Impact Brief | Bangladesh | October 2023

Practical ACTION

IMPROVED COMMUNITY FLOOD RESILIENCE

Flood Resilience Project: Bangladesh Snapshot 2018-2023

SUMMARY

Practical Action is working with vulnerable communities to find ways to adapt to and prepare for flood events. Our aim is to make resilience a way of life in Bangladesh. We share our knowledge and experience of what works with communities, practitioners, and decision makers across the globe.

Title:	Flood Resilience Project
Project period:	2018 – 2023 (Phase II)
Locations:	Faridpur District, Bangladesh (Decreerchar & North Channel Union under Sadar Upazila and Char Nasirpur & Dheukhali Union under Sadarpur Upazila)
Implementing partner:	Village Education Resource Center (VERC)
Participants:	40,000 people in 8 communities
Donor:	Z Zurich Foundation

Flood Resilience Alliance

BACKGROUND

Floods affect more people globally and cause greater economic, social, and humanitarian losses than any other natural hazard. Climate change, combined with urbanization and economic development, will only make flooding worse.

Practical Action has been a member of the award-winning Zurich Flood Resilience Alliance since 2013. Building on our experience of collaborating with the Alliance, we have been working with 77 communities across six countries as part of our Global Flood Resilience Programme since 2020.

CONTEXT


Riverine flood in Faridpur District

Bangladesh is extremely vulnerable to natural hazards. Its location, meteorological features, riverine conditions, and the funnel-shape of the Bay of Bengal, combined with climate change, a rapidly growing population, and unplanned urbanization, contribute to multiple disaster risks.

Due to climate change, Bangladesh's low-lying riverine and coastal districts are flooded with increasing frequency and intensity. Faridpur district lies within the lower Ganges River floodplain and is bordered by four major rivers; the Padma, the Madhumati, the Arial Khan, and the Kumar. Analysis of the 2016 floods revealed that five percent of the population in Faridpur (2,946 families) were seriously affected. These communities are recurrently flooded during the monsoon, and are exposed to high flood risk and riverbank erosion.

APPROACH

FRMC grading validation workshop

We pioneered the use of the Alliance's innovative resilience framework, the Flood Resilience Measurement for Communities (FRMC), to undertake holistic assessments of resilience at community level. We then engaged in participatory action planning to strengthen community resilience.

Based on our initial data and our experience of working with these communities over the last five years, it is evident that building flood resilience is about more than just protecting these communities from the flood waters; it is about reducing the risk of flood exposure, preparing for future floods, and being able to respond to and recover from floods quickly. Increasing flood resilience therefore requires an approach that improves the social, human, natural, financial, and physical capacities of communities.

The FRMC findings showed that the most vulnerable groups in communities are the elderly, farmers, women, and people with disabilities, and that crop losses represent the biggest losses experienced during floods, followed by household damages. Floods also disrupt markets, decreasing the value farmers can realize from selling their goods and limiting access to resources, and many households are forced to sell their assets at low prices just to survive.

PROJECT IMPACT

increased allocations for flood resilience at local level:

56%
North Channel Union

31%
Dheukhali Union

25%
Decreerchar Union

Increased investment in resilience

By generating robust evidence of community resilience, the Flood Resilience Project has attracted donors and support from a variety of sources at both global and national level to deliver meaningful change for the people we work with and for.

A 2022-2023 budget analysis of three Unions in Faridpur revealed increased allocations for flood resilience, which is directly attributable to the work we have done: 56 percent of the yearly budget in North Channel Union, 31 percent in Dheukhali Union, and 25 percent in Decreerchar Union.

We received $4.2m funding from the Foreign, Commonwealth & Development Office (FCDO) for an 'Ecosystem-based Adaptation in Ecologically Critical Areas' project, which aims to improve access to climate and weather information for 820,250 vulnerable people.

We also won $100k funding from the Citi Foundation for a project working with Chatham House to deepen understanding of cascading risks to flood and early warning systems (EWS) at the community level.

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4.2M
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Improved policy at global national and local level

We used evidence and insights to champion holistic policy transformations at local, national and global levels to strengthen local risk governance. In 2021, we undertook a Post-Event Review Capability (PERC) study on the floods triggered by Cyclone Amphan. Our findings showed that insufficient financing at the local level for disaster risk management was a critical risk magnifier. We pooled data from the PERC, the FRMC, and field-level initiatives that highlighted the repercussions of constrained financial means, and presented these findings in a focused policy brief developed with our Alliance partner Concern Worldwide.

We consistently highlighted the benefits of involving communities in developing an improved flood EWS by identifying and documenting the gaps in present warning dissemination channels. We pioneered new approaches, including a 'disaster alert app' and training and empowering flood volunteers, and we engaged other organizations to highlight the necessity of ensuring early warning information is accessible to affected communities. Development partners and local governments are now interested in using the FRMC, and the Government has adopted the 'disaster alert app' we have developed to strengthen EWS and manage disaster preparedness, response, and recovery effectively.

In 2021 we published a study on Assessing and addressing climate-induced loss and damage in Bangladesh, which influenced the Scottish Government's position on loss and damage, and supported developing countries to establish a loss and damage fund at COP27. We also contributed to the Alliance publication on addressing losses and damages, and worked with civil society organizations (CSOs) in Bangladesh to develop a climate diplomacy report calling for action on climate justice.

Flood-resilient homestead

Improved flood resilience practices

Conducting the FRMC alongside participatory rural appraisals, enabled us to identify and prioritize strategic interventions in a participatory manner, including awareness raising, institutional capacity building, strengthening EWS, and improving household-level infrastructure. Subsequently, 41 community groups and 8 community-based organizations (CBOs) were formed in the working communities, and most of the members of these groups were women. Between 2020 and 2023 the project demonstrated and promoted context-specific flood resilience practices to 593 households, including raised platform systems for livestock and poultry sheds, raised homesteads, installation of flood-resilient toilets, raised platforms for tube wells to provide safe water during floods, and the distribution of boats to continue livelihood activities during flood conditions. This context-specific livelihood assistance has contributed significantly to flood risk mitigation and to strengthening the physical and financial resilience of the communities.

Community women group discussion on flood resilience

Awareness raising

Eight CBO executive committees were formed to promote mutual support and cooperation among the flood-affected communities, with local field staff providing management support. An advisory committee of local elites and public representatives was also established to enable effective communication between the CBOs and the Union Parishads (UPs). Members of the CBO executive committee made significant contributions to flood risk management and resilience building through exchange of knowledge, practices, and experiences. In addition, village-based female group leaders held regular meetings and courtyard sessions to increase awareness around key resilience approaches, such as preparedness and health considerations during and after floods, and to encourage people to respond to early warning information. The project also provided training support to Union disaster management committees (UDMCs) on emergency response, awareness raising, and disseminating weather information and early flood warnings. Local resilience agents (volunteers) were trained with assistance from the District disaster management departments to respond quickly and effectively to floods.

> **“We are grateful to the project because we have learned a great deal about disaster preparedness, which will remain with us even after the completion of the project. We will utilize this flood resilience knowledge and practices and share our insights for the advantage of others. We now have direct access to the local government, including the Upazila and Union chairman, as well as government officials, which is a tremendous privilege. We will continue the practices and promote them to others in our community.**
> *– Amena Begum, community group and CBO member, Decreerchar Union*

Training for UDMC members

Institutional capacity building

Local government systems in Bangladesh play a key role in disaster management. The UP is the lowest tier of government and provides various services to the local community. This project provided support to four UPs and facilitated the formation of UDMCs, comprising of 25 different types of stakeholder as per the guideline of Standing Orders on Disaster (SOD)-2019. Capacity-building training was provided to UDMC members with the help of District, and Upazila-level officials who pushed for increases in disaster management budgets at UP level. In the Unions the project supported the UP-led process of community risk assessment activities, and identified long-term action plans and necessary budget requirements for disaster risk reduction.

> **“I believe that I have made every effort to utilize the knowledge gained from the project for the betterment of the community. Better allocation for disaster preparedness and the significance of an effective early warning are two of the most important lessons I’ve learned from this project.”**
> *-Nurul Islam, secretary, Decreerchar UP*

Early warning voice message received via mobile phone

Four early warning dissemination channels

- Contextualized voice message via mobile phone
- Digital weather boards
- Disaster alert app
- Local resilience agents

Strengthening localized early warning systems

An effective EWS delivers accurate, reliable, timely, and actionable information to those who need it, so they can take actions to protect themselves and others, their assets, and their livelihoods. Our strategy is to disseminate flood early warnings through multiple channels. During a flood, we send easy-to-understand early warning voice messages to the community via mobile phones. Since 2020, approximately 40,000 people from 10,000 households have received flood and other disaster early warning voice messages, and the system was also successfully employed to deliver awareness messages during the COVID pandemic. Digital weather boards (DWB) have been installed in UP digital centres to enable us to share daily and weekly weather forecasts, local and national market prices for agricultural commodities, different advisory services, and guidance on what to do during floods and other disasters. The DWBs have also contributed to a reduction in agricultural production risk through video demonstrations, timely initiatives and advice, and specific advice on disaster risk reduction. Local resilience agents and UDMC members have been encouraged to use the 'disaster alert app' to enable effective rescue and response during disaster situations. A 2022 survey showed that 96 percent of mobile users received the voice message on early warning for disaster preparedness, 93 percent had sufficient time for preparatory measures, and 63 percent of women easily understood the warning messages.

> **Earlier, our preparation for floods was limited because early flood warnings were seldom received in the Chars. Now, with the early warnings we get from various channels, every member of my family is alerted during events like pandemics or floods, which greatly aids our safety and preparedness.**
> *- Rabeya Begum, local resilience agent, Dheukhali Union*

RESOURCES

Media articles on EWSs to reduce loss and damage and on digital innovations for building resilience of vulnerable communities

Article on our work on EWS published by Thomson Reuters Foundation and by The Telegraph

Alliance PERC study

Alliance policy brief 'Increase local government budget allocation for effective disaster management in Bangladesh'

Practical Action's approach to localized flood early warning dissemination in Bangladesh

Roundtable session with The Daily Star 'Effectiveness of flood early warning system in building climate resilience'

Session at the Third Gobeshona Global Conference 'Starting with the first mile to support effective early warning systems at scale'

For more information, visit:
practicalaction.org/our-work/projects/flood-resilience-programme/
www.floodresilience.net

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