



Flying Fish

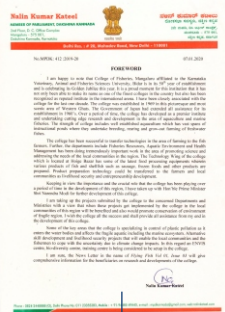
Beyond horizon...



Message from

Shri. NALIN KUMAR KATEEL

Hon'ble Member of Parliament, India &
President of BJP, Karnataka



I am happy to note that College of Fisheries, Mangaluru affiliated to the Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar is in its 50th year of establishment and is celebrating its Golden Jubilee this year. It is a proud moment for this institution that it has not only been able to make its name as one of the finest colleges in the country but also has been recognized as reputed institute in the international arena. I have been closely associated with the college for the last one decade. The college was established in 1969 in this picturesque and most scenic area of Western Ghats. The Government of Japan had extended all assistance for its establishment in 1960's. Over a period of time, the college has developed as a premier institute and undertaking cutting edge research and development in the area of aquaculture and marine fisheries. The strength of college includes well established aquaculture which has vast spans of instructional ponds where they undertake breeding, rearing and grow out farming of freshwater fishes.

The college has been successful to transfer technologies in the area

IN THIS ISSUE

This issue highlights the activities, programmes and events undertaken by staff and students of the College of Fisheries, Mangaluru during the quarter **October to December 2019**.

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Research & Training Vessel



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of farming to the fish farmers. Further, the departments include Fisheries Resources, Aquatic Environment and Health Management has been doing tremendously important work in the area of promoting science and addressing the needs of the local communities in the region. The Technology Wing of the college which is located at Hoige Bazar has some of the latest food processing equipments wherein various products of fish and shellfish such as sausage, frozen foods and other products are prepared. Product preparation technology could be transferred to the farmers and local communities as livelihood security and entrepreneurship development.



Hon'ble MP Shri. Nalin K. submitted memorandum to Hon'ble Prime Minister that included development of the College of Fisheries, Mangaluru.

Keeping in view the importance and the crucial role that the college has been playing over a period of time in the development of this region, I have taken up with Hon'ble Prime Minister Shri Narendra Modi for further development of this college.

I am taking up the projects submitted by the college to the concerned Departments and Ministries with a view that when these projects get implemented by the college in the local communities of this region will be benefited and also would promote conservation of environment of fragile region. I wish the college all the success and shall provide all assistance from my end in the development of this college.

Some of the key areas that the college is specializing in control of plastic pollution as it enters the water bodies and affects the fragile aquatic including the marine ecosystem. Alternative skill development and livelihood security projects that will enable the local communities and the fishermen to cope with the uncertainty due to climate change impacts. In this regard an ENVIS centre, biodiversity centre, training centre is being considered to be setup in the college.

I am sure, the News Letter in the name of Flying Fish Vol 01, Issue 03 will give comprehensive information for the beneficiaries on research and developments of the college.

Date: 07.01.2020
Place: Mangaluru

Nalin Kumar Kateel

Health, Environment and Fisheries

International Coastal Clean-up Day 2019 (The Hindu, Indian Express, Deccan Herald, Udayavani, Hosadiganta, Times of India - 22 September 2019)

The Ministry of Earth Sciences, Government of India through National Centre for Coastal Research, Chennai has assigned CoFM to undertake International Coastal Clean Up campaign on 21.09.2019. A team comprising of about 200 students and staff of CoFM took up the assignment to clean up Tannirbhavi beach at Mangaluru. The CoFM team was also joined by the Indian Coast Guard teams and Central Industrial Security Force team and Shri K.P Paniker, Project co-ordinator for Thannirbavi beach Yojaka (India) Pvt. Ltd. at Tannirbhavi. In total 500 people together with the locals collected the discarded such as plastic straws, spoons, food wrappers, cups, bottles, toys etc. All waste and solid wastes were segregated into degradable and non - degradable wastes packed in gunny bags & garbage bags, these were handed over to Mangaluru City Corporation for disposal. Further the team along with the placards took up rally along Tannirbhavi village spreading the message and making the residents/passerby aware of the harmful effects of plastic and other non- biodegradable materials dumped into the sea. The teams were also joined by local school children. The pamphlets highlighting the adverse impacts of pollution was distributed to local residents and were requested to avoid the usage of plastic.



The press/media was also present for supporting this campaign. The students of the CoFM expressed their concerns with regard to increase of plastics in sea water and their adverse impact on younger generations. [Read more: http://bit.ly/2QT8U42](http://bit.ly/2QT8U42)

Identification and reporting of farming of African Catfish (*Clarias gariepinus*) in Chintamani, Chikkaballapur District - 21st October 2019



The Government of India has banned the farming and sale of African catfish (*Clarias gariepinus*, family Clariidae) in India as the fish pose a threat to indigenous fish varieties. The Fisheries Department, Government of Karnataka directed CoFM to inspect the fish ponds in Chinnasandra, Chikkaballapur District of Karnataka. A team constituting of Scientists from Department of Fisheries Resources and Management, CoFM, Scientists from FRIC, Hebbal and FRIC, Hesarghatta together with the officials from the Department of Fisheries, Revenue and Police departments visited the catfish culture ponds in and around the Chinnasandra and nearby villages on 21 October 2019. There were 87 fish ponds in Chinnasandra and nearby villages. The visiting scientists collected the fish samples from these farms and identified them to be *Clarias gariepinus* based on key taxonomical characteristics. The team submitted a detailed report to the Deputy Commissioner, Chikkaballapur District with a recommendation that the culture and marketing of this fish is illegal and needs to be banned. Accordingly action has been initiated by the authorities against these fish farmers.

Site inspection visit to Dredger "Bhagvati Prem" (The Hindu - 2 November 2019)

The fisherman association approached CoFM with regard to the dangers posed by Dredger Bhagvati Prem which was grounded off Surathkal Beach by NMPT authorities. The Scientist from the college visited the site, inspected the shoreline and studied the physical features of the area. Based on the observations, statement was issued by the college stating that the ship which is very close to the shoreline poses danger to sediment movement along the shore. The ship if stays for long time at this state, large scale erosion would take place as was observed with M.V. River

Princess that had run aground of Goa coast in 2003. The issue has been now taken up with appropriate authorities for early removal of the dredger Bhagvati Prem. Several news papers have carried this article and media is monitoring the situation accordingly. [Read more: http://bit.ly/2tTXArV](http://bit.ly/2tTXArV)



Two days farmers fest "Krishimela - 2019" at Brahmapura (Newskarnataka - 19 & 20 October 2019)

A two day fest "Krishimela-2019" was organized by the Zonal Agricultural & Horticultural Research Station, Brahmapura on 19 Oct & 20 Oct, 2019. Shri. K. Raghupathi Bhat, MLA Udupi District inaugurated the programme. The event focussed on the auxiliary technologies to enhance agriculture income, Yield demonstration of new seed varieties, agricultural innovations and implements suitable for small and marginal farmers through seminars and exhibition.

CoFM participated in the event and had set up a stall where various models and exhibits related to fish and fisheries were displayed. The visitors to the stall were apprised of the activities of CoFM as well as the models and exhibits displayed. On the occasion, leaflets prepared by the college on "Fish for Good Health" and ಖನಿ ಕೃಷಿಯಲ್ಲಿ ನೀರಿನ ಗುಣಮಟ್ಟದ ಮಹತ್ವ was released by Shri Manjunatha K. Naik, Vice Chancellor, University of Agricultural and Horticultural Sciences, Shivamogga. More than one lakh farmers/visitors from in and around Udupi District participated in the Krishi Mela. [Read more: http://bit.ly/36AbSQv](http://bit.ly/36AbSQv)



Parent Teachers meet of B.F.Sc students held at CoFM - 14 & 21 September, 2019

The CoFM organized a Parent Teachers meeting on 14 and 21 Sept. 2019 in the seminar hall. The main purpose of the meet was to create a common platform, where teacher and parents come together to enrich the student's educational experiences and discuss several issues with regards to the overall development of students. The faculty present apprised the students on stress management, study methods for improving their overall marks and the various training and job opportunities available on completion of the course. Parents were glad and requested that such meetings to be held more frequently and put forward suggestions to teachers for the overall development of their wards.

CoFM students visit Indian Coast Guard Ship VIKRAM - 12 October 2019

The undergraduate students of CoFM had an opportunity to visit ICGS Vikram, an offshore patrol vessel docked at New Mangaluru Port, Mangaluru. ICGS Vikram, is the first defence ship which has been entirely built and developed by Larsen & Toubro and manufactured under the 'Make in India' programme. Commandant Raj Kamal Sinha and other officers onboard apprised the students about the state-of-art technology features equipped in the ship such as advanced communication and navigational systems, cutting edge sensors and various types of machinery used in defence purpose. A short film based on the role of Coastal Guards in India was also screened. The students also had an interactive session with the Coast Guard officers wherein they shared their experiences and also gave insight on the selection criteria for coast guards.



Drop in mackerel and sardine and increase in Kargil fish catch (Times of India - 12 November 2019)

It has been noticed that for the last few years there has been a decline in Sardine and Mackerel catch along the Karavali coast, which were earlier being caught in huge quantities. The same is true for the other commercial species like pink perch, pomfrets, seer fish etc. In place of these commercially important species, *Odonus niger* a non-conventional fish has appeared in large quantities. *Odonus niger* also called as 'trigger-fish' is locally referred as 'Kargil fish' or 'Klaati' in Karnataka. Trawl landings of this fish along Karnataka coast is seen to increase from 41,810 tonnes in 2018 to 2,69,500 tonnes as of September 2019. Experts in CoFM are of the opinion if this trend in Kargil fish catch continues, it would replace the catch of commercially important fish along the Indian coast. Presently, trigger fish is not consumed due to its appearance, taste and is treated as trash fish used to prepare fish meal. [Read more - http://bit.ly/39NJ8pb](http://bit.ly/39NJ8pb)



Candle light March - protesting atrocities against women - 6 December 2019

The Staff and Students of CoFM held a 'Candlelight March' within the college premises to protest against the brutal rape and murder of a young Telangana lady veterinary doctor. Staff and student representatives spoke on the occasion and were of the opinion that the judicial system should be strict and punishment meted out for such actions to be severe so that nobody would dare to commit such crimes.

Nirbhaya Karate Classes

As a step towards women safety, CoFM has introduced regular Karate Classes to the girl students towards self defence.



Rural Fisheries Work Experience Programme RFWEP 2019 (Prajavani - 22 December 2020)

The course entitled "Rural Fisheries Work Experience Programme" RFWEP including NSS camp offered during II Semester of the academic year 2019-20 for 11/ students that the camp was conducted from 19th to 25th December, 2019 at adopted village- Daregudde, Moodabidiri Taluk, D.K. dist.

Community outreach/Extension programmes



Field visit by B.F.Sc. students to Net mending yard near State Bank, Mangaluru - 28 December 2019



Field visit to Aquatic Biosystems, Vamanjoor, Mangaluru Ornamental Fish Unit - 28 December



Field trip to the Landing Center, Mangaluru by undergraduate students- 28 December 2019

Activities

First Report of Red Sea Bream Iridovirus (RSIV) in Asian sea bass in India- (The Hindu, Times of India, Deccan Herald - 13 December 2019)

The Department of Aquatic Animal Health Management of CoFM reported for the first time RSIV viral disease in Asian sea bass (*Lateolabrax niloticus*), hitherto unknown in Indian waters. The fish infected with RSIV, was first observed in Japanese cultured red sea bream farm in the 1990's. Asian sea bass grown in cages in nearby Udupi District. On complaint from fish farmers that the fishes exhibited abnormal behaviour and other clinical signs such as slow movement, lethargy, reduced feeding, erratic movement along the sides of the cages and mortality the pathologists from the college collected samples and analysed them. The laboratory tests indicated that Asian sea bass to be infected by RSIV. More than 30 marine and brackish water fish species such as sea bass, grouper fish and red sea bream etc, are known to be susceptible to this virus. This virus can cause mortality up to 100% depending on host fish species, size, age, water temperature and other culture conditions. The main target organs being spleen, kidney, heart, intestine and gill. RSIV is a new emerging virus in Indian waters and its spread could be controlled through proper scientific management practices.



The college has been carrying out a disease surveillance programme under the 'National Surveillance of Aquatic Animal Disease' project in both freshwater and brackish water cultured fishes. The programme was initiated by the National Bureau of Fish Genetic Resources (NBFG), Lucknow. The prime objective of the project is to create awareness about emerging aquatic animal diseases and preventive measures among the fish farmers in the regions where fish culture and shrimp farming are being carried out in the State of Karnataka, through passive and active surveillance. With regard to eating fish which has been infected with the above virus the matter has been taken up with the Ministry of Health and Family Welfare/FSSAI seeking their opinion with respect to food safety. [Read more: http://bit.ly/2N567CB](http://bit.ly/2N567CB)

Fisheries Research/Publications

1. Ram MK et. al. 2019. Evaluation of biofilm of *Vibrio anguillarum* for oral vaccination of Asian seabass, *Lates calcarifer* (BLOCH, 1790). Fish Shellfish Immunol.
2. S.K.Girisha et. al. 2019. Red sea bream iridovirus disease (RSIVD) outbreak in Asian seabass (*Lates calcarifer*) cultured in open estuarine cages along the west coast of India: First report. Aquaculture. <https://doi.org/10.1016/j.aquaculture.2019.734712>
3. Surasani VKR et. al. 2019. Effect of organic acid on recovery yields and characteristics of rohu (*Labeo rohita*) protein isolates extracted using pH shift processing. J Sci Food Agric.
4. M.A.A. Mamun, et. al 2019. Effect of Biofilm of *Aeromonas Hydrophila* Oral Vaccine on Growth Performance and Histopathological Changes in Various Tissues of Striped Catfish, *Pangasianodon Hypophthalmus* (Sauvage 1878). Indian Journal of Animal Research. DOI: 10.18805/ijar.B-3814
5. Mamun et. al 2019. Assessment of Probiotic in Aquaculture: Functional Changes and Impact on Fish Gut. Microbiology Research Journal International, 29(1), 1-10. <https://doi.org/10.9734/mrji/2019/v29i130156>
6. Anjusha et. al. 2019. Effect of Medicinal Herbs on Hematology of Fishes. Int. J.Curr. Microbiol. App. Sci. 8: 2371-2376. doi: <https://doi.org/10.20546/ijcmas.2019.809.274>

Upcoming Conferences/Events

CoFM thanks MoEF-CC, World Bank and SICOM New Delhi for providing a grant of Rs. 50 Lakhs towards the Golden Jubilee (GJ) Celebrations which will focus on Integrated Coastal Management and livelihood of fishing communities.

1. The CoFM welcomes the alumni who have come from various parts of the world and who have shown keen interest in the development of the college.
2. As a runup to the GJ celebrations a meeting with the alumni is scheduled to be held on 24th January 2020 in CoFM. Alumni from various parts of the world are expected to attend the meeting.
3. The GJ celebration marking the 50 years of the college establishment will be held between 12 Mar. to 14 Mar. 2020. The theme for GJ is " Integrated Coastal Management and livelihood of fishing communities". All are requested to attend this function which will have a series of technical sessions wherein eminent speakers from within the country and abroad will be speaking on the above theme. The local fishing communities, fishermen associations, staff and students of CoF from various states and countries will be participating in the event along with Government officers.
4. The students of CoFM will be holding Fishco Festival, a flagship event of CoFM that will involve participation of more than 50 colleges of Dakshina Kannada for the 3 day mega celebration and literary event. The event is scheduled between 22 Mar. to 27 Mar. , 2020.

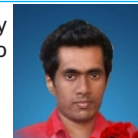
Staff and Student News

- ➔ Placement of students: IV BFSc students - Mr. Namrith, Ms. Nirmitha P. Uchil, Mr. Praveen Kumar S., Mr. Vishnu K. - Nekkanti Sea Foods Ltd. (NSFL) for the job position as Marketing executives
- ➔ All India ICAR-JRF exam 2018-19 rank holders, CoFM - http://www.cofm.edu.in/rank_holders_listings.html
- ➔ Ms. Yashwini Y. Mutta, Masters student at the Department of Fisheries Resource Management, CoFM, bagged the 'Best presentation award' in MARICON - 2019, for her paper entitled - "A survey on the extent of plastic pollution and the ingestion of microplastics by commercially important fishes off Mangalore coast" presented in the International Conference on Frontiers in Marine Science: Challenges and Prospects organized by the School of Marine Sciences, Cochin University of Science and Technology, Kerala, India during December 16-20, 2019 under the guidance of Dr. S. R. Somashekar, Prof & Head, Dept. of FESE, CoFM.



Superannuation - CoFM wishes him a happy retired life!
Dr. N. Basavaraj
 Professor (Aquaculture) CoFM on 30.9.2019

Obituary - CoFM deeply mourns the sad demise. We pray that God Almighty give courage to the bereaved family to bear the loss with fortitude.
Mr. Bimal V,
 Alumni CoFM, B.F.Sc 2009-13



Fun Facts - *Odonus niger*

- ➔ Also known as Kargil Fish (Triggerfish)
- ➔ They vary in size and can grow up to 3 feet long.
- ➔ There are about 40 known Triggerfish species
- ➔ When a Triggerfish senses danger, fish moves its dorsal fins like a trigger.
- ➔ They are highly carnivores and equipped with very powerful jaws to crush the food like shells, crabs etc.
- ➔ They shoot water out of the mouth to remove sand particles and they can dig into the sand/mud to get food
- ➔ They are bottom dwellers, finding crabs, worms, other crustaceans such as mollusks from the bottom of the sea floor.



Scientific name: *Odonus niger*
Family: Balistidae
Class: Actinopterygii
Phylum: Chordata

Dean's Desk



I along with the Flying Fish team wish all the readers of this newsletter a very Happy New Year. The college has successfully brought out 3 newsletters during 2019. The entire Flying Fish team has been working hard to collect compile information so that every newsletter provides you with new information. The college is going to celebrate its Golden Jubilee during 2nd week of March 2020. The information brochure for the Golden Jubilee will be put up on the website soon. I request all stakeholders, academicians, scientists working in the field of fish and fisheries to join the Golden Jubilee Celebrations of CoFM. I also thank MoEF-CC, World Bank & SICOM New Delhi for agreeing to support CoFM.

We're on the Web! www.cofm.edu.in
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