LEVERAGING RESILIENCE DATA FOR RESILIENCE ACTION IN VIETNAM

Overview of FRMC program results

SUMMARY

ISET-International, as a member of the Zurich Flood Resilience Alliance (funded by the Z Zurich Foundation), engaged with flood-vulnerable communities and other key stakeholders in Thua Thien Hue, Binh Dinh, and Can Tho. The Flood Resilience Measurement for Communities (FRMC) framework and tool were used to build an in-depth understanding of community flood risks and challenges and co-create innovative and practical actions to address those risks and challenges. The program focused primarily on community-level actions, providing rich insights, evidence, and lessons valuable for local and national policy advocacy.

Scaffolding provided to households in Nhon Phu ward, Binh Dinh province to keep food and household contents safe during floods © *ISET-International*

CONTEXT

Floods are the single costliest natural hazard globally, threatening to undo growth and development progress that might take years for communities to rebuild. In Vietnam, flooding is responsible for about two thirds of deaths and substantial economic losses from disaster events. The frequency and severity of floods are increasing due to climate change, while the timing and behavior of flooding is becoming more abnormal due to non-climate factors such as urbanization and infrastructure development.

ISET-International (ISET) joined the Zurich Flood Resilience Alliance (the Alliance) in 2018, delivering a global role in knowledge integration and learning. ISET has been present in Vietnam since 2008, and in 2020 launched an Alliance country program implementing the Flood Resilience Measurement for Communities (FRMC) in 12 communities across three provinces – Thua Thien Hue, Binh Dinh and Can Tho. The success of our program is founded on our established relationship with key local stakeholders and in-depth understanding of the social, cultural and institutional context of Vietnam.

Key partners

- Standing Office of the Steering Committee for Disaster Risk Management (DRM Office) of Thua Thien Hue Province
- Climate Change Coordination Office (CCCO) of Binh Dinh Province
- Department of Natural Resource and Environment (DONRE) of Binh Dinh Province
- DRM Office of Binh Dinh Province
- Institute for Climate Change Research of Can Tho University (Dragon Institute)

Stakeholders involved

- communities
- commune level governments
- provincial and national level DRM actors

APPROACH

By collecting and analyzing data about flood resilience, using the FRMC tool, ISET developed information about strengths and weaknesses of flood-vulnerable communities and discussed with each community and our partners – who are key actors in the Disaster Risk Management (DRM) and Climate Change Adaptation (CCA) areas in their respective provinces – to identify how weaknesses could be addressed and strengths leveraged. Involving both communities and the provincial DRM/CCA agencies in discussions ensured that their joint perspectives were taken into account when developing multi-scalar measures to address flood risks. Actions that are highly sustainable and replicable were prioritized.

IMPACT

1 COMMUNITIES ARE BETTER ABLE TO PROTECT THEIR LIVES AND LIVELIHOODS FROM FLOODING

CAPITAL

- Human
- Social
- Physical

- Training on first aid and water and sanitation
- Training on DRR, resilience and flood response
- Community-based canal cleaning and solid waste management
- Flood response equipment for households and first responders
- Repair of a flood evacuation center
- Installing a handrail along a channel to prevent accidents during floods

Photo: *(Left)* Leaflets for raising community awareness on flooding, post-disaster support policies, and the Disaster Prevention and Control Fund, which were highly appreciated by local governments and communities. The leaflets were officially adopted by the provincial government © *Hue DRM Office. (Middle)* Training for community members and officials in Quang Dien district on hydropower reservoir operation and the role of hydropower reservoirs in flood regulation for downstream areas of Huong Dien Hydropower Reservoir, September 2023 © *Hue DRM Office. (Right)* First responders of Quang Tho commune using boat and life vests provided by the program to transport a person bitten by a snake to hospital in time during the November 2022 flood © *Hue DRM Office.*

2 COMMUNITY PLANNING IS STRENGTHENED, POSITIONING THEM TO BETTER ADDRESS FLOOD RISKS AND RESPOND TO FLOODS

CAPITAL

- Social

- Disaster risk management and response plans
- Digitalized flood evacuation plan

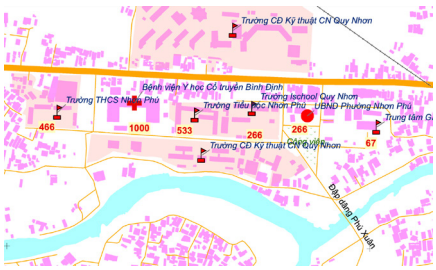

Figure: Flood evacuation map in response to severe flood risk in Nhon Phu ward, Binh Dinh

7 urban & 5 rural communities

26,000

lives positively impacted across 12 communities

275,000

people reached, including those indirectly benefiting from community interventions, awareness raising, scaling up and advocacy activities

> *"The evacuation map of Nhon Phu ward was the first time [flood evacuation mapping] was done in a proper way in our province."*

- **Mr. Nguyen Tuong Vy**
DRM expert from the DRM Office of Binh Dinh province

IMPACT

3 COMMUNITIES RECEIVE TIMELY INFORMATION ABOUT FLOODING

CAPITAL

Social

Physical

- Smart flood warning towers for real time measuring and warning
- Loudspeaker clusters for broadcasting flood warning messages
- Generators to operate loudspeaker systems during blackouts
- Portable loudspeakers for first responder teams
- Painting of flood markers on roads for visual estimation of flood levels
- Flood trace study to build a flood database and support flood early warning and analyses

"When flooding happens, flood level data from the warning tower will be updated on the website of Quang Tho commune. Updates are also sent directly to the village heads, who will inform people in their villages so they can respond in time and properly"

- **Mr. Le Thanh Xuan**
DRR official of Quang Tho commune

"The flood markers help people to see the level of flooding on the road, so they will use another route and avoid damaging their motorbike or car when the flood water is too deep."

- **Mr. Dinh Diep Anh Tuan**
Dragon Institute, Can Tho University

Photo: Flood markers in October 2022 flood in An Khanh, Can Tho © *Dragon Institute*

Photo: Smart flood warning tower co-funded by the project and Watec company, installed in Trung Lang village, Thua Thien Hue. The flood gauge measures flood water depth, sends warning signals, and is automatically connected to the national hydrometeorological data system. It is equipped with a small solar panel and backup battery so that it can operate without power for up to 30 days © *Hue DRM Office.*

4 MORE RESOURCES ARE PROVIDED FOR FLOOD RESILIENCE BUILDING

CAPITAL

Financial

Funding mobilized or invested with input from the project:

- 280,000 USD from USAID through The Asia Foundation (TAF) to build flood resilience and improve early warning systems in Nhon Phu ward and Phuoc Son commune, Binh Dinh.
- ~30,000 USD from the Canadian Embassy in Vietnam for community-based canal restoration and solid waste management in An Khanh ward, Can Tho.
- Contribution from Watec company for ~50% (>4,000 USD) of the cost of two smart flood warning towers in Quang Thai and Quang Tho communes, Thua Thien Hue. Budget allocation by Thua Thien Hue government for annual operation and maintenance of the equipment.
- Commitment of Thua Thien Hue province to invest in large-scale flood protection infrastructure for communities in An Dong ward and Quang Tho commune, of which ~167,000 USD has already been disbursed and spent.

ISET, HUE DRM office and Quang Tho ward local officals discussing project intervention activities during a site visit © *ISET-International*

LESSONS LEARNT

- Our **collaboration with key provincial DRR and CCA actors** has not only enabled relevant and impactful work, but also enhanced its sustainability through institutionalization of tools and processes and official allocation of funding for maintenance and replication. What we have achieved in the program provides a strong foundation for both deepening and scaling impact in future work.
- Over the course of three years engaging with our local communities and local actors, we have observed a **significant change in their risk awareness, primarily as a result of their participation in FRMC data collection interviews and discussions**. This is an unexpected positive outcome of the FRMC studies and was the result of our team's efforts to not just collect information but take every opportunity to engage in meaningful dialogue with community members about the root causes of the risks they face and the value of addressing those risks through a resilience approach.
- **Work in urban, peri-urban and rural contexts highlighted the additional challenges faced by vulnerable communities in urban settings**. The combination of rapid urbanization and development, complex demography and high concentrations of population and assets results in additional risks and stresses on urban and peri-urban communities. These additional challenges and needs need to be actively addressed in the design and implementation of resilience programming.
- **Flood risk does not stop at the community boundary**; flood risk reduction interventions beyond community borders and involving higher levels of governance are necessary. Recognizing this, as we have launched a new, multi-year program in 2024 as part of the Zurich Climate Resilience Alliance, we will focus both on enabling change at the community level and influencing the broader context to address the root causes of flood risks in communities.

Flood Resilience Alliance

The Zurich Flood Resilience Alliance is a multi-sectoral partnership which brings together community programmes, new research, shared knowledge and evidence-based influencing to buildcommunity flood resilience in developed and developing countries. We help people measure the irresilience to floods and identify appropriate solutions before disaster strikes. Our vision is that floods should have no negative impact on people's ability to thrive. To achieve this, we are working to increase funding for flood resilience; strengthen global, national and subnational policies; and improve flood resilience practice. Find out more: www.floodresilience.net

ISET International

Institute for Social and Environmental Transition-International (ISET-International or ISET) builds climate resilience through program design, implementation, evaluation, and learning. We are an interdisciplinary and agile group of climate experts, practitioners, and researchers who deliver technical expertise and advisory services on climate change adaptation and resilience to diverse clients and partners. ISET-International has a portfolio across South and Southeast Asia, Africa, and the Americas, with staff and associates based worldwide.