



**NATIONAL SERVICE SCHEME
KERALA UNIVERSITY OF FISHERIES & OCEAN
STUDIES**



കേരള ഫിഷറീസ്-സമുദ്രപഠന സർവ്വകലാശാല
PANANGAD P.O., KOCHI 682 506, KERALA, INDIA

PR:SPONS:19-20/S-49/G-46



16.10.2019 @ Marine Drive, Kochi



**KERALA UNIVERSITY OF FISHERIES AND OCEAN STUDIES
PANANGAD, KOCHI – 682 506, KERALA
2019**

INTRODUCTION

Vembanad Lake (9° 34' 60 N, 76° 25' 0 E) is the largest humid tropical wetland on the west coast of India with a length of 96 km and a surface area of 1512 km². Based on the rich biodiversity and socio-economic importance, Vembanad Lake along with adjacent *Kole* lands were declared as Ramsar site - a wetland of international importance. It spreads mainly three districts Alappuzha, Kottayam, Ernakulam, and Thrissur. However, the present state of the lake, especially around the Cochin backwaters are pathetic. As per the available information, there was no specific long-term plan to remove accumulated plastic and solid wastes from the lake. Though, a major tourist destination the Marine Drive area is highly polluted with many truckloads of plastic, wood, glass, etc. submerged in the coastal region, which also gets exposed during low tide. This not only pollutes the water body it also affects its inhabitants like micro-organisms to vertebrates. The estuarine ecosystem as well as the mangrove areas, known as a nursery ground for fish and shrimps, are completely taken over by the plastic menace and large scale siltation. This affects fish production by reducing the habitat of larval and juvenile of fish and shrimp. Thus it indirectly affects the fisherman and our fish production. During seasons we can observe millions of fish and shrimp seeds moving around this debris, which eventually influences their survival and growth.

National Service Scheme of Kerala University of Fisheries and Ocean Studies (KUFOS) during its Advisory Committee meeting held on 14.8.2019 decided to have long term programmes against plastic pollution in the Vembanad Lake. This was the flagship programme taken up by the NSS unit to observe the Golden Jubilee of NSS and the 150th Birth Anniversary of Mahatma. As part of this NSS unit was involved in cleaning and awareness campaigns in association with other like-minded organisations. It's mainly against plastic pollution in our water bodies by creating awareness, cleaning the water bodies involving stakeholders, assessment of the level of types of pollutants, erection of hoardings, etc.

NSS unit used to do regular plastic awareness programmes campaign in and around the Universtiy campus and is sorted out to hand over to collection points. On

the day of Gandhijayanthi ,Oct 2nd, associated with the NETFISH a society under the Marine Products Export Development Authority (MPEDA) under Ministry of Commerce, Govt of India to clean up and give awareness on plastic pollution at the Thoppumpady Fisheries Harbour and Manasseryfishing village. Volunteers with the active participation of workers at Thoppumpady Fisheries Harbour cleared the entire area plastic-free. An awareness programme was also held at the Thoppumpady Harbour against Plastic Pollution in our water bodies. The programme was inaugurated by Dr. Joice V Thomas, CEO, NETFISH and he emphasized the impact of plastic pollution on the environment and human health. State coordinator NETFISH welcomed the gathering and described the activities executed as part of Swachhta Hi Seva. Mr. Noushad from the harbour management committee extended all support for keeping the landing center plastic-free. Activities of the National Service Scheme and its 150th Gandhiji commemorative year celebration to clean up Vembanad Lake the 'Vibrant Vembanad' campaign was described by Dr. Binu Varghese, Programme Coordinator. Programme ended with a vote of thanks by Dr. Rejish Kumar VJ, Programme Officer NSS. After this brief inaugural function, a rally was organised with the active participation of volunteers, fishers, and workers of the harbour. Volunteers handed over the awareness creating notices to the workers and shops in the area.

Volunteers then visited Manassery and interaction was organised at Manassery with traditional fishermen to know about fishing activity in the area and also to assess the socioeconomic status of the community. After the interaction volunteers went for a door to door campaign and handed over notices to residents against plastic pollution and described how to properly manage plastics. About a hundred households near the beach area were reached with the awareness program.

Vibrant Vembanad

This flagship programme of NSS-KUFOS was initiated on September 24, 2019, as part of NSS Golden Jubilee and 150th Year of Mahatma. This programme was envisaged as it was often observed the heavy load of plastic debris and other solid waste in the intertidal region. It often gets exposed during low tides. The aesthetic view of cochin backwaters from the Marine Drive walkway is marred by this

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foul-smelling waste accumulated in the area. University is engaged in a fishery and environment-related studies on the Vembanad ecosystem, especially after the 2018 flood. Several surveys were done from the entire stretch of Vembanad.

University decided to convene a public meeting after the adverse research findings on the Vembanad crisis. So, it was decided to create awareness and sensitize the public on the issues of plastic pollution to our backwaters. The venue selected for the meeting was Marine Drive as it's a major public space in Kochi.

On 16.10.2019 awareness campaign started at 9 AM with a volunteer briefing by Dr. Binu Varghese, Programme coordinator describing the days' activities. The 150 volunteers were divided into two groups in such a way that they start the activity from Southern and Northern end of Marine Drive walkway. The first group started their activity from Ernakulam Boat Jetty and the second group from opposite to CMFRI side. Along with the collection, they spread awareness by interacting with public, shopkeepers and boat operators. The programme was well covered in the visual, radio and print media. The collection teams converged at the sorting point by 11 AM and handed over the items to the sorting team. They sorted the collected plastic waste into different categories like bottles, milk covers, hospital wastes, etc and exhibited the same by the side of the public meeting venue.

The public meeting started at 12 PM which was inaugurated by KUFOS Vice Chancellor Dr. A. Ramachandran. The meeting was attended by Dr. Manoj Kurmar, Registrar (i/c); Dr. T. V. Sankar, Director of Research; Dr. Daisy Kappen, Director of Extension; Dr. Riji John, Dean Fisheries; Dr. V.N. Sanjeevan, CARMC; Dr. Subhash Chandran, Director, SFE; Dr. Binu Varghese, PC, NSS-KUFOS; Dr. Rejish Kumar V J, Programme Officer, NSS apart from faculties, staff and students of KUFOS. The invited guests graced the occasion were Dr. M Sudhakar, Director, CMLRE; Moosakutty, Manager BPCL; T. Peter, Fish Workers representative, etc. About 150 student volunteers participated in the plastic awareness programme. The meeting was attended by about 200 persons including students, public, media persons, etc.

In his inaugural address Vice-Chancellor highlighted the issues created by plastic pollution in the Vembanad Estuary. Dr. V. N Sanjeevan presented salient findings of the survey conducted and pointed at the sharp decline in the depth and width of the lake and the menace of heavy plastic pollution.

We acknowledge the support provided by the University and BPCL Kochi Refinery management with special thanks to Sri Vinod T Mathew and Nisar.

Dr. Binu Varghese
Programme Coordinator, NSS- KUFOS

SALIENT FINDINGS ON VEMBANAD REPORT – PRESS RELEASE

A research study report released today at Ernakulam Marine Drive in a public awareness meeting by the Vice-Chancellor of Kerala University of Fisheries and Ocean Studies (KUFOS) Dr.A.Ramachandran reveals the presence of heavy loads of macro plastic litters in the bottom sediments of in the Vembanad lake and coastal belts of Kochi. In the 76.5 square km area of Alappuzha - Thanneermukkom sector of Vembanad, the study report says the presence of 4276 tons of plastic garbage in the bottom sediments which works out to 55.9 tons per square km area. Another alarming finding of the study is the sharp depth shrinkage of the lake from 8 to 9 meters depth in the 1930s to the present 1.6 to 4.5 meters depths, said Dr.Ramachandran presenting the study findings. The decreasing trend in the lakes depth profile is largely from siltation and unless urgent interventions are made to reverse the trend the southern part of the lake is likely to disappear in one or two decades, he said.

The study also revealed that the curbs between Vembanad Lake and sea block the smooth flow of Periyar water into the sea that fell through the river. The major blockades are silt deposited for the construction of 15 bridges in Vembanad lake during the last 20 years in the Kochi-Vypen sector of Vembanad lake. The silt along with wastage of construction activities are still lying under the bridges as barriers.

Dr.Ramachandran said KUFOS has already initiated detailed investigations through the Centre for Aquatic Resource Management and Conservation working under the University on the long-term changes of Vembanad lake which is a *Ramsar Site*. (A Ramsar Site is a wetland ecosystem designated to be of international importance under the Ramsar Convention. The Convention on Wetlands, known as the Ramsar Convention, is an intergovernmental environmental treaty established in 1971 by UNESCO, which came into force in 1975). The Vice-Chancellor has said that the University has plans to undertake long-term clean-up campaigns of Cochin waters through public participation. Hoardings depicting the danger associated with casual disposal of plastic items will be kept at each 500 m distance of the Marine Drive walk-way, urging the public to dispose of plastic items only in the bins kept at several points along the pathway by the University in collaboration with corporate sector willing to participate.

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PHOTOGRAPHS OF THE EVENT

Intertidal zone plastic pollution @ Marine Drive, Kochi



Sewage and plastic waste at Marine Drive walkway and Tourist boat jetties, Kochi



Volunteer briefing on the event by Dr. Binu Varghese, Programme Coordinator, NSS



Plastic awareness rally and Plogathon @ Ernakulam Boat Jetty



Awareness to public on plastic pollution





Removing plastics @ Marine Drive Walkway





Sorting the collected plastic waste @ Marine Drive meeting venue





Visual media coverage of the event





Public meeting at Marine Drive



Sri. Moosakutty, Manager BPCL Kochi Refinery addressing the gathering



Vembanad survey report presentation by Dr. V. N. Sanjeevan





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Vembanad silt has affected Periyar flow: Kufos VC

TIMES NEWS NETWORK

Kochi: The silt and wastage that resulted from construction of 15 bridges in the past 20 years in the Kochi-Vypeen sector of Vembanad Lake have affected the smooth flow of Periyar into the sea, Kerala University of Fisheries and Ocean Studies (Kufos) vice-chancellor A Ramachandran said.

Presenting the research report of a study, which found the presence of heavy macroplastic contamination in the bottom sediments of the Vembanad Lake and coastal belts of Kochi, Ramachandran said the study detected 4,276 tonnes of plastic garbage in the bottom sediments, which works out to 55.9 tonnes per square km area.

Another alarming finding was sharp depth shrinkage of the lake from eight to nine metres in 1930's to the



Kufos students segregate the plastic waste collected from the Vembanad Lake on Wednesday

present 1.6 to 4.5 metres.

"Kufos is planning to undertake long-term clean-up campaigns of Cochin waters through public participation," he said. Ramachandran said the varsity would create awareness regarding marine pollution by installing hoardings that depict dangers associated with casual disposal of plastic items along the

Marine Drive walkway.

At a cleaning drive held on Wednesday under the auspices of the NSS unit of Kufos, around 150 students of the university collected plastic waste from Marine Drive. The students also sorted the collected plastic waste — cosmetic bottles, milk covers, hospital wastes — and exhibited them at the venue.



Students of Kerala University of Fisheries and Ocean Studies sort plastic waste which they collected from Kochi backwaters as part of monitoring of Vembanad lake and associated ecosystem on Wednesday.

— ARUN CHANDRABOSE



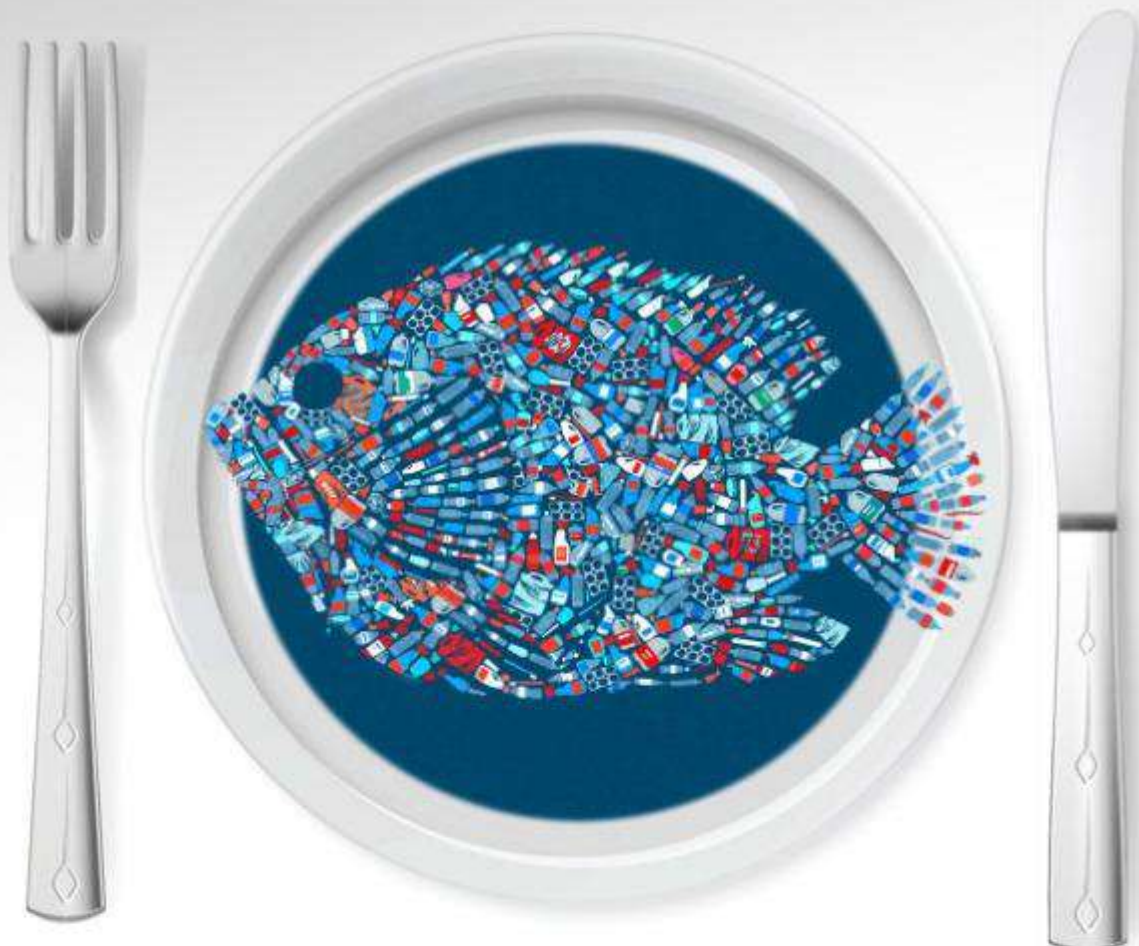
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