

Bengaluru lakes have seen most fish kill incidents in a decade: IISc study

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Bengaluru: Aquatic life in the city's lakes is in deep water. Of the fish mortality cases in India which have grabbed headlines and found mention in research papers, the maximum are from Bengaluru followed by Mysuru, a recent study has revealed.

Most fish have perished for the same reason. Sustained flow of untreated sewage and chemicals into water bodies has caused dissolved oxygen (DO) levels to dip, the study on Recurring Fish Mortality Episodes in Bengaluru Lakes by Indian Institute of Science (IISc) has found. The alarming findings should come as a wake-up call for the authorities, who need to do more than just clear the dead fish from the water bodies.

"Ulsoor Lake falls under category E of Inland Surface Water, which means the water can be used only for irrigation, industrial cooling or controlled waste disposal," said professor TV Ramachandra of the Centre for Ecological Sciences, IISc. He added, "The sustained inflow of untreated sewage into the Ulsoor Lake has flooded the aquatic ecosystem with nutrients." Algae (also harmful to aquatic life) thrive under high nutrient availability.

First incident dates back 11 years

Ulsoor Lake witnessed its first fish kill 11 years ago in January. Increased oxygen demand and chemicals flushed into the lake were to blame. The second episode happened in January 2005 when pollutants made their way into the lake after the Ulsoor swimming pool was cleaned. The third such incident was recorded on March 7 this year where oxygen levels dropped to abysmally low levels (zero at some points) due to entry of untreated sewage.

The analysis of water samples and fish samples by IISc researchers reveals the fish mortality in Ulsoor and Devarabeesanahalli lakes was due to asphyxiation, with a sudden and considerable fall in DO levels in some locations.

Besides Bengaluru, two lakes in Mysuru, (Kukkarahalli and Karanji) witnessed incidents of fish mortality in 2001 and 2014 respectively lake due to discharge of effluents. Even Taj Boudi in Bijapur witnessed the phenomenon in 2010. Andhra Pradesh fares the second worst with over five occurrences of fish death in over a decade. AP is followed by Madhya Pradesh and Kerala

IISc RECOMMENDS

- * Aerators (water fountains) or introduction of ducks. Aeration will increase DO levels and minimize hydrogen sulphide, methane and various volatile organic compounds responsible for bad taste and odour
- * Regular monitoring of lakes will help understand physico-chemical characteristics
- * Dredging (mostly wet dredging) will remove sediments (rich in nutrients)
- * Public awareness and participation necessary to safeguard lakes

The scene at Ulsoor

Until Tuesday, the corners of Ulsoor Lake were swamped with garbage and dead fish. When TOI visited the lake on Wednesday afternoon, little had changed except that the trash and fish were scattered all over the lake's surface. The area was deserted

and absolutely no work was going on. Babu L, who was present at the spot, refused to divulge which department he's from. He said the strong wind had caused the fish to scatter. "We have started the clean up on Wednesday; it's expected to be over in a week. We have divided the work among eight people — while the fishermen are collecting the dead fish, the others are picking up the garbage" he said. "The waste is being offloaded at a spot in Kannur. But if it rains, it will take us two more weeks to clean the area," added Babu.