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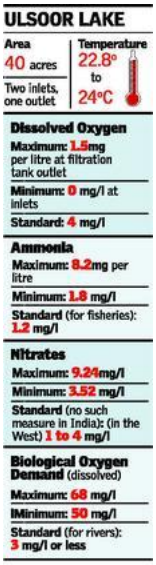
Result of the tests on Ulsoor lake is alarming, says researcher

- Mohit M. Rao

Nitrate content has lead to algal growth—explaining the greenish colour of the lake— leading to lowering dissolved oxygen levels.— Photo K. Murali Kumar



'The quantity of ammonia and nitrates in the lake is more than seven times above the norm'

If the health report of Ulsoor lake, is anything to go by, the water body is in serious need of emergency treatment.

On March 7, the sight of thousands of fish floating dead in the lake, which is among the most prominent in the city, spurred researchers to collect samples to pinpoint the cause.

"The result of the tests is alarming," says Priyanka Jamwal, a researcher at the Ashoka Trust for Research in Ecology and Environment (ATREE), who collected water samples.

Biological Oxygen Demand (BOD), which is a parameter to measure health of a water body, was found to be as high as 60 mg per litre (in its dissolved form) and overall, touching 144 mg per litre.

For a river that can be used as a drinking water source, Central Pollution Control Board (CPCB) puts the standard around 3 mg per litre. “Considering that BOD of raw sewage is around 200 mg per litre, this shows that the water entering the lake is closer in nature to sewage,” says Ms. Jamwal.

The Bangalore Water Supply and Sewerage Board (BWSSB) had proposed a 3 MLD (million litres per day) plant at the inlets – for which it has asked the Bruhat Bengaluru Mahanagara Palike (BBMP) to identify land.

However, even this would not prevent fish deaths as the ‘real killer’ remains ammonia and nitrates, the quantities of which are more than seven times above the ‘norm’, says Ms. Jamwal.

“Parameters like Dissolved Oxygen are low even in Jakkur lake. But there are no deaths there. This is because the ammonia content is low. In Ulsoor, the toxic ammonia content – through faecal matter – is high. In the afternoon temperatures, this amplifies the drop in oxygen levels of the water,” she says.

At the same time, Nitrate content has lead to algal growth – explaining the greenish colour of the lake – leading to lowering dissolved oxygen levels.

She suggests that instead of a blanket announcement of Sewage Treatment Plants (STPs), there needs to be an in-depth study of the contents of the lake and the nutrients that need to be filtered out.

Solution can include

ducks, fountains

It isn’t just big-ticket projects such as Sewage Treatment Plants that are needed to purify Ulsoor lake.

Even the simple step of introducing ducks or constructing fountains can help aerate the near-stagnant water.

“Three pairs of ducks can help in aeration and add to the natural aesthetics of the lake,” says T.V. Ramchandra, an ecologist from Indian Institute of Science.

“Other options are to build fountains and allow paddle boats that not only stir up the water, but can also be a tourist attraction,” he said.

In a meeting following the death of fish, Karnataka State Pollution Control Board (KSPCB) had directed Madras Engineering Group to run their speedboats at least twice a day.

IISc. researchers have also taken samples from the lake, and preliminary data shows correlation with the findings of Ashoka Trust for Research in Ecology and Environment.

However, the researchers have also taken fish samples and are consulting fisheries experts to find out the cause of the deaths.

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