

Monthly Programme Report
The Cochin College BMC

Institution Name: **The Cochin College**

BMC Code: **ERM/2022/29**

ProgrammeTitle: **Beat Ocean Plastic Pollution**

Program Category: Awareness program(Seminars/symposia/workshops/others)	Activity Type: Action Program	No.of participants: 30
Planned Date: 31-01-2024	Renewed date: -	Program Date: 31-01-2024
Budgeted Amount: Rs 0/-	Total expenditure: Rs 1000/-	Extra Amount: Rs 1000/-

Brief Report

Bhoomitrasena volunteers participated in an awareness campaign at Munambam Harbour to beat ocean plastic pollution. Volunteers played a flashmob to share the idea of protecting our oceans from plastics. They painted the walls of harbour with needs, thoughts and ideas of preventing our oceans being polluted by plastics.

Expenditure Statement

Item	Expenditure	Remarks
TA/DA	Rs 1000	
	Budgeted Amount	Rs 0
	Total Expenditure	Rs 1000
	Extra Amount	Rs 1000

Photographs



Bhoomitrasena Club, Nature Club, Department of Zoology, The Cochin College in association with Planatearth NGO, aIuva Fundes by HCLTech conducted a awareness compain "To beat Plastic Pollution" at Munnambam Beach.



Marine invasive species thrive on plastic waste: Kufos study

Harmful Algal Bloom Produces Domoic Acid Toxic To Organisms

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Kufos Besides checking marine life, the plastic waste in the sea and water bodies is also serving as a secure habitat for marine organisms like Algal population to flourish, according to a new study by Kerala University of Fisheries and Ocean Studies (KUOS).

Marine microbiologists at KUOS found that the layers of floating plastics forming on large plastic debris are colonized by several algal communities.

The plastics were collected from five sites in Edappally, Kumbalangi, Kumbalangi Beach, and Chelappan in the Vembanad lake system and Cochin coastal areas and the study recorded a total of 15 species of phytoplankton.

A harmful algal bloom (HAB) species was one of the species found that these were types of cyanobacteria. Inhabiting the water surface, these species were attached to the plastics and in coastal regions of Vembanad Lake and the coastal regions of Kufos. They produce domoic acid which is toxic to organisms.

"We picked up different types of large plastic items like bottles, cans, etc. from the waters and found that they were types of cyanobacteria. Inhabiting the water surface, these species were attached to the plastics and in coastal regions of Vembanad Lake and the coastal regions of Kufos. They produce domoic acid which is toxic to organisms."

Dr. L. M. Anand, professor, department of marine biotechnology, KUOS, who is conducting the study with the research scholar Anura P. P.

She said that the fresh species of HAB in the plastics was a new finding in these waters. Plastics are abundant in the sediments of Vembanad Lake and the lake

sediment is acting as a sink for various pollutants. "We were looking at whether the floating plastics were getting colonized and found that there is a large presence of invasive species in the ecosystems," she added.

It is a dangerous development that the plastic debris is providing substrate for microbes and when they float, they carry these to newer places. The team is now looking at culturing algae on fresh plastic to see how fast these populations grow and colonize on these substrates.

The samples that were collected were almost uniformly muddy and dirty and we could not identify how old these plastics were," Lina Maria said.

She said that this emphasizes the potential ecological threat posed by certain microalgae species thriving on plastic surfaces. The study establishes a direct relationship between the abundance of microbial species on plastic substrates and diversity aspects and how important it was for the society to address plastic menace.