to the atmosphere. Keeping eye on this, ICAR-CIFT oriented its research effort to the green technologies especially in the application of alternate fuel in the fishing industry. This is the first of its kind research work, undertaken by ICAR-Central Institute of Fisheries Technology in collaboration with Indian Oil Corporation Limited to evaluate the performance of XtraGreen diesel under a pilot study on experimental fishing in deep sea using CIFT Vessel *'FV Sagar Harita'*, which would provide fuel economy benefits with reduction in exhaust emissions.

Earlier, ICAR-CIFT has already designed and fabricated solar fishing vessels for inland fishing. The institute has also joined hands with Petronet LNG and Indian Oil Corporation Limited (IOCL) for the field testing of new greener fuels developed by them. The research vessel *R. V. Matsyakumari* has been converted to LNG+Diesel dual fuel propulsion vessel and is conducting experimental fishing operations. Now ICAR-CIFT has signed MoA with IOCL for the experimental fishing operations using XtraGreen diesel developed for fishing vessels.

Another fuel-saving measure for the harvest sector of the country evolved by ICAR-CIFT is the innovative model of V-form doubleslotted otter boards for reducing diesel consumption in fishing trawlers. The innovation will aid in considerably reducing the burden of ever-increasing fuel prices, deceasing carbon emissions and thus improve the economic performance of the trawl sector. Otter boards are gear accessories used for keeping the mouth of the trawl net open horizontally and its

पॉवर 10 hp से 600 hp हैं जो बहुदिवसीय मत्स्यन करते हैं. इसके अलावा लगभग 1000 लोंग लाइनर बहु दिवसीय मत्स्यन में लगे हैं. इसके परिणामस्वरूप प्रतिदिन प्रति यान में बहुदिवसीय मत्स्यन में औसत रूप में 80 से 150 लिटर इंधन का उपयोग होता है. इससे वायुमंडल में कार्बन का उच्च उत्सर्जन होता है. इस पर ध्यान रखते हुए भाकृअनुप- केमाप्रौसं ने हरित प्रौद्योगिकी पर ध्यान दिया खासकर मत्स्यन उपयोग में आंतरिक इंधन के उपयोग पर. यह इस प्रकार का पहला शोध कार्य है जहां भाकृअनुप- केमाप्रौसं इंडियन आयिल कारपोरेशन के सहयोग से कार्य कर रही है. इसमें केमाप्रौसं यान "FV सागर हरिता" के सहारे गहरे समुद्र में परीक्षणात्मक मत्स्यन पर पाईलेट अध्ययन के आधार पर एक्सट्रा ग्रीन डीजल के निष्पादन को आंका जाएगा जो कि निकास उत्सर्जन में कटौती के साथ इंधन आर्थिक लाभ प्रदान करेगा.

इससे पहले भाकृअनुप- केमाप्रौसं द्वारा देश के पैदावार क्षेत्र के इंधन बचत उपाय के रूप में V आकार के दोहरे स्लोट ओटर बोर्ड को विकसित किया गया जिससे मत्स्यन यानों में डीजल के खपत को कम किया जा सकता है. इस नवाचार से बढते इंधन दाम को और कॉर्बन उत्सर्जन को कम किया जा सकता है और ट्राल क्षेत्र के आर्थिक क्षमता को बढाया जा सकता है. ओटर बोर्ड गिअर एक्सेसरी है जिससे ट्राल जाल के मुँह को क्षैतिज रूप में खुला रखा जाता है और इसके आविष्कार ने अकेले बोट से स्टर्न ट्रालिंग में क्रांति ला दी है.

वास्तव में भारत में ट्रालिंग समुद्री मत्स्य अवतरण का 50% बनता है और अन्य वाणिज्यपरक मत्स्यन गतिविधियों की तुलना में सबसे ज्यादा ऊर्जा गहन मत्स्यन गतिविविधयों में से एक है. जैसे आप जानते हैं 2018 में भाकृअनुप-केमाप्रौसं द्वारा किए गए अध्ययन से यह पता चला कि केरल में 3678 ट्रालरों द्वारा वार्षिक तौर पर 165

invention has revolutionized the stern trawling from a single boat.

In fact, trawling in India constitutes about 50% of the marine fish landings of the country and is also one of the most energy-intensive fishing activities compared to other commercial fishing activities. As you may be aware that a study by ICAR-CIFT in 2018 revealed that about 165 million litres of diesel are consumed annually by the 3678 trawlers in Kerala. The hydrodynamic drag of the trawl net and accessories is the major factor responsible for high fuel consumption in trawling. A pair of otter boards account for 20% of the trawl drag. Wooden rectangular otter boards and in the 1970s CIFT introduced V-form steel otter boards are the trawl doors presently used for trawling in India. No doubt, the new V-form double-slotted otter boards developed by ICAR-CIFT will bring a revolution in the fishing sector with better performance as compared to the conventional otter boards. Field trials of the new V-form double-slotted otter boards fitted on-board CIFT Research Vessel *R. V Matsyakumari –II* revealed that on an average three litters of diesel can be saved per hour for trawling in comparison with non-slotted V-form otter boards of the same size and weight, as well as it reduces RPM requirement without affecting the required trawling speed. In addition, the evaluation through Trawl Telemetry study revealed that horizontal spread between the boards and wing ends of trawl net was significantly better with V-form double-slotted otter boards. The technology has been very well accepted by the trawlers in Kerala, Karnataka, and Tamil Nadu and may spread to all the maritime states across India.

I compliment the efforts of scientists in ICAR-CIFT for developing the innovations in fuel and gear, which will contribute in strengthening India's stand on global platform towards achieving net-zero carbon emissions by 2070.

Leela Edwin
Director (Acting)

मिलियन लिटर डीजल का उपयोग होता है. ट्राल जाल का है ड्रोडैनामिक खींच और एक्सेसरीज, ट्रालिंग में उच्च ईंधन खपत के लिए उत्तरदाई प्रमुख घटक है. एक जोड़ी ओटर बोर्ड से 20% ट्राल खींच होता है. मौजूदा स्थिति में भारत में लकड़ी के आयतनाकार के ओटर बोर्ड और 1970 में केमाप्रौसं द्वारा विकसित V आकार के स्टील ओटर बोर्ड का उपयोग हो रहा है. इसमें कोई शक नहीं है कि भाकृअनुप-केमाप्रौसं द्वारा विकसित V आकार के दोहरे स्लोट के ओटर बोर्ड पारंपरिक ओटर बोर्ड की तुलना में बेहतर प्रदर्शन करेगा. RV मत्स्यकुमारी II में फिट किए गए नए V आकार के दोहरे स्लोट ओटर बोर्ड से किए गए क्षेत्र जांच से यह पता चला कि समान आकार और वजन के गैर स्लोट ओटर बोर्ड की तुलना में प्रति ट्रालिंग में औसतन 3 लिटर डीजल बचाया जा सकता है. वांछित ट्रालिंग गति को प्रभावित किए बगैर. इसके अलावा ट्राल टेलीमेट्री अध्ययन द्वारा किए गए मूल्यांकन से यह पता चला कि V आकार के दोहरे स्लोट ओटर बोर्ड की तुलना में बोर्ड और ट्राल के परों में क्षैतिज फैलाव बेहतर था. इस प्रौद्योगिकी को केरल, कर्नाटक और तमिलनाडु के ट्रालरों में स्वीकृति मिली है और यह भारत के समुद्री राज्यों में फैल सकती है.

मैं भाकृअनुप-केमाप्रौसं के वैज्ञानिकों को इंधन और गिअर में विकसित नवाचारों के लिए उनके कोशिशों की प्रशंसा करती हूँ जो कि 2070 तक नेट जीरो कॉर्बन उत्सर्जन को पाने के लिए वैश्विक स्तर पर भारत के विचारों को मजबूत करने में सहायकर होगा.

लीला एड्विन
निदेशक (कार्यकारी)

ICAR-CIFT crowns with NABL-FSSAI integrated accreditation

ICAR-Central Institute of fisheries Technology (ICAR-CIFT), Cochin; the first research institute under the auspices of Indian Council of Agricultural Research (ICAR) accredited by National Accreditation Board for Testing & Calibration Laboratories (NABL India), a Constituent Board of Quality Council of India, since 2005, is adorned with the maiden crown of NABL-FSSAI integrated accreditation, that may boost the export credentials of Indian seafood sector.

On 15 December, 2021; the institute has been bestowed with the unique distinction of integrated accreditation by NABL India and FSSAI, GOI for a period of two years till 14 December, 2023. This accreditation extended the scope for testing 380 parameters with respect to chemical, biological and mechanical components of water, fish and fishery products, feed, gear materials, and packaging materials in line with the national and international quality standard requirements. Normally, the seafood export sector mandatorily requires testing of water, packaging materials, and fish products matching to the quality standards stipulated by the importing countries. In this context, the test certificate accredited by NABL is a global recognition, which is a prerequisite for any foreign buyers for export purposes. ICAR-CIFT with its high-end lab facilities and well experienced NABL team at Cochin has taken the responsibility of testing the antibiotic, pesticide residues, heavy metals, biotoxins contends in finfish / shellfish, harmful contaminants, food additives, etc. along with bacterial pathogens and infectious viruses in fish. The institute has been also accredited for the testing of paper, plastic, paper board, plastic films and fishing gear materials for various quality parameters.

National Accreditation Board for Testing and Calibration Laboratories

NABL

CERTIFICATE OF ACCREDITATION

ICAR-CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY, COCHIN

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2017

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

MATSYAPURI PO, WILLINGDON ISLAND, CIFT JUNCTION, KOCHI, KERALA, INDIA

in the field of

TESTING

Certificate Number: TC-8244

Issue Date: 15/12/2021 Valid Until: 14/12/2023

This certificate remains valid for the Scope of Accreditation as specified in the annexure subject to continued satisfactory compliance to the above standard & the relevant requirements of NABL.
(To see the scope of accreditation of this laboratory, you may also visit NABL website www.nabl-india.org)

Name of Legal Identity : ICAR-Central Institute of Fisheries Technology

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

भाकृअनुप-केमाप्रौसं को एनएनबीएल- एफएसएसएआई समेकित प्रत्यायन

भाकृअनुप-केमाप्रौसं कोचिन भारतीय कृषि अनुसंधान परिषद के तहत पहला शोध संस्थान है जिसे एनएबीएल जो कि 2005 में भारत के गुणता परिषद का संघटक बोर्ड है, द्वारा एनएबीएल- एफएसएसआई का समेकित प्रत्यायन से नवाजा गया है जो कि भारतीय समुद्री आहार क्षेत्र के निर्यात को बढावा देगा.

15 दिसंबर 2021 को NABL इंडिया और FSSAI भारत सकरार द्वारा संस्थान का समेकित प्रत्यायन किया गया. यह 14 दिसंबर 2023 तक दो साल की अवधि के लिए प्रदान किया गया है.इस प्रत्यायन से रासायनिक,जैविक और पानी के यांत्रिक घटक,मत्स्य और मात्स्यिकी उत्पाद, चारा,गिअर सामग्रियां और संवेष्ठन सामग्रियों के 380 प्राचलों को आयातित देशों के गुणता स्तर के हिसाब से जांचा जाता है. इस संदर्भ में NABL द्वारा प्रत्यायित जांच प्रमाण पत्र एक वैश्विक उपलब्धि है जो कि निर्यात के लिए किसी भी विदेशी क्रेता के लिए पुर्वपेक्षा है. मत्स्य में जीवाणु रोगजनक और संक्रामक विषाणु के परीक्षण के अलावा भाकृअनुप-केमाप्रौसं ने उच्च प्रयोगशाला सुविधाएं और अनुभवी एनएबीएल टीम के साथ प्रतिजैविक, कीटनाशक अवशेष, भारी धातु, फिन मत्स्य कवच/मत्स्य मे बयोटॉक्सिन, घातक संदूषक, आहार योज्य आदि के परीक्षण की जिम्मेदारी ली है. संस्थान को कागज, प्लास्टिक, पेपर बोर्ड, प्लास्टिक फिल्म और मत्स्यन गिअर सामग्रियों के भिन्न गुणता प्राचलों को जांचने के लिए भी प्रत्यायित किया गया है.

Earlier, ICAR- CIFT, Cochin was notified as *"National Referral Laboratory"* for fish and fishery products during 2017 and later acredited with the status of *"National Reference Laboratory (NRL) for Fish and Fish Products"* in 2019 by Food Safety and Standards Authority of India (FSSAI) under Ministry of Health and Family Welfare, Govt. of India.

इसके पूर्व भाकृअनुप-केमाप्रौसं को 2017 में मत्स्य और मात्स्यिकी उत्पादों के लिए "राष्ट्रीय रेफेरल प्रयोगशाला" के रूप में अधिसूचित किया गया और 2019 में एफएसएसआई, स्वास्थ्य एवं परिवार कल्याण मंत्रालय, भारत सरकार द्वारा मत्स्य और मात्स्यिकी उत्पादों के लिए राष्ट्रीय रेफेरल प्रयोगशाला का स्तर प्रदान किया गया.

ICAR-CIFT evolved V- form Double Slotted Otter Board helps in reducing diesel consumption in trawlers

ICAR-CIFT has come up with an innovative model of V-form double slotted otter board for reducing diesel consumption in fishing trawlers. The innovation will aid in considerably reducing the burden of increasing fuel prices, controlling carbon emission and improve the economic performance of the trawl fishing. Otter boards are gear accessories used for keeping the mouth of the trawl net open horizontally and its invention has revolutionized the stern trawling from a single boat. The hydrodynamic drag of the trawl net and accessories is the major factor responsible for high fuel consumption in trawling. A pair of otter boards account for 20% of the trawl drag. Wooden rectangular otter boards and V-form steel otter boards are the trawl doors presently used for trawling in India.

The new V-form double slotted otter boards developed by ICAR- CIFT is found to have less drag and less fuel consumption capacity In addition, the slots permits water to flow through the otter board thereby reducing the resistance significantly compared to the conventional otter board. Field trials of the new V-form double-slotted otter boards fitted on-board CIFT Research Vessel *R.V Matsyakumari –II* revealed that on an average three litres of diesel can be saved per hour for trawling in comparison with non-slotted V-form otter board of the same size and weight. It also reduces RPM requirement without affecting the required trawling speed. Trawl telemetry study conducted as part of evaluation also revealed that horizontal spread between the boards and wing ends of trawl net was significantly better with V-form double-slotted otter boards.

भाकृअनुप-केमाप्रौसं द्वारा तैयार किया गया V आकार के दोहरे स्लोट वाले ओटर बोर्ड से ट्रालरों में डीजल खपत कम किया जा सकता है.

भाकृअनुप-केमाप्रौसं मत्स्य ट्रालरों में डीजल खपत को कम करने के लिए V आकार के दोहरे स्लोट ओटर बोर्ड के नए मॉडल को तैयार किया. यह नवाचार बढते इंधन दाम के बोझ को कम करेगा,कार्बन उत्सर्जन पर नियंत्रण रखेगा और ट्राल मत्स्यन के आर्थिक निष्पादन में सुधार लाएगा. ओटर बोर्ड गिअर एक्सेसेरीज है जिससे ट्राल के मुँह को क्षैतिज रूप में खुला रखा जाता है और इसके खोज ने अकेले बोट से स्टर्न ट्रालिंग में क्रांति लाई है. ट्राल जाल का हैड्रोडैनामिक खींच और एक्सेसेरीज प्रमुख कारक है जिनके कारण ट्रालिंग में उच्च इंधन खपत होता है. ओटर बोर्ड के एक जोड़ी से ट्राल खींच 20 % होता है. इस समय भारत में ट्रोलिगं केलिए लकड़ी के आयतानाकार ओटर बोर्ड और V आकार के स्टील ओटर बोर्ड का उपयोग होता है.

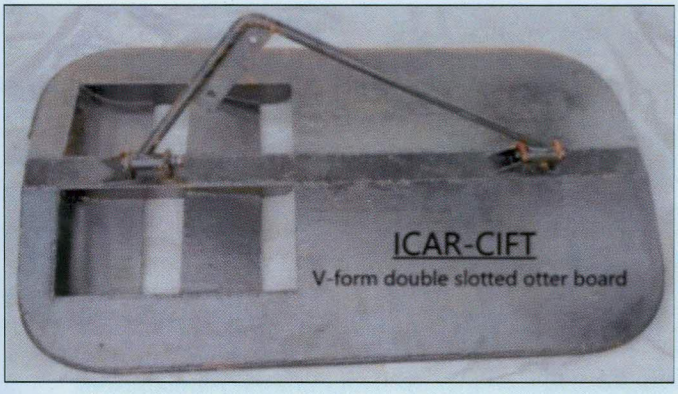
भाकृअनुप-केमाप्रौसं द्वारा विकसित दोहरे स्लोट ओटर बोर्ड में कम खींच और कम इंधन खपत पाया गया. इसके अतिरिक्त स्लोट पानी को ओटर बोर्ड से बहने देता है जो कि पारंपरिक ओटर बोर्ड की तुलना में प्रतिरोध को कम करता है. केमाप्रौसं के शोध यान आर.वी.मत्स्यकुमारी -II में फिट किए गए V आकार के दोहरे स्लोट ओटर बोर्ड से पता चला कि गैर स्लोट किए गए V आकार के ओटर बोर्ड की तुलना में इसमें ट्रालिंग के प्रति घंटे में तीन लिटर डीजल बचाया जा सकता है. वांछित ट्रालिंग गति को प्रभावित किए बगैर यह आर पी एम कम करता है.मूल्यागंण के तहत किए गए ट्राल टेलिमेट्री अध्यपन से पता चला कि ट्राल जाल के बोर्ड और परों की बीच् कि क्षैतिज फैलाव V आगार के दोहरे स्लोड ओटर बोर्ड की तुल्ना में बेहतर था.

There are about 35,000 trawler boats in India. Diesel consumption of trawlers varies from 15 - 45 litre/hour depending on the size of the vessel, hp of the engine, type of gear and accessories, the skill of the operator, water currents, sea, and atmospheric conditions, etc. Usually a trawler operates for 7-8 hours a day and the total savings by using a V-form double-slotted otter board is approximately 21-24 litres diesel per day. A multiday trawler engaged in fishing for 20 days can save up to 480 litres of diesel in a month. Thus, if 80% of the trawlers adopt V-form double-slotted otter boards, more than 30 million litres of diesel can be conserved annually in India alone. The new technology, if implemented widely will help India, the world's third-biggest emitter of green house gases, to accelerate towards achieving net-zero carbon emissions by 2070, as pledged in the COP26 Climate meeting held in 2021at Glasgow.

The technology has been well accepted by the trawlers in Kerala, Karnataka, and Tamil Nadu. ICAR- CIFT is in process of popularizing this technology in all the maritime states across India.

भारत में लगभग 35,000 ट्रालर बोट हैं. ट्रालरों में डीजल की खपत यान के आकार के आधार पर 15 से 45 लिटर/घंटा,इंजन के हार्स पॉवर, गिअर एवं एक्सेसेरीज, ऑपरेटर की क्षमता,पानी का प्रवाह, समुद्र, वातावरण आदि के आधार पर होता है. आमतौर पर एक ट्रालर दिन में 7 से 8 घंटों तक प्रचालित किया जाता है और V आकार के दोहरे ओटर बोर्ड के उपयोग से प्रति दिन 21 से 24 लिटर बचत संभव है. 20 दिन के मत्स्यन में लगे बहुदिवसीय ट्रालर में महीने में 480 लिटर डीजल की बचत हो सकती है. अतः यदि 80 % ट्रालर V आकार के दोहरे ओटर बोर्ड को अपनाते हैं तो भारत में वार्षिक तौर पर 30 मिलियन लिटर डीजल की बचत हो सकती है. यदि भारत में इस नई प्रौद्योगिकी को सही तरीके से कार्यान्वित किया जाए तो ग्रीन हाउस गैस के तीसरे बड़े उत्सर्जक भारत को 2070 तक नेट जीरो कॉर्बन उत्सर्जन पाने की ओर अग्रसर हो सकती है जैसे कि 2021 में ग्लासगो में हुए COP26 कलैमेट चेंज में शपथ लिया गया था.

इस प्रौद्योगिकी को केरल, कर्नाटक और तमिलनाडु में स्वीकारा गया है. भाकृअनुप- केमाप्रौसं भारत के सारे समुद्री इलाकों में इसे लोकप्रिय बनाने की कोशिश में है.



वाणिज्यिक ट्रालर में V आकार के दोहरे स्लोटवाले ओटर बोर्ड
V-form double slotted otter board

V आकार के दोहरे स्लोटवाले ओटर बोर्ड का प्रदर्शन
Demonstration of V-form double slotted otter board on board a commercial trawler

Secretary (Fisheries), Govt. of India visits ICAR-CIFT Veraval Research Centre, Gujarat

Shri. Jatindra Nath Swain (IAS), Secretary (Fisheries), Government of India visited the ICAR-CIFT- Veraval Research Centre (VRC) in Gujarat on 6 March, 2022. He was accompanied by Dr. J. Balaji (IAS), Joint Secretary (Marine Fisheries), Government of India; Shri. Nitin Sangwan, Commissioner of Fisheries, Govt. of Gujarat; Dr. L.N. Murthy, Senior Executive Director, National Fisheries Development Board (NFDB), Hyderabad along with other senior officials of State Fisheries Department of Gujarat. The visit was planned during the launching progamme of "Sagar Parikrama" to mark our gratitude to seas and saluting the freedom fighters, sailors and fishers as part of *"Azadi Ka Amrit Mahotsava"*. During the programme, the Secretary visited different laboratories and demonstration facilities established at the Centre and apprised about the various technologies and the ongoing research and development programmes of the Centre by Dr. Ashish Kumar Jha, SIC, VRC-CIFT. Being highly impressed with the R&D achievements of the Centre, he urged the scientists to focus more upon the sector- specific issues and location-based problems of the stakeholders, while formulating a research project. Secretary (Fisheries) also had a fruitful interaction with the stakeholders of ICAR-CIFT to assess the status of the fisheries sector in Gujarat with respect to national scenario. Later, in his address the Secretary extolled ICAR-CIFT for it's tremendous contributions for the improvement of harvest and post-harvest fisheries sector of the country.

Dr. J. Balaji (IAS), Joint Secretary (Marine Fisheries), Government of India also applauded the overall contributions of ICAR-CIFT in bringing a visible impact in the fisheries sector. While interacting with the stakeholders Dr. L.N. Murthy, Senior Executive Director, NFDB, Hyderabad explained about the different schemes of NFDB and called for few initiatives in fish processing, seaweed-based product, development fish culture etc..

भारत सरकार के सचिव (मात्स्यिकी) ने भाकृअनुप- केमाप्रौसं के वीरावल केंद्र, गुजरात का दौरा किया

श्री जतींद्रनाथ स्वैन (भाप्रसे),सचिव (मात्स्यिकी)भारत सरकार ने 6 मार्च 2022 को भाकृअनुप-केमाप्रौसं के वीरावल केंद्र,गुजरात का दौरा किया. डॉ जे.बालाजी (भाप्रसे), संयुक्त सचिव (समुद्री मात्स्यिकी), भारत सरकार, श्री नितिन सांगवान, मात्स्यिकी आयुक्त, गुजरात सरकार, डॉ एल.एन.मूर्ति, वरिष्ठ एक्जीकूटीव निदेशक, एनएफडीबी, हैदराबाद और गुजरात के राज्य मात्स्यिकी विभाग के वरिष्ठ अधिकारियों ने उनका अनुगमन किया. सागर परिक्रमा के लांच के दौरान यह दौरा किया गया जो कि समुद्र के प्रति हमारी कृतज्ञता है और "आजादी के अमृत महोत्सव" में स्वतंत्रता सेनानी,नाविक और मछुवारों के प्रति हमारा आदर है. कार्यक्रम के दौरान सचिव ने केंद्र में स्थापित भिन्न प्रयोगशालाओं और प्रदर्शन सुविधाओं का दौरा किया और डॉ आशीष कुमार झा, प्रभारी अधिकारी, वेरावल केंद्र ने उन्हें भिन्न प्रौद्योगिकियों एवं केंद्र में चालू शोध और विकास कार्यक्रमों की जानकारी दी. केंद्र के शोध और विकास कार्यक्रमों से प्रभावित होकर उन्होंने शोध परियोजना को रूपायित करते समय क्षेत्रीय मुददों और पणधारियों की समस्याओं पर ध्यान देने का अनुरोध किया. सचिव (मात्स्यिकी) ने राष्ट्रीय परिदृश्य में गुजरात के मात्स्यिकी क्षेत्र के मूल्यांकन के संबंध में भाकृअनुप-केमाप्रौसं के पणधारियों के साथ फलदायक बातचीत की. बाद में अपने संबोधन में सचिव ने भाकृअनुप-केमाप्रौसं द्वारा देश के मात्स्यिकी क्षेत्र के पैदावार और पश्च पैदावार क्षेत्र को सुधारने के लिए दिए गए योगदान की सराहना की.

डॉ जे. बालाजी (भाप्रसे), संयुक्त सचिव (समुद्री मात्स्यिकी), भारत सरकार ने भी भाकृअनुप-केमाप्रौसं के योगदान की सराहना की. पणधारियों के साथ बातचीत करते हुए डॉ एल.एन.मूर्ति, वरिष्ठ एक्जीकूटीव निदेशक, एनएफडीबी, हैदराबाद ने एनएफडीबी के भिन्न परियोजनाओं की जानकारी दी और मत्स्य प्रसंस्करण, समुद्री शैवाल आधारित उत्पाद, मत्स्य संवर्धन आदि पर नए पहल करने का अनुरोध किया.

At the end, the Secretary (Fisheries) handed over some promising technological tools developed by ICAR-CIFT namely 'Refrigerated Fish Vending Kiosk' to "Shri. Bhimrao Matsayadyog Sakhari Mandali", a society run by SC community and 'Slotted Otter Board' to Shri. Prabhudasa local fisherman. Director CIFNET, Cochin and Director NIFPHATT, Cochin were also present among the dignitaries.

अंत में सचिव (मात्स्यिकी) ने भाकृअनुप-केमाप्रौसं द्वारा विकसित प्रौद्योगिकी प्रशीतित मत्स्य वेंडिंग कियोस्क अनुसूचित जाति द्वारा चलाए जानेवाले "श्री भीमराव मत्स्य उद्योग सहकारी मंडली सहकारिता" को और स्थानीय मछुवारा श्री प्रभुदास को स्लोटेड ओटर बोर्ड प्रदान किया. अन्य गणमान्य व्यक्तियों में सिफनेट और निफाट कोचिन के निदेशक शामिल थे.

सचिव (मात्स्यिकी) और अन्य गणमान्य व्यक्ति, भाकृअनुप-केमाप्रौसं के वीरावल केंद्र में
Secretary (Fisheries) and other dignitaries at ICAR-CIFT Veraval Regional Centre

गणमान्य व्यक्तियों को केमाप्रौसं के प्रौद्योगिकियों से परिचित कराते हुए
Appraisal of the CIFT technologies to dignitaries

डॉ एल.एन.मूर्ति, एनएफडीबी केमाप्रौसं के सदस्य कर्मचारियों से चर्चा करते हुए
Dr. L.N.Murthy, NFDB interacting with the CIFT staff

ICAR-CIFT inks MOU with KAU for transfer of technology on 'Conversion of fish waste to wealth'

ICAR-CIFT, Cochin signed an MoU with Kerala Agricultural University (KAU) for transferring a novel technology on 'Conversion of fish waste to fish manure' on 8 January, 2022 during the Technology Demonstration programme on 'Fish waste management' organized in collaboration with KVK, Kottayam, KAU under the SCSP component of ICAR-CIFT. Inaugurating the programme, the Chief Guest, Shri P. Prasad, Honourable Minister for Agriculture, Govt. of Kerala lauded the effort of ICAR-CIFT for developing such a time testing technology for converting fish waste into feed & manure. He accentuated that this technology will help in effective management of huge volume of unhygienic fish waste dumped in the fish markets, processing / peeling industries throughout the state. He also pointed out that Kumarakom is the right place for intervention of this technology and fish waste management, which may give an impetus for boosting the entrepreneurship opportunities in fish waste management as the region encompassed by Vembanad lake, known for commercial fish farming.

Speaking on the occasion, Dr R. Chandra Babu, Vice Chancellor, KAU applauded the initiatives taken by ICAR-CIFT to lead the state to attain the goal of organic farming mission through production of organic manure and feed from fish waste that can also be taken up as a better livelihood option for income generation.

Highlighting the importance of fish waste management; Dr Ravishankar C.N., Director, ICAR-CIFT, Cochin said that the technology will help in best utilization of nutrients found in fish waste for preparation of feed or manure. The feed enriched with essential nutrients can be stored in pellet form up to six months to ensure the regular availability of fish feed for the growth of fishes. Dr. Jayasree Krishnankutty, Director of Extension, Kerala Agricultural University, also graced the function.

रद्दी को धन में परिवर्तित करने पर प्रौद्योगिकी हस्तांतरण के लिए भाकृअनुप-केमाप्रौसं ने केएयू के साथ समझौता हस्ताक्षर किया.

केवीके कोट्टयम के सहयोग से भाकृअनुप के एससीएसपी घटक के तहत भाकृअनुप-केमाप्रौसं, कोचिन ने 8 जनवरी 2022 को मत्स्य रद्दी को धन में परिवर्तित करने पर प्रौद्योगिकी हस्तांतरण के लिए केरल कृषि विश्वविद्यालय के साथ समझौता हस्ताक्षर किया. कार्यक्रम का उद्घाटन करते हुए श्री पी. प्रसाद, माननीय कृषि मंत्री, केरल सरकार ने मत्स्य रद्दी को आहार और खाद में परिवर्तित करने की प्रौद्योगिकी को विकसित करने पर भाकृअनुप-केमाप्रौसं की कोशिशों की सराहना की. उन्होंने इस बात पर बल दिया कि राज्य में मत्स्य बाजार, प्रसंस्करण/ पीलिंग प्लांट में फेंके गए मत्स्य रद्दी के प्रभावी प्रबंधन में यह प्रौद्योगिकी सहायकर होगी. उन्होंने यह बताया कि इस प्रौद्योगिकी के लिए सही जगह कुमरेकम है और मत्स्य रद्दी प्रबंधन से इस क्षेत्र के मात्स्यकी अवसर में वृद्धि होगी चूंकि यह क्षेत्र वेमबनाड तालाब से घिरा हुआ है और मत्स्य रददी प्रबंधन के वाणिज्यपरक मत्स्य खेती के लिए जाना जाता है.

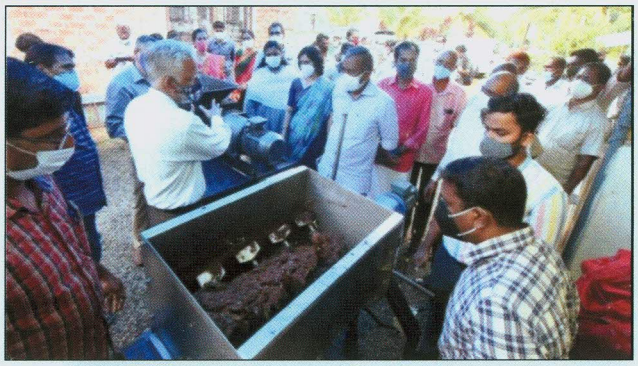
इस अवसर पर बात करते हुए डॉ आर चंद्रबाबू, कुलपति, केएयू ने जैविक खाद द्वारा जैविक खेती मिशन को पाने में अहम भूमिका निभाने पर और मत्स्य रददी से चारा तैयार करने पर भाकृअनुप-केमाप्रौसं की सराहना की.इसे आमदनी प्राप्त करने के लिए आजीविका का बेहतर विकल्प के रूप में लिया जा सकता है.

मत्स्य रद्दी प्रबंधन के महत्व को बताते हुए डॉ रविशंकर सी.एन., निदेशक भाकृअनुप-केमाप्रौसं, कोचिन ने कहा कि मत्स्य रद्दी में पाए जाने वाले न्यूट्रिएंट से चारा और खाद तैयार किया जा सकता है. जरूरी न्यूट्रिएंट से भरपूर आहार को पेलेट रूप में छह महीनों के लिए संचयित किया जा सकता है जिससे मत्स्य के विकास के लिए मत्स्य आहार की उपलब्धता सुनिश्चित हों. डॉ जयश्री कृष्णमूर्ति, विस्तार निदेशक, केरल कृषि विश्वविद्यालय ने भी कार्यक्रम की शोभा बढाई.

The programme was followed by a training-cum demonstration on 'Fish waste management' coordinated by scientists from ICAR-CIFT namely Dr. Zynudhheen A.A., Dr. A. K. Mohanty, Dr. V. Geethalakshmi and Dr. Jeyalakshmi, Head, KVK, Kottayam. More than 100 people including officers from line department, fishermen, fisherwomen and entrepreneurs participated in the programme.

कार्यक्रम के बाद मत्स्य रद्दी प्रबंधन पर प्रशिक्षण एवं प्रदर्शन कार्यक्रम आयोजित की गई. भाकृअनुप-केमाप्रौसं के वैज्ञानिक डॉ जैनुददीन, डॉ ए.के.मोहंती, वी. गीतालक्ष्मी और केवीके कोट्टयम के मुख्य डॉ जयलक्ष्मी ने इसका समन्वयन किया. इस कार्यक्रम में मछुवारे और उद्यकर्ता और अन्य विभागों के अधिकारियों समेत 100 लोगों ने भाग लिया.

प्रौद्योगिकी प्रदर्शन कार्यक्रम का उद्घाटन
Inauguration of Technology Demonstartion Programme



मत्स्य रद्दी प्रबंधन पर प्रशिक्षण एवं प्रदर्शन
Training cum Demonstration on Fish Waste Management

CIFT Study reveals excellent quality of water in Sasthamcotta Lake

The Sashthamcotta Lake in Kollam District, the largest freshwater lake in Kerala, is a majore source of drinking water for more than half a million people in Kollam. The microbial quality of water from Sasthamcotta Lake was found to be safe and within the limits of drinking water standards set by the Central Pollution Control Board (CPCB), which was revealed through a study conducted by CIFT scientists in January 2022. The study was taken by a team led by Dr. Toms C. Joseph, Principal Scientist and Head, Microbiology, Fermentation and Bio-technology division along with the scientists namely Dr. Murugadas S, Dr. V. Visnuvinayagam, and Radhakrishnan Nair V.

It was observed that microbiological water quality for indicator bacteria *(Coliform bacteria)* in Sasthamcotta Lake at all the locations were within the limit of ≤50 Most Probable Number (MPN) coliform in 100mL set for class A

केमाप्रौसं ने शास्तांकोटा तालाब में पानी को उत्तम गुण वाला बताया

कोल्लम जिले के शास्तांकोटा स्थित केरल के सबसे बड़े स्वच्छ पानी तालाब कोल्लम में दस लाख लोगों के लिए पीने के पानी का प्रमुख स्रोत है. शास्तांकोटा के तालाब के पानी में सूक्ष्मजैविक गुण सुरक्षित पाया गया और सीपीसीबी द्वारा निर्धारित पेय जल के सीमाओं के अंतर्गत पाया गया जो कि जनवरी 2022 को केमाप्रौसं के वैज्ञानिकों द्वारा किए गए अध्ययन से पता चला. डॉ टोम्स जोसफ सी, प्रधान वैज्ञानिक और मुख्य सूक्ष्मजीव, किण्वन और जैव प्रौद्योगिकी प्रभाग एवं डॉ मुरूगादास एस, डॉ वी. विष्णुविनायकम और राधाकृष्णन नायर वी के टीम ने इस अध्ययन का नेतृत्व किया.

यह देखा गया कि शास्तांकोटा तालाब के सभी लोकेशनों में इंडिकेटर जीवाणु (कोलीफाम जीवाणु) का सूक्ष्मजैविक पानी गुणता A किस्म श्रेणी में 100 ML सेट 50 MPN कालीफार्म की सीमा में थी.

type of water. As per the European Union (EU) standards, the water can be rated as Excellent Quality (*E. coli* <500 colony forming unit (cfu)/100mL). As opined by Director (Acting), ICAR-CIFT Dr. Leela Edwin, even though the survey revealed excellent microbiological quality of water from Sasthamcotta Lake, there is need for continuous monitoring to initiate remedial measures, if there is drop in the quality of water.

यूरोपीय यूनियन के स्तर के अनुसार पानी को उत्तम गुण वाला (इकोली 500 से कम cfu/100ml) माना जा सकता है. भाकृअनुप-केमाप्रौसं के निदेशक डॉ लीला एडविन के विचारों के अनुसार हालांकि सर्वेक्षण से यह पता चला कि शास्तांकोटा के तालाब में पानी में सूक्ष्मजैविक गुण पाया गया वहां पानी के गुण को बनाए रखने के लिए उपचारी उपाय के लिए निरंतर मानीटरन की जरूरत है.

CIFT inks MOU with ICICI Foundation for livelihood development of rural fishers

ICAR-CIFT and ICICI foundation, the CSR arm of ICICI group join hands together to ensure optimal utilization of rural resources especially in the fishery domain to bring livelihood security among the rural population. The Fish Value Chain project, envisaged by ICICI Foundation in collaboration with ICAR- CIFT as its technical partners will be implemented initially at Pattanakkadu and Thykkattusserry block Panchayaths in Alappuzha district, and will be focused on incremental income through fish value added products developmemt and providing market linkage and establishing micro enterprises there.

As part of the MOU, ICAR-CIFT will be imparting all the technical trainings, guidance and support to the beneficiaries identified under the project. In order to make the project operational, an MOU was inked between ICAR-CIFT and ICICI foundation at its campus in Kochi. The MOU was exchanged between Mr. Suketu Kumar, Programme Head, ICICI Foundation and Dr. Leela Edwin, Director (Acting), ICAR-CIFT. During the signing ceremony, Dr. Leela Edwin, Director(Acting), ICAR-CIFT emphasized on the need of adopting eco-friendly measures and ensuring a holistic development approach while implementing the project.

ग्रामीण मछुवारों के आजीविका विकास के लिए केमाप्रौसं ने ICICI फाउंडेशन के साथ एमओयू हस्ताक्षरित किया

भाकृअनुप- केमाप्रौसं और ICICI फाउंडेशन, जो कि ICICI समूह का एक अंग है, ने देहाती संपदाओं के अनुकूलतम उपयोग को सुनिश्चित करने के लिए परस्पर हाथ मिलाया. यह मात्स्यिकी क्षेत्र में देहाती आबादी के आजीविका सुरक्षा के लिए है. भाकृअनुप- केमाप्रौसं के सहयोग से ICICI फाउंडेशन द्वारा परिकल्पित मत्स्य मूल्य चेन को शुरूआत में अलप्पुषा जिले के पटटनेक्काड और तैकाटुशेरी ब्लोक पंचायत में कार्यान्वित किया जाएगा. यहां मत्स्य मूल्य जोड उत्पाद एवं बाजार लिंकेज और लघु उद्योग द्वारा वृद्धिशील आय पर ध्यान दिया जाएगा.

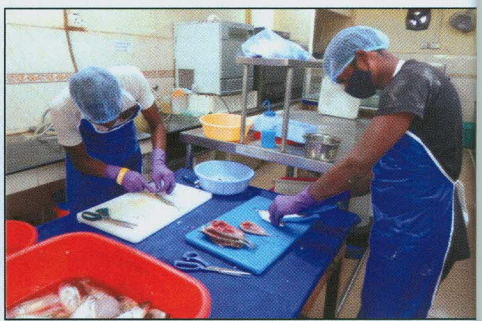
समझौता हस्ताक्षर के तहत भाकृअनुप- केमाप्रौसं परियोजना के तहत लाभार्थियों को प्रौद्योगिकीय प्रशिक्षण, मार्गनिर्देश और सहयोग दिया जाएगा. परियोजना को प्रचालित करने के लिए भाकृअनुप-केमाप्रौसं और ICICI फाउंडेशन के साथ कोचिन के कैंपस में श्री सुकेतु कुमार, प्रोग्राम हेड, ICICI फाउंडेशन एवं केमाप्रौसं के निदेशक डॉ लीला एडविन के बीच समझौता हस्ताक्षरित किया गया. कार्यक्रम के दौरान डॉ लीला एडविन, निदेशक ने पर्यावरण सहज साधनों को अपनाने पर बल दिया और परियोजना को कार्यान्वित करने पर एक समग्र दृष्टिकोण को सुनिश्चित किया.

Training Programmes conducted at ICAR-CIFT for Farmers/ Processors/ Technologists/ Entrepreneurs/ Students

Sl. No.	Name of the training	Date
	Headquarters (Cochin)	
1.	Pre- Processing and Drying of Fish	22-23 February, 2022
2.	"Validation and Verification of PCR based method for food testing" for laboratory staff of SMS Labs Services Private Limited, Chennai	22-24 February, 2022
3.	Demonstration cum Skill Develop-ment programme on "Fisheries based Entrepreneurship" in collaboration with MSSRF, Chennai	2-4 March, 2022
4.	Hygienic fish handling and value addition	24-25 March, 2022
	Veraval RC	
1.	Training programme for B.F.Sc students of Chandra Shekhar Azad University of Agriculture and Technology, Kanpur, Uttar Pradesh	10 November, 2021-12 , January, 2022
2.	Microbial quality analysis of fish and fishery products.	03-08 January,2022
3.	Pre-processing and drying of fish.	22-23 February, 2022
	Vishakhapatnam RC	
1.	Demonstration cum skill development programme on "Hygienic drying of fish" for the workers of M/S. Sri Teja Solar Dry Fish.	9-11 February, 2022

मत्स्य और मात्स्यिकी उत्पादों के सूक्ष्मजैव गुणता विश्लेषण का चालू सत्र
Training Session on "Microbial quality analysis of Fish and Fishery Products" in progress

मत्स्य और मात्स्यिकी उत्पादों के सूक्ष्मजैव गुणता विश्लेषण के चालू सत्र में प्रशिक्षण कार्यक्रम के संकाय सदस्यों के साथ प्रतिभागी
Participants along with faculty of Training programme "Microbiological Quality Analysis of Fish and Fishery products"



मत्स्य के स्वास्थ्यपरक शुष्कन पर प्रशिक्षण
Training on "Hygienic drying of fish

Exhibitions participated

- ICAR-CIFT showcased its technologies in the exhibition in Matsyamela exhibition at Kannur Kerala organised by ADCOS, Payyannur, Kannur District during 13-14 January, 2022.
- ICAR-CIFT participated in the exhibition during 'Science Week Festival' organized by Andhra University from 22 - 28 February, 2022 at Visakhapatnam, Andhra Pradesh

कन्नूर में मत्स्य मेला प्रदर्शन में भाकृअनुप-केमाप्रौसं स्टाल
ICAR-CIFT stall in Matsyamela exhibition, Kannur

विशाखपटणम में विज्ञान सप्ताह ऊत्सव में प्रदर्शन स्टाल
Exhibition stall in 'Science week festival' at Visakhapatnam

Flagship Programmes/फ्लैगशिप कार्यक्रम

SCSP Component

ICAR-CIFT successfully conducted 77 trainings/ capacity building programmes, 30 frontline demonstrations and 4 awareness camps/ workshops/exhibitions/exposure visits covering 20 states and 2 UTs of the country during January to March, 2022. In addition, 33 other programmes including setting up of sale counters, provision of inputs such as dryers, nets, boats, pens, etc., setting up of Mini Fish Processing Units, dryers and custom hiring centres were also taken up during the period under the CIFT-SCSP component.

एससीएसपी घटक

जनवरी से मार्च 2022 के बीच 20 राज्यों और २ संघ शासित प्रदेशों में भाकृअनुप केमाप्रौसं में 77 प्रशिक्षण/क्षमता वर्धन कार्यक्रम, 3 फ्रंट लाइन प्रदर्शन और 4 जागरूकता कैंप/ कार्यशाला / प्रदर्शन / एक्सपोजर दौरा कार्यक्रम आयोजित किया गया. इस अवधि के दौरान सेल्स काउंटर तैयार करना, इनपुट जैसे ड्रायर, जाल, बोट, कलम आदि प्रदान करना, छोटे मत्स्य प्रसंस्करण यूनिट तैयार करना, ड्रायर और कस्टम हायरिंग सेंटर तैयार करना आदि से संबंधित 33 कार्यक्रम आयोजित किए गए.

एससीएसपी के तहत क्षमता वर्धन कार्यक्रम
Capacity building programmes under SCSP

CIFT technologies including FRP Canoes, Fishing nets (microfilament, monofilament, gill net-32mm, 34 mm), Solar tunnel dryer, Solar dryer with electrical backup, Fish smoking kiln, Manual fish descaling machine, Motorised fish descaling machine, Refrigeration enabled fish vending kiosk, insulated fish storage boxes, Mini fish processing units, Fish based products (pickle, fingers, balls, cutlets) and dried fish were popularised among SC beneficiaries all over the country through various programmes contected in association with KVKs, CoFS and line agencies.

देश भर में अनूसूचित जाति के लाभार्थियों के लिए केमाप्रौसं के प्रौद्योगिकियां जैसे एफ आर पी डोंगियां, मत्स्यन जाल (माइक्रो फिलेमेंट, मोनोफिलेमेंट, गिल जाल 32mm, 34 mm), सौर टनल ड्रायर, विद्युत बैक अप के साथ सौर शुष्कक, मत्स्य घुमायन भट्टी, हस्त मत्स्य विशल्कन मशीन, मोटरीकृत मत्स्य विशल्कन मशीन, शीतीकृत मत्स्य कियोस्क, लेपित मत्स्य संचयन बक्सा, छोटे मत्स्य प्रसंकरण एकक, मत्स्य आधारित उत्पाद (अचार, फिंगर, बॉल, कटलेट) और सूखे मत्स्य को लोकप्रिय किया गया.

एस सी एस पी के तहत क्षमता वर्धन कार्यक्रम / Capacity building programmes in Punjab under SCSP

In order to conduct these programmes , ICAR-CIFT established linkages with 18 organisations including KAU, Thrissur; Dr J Jayalalithaa Fisheries University, Tamil Nadu;SKUAST, Jammu;OUAT, Bhubaneshwar; ICAR-NRRI, Cuttack;ICAR- CIFA, Bhubaneswar; KVAFSU, Bidar, Karnataka; COF, Dholi, RPCAU, Bihar; College of Fisheries, Veraval, Kamadhenu University, Gujarat; GADVASU, Punjab; GBPUAT, Uttarakhand; PKKVK, Puducherry; DOF, Tamil Nadu and NETFISH, MPEDA.

इन कार्यक्रमों का आयोजन करने के लिए भाकृअनुप-केमाप्रौसं ने 18 संगठनों के साथ संपर्क स्थापित की जिनमें केएयू त्रिशूर, डॉ जे.जयललिता फिशरीज यूनिवर्सिटी, तमिलनाडु,एसकेयूएएसटी जम्मु, ओयूएटी भुवनेशवर, भाकृअनुप नआर आई, कटक, भाकृअनुप-सीआईएफए, भुवनेश्वर, केवीऐएफएसयू बीदर, कर्नाटक, सीओएफ, धोली,बिहार, कॉलेज आफ फिश्रीज,वीरावल, कामधेनु युनिवर्सिटी गुजरात, गदवासू पंजाब, जीबी पीयूएटी, उत्तराखंड, पीकेकेवी के पुदुशेरी, डीओएल, तमिलनाडु और नेटफिशर एमपीईडीए शामिल है.

एससीएसपी के तहत क्षमता वर्धन कार्यक्रम / Capacity building programmes under SCSP

Details of CIFT-SCSP programmes in Kerala	Number of Programmes	Number of Beneficiaries
Trainings / Capacity building	77	1925
Frontline demonstrations	30	1500
Awareness camps/ Workshops/ Exhibitions/ Exposure visits	4	10000
Others (Distribution of inputs such as nets, boats, pens, etc.)	33	33

All three programmes were conceptualised and implemented by Dr. A.K. Mohanty, Nodal Officer, SCSP and Dr. Sajeev M.V. Co-Nodal Officer, SCSP from ICAR-CIFT, Cochin. The SCSP programmes of ICAR-CIFT could directly benefit nearly 13000 SC members all over the country during the quarter.

कार्यक्रमों की संकल्पना और कार्यान्वयन डॉ ए.के.मोहंती, नोडल अधिकारी एससीएसपी और डॉ संजीव,एव.वी, सह नोडल अधिकारी, एससीएसपी, भाकृअनुप-केमाप्रौसं, कोचिन ने किया. तिमाही के दौरान एससीएसपी कार्यक्रमों के तहत 13000 अनुसूचित जाति सदस्यों को सीधा फायदा पहुँचा.

Ready to eat fish products outlet established at KVK, Raipur under CIFT-SCSP

Under CIFT-SCSP scheme a skill development programme on Fish value added product development' was conducted by KVK, Raipur in collaboration with ICAR-CIFT. Out of the see beneficiaries, a couple, Mr Chuaram Tandekar, Mrs Deepika Tandekar, conceived a business enterprise with ' Ready to Eat fish products' and implemented under technical guidance jointly by KVK, Raipur and CIFT, Cochin.

On 19 January 2022, the "Ready to Eat" Counter in the name of "KFCG-Fish and Chicken Mart" was inaugurated by Hon'ble Vice Chancellor Dr S.S. Sengar, IGKV, Raipur. Speaking on the occasion Dr. Sengar lauded the efforts taken by the young aspirants to start such entrepreneurship with diversified varieties of eatables including packed food in the form of "Fish Pickles" and urged that many such aspirants should come forward to start entrepre-neurship in fisheries.

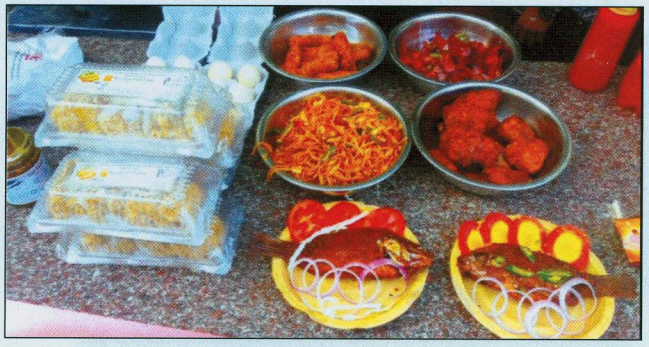
केमाप्रौसं- एससीएसपी के तहत केवीके, रायपुर में खाने के लिए तैयार आउटलेट स्थापित किया गया.

केमाप्रौसं- एससीएसपी के योजना के तहत केवीके रायपुर द्वारा मत्स्य मूल्य जोड उत्पाद पर एक क्षमता विकास कार्यक्रम आयोजित किया गया. इन लाभार्थियों में श्री चुरान तांडेकर और मिसिस दीपिका तांडेकर दंपति ने खाने के लिए तैयार मत्स्य ऊत्पादों का एक बिजिनस शुरू किया और इसे केवीके, रायपुर और केमाप्रौसं, कोचिन के तकनीकी मार्गनिर्देश के तहत लागू किया.

19 जनवरी 2022 केएफसीजी मत्स्य और चिकन मार्ट के नाम से खाने के लिए आसान काउंटर का उद्घाटन डॉ एस.एस.सेनगार, माननीय कुलपति, आईजीकेवी, रायपुर ने किया. इस अवसर पर बात करते हुए डॉ सेनगर ने खाने के भिन्न किस्म जिसमें मत्स्य अचार के रूप में संवेष्ठित आहार शामिल है, इस प्रकार का एक उद्यमिता शुरू करने पर युवा उम्मीदवारों की प्रयासों की सराहना की और इस प्रकार के उम्मीदवारों को मात्स्यिकी में उद्यमिता शुरू करने के लिए आग्रह किया.

केएफसीजी आउटलेट / *The KFCG Outlet in Raipur Chhatisgarh*

माननीय कुलपति द्वारा कार्यक्रम का उद्घाटन *Inauguration of the programme by Hon'ble Vice Chancellor IGKV, Raipur*



आउटलेट में उत्पादों का प्रदर्शन / *Products display at outlet*

Training cum demonstration on 'Cured and dried fish products' at KVK Kottayam under CIFT-SCSP.

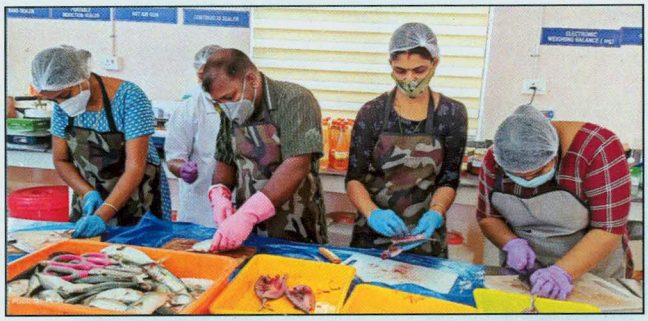
ICAR-CIFT, organized a training cum demonstration on 'Cured and dried fish products' in collaboration with Krishi Vigyan Kendra, Kottayam on 2 March, 2022 under its SCSP component. At the outset Dr. Navya R., Subject Matter Specialist (Aquaculture), KVK, Kottyam gave an overview of the training programme. The participants were trained on hygienic handling of fish, renewable energy based improved drying method using ICAR-CIFT designed hybrid Solar Dryer as well as improved packaging and labelling of dried fish products under the guidance of Dr. Remya S., Scientist; Mrs. Anu Mary Jose, Technical Assistant, Fish Processing Division and Mrs. Lovely Bhasi, Supporting Staff, Pilot Plant, ICAR-CIFT, Kochi. As many as 25 fish

केमाप्रौसं- एससीएसपी के तहत केवीके कोट्टयम में संवर्धित और सूखे मत्स्य ऊत्पादों पर प्रशिक्षण एवं प्रदर्शन कार्यक्रम

भाकृअनुप- केमाप्रौसं ने २मार्च 2022 को एससीएसपी घटक के तहत केवीके कोट्टयम के सहयोग से संवर्धित और सूखे मत्स्य ऊत्पादों पर एक प्रशिक्षण एवं प्रदर्शन कार्यक्रम आयोजित की. शुरूआत में डॉ नव्या नायर आर, विषय विशेषज्ञ (जलकृषि), केवीके, कोटटयम ने प्रशिक्षण कार्यक्रम की जानकारी दी. प्रतिभागियों को मत्स्य के स्वास्थ्यपरक हस्तन, भाकृअनुप- केमाप्रौसं द्वारा अभिकल्पित हैब्रिड सौर शुष्कक द्वारा अक्षय ऊर्जा आधारित बेहतर शुष्कक तरीका और बेहतर संवेष्ठन और सूखे मत्स्य उत्पादों के लेबेलिंग पर प्रशिक्षण दिया गया. डॉ रम्या आर, वैज्ञानिक, श्रीमती अनु मेरी जोस, तकनीकी सहायक, मत्स्य प्रसंस्करण प्रभाग और श्रीमती लवली भासी,सहायक कर्मचारी, पायलेट संयत्र, भाकृअनुप- केमाप्रौसं, कोचि ने प्रशिक्षण का

farmers/fish vendors/fishermen/ fisherwomen from different parts of Kottayam District in Kerala participated in the training programme. The participants expressed high satisfaction over the training programme during the feedback session.

नेतृत्व किया. केरल के कोट्टयम जिले से 25 मत्स्य कृषक/ मत्स्य विक्रेता/ मछुवारा एवं मछुवारिनों ने इस कार्यक्रम में भाग लिया. प्रतिक्रिया सत्र में प्रतिभागियों ने प्रशिक्षण कार्यक्रम में अपनी संतुष्टि प्रकट की.



प्रतिभागियों को मत्स्य के स्वास्थ्यपरक हस्तन पर प्रदर्शन
Demonstration of Hygienic handling of fish to participants

Training cum demonstration programme on "Responsible fishing methods in inland fishery" at Kozhikode, Kerala under CIFT-SCSP component

Two days training cum demonstration programme on "Responsible fishing methods in inland fishery" was organized during 7-8 January, 2022 at Atholi, Kozhikode. Shri. Prabhakaran, A.P., President, Velur-Aanappara Ulnaadan Matsy thozhillali Vikasana Khema Sahakarana Sangham delivered the Presidential address followed by inaugural address by Smt. Sheeba Ramachandran, President,Atholi Panchayat. Shri. Vidyadharan, Fisheries Development officer, FDO and AR felicitated the function. On the first day, an orientation was given to 17 fisherwomen from Atholi and nearby villages of Kozhikode district on the topic "Scope of entrepreneurship in clam processing" by Dr.Sajesh V.K. and Dr.Rejula. K, Scientists, EIS Division which was followed by group discussion on feasibility of establishing clam processing unit for women at Velur, Atholi, Kozhikode.

As part of this programme, a field visit was arranged to the existing clam sheds in the area and inland water bodies. The fishermen explained about the prevailing practices in clam fishery, post-harvest handling and marketing channels.

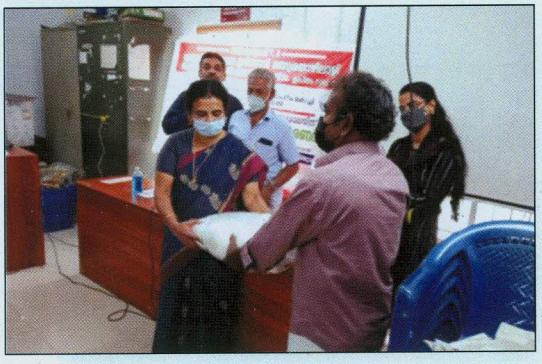
केमाप्रौसं- एससीएसपी के तहत कोजिकोड, केरल में अंत:स्थलीय मात्स्यिकी में जिम्मेदार मत्स्यन तरीकों पर प्रशिक्षण एवं प्रदर्शन

7-8 जनवरी 2022 को अतोली, कोजिकोड में अंत:स्थलीय मात्स्यिकी में जिम्मेदार मत्स्यन तरीकों पर प्रशिक्षण एवं प्रदर्शन आयोजित किया गया. श्री प्रभाकरन ए.पी, अध्यक्ष, आनापारा के मत्स्य मजदूर कल्याण सहकारिता ने अध्यक्षीय भाषण दिया. श्रीमती शीबा रामचंद्रन, अध्यक्ष, अतोली पंचायत, श्री विद्याधरन, मात्स्यिकी विकास अधिकारी, एफ डी ओ और ए आर ने बधाई भाषण दिए. पहले दिन अतोली और कोजिकोड के आस पास के गांवों के 17 मछुवारिनों को क्लैम प्रसंस्करण में उद्मी संभावना विषय पर डॉ सजेश वी.के और डॉ रेजुला के, विस्तार विभाग के वैज्ञानिकों ने अभिविन्यास दिया. इसके बाद वेलूर, कोजिकोड में महिलाओं के लिए क्लैम प्रसंस्करण युनिट स्थापित करने की संभाव्यता पर सामूहिक चर्चा आयोजित की गई.

कार्यक्रम के तहत उस इलाके के क्लैम शेड और अंत:स्थलीय पानी स्रोतों का दौरा आयोजित किया गया. मछुवारों ने मौजूदा क्लैम मात्स्यिकी, पश्च पैदवार हस्तन और विपणन चेनलों के बारे में समझाया.

Dr Rejula, K, Dr. Sajesh V.K, Dr. Sandhya K.M, Scientists, ICAR- CIFT, Cochin and Mr. T. M. Balan, Skilled Supporting Staff, ICAR CIFT coordinated the entire event along with the fishermen society office bearers. Almost 40 people attended the programme.

डॉ रेजुला के, डॉ सजीश वी.के., डॉ संध्या के.एम. वैज्ञानिक, भाकृअनुप-केमाप्रौसं और श्री टी.एम. बालन, भाकृअनुप-केमाप्रौसं ने मछुवारा सहकारिता के पदाधिकारियों के साथ मिलकर संपूर्ण कार्यक्रमों का संयोजन किया.



श्रीमती शीबा रामचंद्रन, अध्यक्ष, अतोली पंचायत, मछुवारों को इनपुट वितरण करते हुए
Smt. Sheeba Ramachandran, President Atholi Panchayat, distributing input to the fishermen

डॉ सजेश वी.के., वैज्ञानिक, विस्तार विभाग, भाकृअनुप-केमाप्रौसं जिम्मेदार मत्स्यन अभ्यासों को अपनाने की जरूरत पर भाषण देते हुए
Dr.Sajesh V.K., Scientist EIS Division ICAR -CIFT delivering lecture on "Need for adopting responsible fishing practices"

On the second day, Dr. Sajesh V.K., Scientist, EIS Division, ICAR CIFT took a class on need for adopting responsible fishing practices, followed by a lecture on "Responsible fishing methods in inland fishery" by Dr. Sandhya K.M, Scientist, Fishing Technology Division, ICAR CIFT. A focussed group discussion on 'Challenges in adopting responsible fishing practices' was also conducted with the fishers present there.

दूसरे दिन डॉ सजेश वी.के., वैज्ञानिक, विस्तार विभाग,भाकृअनुप-केमाप्रौसं ने जिम्मेदार मत्स्यन अभ्यासों पर कक्षा चलाई. इसके बाद डॉ संध्या के. एम., वैज्ञानिक, मत्स्यन प्रौद्योगिकी प्रभाग, भाकृअनुप-केमाप्रौसं ने अंतःस्थलीय मात्स्यिकी में जिम्मेदार मत्स्यन तरीकों पर भाषण दिया. मौजूदा मछुवारों ने जिम्मेदार मत्स्यन अभ्यासों को अपनाने की चुनौतियों पर सामूहिक चर्चा की.

STC Component

ICAR-CIFT has conducted 14 trainings/capacity building programmes, 9 on farm trials, 5 frontline demonstrations under scheduled tribe component (STC) during the period. Also establishment of mini fish processing units and distribution of inputs like dryers, nets, boats, etc were also taken up during the period. ICAR-CIFT has collaborated with eight KVKs in the state of Assam, three KVKs and one

एसटीसी घटक

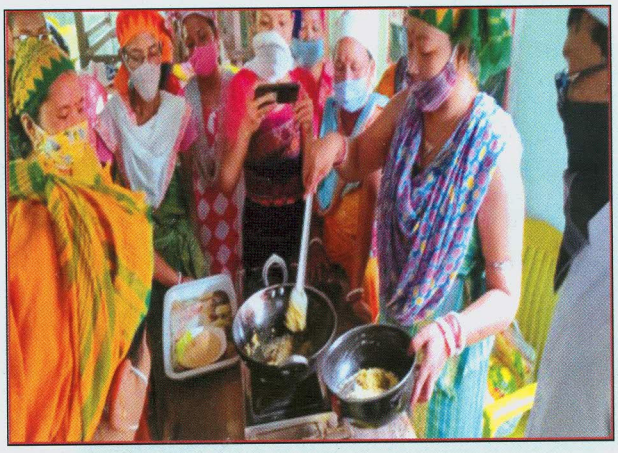
भाकृअनुप-केमाप्रौसं ने अवधि के दौरान एसटीसी घटकों के तहत 14 प्रशिक्षण/क्षमतावर्धक कार्यक्रम,9 खेती परीक्षण, 5 फ्रंट लाइन प्रदर्शन कार्यक्रम आयोजित की. यही नहीं इस अवधि के दौरान छोटे मत्स्य प्रसंस्करण युनिट, इनपुट जैसे ड्रायर,जाल, बोट आदि को वितरित किया गया. केमाप्रौसं ने असम, उत्तराखंड और छत्तीसगढ़ में कार्यक्रम के

CoF in Uttharakhand and two KVKs and one CoF in Chhattisgarh for the implementation of the programme. Training programmes were carried out on various topics namely 'Hygienic handling of fish'', Post -harvest management' and 'Fish Processing through preparation of value added products'. Demonstration of solar tunnel dryer, fish smoke kiln, solar dryer with electrical back up, fish descaling machine etc were carried out for the benefit of the stakeholders along with distribution of required inputs. Besides, inputs for the establishment of mini fish processing were also distributed among the beneficiaries group that need to be used through custom hiring mode

कार्यान्वयन के लिए आठ केवीके के साथ सहयोग किया. भिन्न विषय जैसे मत्स्य का स्वास्थ्यपरक हस्तन,पश्च पैदावार प्रबंधन और मूल्य जोड़ उत्पादों द्वारा मत्स्य प्रसंस्करण पर प्रशिक्षण कार्यक्रम आयोजित किए गए. पणधारियों की सुविधा के लिए और जरूरी इनपुट के वितरण के लिए सौर टनल शुष्कक, मत्स्य घुमायन भटटी, विद्युत बैक अप के साथ सौर शुष्कक, मत्स्य विशल्कन मशीन आदि का प्रदर्शन किया गया. इसके अलावा लाभार्थियों के लिए छोटे मत्स्य प्रसंस्करण को स्थापित करने के लिए भी इन पुट वितरित किए गए जिसे कस्टम हायरिंग मोड में उपयोग करना है.

असम के लखिमपुर में लाभार्थी कोफिस्की के सहारे मत्स्य घुमायन करते हुए
Beneficiary performing fish smoking using COFISKI at Lakhimpur district of Assam

केमाप्रौसं टनल शुष्कक-50 के सहारे मत्स्य शुष्कक के तरीके का प्रदर्शन
Method Demonstration on fish drying using CIFT Tunnel Dryer- 50



असम के दूब्री जिले में आयोजित प्रशिक्षण कार्यक्रमों की झलकियां
Glimpses of Training programmes conducted within Dhubri district of Assam

Celebrations/समारोह

International Women's day 2022

Veraval Research Centre of ICAR-CIFT celebrated International Women's day on 8 March 2022. Smt. Suman Nala, IPS was the Chief Guest for the programme. Dr. Ashish Kumar Jha, Scientist in Charge, VRC, ICAR-CIFT presided over the function and highlighted the activities of the centre in harvest and post-harvest fisheries. Smt. Suman Nala, IPS inaugurated the programme and briefed about the challenges faced by the women in society and workplace. She also highlighted the need for persistent effort to bring gender equality among the socio-economic segments of the population.

Gracing the programme as Guest of Honour Smt. S.A Bharadiya, Assistant Director (Fisheries), Porbandar spoke about gender equality and motivated women for greater achievements in the future.

श्रीमती सुमन नाला, आई पी उस उद्घाटन भाषण देते हुए मुख्य अतिथि

Smt. Suman Nala, IPS giving inaugural address

National Girl Child Day – 2022

ICAR-CIFT, Cochin observed the National Girl Child Day – 2022 by organizing an event *'Selfie with daughters'* on 24 January, 2022. The staff from both headquarters and centres actively participated and the photos of the staff members with their daughter/s were displayed in the lobby of the ICAR-CIFT, Cochin towards signifying the National Girl Child Day. The event was co-ordinated by Dr. Pe. Jeyya Jeyanthi, Senior Scientist, ICAR-CIFT, Cochin.

अंतर्राष्ट्रीय महिला दिवस 2022

भाकृअनुप- केमाप्रौसं के वीरावल केंद्र में ८ मार्च २०२२ को अंतर्राष्ट्रीय महिला दिवस मनाया गया. श्रीमती सुमन नाला, आई पी एस कार्यक्रम में मुख्य अतिथि थी. डॉ आशीष कुमार झा,प्रभारी वैज्ञानिक ने कार्यक्रम की अध्यक्षता की और संस्थान के मात्स्यिकी के पैदावार और पश्च पैदावार क्षेत्र की गतिविधियों पर प्रकाश डाला. श्रीमती सुमन नाला, आई पी एस ने कार्यक्रम का उद्घाटन किया और उन्होंने समाज और कार्यस्थल में महिलाओं द्वारा सामना किए जानेवाले चुनौतियों की जानकारी दी. उन्होंने आबादी के सामाजिक आर्थिक खंडों में लिंग समानता लाने की जरूरत पर जोर दिया.

कार्यक्रम में श्रीमती एस.ए. भरादिया, सहायक निदेशक (मात्स्यिकी), पोरबंदर, विशिष्ट अतिथि थीं. उन्होंने लिंग समानता पर बात की और महिलाओं को बड़ी उपलब्धियों के लिए प्रेरित किया.

श्रीमती सुमन नाला,आई पी एस, वीरावल के कर्मचारियों के साथ

Smt. Suman Nala, IPS, Chief Guest along with staffs of VRC of CIFT

बालिका दिवस 2022

भाकृअनुप- केमाप्रौसं ने 24 जनवरी 2022 को बेटियों के साथ सेल्फी कार्यक्रम के साथ राष्ट्रीय बालिका दिवस 2022 मनाया. मुख्यालय और अनुसंधान केंद्रो के सदस्यों ने इसमें भाग लिया और अपनी बेटियों के साथ खींचे गए तस्वीरों को भाकृअनु-केमाप्रौसं के लॉबी में प्रदर्शित कर राष्ट्रीय बालिका दिवस मनाया. इस कार्यक्रम को डॉ पी. जेय्या जयंती, वरिष्ठ वैज्ञानिक, भाकृअनुप- केमाप्रौसं ने सह समन्वय किया.

Republic Day 2022

ICAR-CIFT celebrated 73rd Republic Day on 26 January, 2022. The National Flag was hoisted at the premises of ICAR-CIFT and its Research Centres. All the staff members attended the ceremony.

गणतंत्र दिवस 2022

भाकृअनुप- केमाप्रौसं ने 26 जनवरी 2022 को गणतंत्र दिवस मनाया. भाकृअनुप- केमाप्रौसं और अनुसंधान केंद्रों में राष्ट्रीय ध्वज फहराया गया. सभी सदस्य कर्मचारियों ने समारोह में भाग लिया.

भाकृअनुप- केमाप्रौसं और अनुसंधान केंद्रों में राष्ट्रीय ध्वज को फहराने के दृश्य

Flag hoisting at ICAR-CIFT Headquarters, Mumbai Research Centre & Veraval Research Centre on Republic Day

Official Language Activities / राज भाषा गतिविधियाँ

Vishwa Hindi Diwas

Vishwa Hindi Diwas was celebrated in the institute on 10 January, 2022. On this occasion, Dr. Ravishankar C. N. Director, ICAR-CIFT gave a message which was uploaded on Institute website for the staff of the Institute and its three research centres. He also released a book entitled 'Maatsyikee Vaigyaanik Shabdaavalee Sankalan'.

विश्व हिंदी दिवस

10 जनवरी 2022 को विश्व हिंदी दिवस मनाया गया. निदेशक, भाकृअनुप- केमाप्रौसं ने संदेश दिया जिसे संस्थान के वेबसाइट पर अपलोड किया गया. इस अवसर पर मात्स्यिकी वैज्ञानिक शब्दावली संकलन का विमोचन किया गया.

निदेशक द्वारा हिंदी प्रकाशन का विमोचन
Release of Hindi publication by Director, ICAR-CIFT

Online Official Language Workshop

Official Language online workshop on 'Hindi applications for working on computers' was organized on 18 March, 2022 for the officers and employees of Administration and Audit Section of the Institute. The workshop commenced with the opening remarks by Dr. J. Renuka, Deputy Director (Official Language) in which she welcomed all the participants along with the resource person Mr. Jaishankar, Praadhyaapak, Central Hindi Teaching Scheme, Hyderabad. Thereafter, the resource person presented a talk on available applications in Hindi for working in computers.

ओनलाइन राजभाषा कार्यशाला

18 मार्च 2022 को प्रशासन एवं ऑडिट के अधिकारियों एवं कर्मचारियों के लिए कंम्यूटरों में हिंदी में प्रयोग विषय पर ओनलाइन राजभाषा कार्यशाला चलाया गया. कार्यशाला में डॉ जे. रेणुका, उपनिदेशक (राजभाषा) के शुरूआती टिप्पणी के साथ हुआ. उन्होंने श्री जयशंकर, प्राध्यापक, हिंदी शिक्षण योजना, हैदराबाद को और सभी प्रतिभागियों का स्वागत किया. इसके पश्चात संकाय सदस्य ने अपना वक्तव्य प्रस्तुत किया.

Success of ICAR-CIFT Staff in Hindi Parangat Examination

Seven staff members of Mumbai Research Centre of ICAR-CIFT successfully passed 'Hindi Parangat Examination' conducted off-line by Department of Official Language, Home Ministry, Govt. of India on 18 October, 2021 at MRC of ICAR-CIFT. The result was declared on 31 December, 2021.

पारंगत परीक्षाओं के परिणाम घोषित

भाकृअनुप- केमाप्रौसं के मुंबई अनुसंधान केंद्र के सात सदस्य कर्मचारीगण, राजभाषा विभाग, गृह मंत्रालय, भारत सरकार द्वारा चलाए गए हिंदी पारंगत परीक्षा में उत्तीर्ण हुए. परीक्षाएं 18 अक्तूबर को चलाई गई और परणिाम 31 दिसंबर 2021 को घोषित किया गया.

ZONAL TECHNOLOGY MANAGEMENT – AGRIBUSINESS INCUBATION CENTRE

Collaborative Research / Consultancies / Contract Service / Technology Transfer

SL. No	Activity	Date of signing	Amount (Rs.)	Firm / Company
A.	**Collaborative Research:**			
1.	Extraction, characterization and clinical evaluation of biomolecules of aquatic origin	21 February, 2022	Nil	Pushpagiri Medical Society (PMS)
B.	**Consultancy**			
1.	Providing necessary guidance for setting up of Fish Processing Unit, technical know- how for production of value- added products.	7 January, 2022	Rs. 2,00,000 + 18% GST	Kerala State Cooperative Federation for Fisheries Development Ltd., (MATSYAFED)
2.	Witnessing the inclining experiment and approval of Trim and Stability booklets. Evaluation of design of 11 m electric boats.	10 February, 2022	Rs. 18,000+ 18% GST	M/s Navalt Solar & Electric Boats Private Limited
3.	Production of squid paste, its shelf life extension at room temperature and application as the feed ingredient in the aqua feed sector	23 February, 2022	Rs. 30,000+ 18% GST	M/s Kalasona Ingredients
C.	**Contract Service**			
1.	Type Approval of Diesel Engine for Fishing Vessel	7 January, 2022	Rs. 2,00,000 + 18% GST	Sardhara Engine Manufacturers
2.	Type Approval of Diesel Engine for Fishing Vessel	7 January, 2022	Rs. 2,00,000 + 18% GST	Kirloskar Oil Engines Ltd.
3.	Efficacy study of EAT SAFE	7 January, 2022	Rs. 1,50,000 + 18% GST	Ave Health Care Private Limited
4.	PCR training and validation of PCR methods	18 February, 2022	Rs. 40,000 + 18% GST	SMS Labs Services Private Limited
5.	Certification of 5 Field marshal Model Engines	7 January, 2022	Rs. 5,62,500 + 18% GST	Gujarat Forgings Pvt. Ltd.

SL. No	Activity	Date of signing	Amount (Rs)	Firm / Company
6.	Supply of PCR test kits for (100 reactions each) for detection of Koiherpes Virus (KHP), Spring Viraemia of Carp (SVC) & Epizootic Ulcerative Syndrome (EUS)	21 February 2022	Rs. 1,00,000 + 18% GST	Agency for Development of Aquaculture Kerala (ADAK)
D.	**Technology Transfer**			
1.	Technical know- how of Dry fish, Fish pickle, Fish chutney powder	3 February, 2022	Rs. 3000/- + 18% GST	Anand Traders
2.	Solar Electric dryer (20 kg capacity) and dry fish processing	22 February, 2022	Rs. 5000 + 18% GST	A. S. Food Products
3.	Production of chitin, chitosan, chitooligomers from shrimp shell waste using enzymatic process	25 February, 2022	Rs. 3,00,000/-+ 18% GST	Longshore Technologies LLP
4.	Technology transfer of RTE Fish Canning unit	25 February, 2022	Rs. 5,00,000/- + 18% GST	Dept. of fisheries, Himachal Pradesh
5.	Technical know- how of retort based RTE Fish and Prawn curry (iguru and pulusu style) with 1-year shelf life	3 March, 2022	Rs. 75,000 + 18% GST	Q Matrix Exim Pvt. Ltd.
6.	Technical know- how for the development of aquatic products.	8 March, 2022	Rs. 5,00,000 + 18% GST	Envozyme Technologies Pvt. Ltd.
7.	Technical know-how of processing, packaging, transportation and marketing of rainbow trout	10 March, 2022	Rs. 10,000 + 18% GST	Zarin, Jammu & Kashmir

Incubatees registered

SL. No:	Name of the incubatee / entrepreneur	Type of Constitution (Corporate/ Individual /Start-up / Co-op / Producer Company, etc)	Date of Membership
1.	Mrs. Anupama Alex, A.S. Food products, Cochin	Solar electric dryer and dry fish processing	22 February, 2022
2.	Mrs. Jainy M. Paul, PKM Fine Foods & Spices Pvt. Ltd, Ernakulam	Ready to cook jackfruit in vacuum pack	7 March, 2022

Success stories of incubatees

Foo Foods, a start- up by Mr. Mohammed Fawaz who was an incubate of ICAR-CIFT, Cochin is recognized as a start-up by the Department for Promotion of Industry and Internal Trade, Government of India in Food Processing Sector and registered under Kerala Start-up Mission, Govt. of Kerala.

One India Edge Private Limited, a start-up by Dr. Saji Pothen Thomas, who was an incubate of ICAR-CIFT, Cochin has registered a start-up company under Kerala Start-up Mission, Govt. of Kerala. They have also been recognized as a start-up by the Department for Promotion of Industry and Internal Trade. The start-up is working in 'Agriculture' Industry and 'Fisheries' sector as self- certified by them.


Startup Certificate

This is to certify that M/s **ONE INDIA EDGE PRIVATE LIMITED** is registered as a Startup company under Kerala Startup Mission, Government of Kerala.

भाकृअनुप-केमाप्रौसं एवं मत्स्य फेड त्रिवेंद्रम के बीच समझौता हस्ताक्षरित
Agreement Signing between
ICAR - CIFT & Matsyafed, Trivandrum

भाकृअनुप-केमाप्रौसं एवं पुष्पगिरी मेडिकल सोसाइटी के बीच समझौता हस्ताक्षरित
Agreement Signing between
ICAR - CIFT & Pushpagiri Medical Society

Intellectual Property Filed

IPRs	Application/ Registration No.	Name of Innovation/ Technology/ Product/ Variety	Date of application Filed/ submitted
Patent	202211018453	An apparatus for hypothermic anesthetization of aquatic animals prior to live transport using non-cyclic refrigeration	29 March, 2022
Design	358858-001	Collapsible Fish Trap	22 February, 2022
	341136-001	Hot Air Assisted Continuous Infrared Dryer	20 March, 2021

Publications

Research Papers

- Binsi, P. K., Muhamed Ashraf, P., Parvathy, U. and Zynudheen, A. A. (2022) Photo-protective effect of cuttlefish ink melanin on human hair. J. Appl. Polym. Sci., e51631. https://doi.org/10.1002/ app.51631.
- Kannanchery R. Sreelakshmi, Chitradurga O. Mohan, Korpulliyil K. Anas, Rajamma K. Renjith, SasikalaRemya, Muhamed A. Pachareentavita. (2022) Synthesis and stability of chitosan gold nanocomposites: Effect of time of heating and concentration of reactant. International Journal of Food Science & Technology, 57(2):1333-1339.
- Divya K. Vijayan, Sreerekha, P. R., Dara, P. K., Ganesan, B., Suseela Mathew, Anandan, R. and Ravishankar, C. N. (2022) Antioxidant defense of fish collagen peptides attenuates oxidative stress in gastric mucosa of experimentally ulcer-induced rats. *Cell Stress Chaperones.* 27: 45-54.
- Prashob, K., AniesraniDelfiya, D. S., Murali, S., Alfiya, P. V. & Samuel, M. P. (2022). Drying of shrimp using hot air-assisted continuous infrared drying system. Journal of Food Processing and Preservation, 00, 1– 13. https://doi.org/10.1111/ jfpp.16364
- Laly, S.J., Sankar, T.V., & Panda, S. K. (2022). Effect of pressure cooking alone and in combination with other treatments on shrimp allergic protein, tropomyosin. Journal of Food Science and Technology, 59(3), 1193-1201.
- Saly N. Thomas, Sandhya, K. M. and Leela Edwin (2022) Incidental Catch of Marine Mammals and Turtles in Gillnets: Indian Scenario. *Fish. Techol.* 59 (1): 1-18.
- Raghu Prakash, R., Kamie, G., Sreedhar, U. and Swamy Kumar, M. (2022) Size Selectivity of Square Mesh Cod-end with respect to Stole-phoruscommersoni

(Lacepède, 1803) and white fish, Lactariuslactarius (Bloch and Schneider, 1801) along East coast of India. *Fish. Techol.* 59 (1): 19-25.

- Devananda Uchoi, Pankaj Kishore, Anuj Kumar, Nadella, R. K., Panda, S. K. and Zynudheen A. A. (2022) Prevailing challenges in Processing of Fermented Fishery product 'Shidal' in Tripura, India and Solutions. *Fish. Techol.* 59 (1): 26-32.
- Prajith, K. K. and Madhu, V. R. (2022) Effect of Trap Funnel angle on Fish Capture Efficiency. *Fish. Techol.* 59 (1): 56-59.
- Manikantha, B., Karthika, R., Murugadas, V., Visnuvinayagam, S., Madhusudana Rao, B. (2022) Comparison of the Single Agar and Double Agar layer methods for Enumeration of Bacteriophages. *Fish. Techol.* 59 (1): 60-63.
- Sanjoy Das and Lalitha, K. V. (2022) Listeria monocytogenes Biofilms on Glass surface: Survival and Efficacy of two Sanitizing Agents for Inactivation. *Fish. Techol.* 59 (1): 49-55.
- Remya S., G. K. Sivaraman, Toms C. Joseph, Ejaz Parmar, K. R. Sreelakshmi, C. O. Mohan, & C. N. Ravishankar (2022). Influence of corn starch based bio-active edible coating containing fumaric acid on the lipid quality and microbial shelf life of silver pomfret fish steaks stored at 4°C. J Food Sci Technol. https://doi.org/10.1007/s13197-021-05322-y.
- Vishnu KV, Ajeeshkumar KK, Lekshmi RG, Chatterjee NS, Ganesan B, Anandan R, Mathew S, Ravishankar CN. Sardine oil loaded vanillic acid grafted chitosan microparticles improves the in vivo antioxidant, haematological and lipid profile. Journal of Food Science and Technology. 2022 Jan 10:1-7.
- Joshy C. G., Shirin Antony, George Ninan, Ashok Kumar, K. and Ravishankar, C. N. (2022) Artificial Neural Network Models for Predicting and Optimizing the Effect of Air-frying Time and Temperature on Physical, Textural, Sensory, and Nutritional Quality Parameters of Fish Ball. *J. Aquatic Food Product Technol.* 31(1):35-46. https://doi.org/10.1080/10498850.2021.2008079.
- Viji, P., Rao, B. M., JesmiDebbarma and Ravishankar, C. N. (2022) Research developments in the applications of microwave energy in fish processing: A review. *Trends Food Sci. Technol.* https://doi.org/10.1016/j.tifs.2022.03.010.
- Muhamed Ashraf, P., Manju Lekshmi, N., Chinnadurai, S., SajeevanAnjitha, Archana, M., Vineeth Kumar, C. M., Sandhya, K. M., Ambarish PurackattuGop (2022) Impact assessment of biofouling resistant nano copper oxide– polyaniline coating on aquaculture cage nets. Aquaculture and Fisheries.AniesraniDelfiya, D.S., Prashob, K., Murali, S., Alfiya, P.V., Kumar, L.R. and Samuel, M.P., (2022) Design and development of hot air-assisted continuous infrared drying system for Shrimps. Journal of Aquatic Food Product Technology, pp.1-13.

Popular Articles

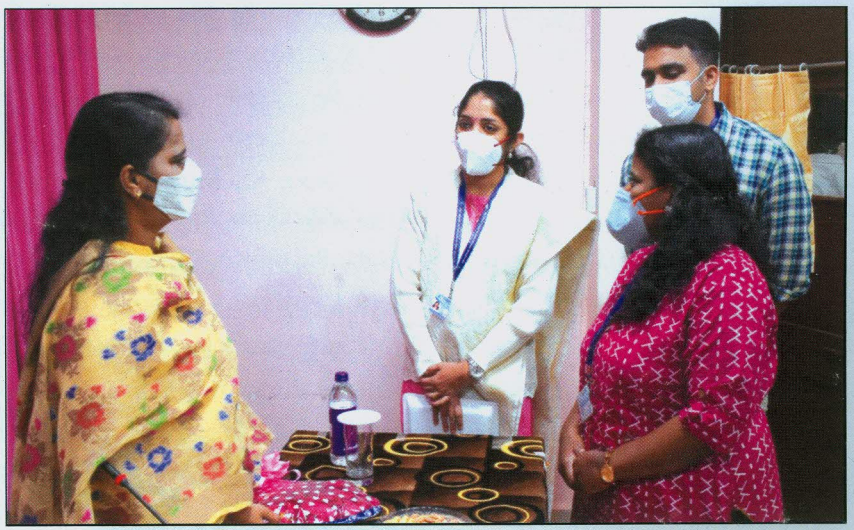
- Kumar, A and S.M. Shaikh. (2022). Impact of Corona virus in Fisheries Sector, Aqua International, January 2022, p 30-32
- Sreelakshmi.K.R, Renjith.R.K and Sajesh.V.K. (2022) Supplementing fisheries livelihood through dry fish production: The case of Adimalathura fishing village in Kerala. Aqua Star, March, 2022.

Book Chapters

- Mohan C.O., Remya S., Sreelakshmi K.R. and Ravishankar C.N. (2022) Functional Packaging Materials for Fishery Products Applications. In: Shukla A.K. (eds) Food Packaging: The Smarter Way. Springer, Singapore. Pp 165-185. https://doi.org/10.1007/978-981-16-7196-8_7.
- Venkatasubramanian, V., Sajeev, M.V. and A.K. Singha (2021). Technology assessment and refinement, In: V.K. Jayaraghavendra Rao et al. (2021). Extension for Horticultural Technologies [e-book]. Hyderabad: National Institute of Agricultural Extension Management (MANAGE) and ICAR-Indian Institute of Horticultural Research.
- Sajeev, M.V. (2022). Participative and integrative techniques for use with women farmers In: Anita Kumari et al. (2022)Participatory techniques for women farmers: enabling gender-oriented feedback, situation analysis, problem prioritization [e-book]. Hyderabad: National Institute of Agricultural Extension Management (MANAGE) and ICAR-Central Plantation Crops Research Institute.

Visit of Dignitaries / गणमान्त्रा व्यक्तियों का दौरा

- Dr. C. Suvarna (IFS) Chief Executive, NFDB (National Fisheries Development Board), visited Veraval RC of ICAR-CIFT on 12 January,22 and discussed on "Better utilization of Seaweeds in Gujarat".



डॉ सी सुवर्णा (आईएफएस),चीफ एक्जीकूटीव, एनएफडीबी, भाकृअनुप- केमाप्रौसं के वीरावल अनुसंधान केंद्र के वैज्ञानिकों से चर्चा करते हुए

Dr. C. Suvarna (IFS) Chief Executive, NFDB interacting with scientists VRC of ICAR-CIFT

- The Directors of NIFPHATT Dr. Shine Kumar C.S. and CIFNET, Shri. A.K.Choudhury, Cochin visited and interacted with scientists of Veraval RC of ICAR-CIFT on 05 March, 2022. They visited the laboratories and impressed with the ongoing activities of the centre.

निफाट और सिफनेट के निदेशक भाकृअनुप- केमाप्रौसं के वीरावल अनुसंधान केंद्र में

Directors of NIFPHATT and CIFNET, Kochi at VRC ICAR-CIFT

- Prof. Till Bachmann, Univ. of Edinburgh, UK, Prof. Alison Prendivillie, Univ. of Arts, London, & Prof. Ravikrishnan Elangovan, IIT-D visited the ICAR- CIFT, Cochin on 21 March, 2022 and interacted with Director, ICAR-CIFT and Scientists of Microbiology, Fermentation & Biotechnology Division of ICAR-CIFT.

Awards / Recognitions/पुरस्कार एवं मान्यताएं

Dr. C.O. Mohan, Senior Scientist won Best Oral presentation award for the paper entitled "Effect of vacuum impregnation of Rosemary Essential Oil (REO) and Vacuum packaging on the quality of Yellowfin tuna (*Thunnus albacares*) chunks at chilled storage condition (1-2°C)" authored by Mohan, C.O., Remya, S., Bindu, J., Ashok Kumar, K.in the International Conference on Advancement of Science and Technology for Environment, Society and People (ICASTESP-2022) from 28-29 January, 2022 organised by Society for Technology, Environment, Science & People, Kozhikode, Kerala

डॉ सी.ओ.मोहन, वरिष्ठ वैज्ञानिक को एफेक्ट आफ वाकुम इमप्रेगनेशन आफ रोसमेरी एसेनशियल आयिल और वेकुम पैकेजिंग आफ एल्लो फिन टूना (थून्नस एलबेकेर्स)चंक्स एट चिल्ड स्टोरेज कंडिशन (1-20c) विषय पर उत्त्म मौखिक प्रस्तुति पुरस्कार प्राप्त हुआ. श्री मोहन सी.ओ, रम्या एस, बिंदु.जे, अशोक कुमार,के इसके लेखक हैं. 28 से 29 जनवरी, 2022 को सोसाइटी फार टेक्नोलोजी, एनविरोनमेंट, साइन्स एंड पीपल,कोजिकोड, केरल में आयोजित ICASTESP 2022 के दौरान यह पुरस्कार प्रदान किया गया.

Dr. Niladri Sekhar Chatterjee, Scientist Received the Kerala State Young Scientist Award 2021 by Kerala State council for Science, Technology and Environment on 10 February, 2022

डा नीलाद्री चेटरजी ने 10 जनवरी 2022 को केरला स्टेट काउंसिल फॉर साइंस, टेक्नोलॉजी एंड एनवायरनमेंट से युवा वैज्ञानिक पुरस्कार प्राप्त किया।

Dr. Remya S., Scientist conferred with Young Scientist Award by College of Fisheries Panangad Alumni Association (COFPAA) for the year 2022 in recognition to the contributions in the field of fisheries science. The award was presented during COFPAA SHOAL 2022 at Hotel Le Meridien, Kochi, Kerala.

डॉ रम्या एस, वैज्ञानिक को युवा वैज्ञानिक पुरस्कार प्राप्त हुआ. COFPAA द्वारा 2022 को मात्स्यिकी विज्ञान के क्षेत्र में दिए गए योगदान के लिए यह पुरस्कार डॉ रम्या को COFPAA शोल २०२२के दौरान होटल, ली मेरीडीन, कोचिन,केरल में आयोजित समारोह में यह पुरस्कार प्रदान किया गया.

Dr. Remya S., Scientist received INSA Visiting Scientist Fellowship (FY 2021-2022) by Indian National Science Academy, New Delhi.

डॉ रम्या, वैज्ञानिक को आईएनएसए विजिटिंग साईंटिस्ट फेलोशिप प्राप्त हुआ. वर्ष 2021- 2022 के लिए इंडियन नेशनल साईनस एकेडेमी, नई दिल्ली द्वारा यह फेलोशिप दिया गया.

डॉ राम्या, कुफोस के कुलपति डॉ रिजी जॉन से
युवा वैज्ञानिक पुरस्कार ग्रहण करते हुए
Dr. Remya S. receiving young scientist award from
Dr. Riji John, Vice-Chancellor, KUFOS

Dr. Parvathy U., Scientist won Best oral presentation award for the paper entitled"Bioactive and storage properties of astaxanthin-cow milk encapsulates" by Parvathy U., Binsi P.K. and Arya Raguvaranin the 1st Indian Fisheries Outlook 2022 on "Priming Indian Fisheries in Attaining Sustainable Development Goals" under the Theme: "Fisheries post-harvest technology and value addition" held from 22-24 March, 2022 at ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata, West Bengal.

डॉ पार्वती यू, वैज्ञानिक ने उत्तम मौखिक प्रस्तुति पुरस्कार प्राप्त की. 22 से 24 मार्च 2022 को भाकृअनुप सिफरी, बैरेकपुर, पश्चिम बंगाल में आयोजित पहले इंडियन फिशरीज आउटलुक 2002 कार्यक्रम में मात्स्यिकी पश्च पैदावार प्रौद्योगिकी और मूल्य जोड थीम पर प्राईमिंग इंडियन फिशरीज इन अटेनिंग सस्टेनेबल डिवलेपमेंट गोल्स पर बयोएक्टिव एंड स्टोरेज प्रोपरटीज आफ आस्ताजांतिन कौ मिल्क एनकेपसूलेट्स विषय पर प्रस्तुत शोधालेख के लिए पुरस्कार प्राप्त किया.

Participation in Seminars/ Symposia/ Meeting/ Invited Talk Delivered

Dr. Suseela Mathew, Principal Scientist & HoD i/c, B &N Division

- Attended Institute Management Committee meeting of ICAR-NBFGR 24th Academic Council Meeting on 08 February, 2022
- Attended KUFOS Academic Council meeting held on 19 January, 2022 & 25 March, 2022 as Academic Council Member
- Served as NABL Technical Assessor for assessment of ROSS Life science Pvt. Ltd, Pune from 25-27 March 2022
- Served as NABL Technical Assessor for assessment of Govt Analysts Lab Trivandrum from 9-13 March 2022

Dr A.K. Mohanty, Principal Scientist & HoD i/c, EIS Division

- Delivered an invited lecture *on "Entrepreneurship in fish processing: Options and way forward"*on 13 January, 2022 for the UG & PG final year students of NIFTEM, Sonipat, Harayana during the Induction Session of Village Adoption Programme (VAP-16) held in online mode from 11-19 January, 2022.
- As resource person gave a deliberation on *"Innovative Extension Approaches in Extension Education"* on 3 March, 2022 to enhance the knowledge, skill and confidence of aspirant students for preparation of ICAR JRFSRF/NET/ARS Examinations during the e-Training Course on 'ICAR JRF/SRF, NET/ ARS Exam. Preparation' organised by Department of Agricultural Extension and Communication, Post Graduate Institute, Mahatma Phule Krishi Vidyapeeth (MPKV) Rahuri, Maharashtra held from 15 February to 10 March, 2022.

Dr. J. Bindu, Principal Scientist & HoD i/c, FP Division

- Attended the online International Workshop on Emerging Trends and New Opportunities in High Pressure Processing organized by Kerala Agricultural University, Vellanikkara, Thrissur from 21- 22 February, 2022.

- Invited talk on 'Prospects for value addition in fishes' on 18 January 2022, in the online webinar series on Agriculture and allied activities organised in connection with the ICAR- SCSP plan fund organised by College of Agriculture, Padnnakkad, Kasaragod from 10-20 January, 2022.
- Invited talk on 'Application of High Pressure Processing in Aquatic Products' in the online International Workshop on "Emerging Trends and New Opportunities in High-Pressure Processing" conducted by the Department of Agricultural Engineering, College of Agriculture, Vellanikkara, Thrissur from 21 – 22 February, 2022.

Dr. R. Raghu Prakash, Principal Scientist & SIC Vishakhapatnam

- Attended a webinar on "National campaign on Diversification of Aquaculture" organized by ICAR Central Institute of Fisheries Technology, Cochin on 10 March, 2022
- Attended and participated in a Consultation Meeting of ECRICC Project on fishery related value addition with ECRICC project team through virtual mode on 15 February, 2022.

Dr. U Sreedhar, Principal Scientist

- Delivered Oral presentation on 'Inland fishing system of Jharkhand' In National Hindi Webinar on "Green Science for Blue Growth" held at VRC of CMFRI, Visakhapatnam on 28 March, 2022 and awarded the First best paper award in the theme "Fish Harvest and Post Harvest".
- As a RAC member attended and gave suggestion for the First meeting of Research Advisory Committee (RAC) for the 15th Financial Commission programs of CMLRE conducted virtually on 07 February, 2022.
- Attended as a special invitee the virtual meeting organised by International Ocean Institute (IOI) on 17 February, 2022. The programme was related to ocean governance-related training for interested stakeholders in their local language.

Dr. B. Madhusudana Rao, Principal Scientist

- Participated as subject expert in the selection committee constituted for the recruitment of Junior Research Fellow in the DST-SERB-SRG project entitled "Metagenome mining of marine macroalgal epiphytic microbiome for novel drug targets" conducted by GITAM (Deemed to be University), Visakhapatnam on 18 January, 2022
- Attended as audit member along with MPEDA officials for the Shaphari Certification of at M/s Visakhi Bioresources (P) Ltd, shrimp hatchery at Vizianagaram district on 9 February, 2022.
- Attended a meeting at ICAR-NBFGR, Lucknow regarding the final outputs and deliverables of ICAR-FAO collaborative project 'Support mitigation of antimicrobial resistance risk associated with aquaculture in Asia' on 15 March, 2022.

- Attended and participated in a Consultation Meeting of ECRICC Project on fishery related value addition with ECRICC project team through virtual mode on 15 February, 2022.

Dr. G. K. Sivaraman, Principal Scientist

- Participated and presented a poster on 'Baseline assessment of AMR pathogens prevailing in shrimp aquaculture farms in Kerala' authored by G. K. Sivaraman, Vineeth Rajan, Ardhra Vijayan, Ravikrishnan Elangovan, Alison Prendiville, Till T. Bachmann in "Antimicrobial Resistance Dx Bootcamp" under DOSA project organised by Prof. Till Bachmann, Univ. of Edinburgh, UK, Prof. Alison Prendivillie, Univ. of Arts, London, Prof. Amitabh Bhattacharjee, Assam Univ, Dr. G. K. Sivaraman, ICAR- CIFT, Cochin & Prof. Ravikrishnan Elangovan, IIT-Delhi, at IIT-Delhi during 28-29 March, 2022

- Participated and presented a poster on "Development and evaluation of spore-based kit for the detection of antibiotic residues in shrimp aquaculture settings" authored by G. K. Sivaraman, Naresh Kumar, Ravikrishnan Elangovan, Vineeth Rajan, Ardhra Vijayan, Alison Prendiville, Till T. Bachmann. in Antimicrobial Resistance Dx Bootcamp" under DOSA project organised by Prof. Till Bachmann, Univ. of Edinburgh, UK, Prof. Alison Prendivillie, Univ. of Arts, London, Prof. Amitabh Bhattacharjee, Assam Univ, Dr. G. K. Sivaraman, ICAR- CIFT, Cochin & Prof. Ravikrishnan Elangovan, IIT-Delhi, at IIT-Delhi during 28-29 March, 2022

- Presented a paper as co-author on "Genetic characterization of Methicillin resistant Staphylococcus isolates from aquaculture samples using Nanopore sequencing" authored by Ada Zwetlana, Jayakumal Patel, Dipannita Ghosh, Vineeth Rajan, G. K. Sivaraman, Vivekanandan Perumal, Ravikrishnan Elangovan in Antimicrobial Resistance Dx Bootcamp" under DOSA project organised by Prof. Till Bachmann, Univ. of Edinburgh, UK, Prof. Alison Prendivillie, Univ. of Arts, London, Prof. Amitabh Bhattacharjee, Assam Univ, Dr. G. K. Sivaraman, ICAR-CIFT, Cochin & Prof. Ravikrishnan Elangovan, IIT-Delhi, at IIT-Delhi during 28-29 March, 2022

- Delivered a talk on "Current methods on Pathogens Antimicrobial Susceptibility" in Antimicrobial Resistance Dx Bootcamp" organised under DOSA project at IIT-Delhi during 28-29 March, 2022.

- Delivered a talk on "Abx residue test" in Policy Workshop on Building local knowledge to manage AMR: A One-Health Approach to diagnostic developments in human, animal and aquaculture settings on 30 March, 2022 at IIT-Delhi by Prof. Till Bachmann, Univ. of Edinburgh, UK, Prof. Alison Prendivillie, Univ. of Arts, London, Prof. Amitabh Bhattacharjee, Assam Univ, Dr. G. K. Sivaraman, ICAR- CIFT, Cochin & Prof. Ravikrishnan Elangovan, IIT-Delhi

- Delivered a lecture on "AMU and AMR in aquaculture farm and its environment" In: International Workshop on Antimicrobial Resistance in Food-borne Pathogens: Safety Concern" being organized under the aegis of DBT funded Indo-UK collaborative project, NEOSTAR on AMR from 14-16 March, 2022 by the Division of VPH, ICAR-IVRI, Izatnagar, UP.

- Delivered a lecture on "Recent trends in AntiMicrobial Use (AMU), Antimicrobial Resistance (AMR) and its Diagnostics Development in National Conference on Current Advances in Life Sciences"-Virtual Mode (NCCALS-2022) on 4th - 5 March,2022, Department of Biotechnology, SRMIST, Kattankulathur-603203, Chennai, Tamil Nadu.

- Delivered a lecture on "AMR and AMU in shrimp aquaculture", in Edinburgh AMR Forum Seminar, Organized by the Edinburgh Infectious Diseases The Univ. of Edinburgh, Scotland, UK on 09 Febraury, 2022.
- Participated in Panel Discussion Session of the International Workshop on Antimicrobial Resistance in Food-borne Pathogens: Safety Concern" being organized under the aegis of DBT funded Indo-UK collaborative project, NEOSTAR on AMR on 16 March, 2022 by the Division of VPH, ICAR-IVRI, Izatnagar, UP.
- Attended as Chief guest of the "National Conference on Current Advances in Life Sciences"-Virtual Mode (NCCALS-2022) on 4 March, 2022, Department of Biotechnology, SRMIST, Kattankulathur-603203, Chennai, Tamil Nadu.

Dr. George Ninan, Principal Scientist

- Attended the Appraisal Committee Meeting on 02 February, 2022 to review the proposals for establishing Common Incubation Centres under PMFME scheme, MoFPI as expert member.
- Invited talk on "Transforming Aquaculture through Technological innovations – Fisheries Post Harvest Sector" in Azadi Ka Amrut Mahotsav Webinar Series "Fostering Agri Start-up Ecosystem" held on 1 March, 2022 by National institute of Agriculture Extension Management.
- Invited talk on "Technological innovations in Post-Harvest Sector for Aquaculture" in National Webinar on "Diversification of aquaculture" held on 1March, 2022 by ICAR–Central Institute of Fisheries Technology.

Dr. A. Suresh, Principal Scientist

- Attended a Workshop organized jointly by Kerala Agricultural University to design the training module on Climate Smart Agriculture for elected representative and officials of local bodies in the coastal areas of Thrissur district at Kerala Institute of Local Administration on 03 March, 2022.
- Delivered an invited lecture on "Climate change impacts on livelihoods in coastal ecosystem and way forward participatory planning" in the Workshop organized jointly by Kerala Agricultural University to design the training module on Climate Smart Agriculture for elected representative and officials of local bodies in the coastal areas of Thrissur district and provided an invited lecture, at Kerala Institute of Local Administration on 03 March, 2022.
- Delivered an invited lecture on *"Economic Evaluation Tools for Biodiversity Management'* in the training programme organised by Thunchath Ezhuthachan Malayalam University at the University campus (on 15 March, 2022).

Dr. Sullip K. Majhi, Principal Scientist

- Acted as external examiner for the viva-voce of the Ph.D. Scholar Mrs. Chinmayee Priyadarshini Khuntia of the School of Biotechnology, Kalinga Institute of Industrial Technology (KIIT), Deemed to be University.

- Attended an online training program on "Role of Technology in Community Level Disaster Mitigation" organized by Lal Bahadur Shastri National Academy of Administration, Mussoorie from 07-11 February, 2022.

Dr. Sajeev M.V. Senior Scientist

- Delivered an invited lecture on 'Participatory and Integrative Techniques for use with women farmers' in the training programme'Participatory techniques for women farmers: enabling gender-oriented feedback, situation analysis, problem prioritization' organized by MANAGE, Hyderabad and ICAR-CPCRI 05 January, 2022.

Dr. C.O. Mohan, Principal Scientist

- Attended the International Conference on Advancement of Science and Technology for Environment, Society and People (ICASTESP-2022) Organised by Society for Technology, Environment, Science & People, Kozhikode, Kerala 28-29 January, 2022 and presented a oral presentation on 'Effect of vacuum impregnation of Rosemary Essential Oil (REO) and Vacuum packaging on the quality of Yellowfin tuna (*Thunnus albacares*) chunks at chilled storage condition (1-2°C)' authored by Mohan, C.O., Remya, S., Bindu, J., Ashok Kumar, K.
- Invited talk on the topics: Post-harvest fish processing technologies, Cold chain technologies; Fish as health food in LINAC-NCDC Fisheries Business Incubation centre training programme organized by NCDC, GURUGRAM.
- Invited talk on "Thermal processing of fish" in the on-line training for Master Trainers on Fish and Marine Products Processing organized by NIFTEM in collaboration with ICAR-CIFT on 06 January, 2022.

Dr. Binsi P.K., Senior Scientist

- Invited talk on 'Farm to Fork: value chain gaps and Industry Dimensions' in the National seminar on 'Reorienting the strategies towards sustainable aquaculture and Fisheries' organized by KUFOS and Department of Fisheries, Kerala
- Expert interaction on "Value addition in Seafood Sector, Future dimensions" on 5 February, 2022 for FSPT students of VHSE ,Njarakkal
- Expert interaction on "Value addition in Seafood Sector, Future dimensions" on 9 February, 2022 for FSPT students of VHSE, Poovar
- Delivered lectures on the topics 'Demonstration of hygienic handling and drying of fish'; 'Fishery waste utilization' and 'Demonstration of preparation of feed & silage from fish waste' for the Training programme "Demonstration cum skill development programme on 'Fisheries based entrepreneurship'" in collaboration with MSSRF, Chennai (Cochin Branch) on 2-3 March, 2022.

Dr. Ashish Kumar Jha, SIC, Veraval

- Attended a talk on "Importance of Climate actions in Fisheries and Marine Resource Management in connections with state holders training programme organised by VRS of ICAR-CMFRI on 11 March, 2022.

Dr.V. Chandrasekar, Scientist

- Made an online poster presentation "Management and utilisation of clam resources in Vembanad lake: Using choice experiment to assess willingness" during 1st Indian Fisheries Outlook in the Session: Fisheries Resource Management, organized by ICAR-CIFRI, Barrackpore on 22 March, 2022.

Dr. Jesmi Debbarma, Scientist

- Attended a webinar on "National campaign on Diversification of Aquaculture" organized by ICAR- Central Institute of Fisheries Technology, Cochin on 10 March, 2022
- Oral presentation on 'Quality evaluation of Tuna caught by different fishing methods in Andhra Pradesh. In National Hindi Webinar on "Green Science for Blue Growth" held at VRC of CMFRI, Visakhapatnam on 28 March, 2022 and awarded the 2nd best paper award in the theme "Fish Harvest and Post Harvest".
- Attended and participated in a Consultation Meeting of ECRICC Project on fishery related value addition with ECRICC project team through virtual mode on 15 February, 2022.
- Delivered a talk on "Edible food packaging film from seaweed" in a Webinar on Transforming Waste into Wealth: Global Challenge, Local Solutions organized by CSIR-NIIST, Thiruvanathapuram on 19 January 2022.

Dr. S. Remya, Scientist

- Delivered a lecture on "Packaging and labelling of fish and fishery products" in the Front-Line Demonstration (FLD) & training programme on "Hygienic handling, drying and packing of fish" in collaboration with Krishi Vigyan Kendra (KVK), Kumarakom, Kottayam organized by ICAR-CIFT on 2 March, 2022 under the SCSP Programme.
- Delivered a lecture on 'Packaging and labelling of fish and fishery products'; 'Demonstration of packaging techniques'; 'Demonstration of preparation of value added products from fish' in the "Demonstration cum skill development programme on 'Fisheries based entrepreneurship'" in collaboration with MSSRF, Chennai (Cochin Branch) on 3 - 4 March, 2022.

Dr. Anupama T.K., Scientist

- Attended a talk on "Importance of Climate actions in Fisheries and Marine Resource Management in connections with state holders training programme organised by VRS of ICAR-CMFRI on 11 March, 2022

Dr. Parvathy U. Scientist

- Attended the 1st Indian Fisheries Outlook 2022 on "Priming Indian Fisheries in Attaining Sustainable Development Goals" under the Theme: "Fisheries post-harvest technology and value addition" held from 22-24 March, 2022 at ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata, West Bengal and presented a paper entitled"Bioactive and storage properties of astaxanthin-cow milk encapsulates" by Parvathy U., Binsi P.K. and Arya Raguvaran

- Delivered Invited talks on "Advanced fish processing technologies" and "Speciality fish products"in the Training of Master Trainers for Fish and Marine processing domain by NIFTEM, Thanjavur in collaboration with CIFT Cochin under Prime Minister Formalization of Micro Enterprise (PM-FME) scheme from 5 - 10 January, 2022.
- Invited talk on "Handling and pre-processing of fish for drying" in the training programme on "Pre-processing and Drying of fish" at ICAR-CIFT, Kochi, from 22-23 February, 2022.
- Delivered a lecture on "Battered and breaded products" in the Front-Line Demonstration (FLD) cum skill development training programme on "Seafood Value Addition" organized byICAR-CIFT in collaboration with Krishi Vigyan Kendra (KVK), Kumarakom, Kottayam on 28th February, 2022 under the SCSP Programme.
- Resource person for handling the topic on "Hygienic seafood handling, processing, packaging and value addition of fish and fishery products" in the Demonstration cum skill development programme on "Seafood Value Addition and Waste Utilization" under the centrally sponsored scheme SPMRM, Govt of India, Department of Rural Development, UT of Lakshadweep by ICAR-CMFRI-KVK, Lakshadweep in collaboration with ICAR-CIFT at Amini Island of Lakshadweep from 16-18 March, 2022.

Shri. Sreejith. S, Scientist

- Delivered lecture on 'Packaging materials used in seafood processing' for Vocational Higher Secondary School students of GVHSS Kadamakudy, Ernakulam on 07 January, 2022.
- Attended a talk on "Importance of Climate actions in Fisheries and Marine Resource Management in connections with state holders training programme organised by VRS of ICAR-CMFRI on 11 March, 2022.

Dr. Viji P, Scientist

- Attended and participated in a Consultation Meeting of ECRICC Project on fishery related value addition with ECRICC project team through virtual mode on 15February, 2022.

Dr. Renuka V, Scientist

- Participated in APE visit to M/s.Bell Foods, Thoppumpady, Kochi on 11 March 2022.
- Attended the "1st Indian Fisheries Outlook 2022: Priming Indian Fisheries in Attaining Sustainable Development Goals" to be held at Barrackpore, Kolkata during 22-24 March, 2022, organized in virtual mode by ICAR-Central Inland Fisheries Research Institute, Barrackpore.
- Attended the training programme on "Chromatographic techniques in seafood analysis" organized by Dept. of Fish Quality Management, FC&RI, Tamil Nadu Dr. J.Jayalalithaa Fisheries University (TNJFU), during 21-25 March, 2022.

Dr. A. Jeyakumari, Scientist

- Attended the 1st Indian Fisheries Outlook 2022 on "Priming Indian Fisheries in Attaining Sustainable Development Goals" under the Theme: "Fisheries post-harvest technology and value addition" held from 22-24 March, 2022 at

ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata, West Bengal and presented a paper entitled"Physico-chemical and functional properties of freeze-dried fish protein isolate from selected fishes" by Jeyakumari A and George Ninan.

- Attended the training programme on "Chromatographic techniques (HPLC& GC-MS) for food quality analysis at Department of Fish quality management division (DFQM), Fisheries college and Research Institute (FC & RI), Thoothukudi, Tamil Nadu during 21-26 March, 2022.
- Delivered a lecture on "Surimi and other mince-based fishery products" for the on-line training for Master Trainers on Fish and Marine Products Processing organized by NIFTEM in collaboration with ICAR-CIFT on 06 January, 2022.
- Delivered a lecture on "Preparation of value added products from fish and shrimp" for the training programme under the project " Collaborative Technology and Employability in Fisheries Sector in Odisha on 08 February,2022 organised by KVK, Malkangiri, Odisha.

Mrs. Greeshma S.S, SIC, Mumbai

- Attended assessment for renewal of approval of M/s. VKM Foods Private Limited (Formerly known as M/s Naik Seafoods Pvt. Ltd. Unit III) (Approval No.1114) on 15 February, 2022 at Vashi, Navi Mumbai.
- Attended Study Committee Meeting on "Review of Diesel Quota for Marine fishing boats and Fuel Subsidy Scheme and other fuel options including non-conventional energy for sustainable fishing" as a working committee panel member on 23 February, 2022 at Commissioner of Fisheries Hall, Mumbai.
- Attended as panel member in the seafood technologist interview at M/s. VKM Foods Private Limited at Vashi, Navi Mumbai on 14 March, 2022
- Attended assessment for renewal of approval of M/s. VKM Foods Private Limited at Taloja, Mumbai on 16 March, 2022.

Shri. Sathish Kumar K., Scientist

- Attended a training program on "Laboratory quality management system & internal audit as per IS/ISO/IEC 17025:2017" Conducted by NITS, BIS, from 04 – 07 January, 2022.
- Attended an online International Workshop on "Emerging Trends and New Opportunities in High-Pressure Processing" conducted by the Department of Agricultural Engineering, College of Agriculture, Vellanikkara, Thrissur from 21 – 22 February, 2022.
- Invited talk on the topic "Design and layout of fish processing units" in the Training of Master Trainers for Fish and Marine processing domain by NIFTEM, Thanjavur in collaboration with CIFT Cochin under Prime Minister Formalization of Micro Enterprise (PM-FME) scheme from 5 - 10 January, 2022.

Smt. Sreelakshmi K.R. Scientist

- Invited talk on 'Salt curing, smoking & drying of fishery products' in the Training of Master Trainers for Fish and Marine processing domain by NIFTEM, Thanjavur in collaboration with CIFT Cochin under Prime Minister

Formalization of Micro Enterprise (PM-FME) scheme from 5 - 10 January, 2022.

- Invited talk on 'Technologies for processing and value addition of fish' in the expo '12th Edition of FoodTech Kerala' being organized by Cruz Expo, Cochin, from 6-8 January, 2022 at Cochin.
- Invited talk on 'Value added products from fish' on the training programme on "Pre-processing and Drying of Fish" at Engineering Division of ICAR-CIFT, Kochi on 23rd February, 2022
- Expert interaction class on 'Spoilage in seafood' for students of Vocational Higher secondary school, Kadamkkudy, on 3 March, 2022.
- Invited talk on 'Value addition of fish' for the farmers of Wayanad organised by KVK Wayanad, on 9 March, 2022.
- Expert interaction class on 'Preparation and maintenance of work area for seafood processing' for students of Dr VVV KAM GRFT Vocational Higher secondary school, Karunagapally, on 10 March, 2022.

Dr. K. Elavarasan, Scientist

- Resource person for handling the topic on "Preparation of feed, silage and manure from secondary fishery raw material" in the Demonstration cum skill development programme on "Seafood Value Addition and Waste Utilization" under the centrally sponsored scheme SPMRM, Govt of India, Department of Rural Development, UT of Lakshadweep by ICAR-CMFRI-KVK, Lakshadweep in collaboration with ICAR-CIFT at Amini Island of Lakshadweep from 16-18 March, 2022.

Dr. Chinnadurai S, Scientist

- Delivered lecture on "*Trap operation: by-catch issues and mitigation measures*" in the training program on 'By-catch Reduction in Fisheries: Recent Advances' on January 21st, 2022 via Zoom organized by ICAR-Central Institute of Fisheries Technology.
- Presented a invited lecture on "*Role of ICAR-CIFT on development of Indian marine fisheries harvest sector*" for the B. F.Sc students of Veraval fisheries college, Veraval on 29 January, 2022 via Zoom.
- Attended virtual programme on National Campaign on "Diversification in Aquaculture" organized by CMFRI and attended webinar, coordinated by CIFT
- Attended virtual programme on National Campaign on "Diversification in Aquaculture" organized by CMFRI and attended webinar, coordinated by CIFT.
- Attended a talk on "Importance of Climate actions in Fisheries and Marine Resource Management in connections with state holders training programme organised by VRS of ICAR-CMFRI on 11 March, 2022

Dr. Sarika K, Scientist

- Invited as speaker for International Workshop on "Emerging trends and new opportunities in High Pressure Processing" by Department of Agricultural engineering, KAU during 21 to 22 February, 2022

- Attended a talk on "Importance of Climate actions in Fisheries and Marine Resource Management in connections with state holders training programme organised by VRS of ICAR-CMFRI on 11 March, 2022

Dr. Minimol V A, Scientist

- Attended and presented a poster on "Molecular characterization demonstrates the occurrence of phylogenetic similar isolates of V. alginolyticus and V. parahaemolyticus in aquatic environment' authored by Minimol V. A, Kishore P, Muthu Lakshmi T, Ranjit KN, Greeshma S, Nilavan E and Mothadaka MP in 34 th Kerala science congress (KSC 2022) organized by Kerala state council for Science, Technology and Environment during 10- 12 February, 2022 at Thiruvanthapuram.
- Participated in the one-day online workshop on "Genomics for sustainable fisheries and aquaculture" conducted by ICAR-Central marine research Institute, Cochin on 4 March, 2022.
- Delivered a lecture on safety hazards of fish and fishery products: assessment and mitigation measures NFDB – PMMYS sponsored National workshop on Capture Fisheries (Biotoxin - Safety Hazards)" held during 24-25 March, 2022 at Centre of Advanced study (CAS) in Marine Biology, Annamalai University, Parangipettai Chennai.

S. Ezhil Nilavan, Scientist

- Attended Regional Capacity building programme on "Module 2: Aquatic Animal Disease and Biosecurity", conducted by ICAR-NBFGR and APARRI from 04 to 12 January,2022
- Attended one day National webinar series on "Microencapsulation of nutraceuticals, organized by ICAR-CIPHET, Ludhiana on 03 February, 2022.

Dr. Abhay Kumar, Scientist

- Attended webinar on 'Aquaculture breeding programs, genetics and genomics: a global perspective and career prospectus' organized by AFS TALKS Series 38 on 15 January 2022
- Attended webinar on 'Cretaceous to Anthropocene: Ichthyological journey in the Western Ghats'' Organized by AFS TALKS Series 39 on 29 January, 2022.
- Attended webinar on 'Effects of aquaculture Probiotics: overhyped or real'' Organized by AFS TALKS Series 40 on 12 February, 2022.
- Attended webinar on 'Strengthening gender perspectives in fisheries research and extension'' Organized by AFS TALKS Series 42, on 12 March, 2022.
- Attended APE for approval and renewal of M/S. Ajay Foods International, Pune, Maharashtra on 23 March, 2022.

Smt. Rehana Raj, Scientist

- Attended webinar on 'Fish Talk' conducted by ICAR-CIPHET Ludhiana, Punjab on 10 January, 2022.

Dr. G. Kamei, Scientist

- Oral presentation on 'Indigenous fishing practices and baits of Manipur' In National Hindi Webinar on "Green Science for Blue Growth" held at VRC of CMFRI, Visakhapatnam on 28 March, 2022 and awarded with the Third best paper award in the theme "Fish Harvest and Post Harvest".

Dr K. Ahamed Basha, Scientist

- Attended a meeting at ICAR-NBFGR, Lucknow regarding the final outputs and deliverables of ICAR-FAO collaborative project 'Support mitigation of antimicrobial resistance risk associated with aquaculture in Asia' on 15 March, 2022.

Dr. Tejpal C.S., Scientist

- Awarded Dr. M. S. Swaminathan Best Indian Fisheries Scientist award for the year -2018 presented by Professional Fisheries Graduate Forum of India
- Attended "1st Indian Fisheries Outlook 2022: Priming Indian Fisheries in Attaining Sustainable Development Goals" jointly organized by Professional Fisheries Graduate Forum (PFGF) and ICAR-CIFRI, Barrackpore during 22-24 March, 2022.

Smt. Alfiya. P.V, Scientist

- Delivered a special lecture in online training of Master Trainers on Fish & Marine processing under PM-FME on the topic Machinery and equipment involved in unit operation of fish and marine food processing, CIP, organized by NIFTEM, Thanjavur and ICAR-CIFT, Cochin on 7 January, 2022.

Dr. S. Murali, Scientist

- Delivered a technical presentation on "Equipment and machinery for fish processing and value addition" on 10 February, 2022 in the virtual training program on "Profitable Farming through Mechanization" held from 7 to 11 February, 2022 organized by Extension Education Institute, Hyderabad.

Dr. J. Renuka, Deputy Director (Official Language)

- Delivered a talk on the subject Official Language Policy and its implementation in the National Institute of Micro, Small and Medium Enterprises, Hyderabad as part of two-day Hindi workshop on 10 - 11 March, 2022.

Shri. Avinash Agwane, Assistant Administrative Officer, Mumbai Research Center of ICAR-CIFT

- Participated in two days Hindi workshop organized by ICAR in Directorate of Weed Research, Jabalpur for ICAR institutes located in Central and West Zone of India on 7-8 March, 2022.

Ph.D. Awarded / पीएच.डी. से सम्मानित

Dr. Chinnadurai successfully defended the Doctoral Thesis Open Defence on ***"Studies on Development of Optimum Depuration Protocols for Commercially Important Edible Bivalves of India"*** on 12 January, 2022 in the Department of Biosciences, Mangalore University, Mangalore and awarded with Ph.D degree under the guidance of Dr. K. Sunilkumar Mohamed, Former Principal Scientist and Head, ICAR-CMFRI, Kochi.

डॉ चिन्नदुरै को डॉ के. सुनिलकुमार मोहम्मद, भूतपूर्व प्रधान वैज्ञानिक और मुख्य, भाकृअनुप-सीएमएफआरआई, कोचिन के निर्देशन में ***"स्टडीज आन डिवलेपमेंट आफ ओपटिमम डेपुरेशन प्रोटोवाल्स फार कार्मरशियली इंपोरटेंट एडिबल बैवाल्स आफ इंडिया"*** विषय पर थिसिस को डिफेंड करने पर बयोसाइन्स विभाग, मैंगलूर विश्विद्यालय से 12 जनवरी 2022 को पी.एच.डी की उपाधि प्रदान की गई.

Mr. Aneesh P. A., was awarded the degree of Ph.D. under the Faculty of Marine Sciences, Cochin University of Science and Technology on successfully defending his thesis entitled ***"Optimization of supercritical fluid extraction, characterization and assessment of bioactivities of astaxanth in oil from processing discards of Ridgeback shrimp (Solenocera choprai Nataraj, 1945)"*** done under the guidance of Dr. Suseela Mathew, Principal Scientist & Head i/c, Biochemistry and Nutrition Division on 8 February, 2022.

पी.ए.अनीश को डॉ सुशीला मैथ्यू,प्रधान वैज्ञानिक एवं प्रभारी जीवरसायन एवं पौष्टिक प्रभाग,भाकृअनुप - केमाप्रौसं के निर्देशन में ***"आपटिमैजेशन आफ सपूर क्रिटिकल फ्लूयिड एक्सट्रेक्शन, केरेक्टेरैजेशन एंड एसेसमेंट आफ बयोएक्टिव आफ अस्ताजांतिन आयिल प्राम प्रोसेसिंग डिस्कार्डस आफ रिड्जबैक श्रिंप"*** विषय पर थिसिस को डिफेंड करने पर कोचिन विश्विविद्यालय से 8 फरवरी 2022 को पी.एच.डी की उपाधि प्रदान की गई.

Personalia

Retirements

- Shri. W. Sreenivasa Bhat, Senior Administrative Officer, ICAR-CIFT, Cochin retired on superannuation *w.e.f.* 31 January, 2022.
- Shri Shaji T.N., Assistant, ICAR-CIFT, Cochin retired on superannuation 31 January, 2022
- Dr. Saly N. Thomas, Principal Scientist, CIFT, Cochin retired on superannuation *w.e.f.* 28 February, 2022.
- Shri K.D. Jos, ACTO, CIFT, Cochin retired on superannuation *w.e.f.* 28 February, 2022

व्यक्तिक

सेवानिवृत्ति

- श्री डब्ल्यू श्रीनिवास भटट, वरिष्ठ प्रशासनिक अधिकारी, केमाप्रौसं, कोचिन, 31 जनवरी 2022 को सेवानिवृत्त हुए.
- श्री शाजी, टी.एन, सहायक, केमाप्रौसं, कोचिन, 31 जनवरी 2022 को सेवानिवृत्त हुए.
- डॉ सैली एन.थामस, प्रधान वैज्ञानिक, केमाप्रौसं, कोचिन, 28 फरवरी 2022 को सेवानिवृत्त हुए.
- श्री के.डी.जोस,समुतअ, केमाप्रौसं, कोचिन, 28 फरवरी 2022 को सेवानिवृत्त हुए.

Promotions

- Shri Sida Hanif Ummer Bhai Senior Technical Assistant promoted to Technical Officer *w.e.f.* 29 June, 2021 vide Office Order F.No. 2-2/2020-Estt dated 01 February, 2022.
- Shri K.V. Mohanan Senior Technical Assistant promoted to Technical Officer *w.e.f.* 29 June, 2021 vide Office Order F.No. 2-2/2020-Estt dated 01 February, 2022.
- Smt. Reshmi K., Senior Technician promoted to Technical Assistant *w.e.f.* 05 August, 2021 Office Order F.No. 2-2/2020-Estt dated 01 February, 2022.
- Smt. Anu Mary Jose, Senior Technician promoted to Technical Assistant *w.e.f.* 06 August, 2021 vide Office Order F.No. 2-2/2020-Esttdated 01 February, 2022.
- Smt. Archana G., Senior Technician promoted to Technical Assistant *w.e.f.* 06 August, 2021 vide Office Order F.No. 2-2/2020-Esttdated 01 February, 2022.
- Shri Sreejith V.N., Senior Technician promoted to Technical Assistant *w.e.f.* 08 August, 2021 vide Office Order F.No. 2-2/2020-Esttdated 01 February, 2022.
- Smt. Mary P.J., Senior Technician promoted to Technical Assistant *w.e.f.* 09 August, 2021 vide Office Order F.No. 2-2/2020-Estt dated 01 February, 2022.
- Shri Suresh P., Senior Technician promoted to Technical Assistant *w.e.f.* 12 August, 2021 vide Office Order F.No. 2-2/2020-Estt dated01 February, 2022.
- Shri Yogesh D. Kriplani, Senior Technician promoted to Technical Assistant *w.e.f.* 25 August, 2021 vide Office Order F.No. 2-2/2020-Esttdated 01 February, 2022.

पदोन्नति

- श्री सिदा हनीफ उम्मरबाई वरिष्ठ तकनीकी साहयक को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 29.6.2021 के आधार पर 1 फरवरी 2022 से तकनीकी अधिकारी के रूप में पदोन्नति हुई.
- श्री के.वी.मोहन वरिष्ठ तकनीकी साहयक को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 29.6.2021 के आधार पर 1 फरवरी 2022 से तकनीकी अधिकारी के रूप में पदोन्नति हुई.
- श्रीमती रेशमी के., वरिष्ठ तकनीशियन को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 5.8.2022 के आधार पर 1 फरवरी 2022 से तकनीकी सहायक के रूप में पदोन्नति हुई.
- श्रीमती अनुमेरी जोस, वरिष्ठ तकनीशियन को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 6.8.2022 के आधार पर 1 फरवरी 2022 से तकनीकी सहायक के रूप में पदोन्नति हुई.
- श्रीमती अर्चना जी, वरिष्ठ तकनीशियन को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 6.8.2022 के आधार पर 1 फरवरी 2022 से तकनीकी सहायक के रूप में पदोन्नति हुई.
- श्री श्रीजित वी.एन., वरिष्ठ तकनीशियन को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 8.8.2022 के आधार पर 1 फरवरी 2022 से तकनीकी सहायक के रूप में पदोन्नति हुई.
- श्रीमती मेरी पी.जे., वरिष्ठ तकनीशियन को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 9.8.2022 के आधार पर 1 फरवरी 2022 से तकनीकी सहायक के रूप में पदोन्नति हुई.
- श्री सुरेश पी, वरिष्ठ तकनीशियन को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 12.8.2022 के आधार पर 1 फरवरी 2022 से तकनीकी सहायक के रूप में पदोन्नति हुई.
- श्री योगेश डी. कृपालनी, वरिष्ठ तकनीशियन को कार्यालय फा सं 2-2/2020 स्थापना दिनांक 25.8.2022 के आधार पर 1 फरवरी 2022 से तकनीकी सहायक के रूप में पदोन्नति हुई.

Obituary / शोक संदेश

Dr. K. Ashok Kumar, Principal Scientist, and Head i/c Fish Processing Division, ICAR-CIFT left for heavenly abode on 16 February, 2022. Dr Ashok Kumar has left behind a significant research contributions in the field of post-harvest fisheries, quality management, HACCP, NABL accreditation etc. He had established an excellent linkage with fisheries export sectors and state level stakeholders bringing wide visibility to the institute. With profound grief, the CIFT family expressed their deep condolences for the untimely and sad demise of Dr. Ashok Kumar and pray almighty for the divine soul to rest in peace.

डॉ के. अशोक कुमार, प्रधान वैज्ञानिक, प्रभाग प्रभारी, मत्स्य प्रसंस्करण प्रभाग, भाकृअनुप-केमाप्रौसं 16 फरवरी 2022 को स्वर्गवास हो गए. डॉअशोक कुमार ने पश्च पैदावार मात्स्यिकी, गुणता प्रबंधन, एचएसीसीपी, एनएबीएल प्रत्यायन आदि के क्षेत्र में महत्वपूर्ण शोध योगदान छोड़ गए. उन्होंने मात्स्यिकी निर्यात क्षेत्र और राज्य स्तर के पणधारियों के बीच कडी बन संस्थान को पहचान दिलाई. केमाप्रौसं परिवार उनके असामयिक निधन पर गहरा शोक व्यक्त करते हैं और उनकी आत्मा के शांति की प्रार्थना करते हैं.

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