Youth Connect

Youth Community Resilience to Climate Change in the Mekong Delta (Y-CoRe)

Community Flood Warning System Application (AFSC)

Project background

Can Tho, located south of the Hau River, is experiencing rapid urbanisation and frequently suffers from urban flooding caused by high tides in September and October. These floods have caused serious problems for health, livelihoods, and the environment.

Area 1 of An Khanh Ward, Ninh Kieu District, Can Tho City, is highly urbanised and situated near a network of canals, making it particularly prone to tidal flooding during the lunar months of September and October. These floods severely impact public health, livelihoods, and the environment.

To address this, the project team proposed the use of a water level monitoring system that provides early warnings to residents in Area 1, An Khanh Ward, Ninh Kieu District, Can Tho City, aiming to minimise the economic and property damages caused by flooding.

Project objectives

Develop a flood monitoring and warning system to provide timely alerts – especially during high tides – and help communities better prepare for floods, reducing the risk of damage.

Project overview

The device uses a pressure sensor placed inside a securely fixed steel tube and directly lowered into the water to accurately measure water levels. The system operates entirely on solar power, independent of the national power grid, making it especially suitable for rural, remote, and isolated areas where infrastructure is limited.

The collected water level data is transmitted via the Wi-Fi network of a nearby household at the installation site, then integrated into the project's management application. Here, the data is stored and visually displayed, enabling users to easily monitor water level changes in real time.

Notably, the system also incorporates automatic analysis and early warning features. When the water level exceeds a safe threshold, the application immediately sends notifications to residents' phones, helping them quickly access information and proactively respond to risks of flooding or abnormal water rise.

Outstanding outcomes

A water level monitoring device and a mobile application for real-time water level tracking were built successfully, and a monitoring device was installed in Area 1, An Khanh Ward, Ninh Kieu District, Can Tho City.

One training session was conducted for local residents on how to operate and use the water level monitoring app in the study area.

Finally, the team's product was showcased at the Science and Technology Exhibition Fair in Vinh City, organised by the Ministry of Science and Technology.

Team member's information

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