

Turning to nature to improve vital water treatment

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Escalating industrialization, urbanization and climate change in Asia

present a significant challenge to maintaining water quality.

In an effort to improve [water treatment](#), RMIT has collaborated in an international team supporting pilot projects in Vietnam, Sri Lanka and the Philippines through an Asia-Pacific Network for Global Change Research project.

Led by RMIT's Professor Jega Jegatheesan, the pilots included the construction of floating wetlands in Can Tho, Vietnam and Kandy, Sri Lanka, [green roofs](#) in Ho Chi Minh City and constructed wetland in the Philippines.

This saw 40 students at Can Tho University trained to build and install the structures in two canals, with another 32 early career researchers engaged through hands-on learning across the other sites.

RMIT also provided scientific and methodological guidance for the establishment and replication of a green roof in Ho Chi Minh City for domestic wastewater treatment.

The system using rock, [oyster shells](#) and charcoal was set up on the roof of a research center at Ho Chi Minh City University of Technology in Vietnam, another project partner.

Jegatheesan said the project's overall aim was to effectively remove pollutants from water bodies, delivering environmental and communal benefits.

"We developed guidelines to replicate and scale nature-based water treatment solutions," said Jegatheesan.

"Our overall aim was to explore the role nature-based solutions could play in making Southeast Asian cities more liveable and resilient.

"We worked with teams in the Philippines, Sri Lanka, Vietnam, Australia and Spain to make this happen—there was a lot of support all round, which was critical to our success."

RMIT Europe's Nevelina Pachova worked on developing the project's concept and supported its implementation through a series of online and in-person meetings.

"In Europe, nature-based solutions are popular for making cities greener and the use of urban resources more sustainable and circular," she said.

"Many traditional resource management practices in Southeast Asia are de facto nature-based solutions but many have disappeared or remain limited to rural areas.

"So the idea was to discover if and how they can be integrated in making cities better places to live in."

The main goal was to develop solutions suited to local conditions, which Pachova said required the consultation of diverse stakeholders.

The team has now applied for a follow-up project focused on building capacities and engaging people in the design and use of nature-based solutions across the broader range of sites in the region.

More information: Report: [Integrated assessment of existing practices and development of pathways for the effective integration of nature-based water treatment in urban areas in Sri Lanka, the Philippines, and Vietnam](#)

Provided by RMIT University

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