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## Houseboats to embrace new wastewater treatment tech

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KERALA'S backwaters, choking due to indiscriminate discharge of wastewater, are set to get a breather thanks to an initiative to set up onboard wastewater treatment technology for houseboats.

At present, most of the houseboats operating in Alappuzha and nearby districts lack a proper wastewater treatment system on board. This has led to discharge of large amount of untreated wastewater directly into the backwaters, severely degrading water quality and affecting the ecosystem.

To find a solution, the Kerala Houseboat Owners Federation recently approached Thiruvananthapuram-based CSIR-National Institute For Interdisciplinary Science and Technology (CSIR-NIIST), which had developed a modular wastewater treatment technology named NOWA. This will now be re-purposed for wastewater treatment in houseboats.



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- Installing wastewater treatment tech will promote environmentally responsible operation of houseboats

Based on preliminary discussions and site visits, CSIR-NIIST will sign a memorandum of understanding with the federation on Wednesday to develop and demonstrate an onboard wastewater treatment technology for houseboats.

The initiative aims to promote more sustainable and en-

vironmentally responsible operation of houseboats in Kerala's backwaters. The project will be executed in close association with Suchitwa Mission and the Kerala State Pollution Control Board.

"Through the project, CSIR-NIIST aims to provide a scientifically sound and practical

solution to the wastewater challenges faced by the houseboat sector. Our goal is to ensure tourism and sustainability go hand in hand, making the backwater ecosystem cleaner, healthier and future-ready," said C Anandharamakrishnan, the institute's director.

Krishnakumar B, the chief scientist and head of CSIR-NIIST's environmental technology division, said the system will integrate anaerobic and oxic/anoxic microbial processes to ensure efficient treatment with minimal sludge generation, while producing effluent that meets prescribed discharge standards.

Major highlights of the project include addressing space constraints, ensuring installation without compromising the structural stability of the houseboat and maintaining affordability and operational simplicity of the treatment system.

A sewage treatment plant (STP) that was established in

Alappuzha under a joint initiative of the houseboat operators and tourism department has been non-functional for years.

At present, only toilet waste (black water) is treated in the bio-toilets fitted on board houseboats.

However, overflow from the bio-toilet and the bulk greywater - which constitutes nearly 80% of the total wastewater from a houseboat - is discharged into the lake without any treatment.

"We already have proper arrangements in place for the transportation and treatment of septage. Besides, a new STP is coming up at Kainakary panchayat. With the introduction of CSIR-NIIST's onboard facility to treat wastewater from kitchen and bathroom, houseboats aim to become completely non-polluting entities," said Venugopal G, president, Kerala Houseboat Owners' Federation. He said the system will be integrated in close to 950 houseboats in the state.