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Vietnam deploys an innovative real-time sea-water monitoring system for aquaculture

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A groundbreaking collaboration between UTS, Vietnam National University and Ho Chi Minh University of Technology has led to the development of a real-time sea-water monitoring system in Xuan Dai Bay, Vietnam.

As the system is scalable and non-site specific, the technology has the potential to be used not just in further sites across Vietnam, but globally, and the team is actively seeking new partners to help them realise its full potential.

The project, funded by Aus4Innovation and part of UTS Rapido Vietnam, employs the latest Industry 4.0 technologies such as Internet of Things, data analytics, and mechatronics.

"Aquaculture is an important industry in Vietnam, generating an income of AUD$11 billion per year. But while it can have rich economic rewards for farmers and the regions they live in, it can be a precarious livelihood," says Professor Eryk Dutkiewicz, the chief investigator of the project at UTS.

The system, launched in March 2020, monitors temperature, acidity, ammonia, dissolved oxygen, salinity, and turbidity, providing real-time data to farmers. The advanced technology withstands harsh conditions, offering alerts for timely decision-making. The monitoring stations, the first of its kind in Vietnam, are now permanent fixtures in the bay.

Mr Le Tan Ho is Vice President of Phu Yen province and was impressed with both the UTS team and the results of the project. He says the information it has provided has been invaluable for decision making.

"The data from the realtime seawater monitoring system allows the local government to assess and better plan aquaculture and other activities like tourism towards the sustainable social and economic development goals while protecting environment and coping with global climate changes, especially in coastal areas," says Le Tan Ho.

The research team hopes the application of IoT platforms for coastal water system management in PhÃº YÃªn will just be the start.