Revitalizing the Citarum River: A collaborative 'Living Lab' approach

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Credit: Pexels

The Citarum River, one of Indonesia's most polluted waterways, is undergoing a transformative journey towards revitalization through an innovative "Living Lab" approach.

A recent study led by Monash University researchers explores the Citarum Living Lab, a pioneering program that integrates community-led, transdisciplinary research and practical interventions to address severe pollution, rapid urbanization, and climate change impacts. The research is published in *PLOS Water*.

The Citarum Living Lab brings together local communities, government bodies, NGOs, businesses and researchers to co-develop and test sustainable solutions for restoring the river ecosystem.

Study lead author Dr. Paris Hadfield, Research Fellow from Monash Sustainable Development Institute (MSDI), said that by embracing local knowledge and fostering community participation, the initiative aims to create scalable solutions that balance economic, social and environmental needs.

"Through the Citarum Living Lab, we aim to empower communities and stakeholders to collaboratively develop actionable strategies that address the complex challenges facing the Citarum River," said Dr. Hadfield.

"This approach represents a significant shift towards more inclusive and effective watershed management, particularly in peri-urban settings."

The study highlights the critical importance of local engagement and interdisciplinary collaboration in addressing global environmental challenges and advancing sustainable development goals.

Dr. Michaela Prescott, from Monash Art, Design and Architecture (MADA), said a significant aspect of the project focused on design interventions that were both practical and sustainable.

"The design elements are crucial to this project, as they help integrate technical solutions with the social fabric of the communities. It's about

creating systems that are not only efficient but also culturally and socially resonant," said Dr. Prescott.

This study contributes to the advancement of planetary health outcomes in response to worldwide river pollution and economic development imperatives.

More information: Paris Hadfield et al, Citarum Living Lab: Co-creating visions for sustainable river revitalisation, *PLOS Water* (2024). DOI: 10.1371/journal.pwat.0000200

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