

Industry Waste Caused Bellandur Foam, Says Researchers

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A boy taking a photo at an exhibition organised by the Department of Forests, Ecology and Environment to mark World Environment Day at Kanteerava Indoor Stadium on Friday | JITHENDRA M

BENGALURU: A team of researchers from the Indian Institute of Science, which studied the water and the foam at Bellandur Lake, has concluded that the flames were caused by industrial effluents in the water.

Bellandur lake was in the news after foam engulfed the water body and later caught fire.

Environment scientist Prof T V Ramachandra of Centre for Ecological Sciences (CES) at the Indian Institute of Science (IISc) and his team have come out with a report titled 'Pathetic status of wetlands in Bengaluru: epitome of inefficient and uncoordinated governance' here on Friday.

The report was released on World Environment Day by the Whitefield Rising lakes team in association with KK School, Varthur.

It includes the latest test report from the study of water samples of Varthur Lake. The lake is linked to Bellandur Lake, Agara Lake and others.

Prof T V Ramachandra said, “The foam is also formed due to the phosphorus present in detergents. Phosphorus cannot be used in certain countries as it is a limited nonrenewable resource. Yet, our detergent manufacturers use it in plenty and the foam build up is a result of industrial pollutants that have collected at the bottom of the lake and have been stirred up because of high speed winds and heavy rain.”

Foams are enriched with particulate organic and inorganic compounds such as nutrients (Nitrogen, Phosphorus and Carbon), cations (atoms that have lost an electron to become positive, such as Sodium, Potassium, Calcium and Magnesium).

The foam is a result of the detergents, oil and grease that are used in households or industry, he said.

The foam will cause an environmental problem and the use of Varthur lake water for domestic and irrigation purposes will be harmful and this is likely to contaminate groundwater, he added.

‘Unsustainable Measures’: Experts say there has been unsustainable development without planning. An improper planning of sewage collection system, water supply system and roads without safeguarding wetlands and water bodies has taken its toll.

This has led to a 79 per cent decline in water bodies and 78 per cent decline in trees in the last four decades. This has also led to contamination of water bodies, depleting ground water, unprecedented levels of environmental pollution and flooding. Encroachment of raja kaluves (storm water drains), flood plains and lake beds are common, Prof Ramachandra said.

There is rampant unauthorised dumping of solid waste by citizens and industries in storm water drains and lake beds, he added.

“A dysfunctional system comprising of too many para-state agencies (LDA, KSPCB, etc), lack of coordination among them, and a complete lack of accountability, compounds the problem,” said Prof Ramachandra.

‘Map Water Bodies’

Ramachandra and his team suggest mapping of water bodies with identification of flood plains and buffer zones. He said, “Remove encroachments near lakes. Restrict the entry of untreated sewage into lakes. Let only treated sewage through constructed wetlands and shallow algae get into the lake (as in Jakkur lake). Maintain floating plants in the lake regularly. Plant native species of aquatic plants in open spaces of lake catchment area to retain water in the lake and avoid dumping of solid waste into lakes,” added the scientist. He also suggested that lakes be fenced and ensure lake areas are not used for other purposes such as housing. Local residents must be made environmentally literate, he added.