CSIR-NIIST's eco-restoration project to revamp Padmatheertham pond

Floating wetlands and ex-situ purification units will be used to improve water quality

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The centuries-old Padmatheertham pond, adjacent to the Sree Padmanabhaswamy temple, that has been facing numerous woes including indiscriminate algal bloom, fish death and foul odour, is set to get a new lease of life. The revival comes through an eco-restoration project proposed by the CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST).

The institute will implement a nature-based treatment system using floating wetlands and ex-situ purification units to restore water quality and ecological balance.

According to CSIR-NIIST director C Aandharamakrishnan, the project also involves continuous monitoring for over a year and it is expected to become a model that can be replicated for the conservation of other urban water bodies as well.

There is excessive algal bloom in the water body, which needs to be fixed

During the preliminary analysis, scientists at CSIR-NIIST found numerous external infiltration into the pond that had caused excessive algal bloom in the water body.

According to Krishnakumar B, Chief Scientist & Head, Environmental Technology Division, CSIR-NIIST, the infiltration has to be controlled to reduce algal bloom and the resultant death of fish and foul odour. "Finding out the multiple sources of infiltration in the large water body is practically impossible. That is when we thought of the approach to introduce engineered floating wetlands," Krishnakumar told *TNIE*.

"Our aim is to enhance the natural purifying property of the pond," he explained. The project involves a two-pronged approach. First, the floating wetlands will be introduced into the pond. These engineered wetlands are basically plants that have known water purifying properties that will absorb excess nutrient input into the pond and arrest the algal bloom. Secondly, the existing algae will be filtered using a physical method.