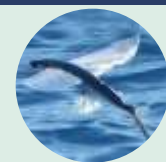




Flying Fish

Beyond horizon...



Message from



Shri. Angara S.

Minister of Fisheries, Ports and Inland Transport Department Government of Karnataka

College of Fisheries, Mangaluru has been bringing out a quarterly newsletter 'Flying Fish'. I would like to heartily congratulate the college for this. After taking charge as the Minister of Fisheries, Ports and Inland Transport Department, Government of Karnataka, I have come across several issues relating to fisheries in the state such as, decline in fish production, illegal fishing, subsidies, the problem of old Fishing ports, alternative livelihood for fishermen, insurance and health issues, natural disasters, lack of communication etc. Efforts are being made to find a suitable solution for these issues.

To improve the livelihood conditions of the fishing community, the department is taking measures to provide a good market environment with cold storage installation and other infrastructure facilities. Attention is being given to restore the environment and in developing the Karnataka

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 January to March 2021.

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① Foundation laying ceremony for Ultra Modern Aquaculture Unit



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③ Monolith found at CoFM Technology Wing

coastline. With increasing demand and value for seaweed, feasibility for growing seaweed along the coast, skill development and other fisheries related activities have been undertaken under the PMMSY scheme of the Central Government.

There is a shortage of fish seeds in the state with regard to inland fisheries, which is currently procured from Tamil Nadu, Andhra Pradesh and other neighbouring states. To bridge the gap between demand and supply of fish seeds, the College of Fisheries, Mangaluru under the Rashtriya Krishi Vijnana Yojana program, GoI, has been sanctioned a grant of Rs.7.9 crores for setting up a Modern research

and instructional fish farm with new aquaculture technologies. The centre was inaugurated with district MPs and legislators.

After assuming charge as Minister of Fisheries, GoK, I visited the College and had discussions with the College Professors, members of the Fishermen's Association and the Fishing community. The college is one of the best in the country with the necessary infrastructure. Hence, I am sure the College can play an important role in solving problems related to fisheries and assist the Government including Karnataka Fisheries Development Corporation.

I wish you all the best for the colleges upcoming programmes.

Best Regards,

(S. ANGARA)

Date: 21/04/2021
Place: Bengaluru

Environment and Fisheries

CoFM celebrates Republic Day 2021

The 72th Republic day was celebrated at CoFM on 26.01.2021. The National flag was hoisted by Dr. Senthil Vel, Dean CoFM in the presence of staff of the college. The function was celebrated taking all precautionary measures for COVID-19. As a part of the Republic day celebration a painting competition was organized for the staff members and their families.

Training program on Dry Fish processing methods for fisher women

Two training programmes on “Dry fish processing methods using advanced processing technology” for fisherwomen were jointly organized by the College of Fisheries and the Coastal Development Authority, Mangaluru. The training programme is in line with Athmanirbhar Bharat, launched by Honourable Prime Minister Narendra Modi. The function was inaugurated by Coastal Development Authority Chairman Dr. Mattar Ratnakara Hegde. Two training sessions were conducted, one at Fish Processing Technology Division of CoFM between 15-18th January, 2021 and another at Malpe during 8-9th February, 2021. Several fisherwomen were trained on advanced aspects of fish drying which included the use of Solar Biomass Hybrid dryers for drying fish. The fisherwomen were also trained on quality maintenance and preservation techniques, branding and marketing of food products as well as obtaining certification from Food Safety and Standards Authority of India (FSSAI) for their products. The college has been assigned the job of preparing a detailed project report for setting up dry fish curing yards at Mangaluru, Udupi and Karwar by the Government of Karnataka. Read more : <https://bit.ly/2MJr9K4>



District Commissioner Mangalore visited CoFM and held meeting

Dr. Rajendra KV, District Commissioner, Mangaluru visited the College on 10.02.2021. During his visit a meeting to discuss the various issues of the college as well as the fishing community was held along with Dean and staff members of the college. A presentation on various developmental projects that could be taken up by CoFM, which could benefit the economic development of the district was made by Dean,CoF. Detailed discussions were held on issues pertaining to provision of tertiary treated sewage water plant for effective recycling and utilization of sewage water at CoF, improvising the sports complex facilities, declaration of CoFM as an CRZ agency, establishment of a central laboratory, solarification of CoFM etc. and the action plan to be undertaken for each of these issues were proposed. The discussions also led to the Deputy commissioner indicating that CoFM could play a major role in developing a wet market under the PMMSY scheme, upgradation of hostel and other facilities for the upcoming skill development centre, renovation of discarded boats on a pilot scale, establishment of an Oceanarium and development of tourism at Mangaluru.

Laying of Foundation stone for ultra-modern aquaculture unit at CoFM

Minister of Fisheries, Ports and Inland transport, Shri S Angara laid the foundation stone for ultra-modern aquaculture units worth Rs 7.9 crore at CoFM on 23.2.2021. The Minister also inaugurated the replica of a fishing boat and laid the foundation stone for the construction of Matsya Darshini canteen on the premises of the CoFM. The foundation laying ceremony was also attended by MLA's of the district, District Commissioner and several other dignitaries. Read more: <https://bit.ly/3kQVvHj>



CoFM participates in a meeting held for setting-up a high-tech fish park in Mangaluru

A review meeting was held by the Deputy commissioner and the Coastal Development Authority and has planned to set up a High-Tech fish park in the city. The park will facilitate cold storage facility processing and packing of fish products. The fish park would come up near the Fisheries College."The officials have been directed to complete the pending works by the end of March. In the district, Rs 26 crore of the funds of MLAs and MPs are pending. The officials have directed to utilise the pending funds and complete pending works." Read more: <https://bit.ly/309j8Ry>

Two monoliths found at Technology Wing campus of CoFM

Two inscriptions, one in Portuguese and another in Kannada, have been found on the technology wing campus of the College of Fisheries, at Hoigebazar in the city, while the ground was being excavated for constructing a building under the Smart City Mission. They were noticed by Mr. Shreyash G. Bhandary, a third-year BFSc student. The Prime Minister's Office has directed the Archaeological Survey of India (ASI) to examine the inscriptions. As per the preliminary studies by the archaeologists, the Kannada inscription belongs to Alupa dynasty of 12-13th century and the engraved script shows that it is a record of a gift of 100 gadeyana, which means 100 gold coins. The ASI has yet to decode the Portuguese inscription. In the next edition of the Flying fish the finding of ASI will be reported which in intensity.

Read more: <https://bit.ly/396J6dy>

Activities

**Tentative list of Sectors for investment and Opportunities for developing Blue Economy of the Country
Aquatic Economy Sector**

<ul style="list-style-type: none"> i. Living resources ii. Minerals iii. Energy iv. Coastal maritime research and education, Institutions v. Ocean support services vi. Desalination vii. Maritime safety and security viii. Other raw materials (e.g. for marine biotechnology) ix. Transport and trade x. Ship and Boat Building xi. Tourism and recreation xii. Coastal development xiii. Carbon sequestration xiv. Coastal protection xv. Waste disposal xvi. Biodiversity Conservation xvii. Western Ghats and Eastern Ghats bio sphere reserve xviii. Island Development xix. Cultural, religious and spiritual services xx. Archeological and heritage sites xxi. Telecommunication xxii. Disaster Management xxiii. Coastal and marine security xxiv. Coast and port based Industries 	<p>Capture fisheries (sea, rivers, lakes, ponds, estuaries) Fresh Water Aquaculture Marine aquaculture Brackish Water Processing and retailing Aggregates mining - Sand, mineral nodules, etc Marine (including deep sea) minerals mining Sea salt production Offshore oil and gas - petroleum, shell gas, etc Coastal electric power generation (when ocean/estuary waters are used for cooling) Renewable energy - Wave, Tide, Solar, wind, etc Research and training institutions and projects Secondary and higher education institutions, Maritime law, seamanship' Insurance and financial services, Desalination plants and construction of related water supply systems Military, coast guard, and other public safety organizations; private security Pharmaceuticals, chemicals, bio-fuels, bio-fertilizers, bio-polymers</p> <p>Navigation and Maritime freight transportation Boat, ship building and allied activities</p> <p>Tourism - Recreation and Blue Flag Beach</p> <p>Marine-related construction (infrastructure development), Urban development - housing, bridges, road, sea links, walkways Blue carbon (i.e. coastal vegetated habitats) like Mangroves, salt marsh</p> <p>Habitat protection, restoration, sea wall construction, groins, sand nourishment, sand bypass, geo textile</p> <p>Sewage treatment plants, plastic waste management, oil spill mitigation</p> <p>Protection of endangered marine species, protection and restoration of habitats, coral reefs, turtle nesting sites, bird migratory sites</p> <p>Protection and Conservation of endangered species and endemic species of these ecological sensitive areas who provide nutrients and fish population to the coastal waters</p> <p>Construction, protection and Integrated Island Development of offshore and inshore islands, Integrated Development of Andaman and Nicobar and Lakshadweep islands</p> <p>Conservation and Renovation of coastal temples, monuments and religious place</p> <p>Conservation and development Forts, temples, ancient township areas, ports, etc</p> <p>Laying of submarine cables and telecommunication infrastructure</p> <p>Cyclones, Tsunamis, floods, landslides, algal blooms</p> <p>Infrastructure relating to marine security like speed boats, ports, telecommunication, ammunition</p> <p>Salt and salt based Industries, Cement, fertilizers, etc.</p>
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Fishco's Family - Recipe Corner Maruvai (clams) Sukka

Ingredients

- Clams - 100 nos. with shell
- Red Chilly long - 20 nos.
- Red chilly round - 5 nos.
- Fenugreek seeds - 1/2 tsp
- Garlic pods - 16 nos.
- Cumin seeds - 1/2 spoon
- Coriander seeds - 6 tsp
- Tamarind - Marble sized ball
- Onion - 2 small
- Turmeric - 1/2 spoon
- Grated coconut - 3 cup
- Salt - as per taste

For Masala:

1. In a pan, dry roast coriander seeds, fenugreek seeds and red chillies. After cooling grind this with tamarind, turmeric, ¼ tsp jeera, 6 garlic pods. Keep aside.
2. Take 2 tsp of oil in a pan, when hot add one chopped onion sauté until it turns golden brown. Add grated coconut, 10 garlic pods, ¼ tsp of jeera and roast it. Grind the roasted grated coconut coarsely and keep aside.

Method:

Cook the cleaned clams with grounded masala, one chopped onion and 1tsp salt for 20 minutes. Then add grinded coconut, cook till the water evaporates. Finally garnish with coriander leaves.

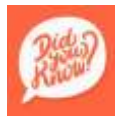


Recipe by:
Mrs. Prafulla Kumari,
CoFM Mangaluru

Fisheries Research/Publications

1. Pallavi, B., Puneeth, T.G., Malathi S., and Girisha, S.K. 2021. Isolation, characterization and genomic analysis of vB-AhyM-AP1, a lytic bacteriophage infecting *Aeromonas hydrophila*. J. Appl. Microbiology doi:10.1111/jam.14997
2. Sheela, P., Malathi S., Isloor S., Hegde, N.R. 2021. Randomly amplified polymorphic DNA analysis of *Staphylococcus chromogenes* isolated from bovine and bubaline mastitis in Karnataka. Vet. World, 14:285-291.
3. Nithin M. S., Kushala K.B., Dheeraj S.B., Harshitha H., Puneeth T.G., Naveen Kumar B.T., Girisha S. K. and Suresh T. 2021. Isolation, characterization and stability of lytic bacteriophage (AhFM22) infecting *Aeromonas hydrophila*. J. Exp. Zool. India Vol. 24(1) :749-754.
4. Dharmakar P., Ganapathi N.M., M.A.A.Mamun, Ramesh K.S. 2021. Effect of dietary peppermint (*Mentha piperita*) on growth, survival, disease resistance and haematology on fingerlings of rohu (*Labeo rohita*). Aquaculture Research DOI: 10.1111/are.15120
5. Dasan, G.P., ManjaNaik, B., Devika, G., Banavath, S.N., Siravati, M.R., Mohan, C.O and Veena S.A. 2021. Heat penetration characteristics and quality of ready-to-eat shrimp in masala (*Litopenaeus vannamei*) in flexible retortable pouches. J.Food Processing and Preservation. DOI: 10.1111.jfpp.15411.
6. Assana, K.K., Mridula Rajesh and Rajesh, K.M. 2021. Reproductive traits in dolphinfish *Coryphaena hippurus* Linnaeus, 1758 along the coastal waters of Karnataka, South-eastern Arabian Sea. Indian J. Fish., 68(1): 19-26.
7. Suyani Nitin K., Mridula Rajesh, Malathi Shekar and Rajesh K.M. 2021. Mangrove Floristics -current Status in India. NESANewsletter, 24(2): 10-13.

Fun Facts - Pearl Oyster



Kingdom : Animalia
Phylum : Mollusca
Class : Bivalvia
Order : Pteriidae
Family : Pteriidae
Genus : Pinctada

- Pearl Oysters are bivalves and filter feeders living in sea
- Are found from the low tide level to depths of about 75 m and 15-20 kms away from the shore.
- Generally found attached to the rocks or dead coral reefs.
- These oysters can grow to a Length of about 65-70 mm and a maximum weight of 70gms
- The only living creature that can produce pearls
- Pearls are made by oysters as a natural defence against an irritant such as a grain of sand or any other foreign object that gets embedded in the mantle and cannot be eradicated by the oyster.
- “Nacre” produced by the oyster to protect itself from the foreign body are deposits formed due to secreted layers of aragonite (82-86%), conchiolin (10-12%) and water (2-4%) around the foreign objects.
- Size and shine of a pearl is directly proportional to the degree of secreted layers against the foreign agent.

Staff and Student News



Congratulations

CoFM congratulates Shri. Angara S. for taking over as the Minister of Fisheries, Ports and Inland Transport Department, Government of Karnataka.. COFM wishes him all the best!



Congratulations

CoFM congratulates Dr.Yathiraj.S, Dr.N.M.Dinesh and Sri. Bhojya Naik for their appointment as Board Member of Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar.



Awards

Dr Pallavi Baliga, Post Doctoral Fellow, Department of Aquatic Animal Health Management, College of Fisheries, Mangaluru has got the DST AWSAR Award - National science story writing competition under the Post-doc category. Her story “Virus-Bane or Dark Knight?” received a cash prize of Rs. 10,000/- and a certificate of appreciation. Congratulations.



Obituary

CoFM deeply mourns the sad demise of former teachers Shri. M.G Shenoy (Dept. of Fishery Microbiology) and Dr. T.R.C.Gupta (Department of Oceanography). CoFM expresses deep condolences to their bereaved families.



Dean's Desk

I would like to thank Shri Angara S, Hon'ble Ministry for Fisheries, Ports and Inland Transport, GoK for kindly agreeing to provide the foreword for this important edition. The college also welcomes Major P Manivannan, Secretary, Department of Animal Husbandry and Fisheries. Under the leadership of the above two Officials we are sure the college will progress and will be able to meet the aspirations of the State Government. I on behalf of the college, staff and students assure that the college will provide all assistance to the State Government and fishing communities in the area of Fish and Fisheries during these difficult times.

I will be extremely happy to receive comments and suggestions at the below given feedback email.

We're on the Web! www.cofm.edu.in
Suggestions and feedback to
newsletter@cofm.edu.in

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