

# HUMANITARIAN IMPACTS OF CLIMATE CHANGE IN **BANGLADESH**

Communities call for more support



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# Glossary

## Humanitarian impacts of climate change

Humanitarian impacts of climate change refer to the adverse effects that changes in climate patterns and associated environmental shifts have on human well-being, safety, and livelihoods. These impacts are wide-ranging and can affect various aspects of human life, often exacerbating existing vulnerabilities and inequalities.

## Coping mechanisms

Coping mechanisms are (1) strategies adopted by communities to reduce the impact of hazard or avoid the occurrence of disasters and (2) cognitive or behavioural responses designed to reduce or eliminate psychological distress or stressful situations. Coping can refer to strategic actions as well as unconscious, automatic responses, and a mixture of them.

## Climate change adaptation

Climate change adaptation refers to efforts undertaken to minimise the impacts of climate change. Operationally, there is significant overlap between disaster risk reduction and activities implemented to support climate change adaptation, with the latest bringing an important dynamic and long-term element to risk reduction and development planning.

## Climate change mitigation

Climate change mitigation refers to efforts undertaken to reduce the emissions of greenhouse gases in the atmosphere, which cause climate change, and enhance sinks that absorb them.

## Community engagement and accountability

Community engagement and accountability (CEA) is a way of working that recognises and values all community members as equal partners, whose diverse needs, priorities, and preferences guide everything we do. We achieve this by integrating meaningful community participation, open and honest communication, and mechanisms to listen to and act on feedback, within our programmes and operations.

## Community resilience

Community resilience is the ability of individuals, communities, organisations, or countries exposed to disasters, crises, and underlying vulnerabilities to anticipate, prepare for, reduce the impact of, cope with, and recover from the effects of shocks and stresses without compromising their long-term prospects.

## Losses and damages (L&D)

Losses and damages refer to the financial, social and cultural shocks coming from the inevitable climate impacts which can't be ameliorated by reducing greenhouse gas emissions (mitigation) or by taking measures to avoid impacts (adaptation). According to the IPCC Sixth Assessment Report, Working Group II Summary for Policymakers uses the term 'losses and damages' to refer to adverse observed impacts and/or projected risks of climate change. These impacts can be economic and/or non-economic.

# Summary

This report provides insights into the humanitarian impacts of climate change on local communities in Bangladesh. It's based on a literature review and primary research in two distinct areas: the coastal community of Satkhira district and the riverine community of Tangail district.

The research identifies five primary impacts of climate change on vulnerable populations:

- Displacement
- Loss of livelihoods
- Physical and mental health
- Infrastructure damage
- Non-economic losses and damage.

There are four current challenges to effective adaptation to those climate change impacts:

- Limited awareness
- Inadequate access to information
- Resource constraints
- Limited community engagement.

Overcoming these challenges will require meaningful collaboration among all the stakeholders including the national and local governments, donors, and international and national NGOs, and local communities. This collaboration should aim to:

- Strengthen community networks and the role of local communities in designing and planning of projects and programmes.
- Improve community-based climate education.
- Improve disaster risk reduction and adaptation approaches, including early warning and early action.
- Make community-level finance available and accessible for locally led adaptation.
- Improve response readiness or strengthen preparedness for response.
- Improve disaster risk governance and climate risk mitigation

Despite significant challenges, our study shows that affected communities in Bangladesh demonstrate remarkable resilience through local initiatives and traditional adaptive measures.

This field-based research offers key insights into the humanitarian impacts of climate change on local communities and recommends actions to reduce those impacts.

# Bangladesh is one of the most vulnerable countries to climate change



Bangladesh is the seventh most vulnerable country to climate change in the world (Eckstein, et al., 2021). Geographical, socioeconomic, and demographic factors increase the nation's susceptibility to both sudden- and slow-onset climate events. The mean temperature in Bangladesh has increased by 0.5°C between 1976 and 2019 (Mahmud et al., 2021). According to the Bangladesh Meteorological Department, Dhaka recorded the highest temperature of 40.4°C in 2023, which was the hottest day in 58 years (The Daily Star, 2023). Between 2001 and 2020 the country's average annual rainfall increased by 223 mm (Rahman et al., 2023).

Indeed, climate change is often referred to as a 'silent disaster' in Bangladesh, impacting every facet of human life. The geographic location, socioeconomic characteristics, and livelihood patterns contribute to heightened vulnerability (Isfat & Raihan, 2022). The direct and indirect consequences of climate change on health, livelihoods, migration and displacement are a source of profound concern among community members.

## **Climate change impacts are projected to worsen**

Projections indicate alarming scenarios if adaptation efforts are not intensified. Climate change threatens to significantly increase coastal flood risk in Bangladesh, from an already high baseline. In the far-future period (2030–2100), the annual mean temperature in Bangladesh is projected to increase by 1.1–4.0 °C (Almazroui et al., 2020). Under a catastrophic climate change scenario, 5% of Bangladesh's population may suffer moderate to severe food insecurity by 2040 without adaptation measures (CVF & V20, 2022). Internal climate displacement may surge to 19.9 million by 2050 (Clement, et al., 2021), contributing to an increasing GDP loss that is predicted to reach 2% by 2050 and exceed 9% by 2100 under extreme scenarios (NAP, 2023). The Bangladesh Delta Plan 2100 anticipates a potential 17% decline in overall rice production by 2050, posing significant threats to food and nutrition security (GB, 2018).

## **Climate adaptation costs will be significant**

Addressing these climate change challenges requires significant financial commitments. The National Adaptation Plan (NAP) emphasizes the need for at least USD 1.2 billion per year by 2030 to prevent anticipated damages, averting a potential loss of USD 11.6 billion in GDP. As per the National Adaptation Plan, Bangladesh will need USD 230 billion over the next 27 years till 2050 to enhance its adaptation capacity. Without adaptation, the UK Met Office (2014) suggests that 2.5 to 7.2 million people may be affected by coastal flooding in Bangladesh from the 2070s to the 2100s. According to projections outlined in the NAP (2023–2050), Bangladesh will require USD 230 billion over the next 27 years until 2050 to bolster its adaptation capabilities.

## **Financial pledges at COP28 provide opportunities for Bangladesh**

In December 2023, at COP28, countries agreed to strengthen climate adaptation agreeing a new "Global Goal on adaptation" and to "at least double climate adaptation by 2025" strengthening the prior Glasgow Climate Pact commitment.

At COP28, several countries pledged an additional USD 192 million to the Adaptation Fund, a UN mechanism for funding climate change adaptation in least developed countries (Adaptation Fund, 2023). The funds will help to reach more vulnerable countries and communities with urgently needed adaptation solutions. Additional pledges of USD 792 million (IIED, 2023) were made on Loss and Damage, of which an estimated 115.3 million were dedicated to wider funding arrangements, separate to the new Fund (L&DC, 2023).

The Loss and Damage Fund will support the recovery, reconstruction, and rehabilitation of communities following extreme climate events and address ongoing loss and damage from the slow-onset effects of climate change.

Both funds and wider funding mechanisms present an opportunity for the government of Bangladesh to bolster its climate adaptation efforts.

## Demographic and socio-economic factors increase vulnerability

Bangladesh's vulnerability is intricately linked to its demographic profile:

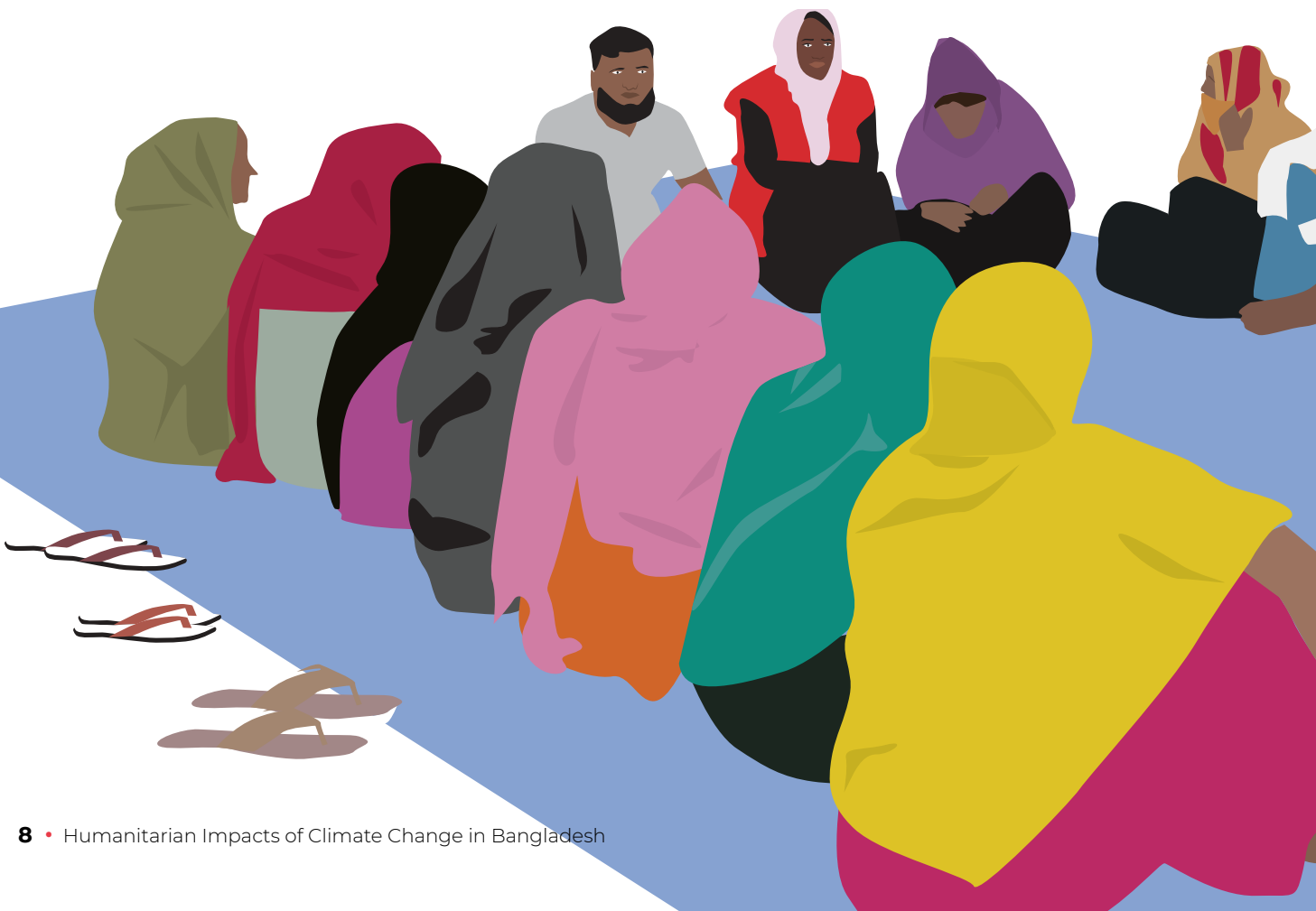
- It is the eighth-most densely populated country
- The majority of its 165 million people reside in rural areas that face heightened risks
- An age dependency ratio of 53%
- Almost 19% live below the poverty line
- Almost 3% of the population are people with disabilities
- 26% of the population is classified as having low literacy (Bangladesh Bureau of Statistics, 2022 & 2023).

## Social inequity and gender

Recent studies, such as Khandekar (2019) and Masud-All-Kamal et al. (2024), emphasize that changing environmental conditions disproportionately affect women, particularly during disasters. In Bangladesh, cultural values and mobility restrictions further heighten the vulnerability of women during disasters (IPCC, 2014). Gender norms intersect with social class, age, and marital status to impede women and undermine their adaptive capacity.

## Socio-economic adaptation and decision-making

In response to climate change, adaptations are observed at the community level. Coastal fishermen, for example, have shifted professions in response to changing climate conditions (Barua et al., 2020). Riverbank erosion, salinity intrusion, strong winds, and high temperatures are compromising crop yields, causing farmers to move seasonally to urban areas for alternative livelihoods (Koubi et al., 2023; Koubi et al., 2022; Al Amin et al., 2019). Changing precipitation patterns, irregular monsoons and extended dry spells also make it harder for farmers to plan when to plant (Barua and Rahman, 2020; Kumar et al., 2020). Research highlights the interconnectedness of land ownership, social networks, and economic strength with climate change decisions (Rana & Ilina, 2021; Mallick et al., 2021). Effective decision-making requires informed communities that trust the government or other stakeholders such as NGOs and humanitarian agencies to address vulnerabilities and challenges (Uddin et al., 2021).





## Mental health impacts and cultural resilience

Climate-induced migration and displacement, economic losses, and morbidity impact mental health (Isfat & Raihan, 2022; Rana & Ilina, 2021; Barua et al., 2020). Grassroots community unity and resilience, grounded in traditional values, family ties, and religious beliefs, play a pivotal role in coping with these challenges (Chowdhury et al., 2020).

## Loss and damage

### Economic losses and damages

Climate change has caused substantial financial losses and livelihood impacts in Bangladesh. In 2021, climate-related disasters caused approximately USD 11.3 billion in damages, accounting for 2.5% of GDP for the fiscal year 2021–2022 (WMO, 2021). Cyclones, which particularly impact the agricultural sector, resulted in a USD 255 million loss from 2015 to 2021 (OCHA, 2022). The flash flood of 2022 affected millions of people and caused extensive damage to critical infrastructure and the agricultural sector (UN RC Bangladesh, 2022). Livestock losses were valued at USD 27.84 million.

### Non-economic losses and damages

Climate change in Bangladesh is also intricately linked to non-economic losses and damages. Each year, riverbank erosion displaces approximately 25,000 people (CEGIS, 2022), affecting human mobility, mental health, traditional knowledge, culture, ecosystem diversity, and social connections. Health impacts and water scarcity present severe challenges. Research indicates that 41.7% of the population has been affected by climate extremes, with 5.6% experiencing hazard-induced sickness and injury (Kabir et al., 2021). Saline water, associated with climate change, contributes to various health issues (Talukder et al., 2015). Furthermore, extreme weather events like storms, floods, and droughts pose threats to mental health, leading to anxiety, depression, and post-traumatic stress disorder due to population displacement and food insecurity (Clayton, 2021).



# Our research reflects a local perspective

This study assesses the humanitarian impacts of climate change by identifying vulnerabilities and challenges faced by local communities. The study includes local perspectives, gained through community engagement, ensuring active participation in assessing climate-related impacts. Establishing accountability mechanisms ensures transparent communication with communities.

The research included a desk-based literature review, twenty key informant interviews and four focus group discussions. Participants represented directly impacted local communities, climate experts, government authorities, academia, humanitarian volunteers, NGO beneficiaries, NGO staff, and civil society.

The research provides actionable recommendations for government, policymakers, humanitarian organisations, donors and NGOs. Emphasizing community-centric solutions, the research considers local context and cultural nuances.



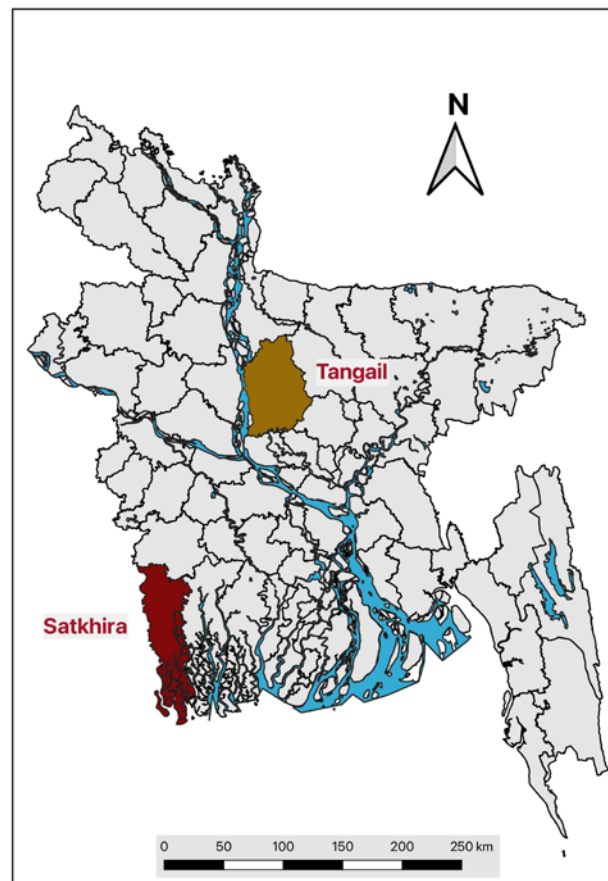
# We investigated two distinct study areas

The selection of Satkhira and Tangail as study areas was driven by the need to understand the perspectives of individuals directly affected by climate change in both urban and rural settings. Both districts are in the programme area of the Bangladesh Red Crescent Society (BDRCS).

Satkhira, in the southwestern coastal area of Bangladesh, faces heightened risks posed by a myriad of climatic challenges, including extreme heat waves, sea level rise, tropical cyclones, storm surges, and salinity intrusion. The Center for Environmental and Geographic Information Services (CEGIS) highlights the scope of vulnerability, with 30,646 km<sup>2</sup> encompassing about 14 million people at the forefront of these climate extremes (GB, 2022).

Contrastingly, Tangail, situated in river floodplains and erosion-prone areas, grapples with a distinct set of challenges related to its riverine landscape. Seasonal flooding, riverbank erosion, and rainfall variability adversely impact agriculture and infrastructure in this region. Covering 58,010 km<sup>2</sup> and affecting around 13 million people, Tangail exemplifies the vulnerabilities faced by communities in the context of climate change (GB, 2022).

**Figure 1** Map of the study areas: Sathkira, in the southwestern coastal area and Tangail, in the river floodplains



# The impacts of climate change on vulnerable communities are extensive

The research in Satkhira and Tangail unveils a grim reality, highlighting the profound impacts of climate change on local communities. Displacement caused by riverbank erosion, the loss of traditional livelihoods due to salinity intrusion, and the escalation of health problems triggered by extreme weather events collectively contribute to profound loss and damage to people's lives. These challenges are exacerbated by limited awareness of climate change within the communities, a lack of access to climate/extreme weather information, resource constraints, and limited participation and community engagement.

Despite these formidable obstacles, the affected communities exhibit remarkable resilience through local initiatives and traditional adaptive measures.

The government, complemented by prominent organisations such as the Bangladesh Red Crescent Society and various non-governmental organisations (NGOs), has played a pivotal role in building community resilience to climate.

However, the absence of climate finance opportunities continues to result in significant deficiencies in policy implementation, resource allocation, and community participation and engagement. Urgent attention is required to address these gaps and enhance the overall capacity of communities to cope with and adapt to the adverse effects of climate change, thereby scaling up adaptation efforts to minimize further loss and damage.

## Displacement

Due to riverbank erosion, rural people from Tangail are moving temporarily to nearby areas. They can't move farther because they have to bring goods, such as tin, wood, cattle and poultry, and crockery. Because of their social networks and connections, they can stay with relatives or neighbours. They then decide whether to move permanently to new places or to return to their properties if that becomes an option. A lack of livelihood options in their affected area may lead people to move to the cities working as day labour in a brick factories or others (Box 1). They may do this permanently with their families, or males might do it seasonally.

In Satkhira, many people's traditional agricultural livelihoods have been disrupted by climate change impacts. A few people have permanently moved into informal settlements following cyclones, such as Sidr in 2007 and Aila in 2009. However, the majority of affected people move seasonally to the settlements seeking income opportunities. This is partially the result of land-use changes, particularly the development of shrimp farming.

“

Because of heat waves and unpredictable rains farmers must migrate for their livelihoods. But many people have only farming skills, so they struggle to adapt in urban areas. We also worked as day labour.

26 year old, Tangail



A few women who live in the informal settlements work as labourers. © ICCAD

## Loss of livelihoods

The economy of the country is mainly dependent on agriculture. About 46% of the labour force is engaged in agriculture (Government of the People's Republic of Bangladesh (GB), 2019). Agriculture-dependent communities experience crop failures due to saline intrusion in the coastal regions, such as Satkhira (Box 1).

### Box 1: Shrimp farming in Satkhira unintended consequences of economic shift

In Satkhira, farmers, lured by the promise of quick returns, transitioned from traditional rice cultivation to shrimp farming.

However, the short-term prosperity concealed long-term sustainability challenges. The shift proved detrimental to traditional livelihoods and left once-fertile lands unproductive. The economic transition exacerbated social inequalities. Traditional rice cultivation, labour intensive and vital to local employment, was replaced by shrimp farming. As a result, those reliant on rice cultivation lost their livelihoods, compelling many to seek alternative opportunities through seasonal migration to urban areas.

Previous studies by Amoako et al. (2016) and Paprocki et al. (2017) support these findings.

Opposition to shrimp aquaculture grew among social movement groups and local residents, who perceived it as a threat to their well-being and the sustainability of the coastal region.



*Shrimp farming in Sakhira district. © ICCCAD*

“

Since cyclones are the single most destructive disaster for this area, the coastal and most vulnerable people often migrate to the city [where extreme health makes it unbearable for low-income people]. The lack of resources in our city, which in turn causes the prices of goods to rise continuously, is the biggest threat for Satkhira to support the most affected communities.

60 and 53 year olds, Sakhira



People rebuild their house in an informal settlement in an urban area after a disaster. In Tangail, the loss of agricultural land due to riverbank erosion has denied people the opportunity to practise traditional agriculture. Previous research (Hossain et al, 2022) reveals that local communities face resource constraints, leaving them without alternative livelihood opportunities when their primary jobs are disrupted. Similarly, low-income informal settlers experience reduced working hours due to extreme heat, limiting their livelihood options in Satkhira. © ICCAD

## Health issues

People from both areas are facing challenges with extreme heat, flood, and salinity-related health issues. Low-income families living in informal settlements (urban areas) are more vulnerable than others, including rural people. However, both urban and rural dwellers are affected by heat-related health issues such as heat exhaustion and heat stroke, along with dehydration, diarrhoea, respiratory diseases, rashes, fatigue, and fever (Box 2). Flood-related health issues, such as diarrhoea, water-borne disease, malaria, and dengue occur in both urban and rural areas. During heat waves, urban areas become heat islands; informal settlers are exposed to increased temperature and vector- and water-borne disease outbreaks. Salinity creates additional health issues for coastal communities, especially women. Exposure to saline water can cause hypertension, skin diseases, miscarriages, digestive diseases such as diarrhoea, and acute respiratory infections.

## Infrastructure damage

Cyclones and floods damage critical infrastructure, disrupting essential services and communication. Riverbank erosion damages the land, roads, houses, and different infrastructure (Billah, et al., 2023). Salinity causes corrosion of roads, bridges, and buildings in the coastal area. Riverbank erosion causes land loss, and extreme heat causes cracking and other damage to roads and flexible pavements. Construction and management of buildings, roads, power and telecommunication transmission lines, drainage and sewerage and waste management are very difficult and vulnerable to climate change disasters (Rahman et al., 2015).

### Box 2: Impact of extreme heat in Satkhira, June 2023

In Satkhira, an urban resident described the tragic death of her uncle due to severe heatstroke during the peak of a relentless heatwave in June 2023. Accustomed to heatwaves, the uncle ventured outside, unaware of the unprecedented intensity that awaited him. Despite prior encounters with heatwaves, he succumbed to the extreme heat around noon with no access to immediate medical attention. Meteorological records reveal that the weather stations recorded an alarming high of 41°C during the first week of June 2023 – the highest temperature documented in the region in six decades. The urban landscape of Satkhira, created a heat island, exacerbating the conditions for residents.

Mojid Ali, an informal settler from Satkhira, provided further insight into the plight of vulnerable communities during the extreme heatwave. Lacking access to electric fans or air conditioning in their living spaces, informal settlers struggled profoundly. The scorching temperatures hindered outdoor work and caused health problems. Mojid Ali highlighted the prevalence of respiratory diseases among the community, and of children experiencing heightened vulnerability to diarrhoea.

## Non-economic losses and damages

Climate change does not only cause physical environmental change. It is also a threat to livelihoods and resources, social life, and culture. For example, salinity intrusion prevents the traditional crop production practices in the coastal regions. In Tangail, riverbank erosion causes non-economic loss and damage to social life, social ties/connections, social and psychological impacts, traditional knowledge, communities, and culture. Displacement and/or migration forces people to leave behind their legacy and cultural heritage. Degradation of ecosystem services, health impacts, biodiversity decline, and loss of traditional knowledge are additional impacts.



“

The young and old cannot fully comprehend the effects of climate change, and so they are less able to adhere to community coping mechanisms. They are reliant on the middle-age working class for how to combat this which in turns elevates their already pressurised conditions.

————— *37 year-old woman, Women Group Discussion, Satkhira*



“

Sometimes, we get the wrong information or the outcome of the predictions might not always be correct, but we still seek information the next time because we care about our lives and families.

————— *40 year-old restaurant manager, Tangail*



## The communities face significant challenges in coping with impacts

### Limited awareness

Many communities, especially in rural areas, lack comprehensive awareness of the nuances of climate change, its impacts, and adaptive measures. Limited awareness hampers the ability of communities to proactively prepare for and respond to climate-related challenges. For example, people don't know when they have to move during a riverbank erosion disaster. People in Satkhira are not aware of any alternative longer-term livelihood opportunities beyond shrimp farming. From the start, they can't understand that shrimp farming is a maladaptation. In some dominant families, women are forced to stay in their houses during disasters. In both of the study areas, religious beliefs imply that people can't reduce the impacts of climatic disasters. Some people do not understand why they cannot practise traditional agriculture, or why they should take localized adaptive measures to reduce the impact of climate change.

### Inadequate access to information

Access to timely and accurate climate information is uneven, with marginalized communities often having limited access to weather forecasts, early warning systems, and climate-related educational resources. Without timely, accessible and easily understood action-orientated information, it is difficult for communities to make informed decisions regarding livelihoods, resource management, and disaster preparedness. People feel insufficiently informed about climate-related and weather impacts climate change to make decisions. For example, people from both study areas lack digital literacy and therefore can't source information from social media or the internet.

### Resource constraints

In the face of climate vulnerability, the local government allocates a constrained budget for climate-resilient infrastructure, technologies, and practices. However, the limited financial resources, coupled with competing priorities, impede the completion of critical projects, such as building embankments in the river. As a consequence, communities are left exposed to the recurrent threats of riverbank erosion and floods. The lack of investment in adaptive measures further exposes these communities to the adverse effects of climate change, exacerbating existing vulnerabilities. Households in vulnerable areas don't have sufficient savings and access to credit to navigate climate-related disruptions, including the loss of livelihood assets. After cyclones and major floods, affected households receive emergency relief funds from the government.

However, the post-disaster financial support proves inadequate, leaving families struggling to rebuild homes and livelihoods. In attempting to recover from disasters, households often take substantial loans from various microcredit organisations with high-interest rates. This strategy not only limits their capacity, but also traps families in a cycle of poverty to recover and prepare for subsequent climate events, such as cyclones, floods, and river erosions.

### Limited community engagement

Inadequate community engagement in decision-making processes related to climate adaptation can result in top-down approaches that do not address the unique needs of local populations. Community Engagement and Accountability (CEA) – a way of working that recognizes and values all community members as equal partners, whose diverse needs, priorities, and preferences guide everything we do (CEA Hub) – is instrumental to ensure that perspectives of people affected by climate change are systematically considered and integrated into the design, implementation and evaluation of adaptation programmes. This will allow for communities to fully embrace, own, or effectively implement adaptive measures, build trust and effective resilience to climate change impacts.

“

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We are low income people. We dont have the ability to take food without working in a single day. During any severe disaster we cant work in the outside. However, we get insufficient of emergency relief such as food assistance, cash support which doesn't meet our needs during disaster.

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*47 year old, informal settlement, Satkhira*



*Informal settlers are concerned about unmet needs and the lack of relief. © ICCCAD*

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The local government fails to heed our concerns; we are unable to grow rice on our agricultural land due to the proliferation of shrimp farming in saline waters. Moreover, a handful of influential locals obstruct the construction of river embankments, exacerbating salinity intrusion in our region.

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*60 year-old farmer, Satkhira*



*People want access to information about climate change. © Sajid Hasan*

## Local initiatives

People did not build concrete structures for housing. They used tin and wood, bamboo structure houses to be easily moveable in times of riverbank erosion and go to safe places in times of cyclones. During disasters such as floods, households skip one or two meals.

### LOCAL INITIATIVES AT A GLANCE

- Borrow money from microcredit organisations
- Practice flood-resistant agriculture and saline tolerant rice seasonally.
- Bamboo bandalling construction for riverbank erosion protection
- Social networks, relationships within their communities livelihood
- Eat less in the disaster crisis moment Communities implement traditional adaptive measures, such as homestead rooftop gardens, raising houses on stilts, and practising flood-resistant agriculture. Bamboo bandalling construction, a locally crafted structure, emerges as a cost-effective solution for riverbank erosion protection in flood-prone areas.

## Government initiatives

### Social protection

The social protection system in Bangladesh is closely linked to disaster management, having emerged from disaster response programmes. Three programmes – Vulnerable Group Development, Test Relief, and Gratuitous Relief – play a crucial role in the provision of immediate emergency relief in Bangladesh in the aftermath of natural hazards and food shortages. A series of reforms have been initiated by the National Social Security Strategy to create robust social protection information systems. The government has also integrated resettlement initiatives with local-level climate change adaptation and poverty reduction activities.

### Ashrayan project

Through the government's Ashrayan project, a groundbreaking initiative for the displaced, landless and homeless, more than 400,000 families have been provided with homes after experiencing disasters. The 'Khurushkul Special Ashrayan Project' is one of the biggest housing projects in the world for climate displacement.

### Government policy, strategies, and plan: Building resilience for climate-resilient sustainable development

Bangladesh, the seventh most climate-vulnerable country, has pioneered comprehensive policies and strategies for climate adaptation and sustainable development. Landmark initiatives like the National Adaptation Programme of Action (NAPA, 2005) and the Bangladesh Climate Change Strategy and Action Plan (BCCSAP, 2009) set the stage, providing strategic vision and priorities for climate change action.

The Bangladesh Delta Plan 2100 and Mujib Climate Prosperity Plan demonstrate the nation's commitment to long-term planning, focusing on sustainable development in the face of climate uncertainties.

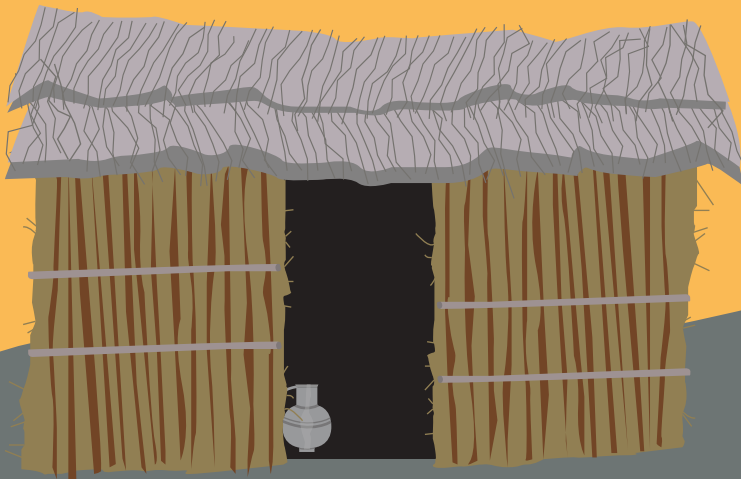
Environmental considerations aligned with global standards were integrated into the updated National Environment Policy (2018).

A revised Standing Order on Disaster (2019) strengthens preparedness and response mechanisms for climate-induced disasters. The Bangladesh Climate Change Trust Fund (BCCTF), established in the fiscal year 2009–10, is a critical funding mechanism, investing around \$480 million in over 800 projects that focus on adaptation, mitigation, and research.

“

I used to have four concrete houses, but due to river-bank erosion I have lost them all. Every few years I have to move my house to a new place. That's why now I only have a small shed made out of hay and straw, which is easier to move and much less expensive to build.

57 year old, Satkhira



## GOVERNMENT INITIATIVES AT A GLANCE

- Emergency relief response after natural shocks
- Local-level climate change adaptation under the social safety programme
- Housing for climate-induced migrants
- The global leader for the best practise of DRM
- Allocated \$480 million national budget to cope with climate change impacts In 2010, the National Adaptation Plan (NAP) was established, facilitating effective adaptation planning and integration into national development processes. The NAP, aligned with global efforts under the United Nations Framework Convention on Climate Change (UNFCCC), serves as a pivotal tool in identifying and addressing medium- and long-term adaptation needs. It plays a crucial role in securing funding support for sustained climate change adaptation beyond the immediate actions outlined in BCCSAP. This comprehensive approach, involving NAP, BCCSAP, and BCCTF, positions Bangladesh as a leader in climate-resilient sustainable development. The nation's policies and funding mechanisms are intricately aligned to address current and future challenges posed by climate change, emphasizing resilience and sustainability (NAP 2023).

### Disaster risk reduction, early warning systems, and disaster risk management

Bangladesh has made remarkable strides in disaster risk reduction (DRR), early warning systems (EWS), and disaster risk management (DRM) to confront climate-induced challenges.

The Community-Based Cyclone Preparedness Programme (CPP), initiated in the 1970s, stands as a flagship DRR initiative, training local volunteers and establishing cyclone shelters to minimize casualties during cyclones.

The government has made significant investments in constructing cyclone shelters in vulnerable coastal regions; these serve as multifunctional evacuation centres during calamities.

Bangladesh has also emerged as a global leader among the Climate Vulnerable Forum (CVF) and the Vulnerable Twenty (V20) Group and has demonstrated global best practices on DRM, such as cyclone preparedness. The country has developed a robust EWS facilitated by the Bangladesh Meteorological Department, disseminating timely warnings through diverse channels like mobile networks and community-based organisations.

Bangladesh's Comprehensive Disaster Management Program (CDMP) strategically integrates DRR principles into national policies, emphasizing risk reduction, community engagement, and institutional coordination. Social safety net programmes contribute to community resilience by addressing socio-economic vulnerabilities and reducing dependence on climate-sensitive sectors. The nation prioritizes climate-resilient infrastructure development, incorporating resilient construction practices in various projects. Institutional strengthening is evident through the establishment of the National Disaster Management Council to oversee disaster-related activities, ensuring a unified and effective response.

International collaboration and knowledge-sharing initiatives further enhance Bangladesh's adaptive capacity and resilience, fostering partnerships with organisations like the United Nations. While these achievements are commendable, challenges persist, requiring continuous efforts to address evolving risks posed by population density, poverty, and emerging climate threats. Bangladesh remains committed to advancing its disaster management strategies for sustainable development in the face of climate change.



## Humanitarian organisations and NGOs are taking some action already

### Bangladesh Red Crescent Society (BDRCS)

BDRCS works in both research areas to enhance climate resilience, community engagement, and preparedness for response. It provides direct support to the community through cash, poultry and duck rearing, homestead gardening, and alternative livelihood training to increase resilience before, during and after climate-related disasters. Bangladesh Red Crescent Society has provided the community members with some flood-resilient shelter, tube-wells, and latrines which can withstand disasters like floods and other natural hazards in Tangail. BDRCS has piloted a social protection response based on early warning data. This involved BDRCS making cash transfers to selected people's accounts before floods forced them to move to higher ground. Initial assessment of the pilot has been positive, as households that did not receive early assistance were four times more likely to borrow from banks and three times more likely to have had to skip meals than households that received assistance from the pilot.

### ROLE OF NGOS, AND STAKEHOLDERS AT A GLANCE

- Forecast-based financing through BDRCS as a grant
- CBF to enhance resilience livelihood of climate-induced migrants
- Mental health service to support vulnerable communities Under its Integrated Flood Resilience Programme (IFRP), BDRCS has provided the community members with some flood-resilient shelters, tube wells, and latrines which can withstand disasters like floods and other natural hazards in Tangail. This type of support is an example of adaptation measures to address climate change considering the local context. The support is usually provided to the targeted people following the BDRCS standard beneficiary selection process, ensuring community engagement so that the locally led adaptation is enhanced and the participation of the relevant stakeholders is ensured. Community people can minimize the risks of climate change to their shelter and water resources.

### NGOs

Numerous NGOs actively engage in climate resilience projects at the community level, contribute to awareness campaigns and implement adaptation projects. They provide direct support such as microcredit loans to vulnerable communities.

In 2019, the Climate Bridge Fund (CBF) was established in collaboration with BRAC – a Bangladesh-based international NGO backed by the government of Germany. By establishing the fund, BRAC aims to provide a long-term mechanism to support adaptation by climate-induced migrants. The CBF is expected to enhance climate migrants' access to sustainable livelihoods and their resilience to future climate-related risks. It channels donors' finances to people in climate-vulnerable locations, particularly urban informal settlements.

SAJIDA Foundation played a pivotal role in establishing the Psychological Health and Wellness Clinic (PHWC), offering affordable and subsidized counselling services with a community-centred approach to treatment and awareness. The initiative aims to extend support to vulnerable communities by making mental health services accessible and cost-effective.

# More action is urgently needed to tackle the impacts of climate change

Effective adaptation, informed decision-making, and substantial climate finance are imperative to mitigate the far-reaching impacts and secure the nation's sustainable future.

## Recommendations for the government

**Increase transparency** through new/enhanced tracking and reporting mechanisms on the allocation and use of funding on disaster risk reduction and climate adaptation. This could include mechanisms such as an online portal to enhance finance flows and support between and across central and local government

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**Increase accessible community-level finance** for locally led adaptation. Through small grants support to local community groups, capacity training support for example floating garden.

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**Allocate pre-arranged finance** to be able to operationalise the forecast-based financing for preparation and recovery from climatic disasters.

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**Enhance social protection** by expanding such as emergency relief, housing for homeless to reach the most vulnerable, particularly focusing on climate displacement.

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**Integrate Early Warning Systems** into the Climate Protection Program to ensure effective response to climate-related hazards and displacement.

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**Establishment and strengthen the Community Based Early Warning System (CBEWS)** considering the different geophysical contexts of Bangladesh to reduce the economic loss among the community members.

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## Recommendations for donors

**Prioritize funding** on investing in capacity building of local actors and communities in participation, engagement, and education as part of locally led action. This should include enhanced funding mechanisms directly allocated to local organisations or local levels, ensuring resources reach communities most affected by climate change and disasters.

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**Focus on most vulnerable** and largest gaps in needs where existing programmes and access struggle to reach (specific to climate-related displacement or marginalised groups such as informal settlers).

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**Support national government priorities** on forecast-based financing commitment to pre-arrange finance.

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**Support strengthening of social protection systems**, such as forecast-based financing initiatives through bi-lateral funding.

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**Support community-based research initiatives** focused on understanding climate change impacts in the South Asian region to inform evidence-based policy and decision making.

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## Recommendations for NGOs and international organisations

**Enhance community participation** and accountability by strengthening existing and establishing enhanced structured feedback mechanisms that actively involve local communities in project design, implementation, and evaluation processes.

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**Establish collaborative partnerships** among NGOs, international organisations, government bodies, and the private sector to foster sustainable business practices and innovative solutions that contribute to climate resilience and humanitarian response efforts.

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**Community-based education programs for climate change awareness** should target a wide range of educational institutions, including primary schools, high schools, vocational training centres, universities, and adult education centres.

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**Invest and strengthen locally led approaches** with local communities for locally led climate change adaptation.

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**Develop initiatives that empower women** economically by providing access to education, healthcare, sustainable livelihood options, and climate change adaptation and resilience-building efforts.

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**Introduce and implement livelihoods programmes** to enhance the opportunities of community members to increase their income generating and make them resilient to climate change and disaster risk.

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# Revising strategies for successful climate adaptation

In light of our findings, we advocate for a comprehensive approach to addressing the impacts of climate change, encompassing immediate, medium-term, and long-term strategies.

Immediate measures involve strengthening early warning systems (EWS), promoting community-based climate education, and enhancing emergency relief preparedness.

Medium-term strategies should focus on empowering local capacities, bolstering financial mechanisms like social protection and agricultural diversification, and reinforcing community networks.

Long-term efforts must prioritize mainstreaming climate adaptation, community resilience, women's empowerment, supporting climate-related displacement, agriculture, livelihoods, and infrastructure development, while embedding and strengthening adaptive capacity such as education.

These strategies necessitate cross-cutting initiatives, including enhanced international collaboration and inclusive policy development. Implementation success relies on coordinated efforts, joint planning, and a whole-of-society approach involving governments, NGOs, international organisations, community based organisations, and local communities.

This issue briefly serves as a rallying call for concerted action. Bangladesh faces significant challenges, demanding immediate and coordinated responses to mitigate climate-related impacts and enhance resilience. Transparent resource allocation, inclusive policy frameworks, and robust community engagement are vital components of an effective response.

The time for action is now – climate change impacts are immediate realities, not distant concerns. Through collective action, with affected communities at the forefront, we can strive for a resilient and sustainable future for Bangladesh, showcasing the power of collaboration and compassion in confronting climate-induced humanitarian crises.

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# Annexes

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## Annex A Key Informant Interview (KII) participants list

S.I no:	Designation/Occupation	Area
01	Social Welfare (Municipal government authority ), Age: 50	Satkhira (Municipality)
02	College teacher, Age: 55	
03	Doctor, Age: 40	
04	Businessman, age: 45	
05	Civil society, age: 50	
06	Young volunteers, age: 26	
08	Farmer, age: 60	
09	Housewife (informal settlement), age: 35	
10	Restaurant staff, age: 47	
11	Community leader, age: 57	
12	Housewife, age: 42	
13	Chairman (local representative), age: 58	
14	Member (local representative), age: 50	
15	Community religious leader, age: 80	
16	Housewife, age: 40	
17	Farmer, age: 57	
18	Fisherman, age: 55	
19	NGOs representative, age: 38	
20	Housewife (Beneficiaries of BDRCS), age: 32	

## Annex B Focus Group Discussion participants list

S.I no:	Group	Occupation	Area
01	Female	housewife, day labour, servant	informal settlement Satkhira (municipality)
02	Male	farmer, fisherman, day labour, small micro entrepreneur (SME)	formal settlement Satkhira (municipality)
03	male and female	farmer, housewife, SME	Tangail, Kakua
04	Female	housewife	Tangail, Katuli

## Annex C Checklist on Focus Group Discussion/Key Informant Interview

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### Socio-Demographic Information

Date of FGD: Name of FGD Facilitators:

### Location/Place: **Satkhira (Urban)**

Community name: Ward No: Municipality name: Upazila:

### Location/Place: **Tangail (Rural)**

Community name: Village name: Union: Upazila:

### Participants

Age:

Gender:

Education:

Occupation/employment:

Income:

Religion:

### Main Discussion

#### **Theme 1. Understanding climate change**

*Open discussion with participants on climate change impacts in Bangladesh, their understanding and perceptions of:*

1. Have you noticed any changes now in climate like heat, floods, rainfall or cyclones that were not there before (10/20/30 years ago)?
2. How severe have these changes been?

#### **Theme 2. Risk perception and experience**

*(Understand what people think and feel, risk perception, effect of Climate change in their lives)*

Though the participants did not know what the term climate change entailed they still were able to identify the impacts it has had in their life.

#### **Sub-theme 1: Hazard and Risk Perception**

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1. How concerned are you about climate change (for example heat waves, more intense and frequent cyclones, floods, soil/riverbank erosion, salinity - tailor to the specific hazards of the district)?
2. How concerned are you about how it will impact you and your community? Can you tell me what worries you the most? How will climate change make things worse?
3. Do different people in your community have different levels of worry about climate change?
4. Are there factors like age, location, or income that influence how people feel about these risks? Have you noticed any recent changes in how worried people are about climate change, and if so, what do you think caused these changes?

## **Sub-theme 2: Information and Knowledge**

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1. What do you know about climate change?
2. Are there variations in access to climate information in climate change knowledge within your community?

## **Sub-theme 3: Decision-making**

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1. Do you feel adequately informed to make informed decisions on how to deal with climate change?
2. Can you provide more insights into the information or resources that would help you in this decision-making process?

## **Sub-theme 4: Climate change-related effects on daily lives - incl. vulnerability**

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1. How has climate change (for example heat waves, more intense and frequent cyclones, floods, soil/riverbank erosion, salinity - tailor to the specific hazards of the district) impacted the daily lives of people in your community, especially in terms of lives, livelihoods, food/water insecurity, displacement/migration, health, housing, transportation, and communication, sanitation, energy? (discuss all the issues)
2. Which groups of society do you think will suffer most from climate change?
  - Can you provide specific examples to illustrate these effects?
3. In your experience, what are the most significant challenges people in your community face due to climate change-related disruptions in their daily lives?
  - Are there any success stories or innovative solutions that have emerged in response to these challenges?

## **Sub-theme 5: Trust**

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- Q1** Do you trust climate information and those who provide it?
- Q2** Do you believe climate change is happening?
- Q3** Do you trust local organisations when it comes to dealing with climate change?
- Q4** What is most important to building and maintaining community trust when it comes to climate information?
- Q5** To solutions to address climate change?
- Are there specific things about which make your community trust or distrust climate change factors and climate information?

## **Sub-theme 5: Government and NGO Interventions (GO and NGO)**

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## **Sub-theme 6: Emotional Responses**

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1. Tell me how you feel about climate change?
  - Why do you feel this way?
  - Is there anything you feel isn't good about climate change?
  - Can you tell me more about it?
2. How do people in your community feel when it comes to climate-related issues?
3. Is there any community support in place to help people cope with the emotional impact of climate change?

## **Sub-theme 7: Coping mechanisms**

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1. Can you share insights into the strategies that individuals in your community use to deal with climate-related hazards?
  - Can you provide specific examples on the specific measures you've taken and their effectiveness?
  - Do you know of any ongoing climate change adaptation measure(s) in your area by any institutions? If so,
  - Can you please explain about those interventions?
2. Are there any notable differences in how various age groups or demographics approach coping?
3. In your experience, how important is seeking help to adapt to climate-related hazards?
4. Can you share insights into the strategies that individuals in your community use to deal with climate-related hazards?
5. Are there any notable differences in how various age groups or demographics approach coping?
6. In your experience, how important is seeking help to adapt to climate-related hazards?

## **Theme 2. Enabling social environment**

*(Understand social norms, power dynamics, and gender roles. Include peer influence and community championships).*

### **Sub-theme 1: Cultural and Societal Factors**

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(Beliefs and values, gender roles, family structure, attitudes toward authority etc.)

1. Are there any cultural beliefs or rules based on your culture and society about climate change that people share? Can you share examples and this influence how people deal with the situation?
2. Do these cultural and societal factors help or make it harder to deal with climate change? Can you think of times when they've been helpful, and when they've been a problem?"

### **Sub-theme 2: Social Norms**

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1. Do you talk about climate change to anyone else? Who do you talk to? What do they say? Are other people you know ready for it?
2. Can you describe the most widely accepted behaviors and practices related to climate resilience?
  - Are there specific examples or stories that illustrate how these social norms influence people's daily actions?

### **Sub-theme 3: Social Networks and Social Capital**

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1. How do people in your community work together to deal with climate challenges, and who plays a significant role in this cooperation?
  - Can you share examples of how these community connections have supported climate-resilient actions?
2. From your point of view, how much does trust, cooperation, and shared values among community members affect their ability to work together on climate resilience efforts?
  - Do you see ways to build stronger connections in the community to improve climate resilience, and are there any challenges in doing so?

#### **Sub-theme 4: Social Protection**

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1. Are there programs that help people during tough times in the community, like a) cash transfers, b) food assistance, or c) safety nets d) skill development?

##### **a) cash transfers**

- If so, how do people access them, and what determines eligibility?
- Who provides them and when (before/during/after tough times)?
- Are there challenges people face when trying to access these programs?

*Repeat with others (food assistance, safety nets, skill development)*

2. Based on what you've seen, do these programs that help people during tough times also make the community safer from climate-related problems?
  - Can you share any examples of when these programs have made a real difference in helping the community handle climate-related challenges, and are there ways to make them work even better?

#### **Sub-theme 5: Government and NGO Interventions**

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1. What is the role of government and non-governmental organisations (NGOs) in providing social protection programs and interventions to enhance climate resilience in your community?
  - Can you describe the key programs or initiatives they have implemented in this regard?
  - Are there specific examples or stories that illustrate the impact of government and NGO interventions on climate resilience within your community? (negative/positive)
2. In your opinion, do these government and NGO actions effectively enhance the community's ability to withstand climate challenges?
  - Are they addressing the most critical issues, or are there areas that require improvement?
  - Can you share any stories of success or valuable lessons from these efforts?
  - Do you see opportunities for these groups to collaborate or make enhancements?

#### **Sub-theme 6: Peer Influence and Champions**

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1. In your experience, how important is peer influence in motivating people to adapt to climate change and its impacts?
  - Are there instances where the influence of peers, friends, or family has had a significant positive effect, and are there cases where it may have presented challenges to climate resilience efforts?
  - Do you see opportunities to harness the power of peer influence to further strengthen climate resilience within the community, or are there strategies to address any potential negative influences?

*Do you want to know anything from us?*

**Thank you**

# **THE FUNDAMENTAL PRINCIPLES OF THE INTERNATIONAL RED CROSS AND RED CRESCENT MOVEMENT**

## **Humanity**

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

## **Impartiality**

It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

## **Neutrality**

In order to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

## **Independence**

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

## **Voluntary service**

It is a voluntary relief movement not prompted in any manner by desire for gain.

## **Unity**

There can be only one Red Cross or Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

## **Universality**

The International Red Cross and Red Crescent Movement, in which all societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.



**The International Federation of Red Cross and Red Crescent Societies (IFRC)**

is the world's largest humanitarian network, with 191 National Red Cross and Red Crescent Societies and around 15 million volunteers. Our volunteers are present in communities before, during and after a crisis or disaster. We work in the most hard to reach and complex settings in the world, saving lives and promoting human dignity. We support communities to become stronger and more resilient places where people can live safe and healthy lives, and have opportunities to thrive.