



GLOBAL BEST
PRACTICE
PROGRAMME

GLOBAL BEST PRACTICE PROGRAMME GUIDE



GLOBAL BEST PRACTICE PROGRAMME GUIDE

EXPO 2020 DUBAI

The Buoyant Foundation Project at the University of Waterloo

Vulnerable in Vietnam
Vietnam

OUR IDEA

Flood season in Vietnam's Mekong Delta occurs every year from July to December, threatening farmers and the wetlands that provide 52% of the national rice production and 60% of the national fisheries output. As climate and weather patterns become more volatile, flood events in the Mekong River Basin have become more frequent, emphasising the need for flood resilient housing.

OUR APPROACH

As part of a Canadian-Vietnamese team, the Buoyant Foundation Project (BFP) worked alongside local experts and community members to retrofit four houses in Vietnam's Mekong Delta region. The amphibious retrofits serve as a supplementary system to the local practice of elevating houses on stilts developed as the traditional response to the annual flooding cycle that is inseparable from the geographic location. The traditional practice cannot easily adapt to the exaggerated flooding predicted to occur due to climate change. An amphibious retrofit is thus a means to provide flood resilience to the physical architecture and protect the possessions of these households as well as reduce traumatic disruptions to the local culture and economy of these communities.

These retrofits are effective, pre-emptive solutions to the dangers posed by annual flooding events to impoverished and vulnerable communities in the region. Amphibious retrofits can be adapted to suit various place-specific housing typologies and customised to the local and environmental context, so as not to disrupt the homeowner's way of

The Buoyant Foundation at the University of Waterloo's 'Amphibious Housing' is a flood mitigation strategy that leverages natural flooding cycles. Amphibious housing allows homes to rest on the ground in dry conditions and rise with floodwater during a flood, returning to their original position as the floodwater dissipates.

life. BFP emphasises on working in harmony with the natural flow of water and with sensitivity to local cultural practices. They have implemented amphibious retrofits across 5 countries - Canada, Jamaica, Nicaragua, USA, and Vietnam, all with different geographies and flood risks, highlighting that this solution can be scaled up and replicated globally.

OUR PARTNERS

- Global Resilience Partnership (GRP)
- Z Zurich Foundation



“Resilience for me means helping a community prepare in advance for a hazardous event so that it doesn't become a disaster, and if there is damage or hardship they can recover much more quickly and resume their normal lives. I'm interested in reducing trauma and displacement because I saw so much of that after Hurricane Katrina in New Orleans, and it was personally very upsetting for me.”

- Elizabeth C English, Ph.D., Founder and Director of the Buoyant Foundation Project, Professor at the University of Waterloo School of Architecture.

OUR SDGs



OUR EXPO 2020 EXPERIENCE

“The BFP aims to scale up the project across the Mekong Delta through training workshops and the implementation of several more amphibious retrofits. Expo 2020 itself was a helpful catalyst for advancing the work of the BFP: one of Dr. English's presentations resulted in an invitation to make a presentation about amphibious retrofit construction at the Bangladesh pavilion at Expo 2020. That interaction has developed into the start of a partnership for an amphibious project in rural Bangladesh. Another conversation at Expo 2020 has led the project in the direction of training and empowering women, expanding the outcomes of the project.”

