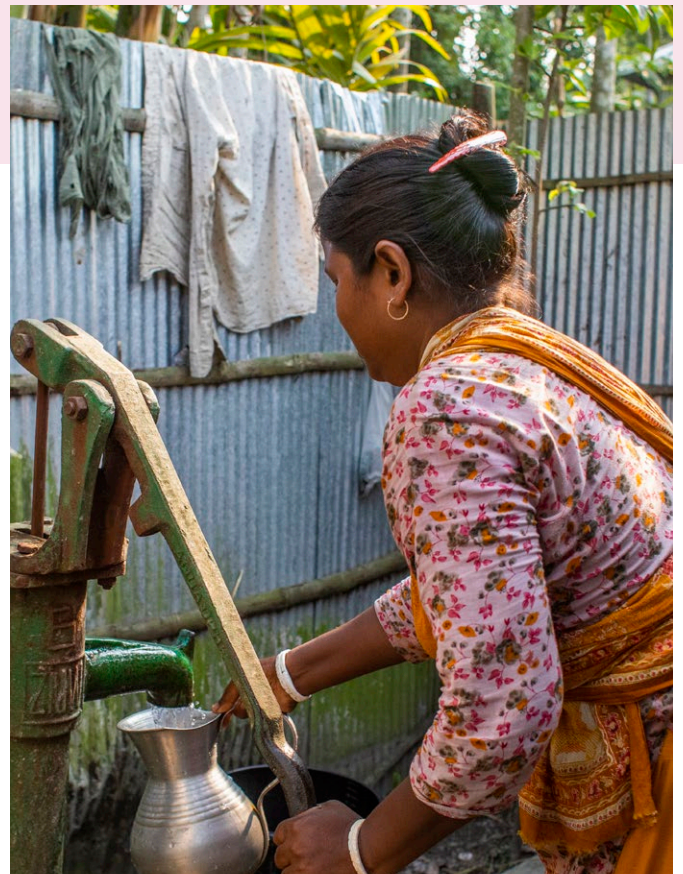




StrømmeFoundation
FIGHTING POVERTY

Strømme Foundation Climate Report 2025

– Impacts, Risks, and Action



Climate Impacts in Bangladesh and Niger
– Awareness and Action

Key Survey Findings from Bangladesh and Niger



Different hazards, shared consequences: Bangladesh faces salinity intrusion, cyclones, and tidal surges, while Niger struggles with drought, desertification, and flash floods. Despite these differences, communities experience similar disruptions to livelihoods and wellbeing.



Food insecurity is critical: Households in both countries reduce meals, sell assets, borrow, or migrate to cope with declining harvests and rising prices.



Education is heavily disrupted: Schools close due to floods or heat, children are withdrawn for economic reasons, and education facilities are often used as shelters, leaving long-term gaps in learning.



Women and persons with disabilities are disproportionately affected: Women face heightened health risks, water burdens, and economic insecurity, while persons with disabilities often struggle to access warnings, shelters, or livelihood opportunities.



Widespread uncertainty about the future: Across both contexts, people express strong anxiety about worsening conditions, particularly for the next generation.



Local adaptation is not enough: Communities employ innovative strategies, but these remain insufficient without both stronger financial support and stronger cooperation with government institutions.

Hovedfunn

fra Bangladesh og Niger



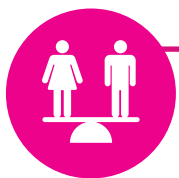
Ulike farer, sammenlignbare konsekvenser: I Bangladesh trues ferskvannet av saltinntrengning, de står overfor sykloner og tidevannsbølger, mens Niger sliter med tørke, ørken-spredning og flom. Til tross for disse forskjellene, trues levebrød og livskvalitet i begge lokalsamfunn.



Matsituasjonen er kritisk: Husholdninger i begge land reduserer måltider, selger eiendeler, tar opp lån eller migrerer for å håndtere synkende avlinger og stigende priser.



Mulighet til skolegang begrenses: Skoler stenger på grunn av flom eller varme, barn blir tatt ut av økonomiske årsaker, og utdanningsfasiliteter brukes som tilfluktssteder, noe som etterlater langvarige læringshull.



Kvinner og personer med funksjonsnedsettelse er uforholdsmessig berørt: Kvinner står overfor økt helserisiko, økte byrder ved lengre avstander til rent vann og økonomisk usikkerhet. Personer med nedsatt funksjonsevne har ofte ikke tilgang til tilfluktsrom, nødhjelp, helsetjenester eller levebrødsprogrammer, noe som gjør dem svært utsatt når katastrofer rammer.



Utbredt usikkerhet om fremtiden: På tvers av begge kontekster uttrykker folk sterk bekymring for forverrede forhold, spesielt for neste generasjon.



Lokal tilpasning er ikke nok: Lokalsamfunn tar i bruk innovative løsninger, men disse er utilstrekkelige uten sterkere støtte både økonomisk og fra myndighetenes side.

Foreword

Climate Change is no longer a future threat, but has become a present-day reality, with an increasingly profound impact on people's lives globally. For Norway, temperatures have risen by almost 1.5 degrees since 1900, resulting in the melting of glaciers, and increased precipitation and floods. Iconic landscapes such as Hardangervidda at threat, and culturally important activities such as skiing become less and less possible. For the underprivileged communities who we as Strømme Foundation serve, climate change has far-reaching consequences, jeopardising our vision of "A World free of Poverty". The Paris Agreement Goal of limiting the increase in the global average temperatures to 1.5 degrees seems increasingly unrealistic, at a time when the international climate discourse and donor priorities are shifting away from sustainability and cooperation. In consequence, the global climate and development community needs to put ever more focus on utilising its limited resources as well as possible, whilst continuing to raise awareness and call to action.

With this report, Strømme Foundation (SF) presents a summary of the findings of climate impact studies conducted between May to July 2025 in two of SF's programme countries operations: Bangladesh and Niger. The study was implemented through SF's local implementing partners, the Community Development Centre (CODEC) from Bagerhat District in Bangladesh and the NGO Halassay from the Dosso Region of Niger with a specific focus on climate change impacts on rural communities.

Together, the two country studies provide a powerful narrative demonstrating how the most vulnerable communities are being affected by climate change, through their own local voices. They demonstrate that while the specific hazards differ, the underlying vulnerabilities are strikingly similar: gender inequality, poverty, limited access to water, weak infrastructures and insufficient institutional support are exacerbated by climate change, deepening existing inequalities and eroding the fragile safety nets on which vulnerable households depend.

For Strømme Foundation, the findings underscore the importance of combining technical adaptation measures (such as resilient seeds, embankments, and water infrastructure) with social and institutional investments (like inclusive education, gender empowerment, and social protection systems). The report highlights the urgency of ensuring that women, children, and persons with disabilities are not left at the margins of adaptation planning but instead placed at the center of solutions. Ultimately, through personal interviews this consolidated report shows that the global climate crisis has local faces. People and families are fighting for survival against forces beyond their control.



Erik Lunde

Secretary General

Forord

Klimaendringer er en realitet med stadig dypere innvirkning på menneskers liv globalt. Denne rapporten viser hvordan den globale klimakrisen har lokale ansikter. Vi ser hvordan mennesker og familier kjemper for å overleve mot krefter utenfor deres kontroll.

For Norge har temperaturen steget med nesten 1,5 grader siden 1900, og ikoniske landskap som Hardangervidda er truet, mens kulturell identitet som ski blir stadig mindre mulig. For fattige lokalsamfunn der Strømmestiftelsen arbeider, har klimaendringer store konsekvenser, og det setter visjonen vår om en verden uten fattigdom i fare. Parisavtalens mål om å begrense økningen i den globale gjennomsnittstemperaturen til 1,5 grader, kan virke urealistisk, og den internasjonale samtalen om klima mellom giverland har ofte ikke bærekraft og samarbeid som tema. Derfor må bevisstheten økes, det må prioriteres hardt og oppfordres til handling.

I rapporten presenterer Strømmestiftelsen et sammendrag av funnene fra en klimastudie gjennomført i to av landene vi arbeider i: Bangladesh og Niger. Studien ble gjennomført i mai til juli 2025 i samarbeid med våre lokale partnere, henholdsvis Community Development Centre (CODEC) fra Bagerhat-distriktet i Bangladesh, og ONG Halassay fra Dosso-regionen i Niger. Oppdraget var å dokumentere klimaendringenes påvirkning på rurale lokalsamfunn i begge landene. Studien benyttet en metodetilnærming som kombinerte spørreskjemaer til utvalgte husholdninger, intervjuer med nøkkelinformanter og fokusgrupper.

Historiene og de lokale stemmene vi møter i denne rapporten viser hvordan de mest sårbare lokalsamfunnene påvirkes av klimaendringer. Den viser at selv om de konkrete farene varierer er resultatet for folk i Niger og Bangladesh slående like. Begge studiene viser at endringene rammer kvinner hardest mens alle opplever større fattigdom.

Klimaendringene gir mindre tilgang på rent vann, mer utrygg infrastruktur og mindre støtte fra myndigheter. I begge land ser vi at klimaendringene eskalerer eksisterende ulikheter og svekker de skjøre sikkerhetsnettene som sårbare husholdninger er avhengige av.

Strømmestiftelsen ser viktigheten av å kombinere tekniske tilpasninger som klimarobuste frø, demninger og vanninfrastruktur, med investering i inkluderende utdanning, kvinners rettigheter og sosiale velferdsgoder. Rapporten fremhever viktigheten av å sikre at kvinner, barn og personer med funksjonsnedsettelse ikke blir stående på sidelinjen i klimatilpasningen, men heller plasseres i sentrum av løsningene. Til syvende og sist viser denne rapporten gjennom personlige intervjuer at den globale klimakrisen har lokale ansikter. Mennesker og familier kjemper for å overleve mot krefter utenfor deres kontroll.



Eirik Lunde
Generalsekretær

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Photo credits

Md. Sabbir Talukdar, Fahad Kaizer, Adamou Assoumane Issa, Torleif Svensson

Disclaimer

The report is based on data gathered from Strømme Foundation's working areas and cannot be generalised for the whole countries. It rather reflects those particular contexts in the researched areas.

Abstract

This report brings together findings from a climate impact study conducted between May and July 2025 in Bagerhat District of Bangladesh and the Dosso Region of Niger. The study was not only meant to document the measurable impacts of climate change, but also to give a voice to the lived realities of vulnerable communities including smallholder farmers, housewives, children, and persons with disabilities, whose daily lives are being reshaped by forces beyond their control.

At first glance, the coasts of Bangladesh and the dry Sahel of Niger look like two different worlds. One is a lush delta where tropical rivers confluence into the Bay of Bengal; the other, an arid landscape where rainfall is rare and fragile soils yield what they can. Yet, this highlights that even in very different topographies, the lives of vulnerable groups are affected by climate change in similar dimensions.

In Bangladesh's Bagerhat District, families battle cyclones, salinity intrusion¹ and tidal surges that are destroying crops and

freshwater sources. Fields that before grew rice are now salted and barren, forcing farmers to abandon the trade they have known all their life, or migrate in search of work. In Niger's Dosso region, the challenges are reversed yet familiar: prolonged drought, sudden floods, and sandy soils steadily erode livelihoods. Farmers watch harvests shrink year after year; and families are forced to cut meals and sell livestock to survive. Though the hazards differ, the outcome is the same: hunger, uncertainty, and decreased hope are visible across both contexts.

Food insecurity is the most visible thread connecting these distant communities. In Niger, almost all households reported that they have had to reduce meals due to crop failures. In Bangladesh, food shortages have forced families into borrowing food, selling assets or migrating. While these coping strategies ease today's crises, they further deepen tomorrow's vulnerability. Education, too, suffers in both contexts. Schools double as cyclone shelters in Bangladesh, while in Niger, fragile classrooms collapse under heavy rains or close during heatwaves.

¹ "Salinity intrusion" in Bagerhat refers to the process by which saltwater moves from the ocean or tidal rivers into areas that normally contain fresh water - into soil, surface water, groundwater, and into agricultural land. This happens due to a combination of natural processes (sea level rise, tidal action) and human-induced changes (reduced river flow upstream, land use changes, shrimp farming, embankment and canal modifications etc.).

For children, these disruptions mean lost learning, uncertain futures, and an ever-widening cycle of poverty.

The burden falls heaviest on those already marginalised. In Bangladesh, women face rising reproductive health risks including pregnancy and gynaecological complications, primarily linked to increased water salinity, coupled with lost income. In Niger, women often have to walk longer distances for water, leaving them exhausted and limiting opportunities for farming or their children's education. In both countries, persons with disabilities often cannot access shelters, emergency relief, health care, or livelihood programs, leaving them highly exposed when disasters strike. Beyond material losses, the emotional toll runs deep. In both geographies, parents are worried for their children's futures. Anxiety, migration, and fractured social cohesion are as much a part of the climate crisis as floods or droughts.

Still, resilience flickers. Adoption of traditional farming methods and more tolerant seed varieties is being preferred to buffer food insecurity in both contexts. Women groups and local innovations have as well demonstrated remarkable creativity and strength in response. However, in both contexts it is clear that local adaptation alone cannot carry the weight of an accelerating crisis. Without sustained institutional and financial support, safe water, resilient schools, inclusive shelters, and diversified livelihoods, the future is uncertain.

The comparative lesson is clear. Geography shapes the hazards, but destiny is shared. Climate change exposes inequalities and

pushes vulnerable families beyond their limits. Whether on the flooded coasts of the Bengal or the parched fields of Sahel, the struggle is the same.

Supporting vulnerable communities can reduce climate risks while providing broader benefits. Community-based disaster risk management helps people identify risks, plan collectively, and improve preparedness, all while fostering social cohesion and care for the most vulnerable.

Diversifying incomes through training, entrepreneurship, and pooling resources in savings groups helps families withstand climate shocks and create new economic opportunities. Climate-smart agriculture strengthens smallholder farmers' resilience by promoting adaptation to improved seeds, effective irrigation, agroecological practices, seed banks, and community gardens, which together increase food security and resilience. Education is also crucial: schools must withstand climate impacts, students and teachers need training in climate adaptation, and school feeding programs and gardens can help vulnerable children. Including women, children, persons with disabilities, and minorities in community planning ensures their needs are met and empowers them to participate fully in decision-making.

Norway, while a global leader in climate aid, continues to contribute to climate change through oil and gas exports. This gives it a particular responsibility to support countries like Bangladesh and Niger, which have high vulnerability to climate impacts but low historical emissions.

Sammendrag

Denne rapporten samler funn fra to studier om klimaendringer gjennomført i juni 2025 i Bagerhat-distriktet i Bangladesh (Sør-Asia) og Dosso-regionen i Niger (Vest-Afrika). Studiene hadde som mål å dokumentere konsekvensene av klimaendringer, men også å gi stemme til de sårbare samfunnene – småbønder, mødre, barn og personer med funksjonsnedsettelse – som daglig påvirkes av krefter utenfor deres kontroll.

Ved første øyekast virker kysten av Bangladesh og den tørre Sahel-regionen i Niger som to helt forskjellige verdener. Den ene er et frodig delta der elver møter Bengalbukta, den andre et tørt landskap der regn er sjeldent og jordsmonnet skrøpelig. Likevel viser dette at selv i svært ulike landskap påvirkes livene til sårbare grupper av klimaendringer på lignende måter.

I Bagerhat-distriktet i Bangladesh kjemper familier mot sykloner, saltinntrengning² og tidevannsbølger som ødelegger avlinger og ferskvannskilder. Jorder som tidligere produserte ris, er nå saltpåvirket og ubrukelige, og bønder tvinges til å gi opp avlingene eller migrere for å finne arbeid. I Dosso-regionen i Niger er utfordringene motsatte, men likevel gjenkjennelige: langvarig tørke, plutselige flommer og sandholdig jord som gradvis svekker livsgrunnlaget. Bønder ser avlingene krympe år etter år; familiene må kutte måltider og

selge husdyr for å overleve. Selv om farene er ulike, er resultatet det samme: Sult, usikkerhet og svekket håp preger begge kontekster.

Matusikkerhet er den mest synlige tråden som forbinder disse fjerne samfunnene. I Niger rapporterte nesten alle husholdninger at de har måttet redusere antall måltider på grunn av avlingssvikt. I Bangladesh håndterte familiene krisen ved å låne mat, selge eiendeler eller migrere – strategier som lindrer dagens problemer, men forverrer morgendagens sårbarhet. Utdanning lider også i begge land. Skoler fungerer som beskyttelse mot sykloner i Bangladesh, mens i Niger kollapser skjøre klasserom under kraftig regn eller stenges under hetebølger. For barna betyr dette tapt læring, usikre fremtidsutsikter og en stadig dypere fattigdomssirkel.

Byrden faller tyngst på dem som allerede er marginalisert. I Bangladesh står kvinner overfor økende reproduktive helseproblemer, inkludert komplikasjoner under graviditet og gynekologiske lidelser, direkte knyttet til saltinnhold i vannet, samt tap av inntekt når stormer forstyrrer arbeidsmarkedet. I Niger må kvinner ofte gå lengre distanser for å hente vann, noe som gjør dem utmattet og begrenser mulighetene for jordbruk eller utdanning. I begge land har personer med funksjonsnedsettelse ofte ikke tilgang til tilfluktsrom, nødhjelp, helsetjenester eller

² «Saltinntrenging» i Bagerhat refererer til prosessen der saltvann beveger seg fra havet eller tidevannselver til områder som normalt inneholder ferskvann – til jord, overflatevann, grunnvann og inn i jordbruksland. Dette skjer på grunn av en kombinasjon av naturlige prosesser (havnivåstigning, tidevannspåvirkning) og menneskeskapte endringer (reduert elveføring oppstrøms, endringer i arealbruk, rekeoppdrett, endringer i fyllinger og kanaler osv.). etc.).

levebrødsprogrammer, og er derfor svært utsatt når katastrofer inntreffer.

Utover de materielle tapene er den emosjonelle belastningen stor. I begge områdene er foreldre bekymret for barnas fremtid. Bekymringer og svekket sosialt samhold er like mye en del av klimakrisen som flom og tørke.

I begge land bidrar tradisjonelle jordbruksmetoder og mer hardføre frøsorter til å dempe matusikkerheten. Kvinnegrupper og lokale innovasjoner har vist bemerkelsesverdig kreativitet og styrke. Men det er tydelig at lokal tilpasning alene ikke kan bære vekten av en stadig mer alvorlig krise. Uten vedvarende institusjonell og økonomisk støtte – reint vann, robuste skoler, inkluderende tilfluktsrom og mangfoldige levebrød – er fremtiden usikker.

Den komparative lærdommen er tydelig: farene og endringene er noe ulike, men skjebnen er felles. Klimaendringer avslører ulikheter og presser sårbare familier til bristepunktet. Enten det er på de oversvømte kystene av Bengal eller de uttørkede jordene i Sahel, er kampen den samme.

I Norge merker vi nå klimaendringene i form av blant annet varmere somre, flom og kostnader til klimatilpasning, mens det i land som Bangladesh og Niger truer det nå selve livsgrunnlaget. Verken rikdom eller ressurser kan fullt ut beskytte mennesker mot ødelagte avlinger eller vannmangel.

Å støtte sårbare samfunn kan redusere klimarisiko og samtidig gi bredere fordeler. Lokalt forankret katastrofeberedskap hjelper

folk med å identifisere risikoer, planlegge sammen og forbedre beredskapen, samtidig som det styrker sosialt samhold og omsorg for de mest utsatte.

Inntektsdiversifisering gjennom opplæring, entreprenørskap og sparegrupper hjelper familier med å tåle klimatiske sjokk og skape nye økonomiske muligheter. Klima-smart jordbruk styrker småbønders motstandskraft ved å fremme bruk av forbedrede frø, effektiv vanning, agroøkologiske metoder, frøbanker og felleshager – tiltak som samlet øker matsikkerheten og robustheten. Utdanning er også avgjørende: Skoler må tåle klimaendringer, elever og lærere trenger opplæring i klimatilpasning, og skolematprogrammer og skolehager kan hjelpe utsatte barn. Å inkludere kvinner, barn, personer med funksjonsnedsettelse og minoriteter i lokal planlegging sikrer at deres behov blir møtt og gir dem mulighet til å delta fullt ut i beslutningsprosesser.

Norge, som en global leder innen klimabistand, bidrar fortsatt til klimaendringer gjennom eksport av olje og gass. Dette gir landet et særlig ansvar for å støtte land som Bangladesh og Niger, som har høy sårbarhet for klimaendringer, men lave historiske utslipp.

Background, overview and objectives



Climate change is increasingly recognised as one of the most pressing global challenges. According to the Intergovernmental Panel on Climate Change, “Human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere

have occurred. Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts and related losses and damages to nature and people. Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected”.

In coastal Bangladesh, sea level rise is a leading cause of increased salinity in shallow groundwater up to 100 km inland, with nearly 26 million people exposed to very high salinity levels, affecting both personal health and agricultural productivity. The World Bank reports temperatures having risen by 0.1 degrees per decade between 1971 and 2020, with trends accelerating, as well as a much higher heat risk for under future climate conditions. The country is likely to experience more frequent extreme precipitation events by the midcentury.

The World Bank considers Niger to be one of the most vulnerable countries globally, “owing to its climatic, institutional, livelihood, economic, and environmental context”. Climate vulnerability is compounded by rapid population growth, and chronic humanitarian crises due to recurrent drought, flooding, food insecurity, epidemics, and violent conflict. According to the Potsdam Institute for Climate Impact Research, temperatures in Niger are projected to rise by between 2.0 and 4.6 degree by 2080, compared to pre-industrial levels, with higher temperatures and more temperature extremes projected for the southwest of Niger, where Dossa Region is located. Climate models project an increase in the number of days with heavy precipitation events. Drought models, however, remain uncertain.

This consolidated report brings together findings from a climate change impact study carried out in the Bagerhat District, of Bangladesh and the Dosso Region, of Niger. In Southern Bangladesh, a low-lying coastal delta, households grapple with salinity intrusion, cyclones, tidal surges, and riverbank erosion, all of which threaten agriculture, housing,

and freshwater access. In Southwestern Niger, a semi-arid Sahelian landscape, the main challenges arise from prolonged droughts, erratic rainfall, desertification, and flash floods, leaving families trapped in cycles of food insecurity and poverty.

The broader aim of the study was to not only document measurable impacts of climate change, but also capture the lived realities, perceptions, and strategies that communities have developed in response to increasingly unpredictable weather and environmental stress. Specifically, the study aimed at:

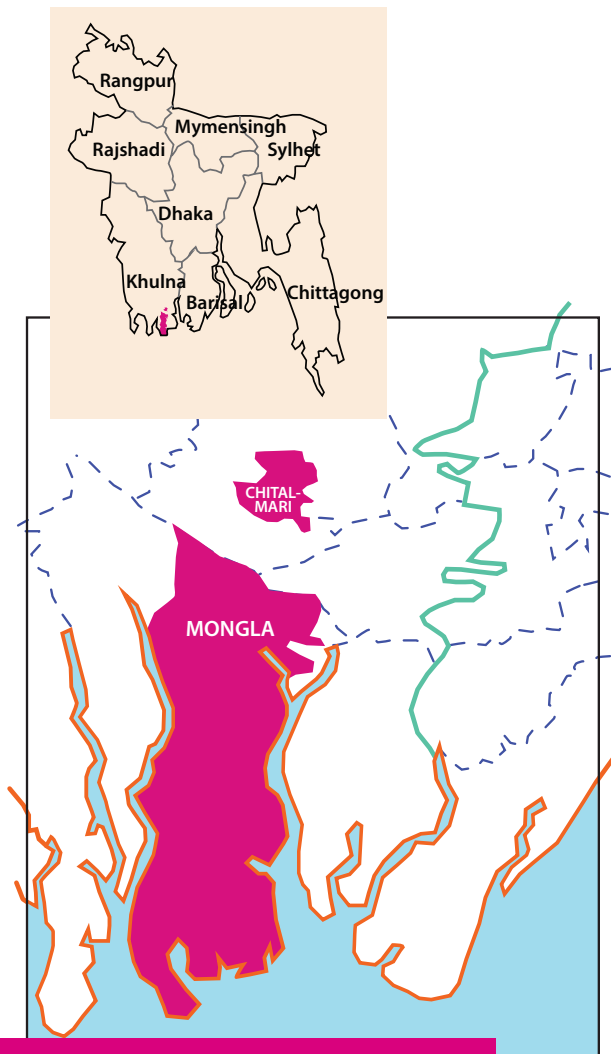
1. Assessing how climate change impacts livelihoods, food security, health, education, and social cohesion.
2. Understanding how specific groups, particularly women, children, and persons with disabilities are affected by climate change.
3. Documenting local adaptation and coping strategies, both positive and negative.
4. Identifying gaps in institutional and policy responses.
5. Identifying future recommendations in the relevant areas.

Together, these objectives provided a comparative lens through which to analyse climate change as a global phenomenon with local faces. While the hazards differed by geography, the patterns of vulnerability and resilience reveal common lessons. This consolidated report synthesises those lessons, highlights community voices, and provides actionable recommendations for governments, NGOs, and international partners.

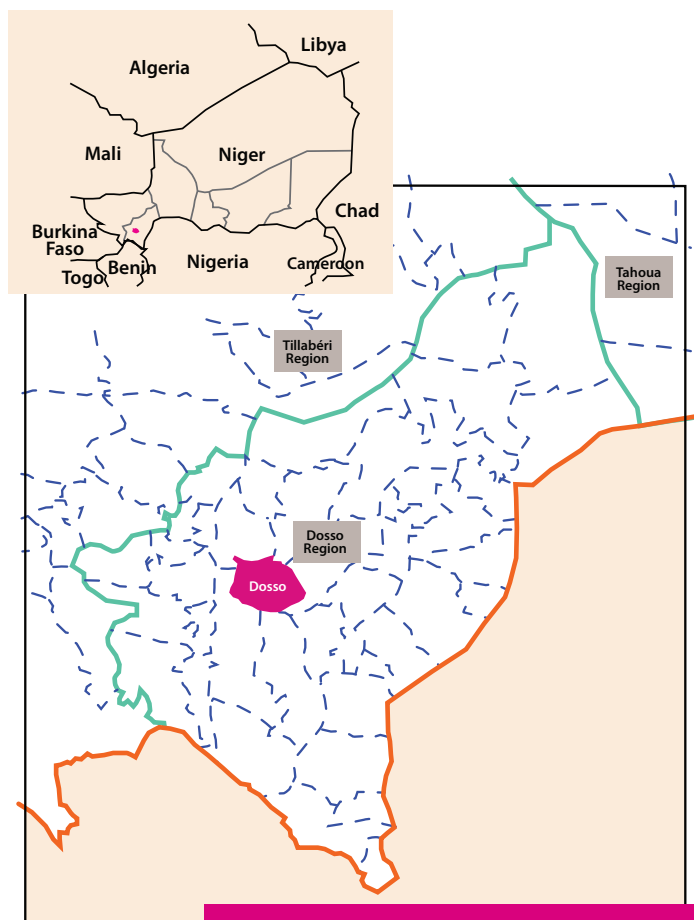
Geographical Coverage

In Bangladesh, the research focused on selected unions in **Mongla** and **Chitalmari Upazilas** of Bagerhat District, a region lying close to the Sundarbans and the Bay of Bengal. Here, people's livelihoods revolve around small-scale agriculture, aquaculture, and fishing, all of which are vulnerable to salinity intrusion, tidal flooding, and cyclonic storms.

In Niger, the study was conducted in the villages of **Maidahini** and **Garbey Tombo** within the commune of Farey, Dosso Region. This Sahelian zone consists of sandy soils, seasonal rivers, short rainy seasons and long dry periods. Subsistence farming and livestock rearing are the backbone of local economies, but these activities are increasingly threatened by heavy rainfall, drought, flash floods, and soil degradation³.



Map of Mongla and Chitalmari Upazilas in Bagerhat district.



Map of Farey Commune in Dosso Region, Niger

³ World Bank, 2024., The World Bank Supports Food Security and Climate Resilience for Households in Niger.

Approach and Methods

By combining statistical quantitative analysis with rich qualitative insights, the research sought to provide both breadth and depth in understanding how climate change unfolds in these diverse contexts. The report is based on the results of two separate reports from the mentioned countries, created by Strømme Foundation's local offices and their collaborative partners.

The study adapted a mixed-methods approach, bringing together quantitative questionnaires and qualitative interviews and Focus Group Discussions (FGDs). This combination allowed us to record statistical trends while also uncovering the nuances of local experiences.

In Bangladesh, household surveys were carried out to 92 respondents. Using a stratified random sampling method to ensure representation across gender, age (15-20, 35-40, and 55-60 years) and occupational groups, with special attention given to women-headed households, fisherfolk, and the landless poor, and persons with disabilities (6%).

In Niger, the household survey included 90 respondents, split between Maidahini and Garbey Tombo, and further divided into three age brackets (15–20, 35–40, and 55–60 years). The sample was carefully balanced to include equal proportions of men and women, and 3% of the respondents were persons with disabilities, to capture perspectives from groups that often are underrepresented in climate adaptation research.

Data Collection

In both countries, the household surveys served as the backbone of the research, covering topics such as demographic profiles, livelihood activities, awareness of climate

change, observed environmental changes, and household-level adaptation measures. Questionnaires were administered in the local language, Bangla in Bangladesh, and Hausa or Zarma in Niger. Responses were later translated into English or French for analysis.

To complement these surveys, Focus Group Discussions (FGDs) were conducted in each location. These were organized separately for men, women, and differentiated by age.

Key Informant Interviews (KIIs) added another layer of perspective, drawing on the knowledge of local leaders, agricultural extension workers, teachers, health practitioners, and NGO representatives. These interviews provided context on policy implementation, disaster preparedness, and longer-term climate trends.

Life stories were gathered from people who had directly experienced severe climate-related shocks, from losing a fishing boat in a cyclone to watching crops fail after a prolonged dry spell. These accounts were in some cases accompanied by photographs and short video testimonies, adding visual and emotional weight to the data.

Data Analysis

To identify and illustrate patterns and differences between gender, age and country, graphs and charts were created. Transcripts from the FGDs and KIIs were coded thematically, allowing us to group responses into recurring topics such as changing rainfall patterns, impacts on food security, or preferred adaptation strategies. Triangulating the quantitative and qualitative results helped ensure that the findings were consistent and grounded in multiple forms of evidence.

Demographics

The study populations in Bangladesh and Niger display broadly similar demographic patterns, with some notable differences. Gender distribution is relatively balanced in both contexts, 53 percent men and 47 percent women in Bangladesh, and 47 percent men and 53 percent women in Niger.

In Bangladesh, the surveyed households were drawn from two sub-districts, Mongla and Chitolmari, with representation nearly equal between the two, although Mongla accounted for a slightly larger share. In Niger, respondents were drawn from two villages, Maidahini and Garbey Tombo. Age data for both countries reveal an even distribution across the three different age cohorts, indicating that no single cohort dominates the sample. In the sample collected, the number of disabled reported was 6% in Bangladesh and 3% in Niger.

Occupational patterns highlighted the prevalence of informal and unpaid work. In Bangladesh, housewives (34%), agricultural workers (20%), students (17%), and day labourers (9%) together made up the majority of respondents, with formal employment nearly absent, reflecting heightened vulnerability to climate-related shocks.

Similarly, in Niger, most respondents are engaged in agriculture and household chores, with both women and men being involved in agriculture, and women performing housework in addition. Students account for 15% of the sample, and a small number participate in craft or commercial activities, indicating some income diversification.



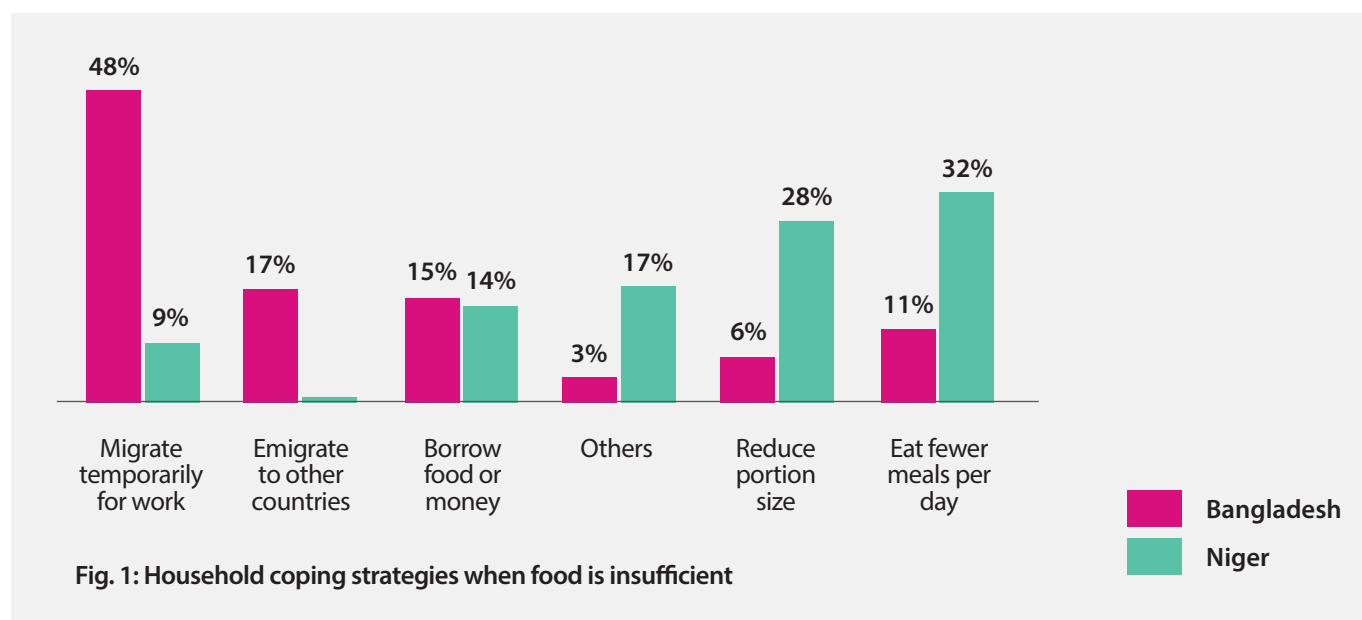
Impacts of climate change



Climate change in Bangladesh and Niger is not only an environmental phenomenon but a social and economic crisis.

The following subsections present a consolidated analysis of the impacts, organised by different thematic focus.

1. Food Security and Nutrition



Households in both Bangladesh and Niger reported significant deterioration in food security, though the drivers and coping mechanisms differ.

In Niger, nearly all respondents (95 percent) stated that they had witnessed noticeable changes in the varieties and amounts of food available to their households for consumption in comparison to only 26 percent from Bangladesh. In response, families across both contexts have adopted varying coping mechanisms.

Families often reduced the number of meals (32 percent) or portion sizes (28 percent) or borrowed from neighbours and relatives (14 percent). Food insecurity is primarily driven by the prolonged seasonal droughts, flash floods, and sandy soils contributing crop failures. Children are often among the most affected malnutrition and hunger.

In Bangladesh, food insecurity is driven primarily by salinity intrusion, cyclones, and tidal surges, which reduce agricultural yields and undermine livelihoods. As a result, 48 percent of the documented households reported relying on temporary migration to secure food, and 17 percent said they resorted to permanent migration, borrowing food or money (15 percent) and reducing meals (11 percent) were also common coping responses.

Although overall levels of reported food insecurity were somewhat lower than in Niger, the structural risks posed by sea-level rise and salinity expansion suggest that Bangladesh's food systems are equally at risk. Both cases highlight how climate change is reshaping household diets, reducing diversity, and forcing families into difficult coping behaviours.

Tales of a Sahelian smallholder farmer battling barren sandy soils and seasonal floods to feed and support his family in the Dosso region of Niger.



Hassan Adamou, Dosso, Niger

In Maidahini village, Hassan Adamou, recalls how last year's farming season nearly broke him. The rains came late, then heavy, leaving fields sedimented and waterlogged. His millet yields collapsed. From the same plot of land where he once harvested 75 bundles, he carried home less than 30. Even beans, usually a reliable crop, suffered badly, and Hassan had to look for other income. "The harvest wasn't enough to last the year," Hassan explains. **"We had to work for others just to feed our children."**

Hassan's story is one such as many in the Dosso region.

The soils around Maidahini no longer give as they once did. Once fertile, they are now sandy and less productive. Flooding worsens the damage, cutting into yields year after year. For Hassan, the need is clear: to reverse the damage and improve on the situation in the Dosso, there is an eminent need to carry out assisted natural regeneration activities and stone cordons. **We do not have sufficient means to protect ourselves from flooding.** That is why we will need support in training to better protect our fields from flooding in order to improve productivity, and

improved seeds to withstand late rains and poor soils.

Still, Hassan holds on to hope and keeps a positive mind **"This year the season started well,"** he says. The rains came early, and the millet fared well during July season. His prayer is for the rains to be more regular and less volatile to have better yield. Behind Hassan's words lies a determination to keep farming, to find a way to feed his family from a land that grows harsher with each passing season.

Struggles of farming from Chitolmari, Bangladesh – Shyamal has no shop to run and no other skills to earn money. If the crops fail, his family goes hungry.



Shymal Mistry, Chitolmari, Bangladesh

Every morning before sunrise, 48-year-old Shyamal Mistry steps out of his small home in North Khalishakhali and looks over the fields his family has farmed for generations. He remembers when the sun was gentler and rains came on time. **“Back then, I ploughed beside my father’s farm, planting rice and vegetables that filled our tables. Today, the land is a different place”** he says.

In the past decade, heatwaves have grown fiercer. **“I can no longer work in the fields from dawn until dusk. When rain does come, it often arrives in a single downpour that rots young**

plants at their roots. Then the sky goes silent for weeks, leaving seedbeds baked and barren. Without water, even the hardiest seeds sprout for only a day or two before withering under the sun. I am unable to feed my family” he laments. When rain comes, it arrives in destructive downpours, then disappears for weeks, leaving the soil cracked and dry. Without water, even hardy seeds wither.

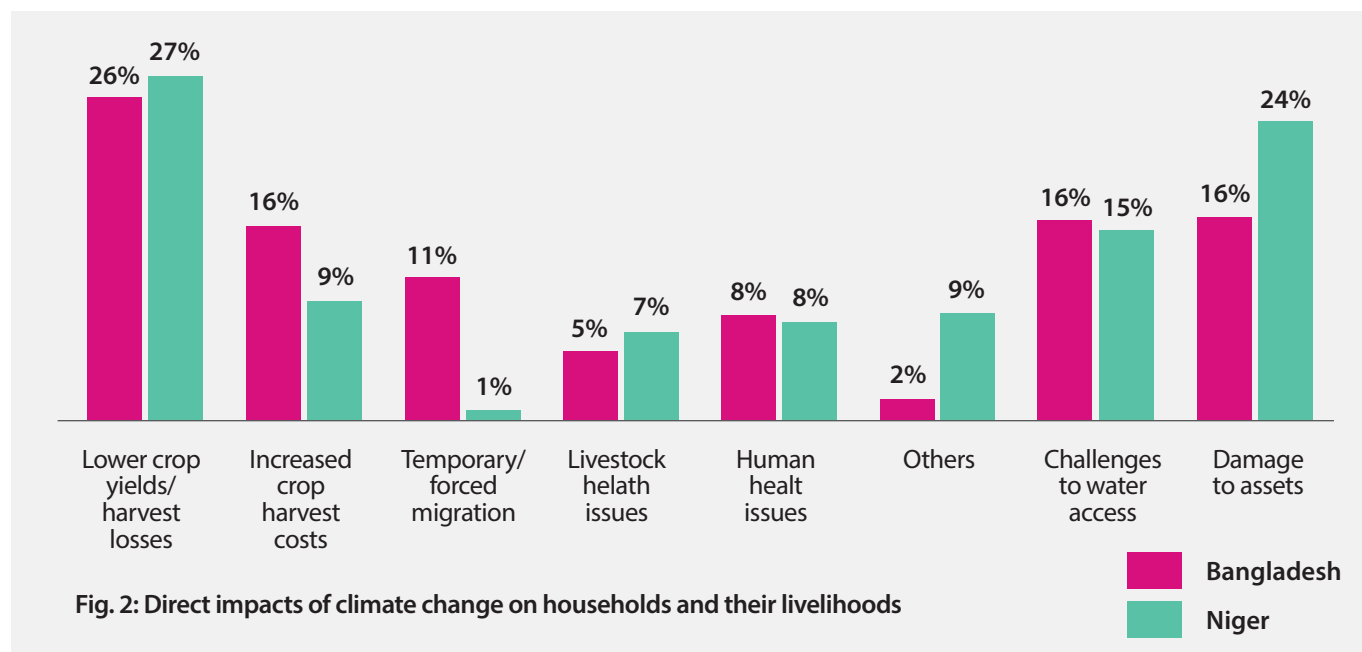
Each season brings new struggles — costly seeds, salty soil, and scarce drinking water. His wife and children fetch what little clean water they can, but it never lasts through the day. With no

other skills or income, failed crops mean hunger.

NGO workers sometimes visit, offering salt-tolerant seeds and advice, but Shyamal knows words alone cannot buy fertilizer or fuel for pumps. “I once tried working at a brick kiln, but farming is all I know,” he says.

Still, he dreams of canals and deep wells that could bring life back to his land. His hope is simple: clean water, affordable seeds, fair fertilizer prices, and real support from the government and NGOs. With help and knowledge, he believes farmers can adapt and rebuild their futures.

2. Livelihoods



Climate change has directly affected households' ability to sustain their livelihoods. Increased frequency and severity of extreme weather events such as droughts, floods, cyclones and salinity intrusion have disrupted agricultural cycles, reduced crop yields, and diminished access to water resources. These environmental changes disproportionately affect households that depend on rainfed agriculture for their food and livelihood, further pushing them into vulnerability and poverty.

In particular, rural households reliant on subsistence farming and fishing are often the hardest hit. As temperatures rise and precipitation patterns become unpredictable, traditional methods of farming and fishing become less reliable, leading to reduced harvests and declining fish stocks. This not only threatens food availability but also undermines the economic foundation of

these communities, forcing families to adopt coping strategies such as selling assets, reducing food intake, or migrating in search of alternative livelihoods.

In Bangladesh, reduced crop yields (26 percent), increased costs of crop production and harvest (16 percent), damage to assets (16 percent) and challenges to accessing water (16 percent) were frequently reported as having affected household livelihoods. Nigeriens similarly mentioned reduced crop yields (27 percent), damage to assets (24 percent), challenges to access water (15 percent) as the most notable impacts of climate change to their livelihoods. Other noticeable changes mentioned in Niger included the extensive flooding during the rainy seasons and the increased costs of basic household necessities especially food stuffs during lean seasons.

Ariful Islam's plight to continue his family's tradition of fishing amidst surges in water salinity and dwindling fish stocks



Ariful Islam, Bagerhat, Southern Bangladesh

Every morning before dawn, 35-year-old Ariful steps out of his small hut in North Shivpuri village, Bagerhat District, and heads to his fishpond. Fishing has been his livelihood all his life, but lately the weather has turned unpredictable. Storms are stronger, rains heavier, and lightning has even struck near his home. **“Last month, lightning hit the mango tree beside my house,” he recalls.** Floods wash away topsoil and damage crops, while the heat dries up ponds and kills fish. **“The sun in the Bagerhat has also been unbearable,” he adds. The fishponds are drying up**

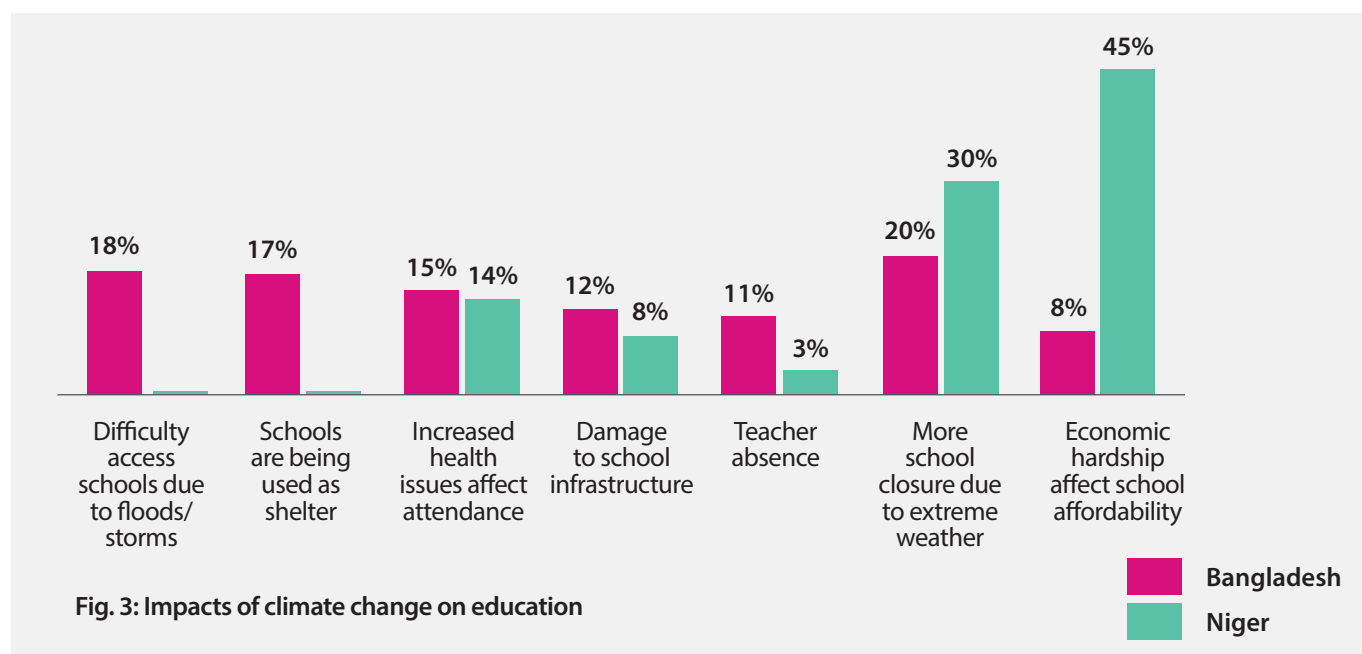
and suffocating our fish. At the start of the Duala season, Ariful stocked his pond with silver carp and shrimp, but the water level dropped fast, and a virus wiped out most of his stock. With no fish and little savings, his family struggles to survive. He has tried new feeds and reinforced the pond walls, yet flash floods from the Bay of Bengal keep turning fields salty and barren.

Still, Ariful remains hopeful. He has recently been trained by NGO staff on new irrigation techniques and started vegetable growing besides his fishpond to supplement his family's diet. Still, without

electricity for pumps and no real financial aid, the lessons can't do much.

Ariful dreams of a day when the government and NGOs will dig deeper wells, provide training, and ensure fair prices for fertilizer and fish feed. He believes that by digging canals, building shaded ponds, and planting salt-tolerant crops, his village can survive the storms and heat. Until then, he returns to his pond each morning with hope, determined to protect his fish and support his family.

3. Education



Education is a hidden casualty of climate change in both contexts. In Niger, climate stress has undermined schooling in several ways. Floods and heatwaves often forced schools to close early, buildings got damaged or collapsed due to extreme weather events, and families are often unable to pay for school fees or supplies due to a decline in agricultural incomes (45 percent). Diseases (14 percent) and teacher absenteeism (3 percent) were also documented as negatively impacting learner's attendance in Niger. The result is often a cycle where reduced educational opportunities threaten children's possibilities to make meaningful impacts in their communities.

In Bangladesh, similar challenges were reported, although the response mechanisms varied. Cyclones and floods are reported to damage roads and schools, cutting children off from classrooms. Many schools function

as cyclone shelters during extreme events, with classes often suspended for extended periods. Families under economic strain find it increasingly difficult to cover education costs, leading to higher dropout rates. As much as 62 percent of households reported that climate change had harmed their children's education.

In both geographies, education is emerging as a casualty of climate change, with long-term consequences for children's futures. Both communities have expressed the urgent need for stronger classrooms, better financial support for students, and integration of climate awareness into curricula so that children are better prepared for the challenges they will face.

4. Impacts on Vulnerable Groups

Vulnerability to climate change in both contexts is highly gendered and stratified. The results from focus groups in Niger show that women bore the burden of water scarcity and food insecurity, as they were often responsible for fetching water over longer distances and ensuring household nutrition. This left them with less time for income-generating work. Children suffered from hunger and disrupted schooling. Persons with disabilities and the elderly faced limited mobility and exclusion from decision-making, leaving them especially exposed during floods or droughts. Poor households were hit hardest, as they lacked the assets to recover from repeated shocks.

In Bangladesh, women face a different but equally severe risks. Saline contamination of drinking water was widely reported to

contribute to health issues, as increased salt intake can lead to high blood pressure, and in turn eclampsia, a major cause of maternal mortality, low birth weight, preterm birth, and other neonatal complications. During floods and storms many women also recorded losing their livelihoods. Persons with disabilities encountered major barriers to evacuation during disasters, as many shelters were inaccessible and transportation support was minimal. Children were often withdrawn from school when households faced crop failures, while elderly members of households had difficulty accessing food, water, or medical care during emergencies.

The results show that in both countries, climate change has deepened inequalities, enhancing risks for those already marginalised.



Maimouna Abdou's story of living life at a crossroads: Holding on through the August rains in Garbey Tombo, Niger.



Maimouna Abdou, Dosso, Niger

Every August, the skies over Garbey Tombo open with force. For Maimouna and her 80-year-old husband, Abdou, the downpours are a reminder that their home may not survive another storm. Last season, their fears came true. **“The back wall of our mud-brick house gave way under the pressure of the rain, then part of the roof caved in, and we had no choice but to rush outside into the storm, with the rains drenching us as we sought safety in the dark. All night the rains fell nonstop, pooling in the yard and seeping into what remained of our house,”** Maimouna recalls.

“The rains are increasingly more, and more irregular. The heaviest rains come in August, and they weaken our houses until they collapse. You can see the state of my house. Repairs are done with very limited means. We cannot afford to build a new house, which keeps us exposed to the danger of collapse.”

With no external help, Maimouna, relies on her husband for the repairs. At 80 years old, Abdou has laboured for more than three months, shaping mud into bricks and mending damages yet the house still stands half-broken.

During the worst rains, they often stay with neighbours. **“We just get wet,” Maimouna says quietly. “It’s safer than being buried.”**

Her hope is simple: a small home built from stronger materials, safe from the August floods. Until then, she will keep layering clay, stretching plastic, and watching the clouds with holding onto hope.

Mohammad Tafim Ahmad's unwavering desire to learn; Navigating the treacherous roads to school as a child born with a physical disability.



Mohammad Tafim Ahmad, Mithakali in Bangladesh

Born with a physical disability, 12-year-old Tafim has spent most of his life in a wheelchair, cared for by his mother, who helps him get ready and pushes him along the rough dirt road to school. Climate change has made their journey harder. **"We have days where the path is so dry and dusty, and others where the rains are so heavy, washing away the ruts and leaving deep puddles and muddy patches. During the monsoon season, the river breaches its banks, and the road disappears under the water. We are unable to go to school or reach the markets,"**

Tafim's mum says. "For my son, it's the towering resolve to get to school—all he has to do is grip his crutches tight and brace through the storm."

Life at home is equally tough. Salty water from the Bay of Bengal has contaminated fields and wells. **"I spend close to two hours walking to the next village to fetch clean water. Food prices have increased; we are now worried about paying for even the smallest medical visits,"** she adds.

Still, Tafim remains hopeful. **"I want to stay here and study hard. I want to do something good for my family,"** he says.

He dreams of ramps at school, stronger riverbanks, and clean water. He asks the government and NGOs to support children like him with safe roads and reliable water. With that help, Tafim believes he and others can build brighter futures right here in Mithakhali.

5. Conflict, Security, and Migration

Both contexts illustrate how climate stress acts as an amplifier for existing risks regarding conflict and displacement. In Niger, competition over scarce water resources has triggered disputes between herders and farmers. As crop yields decline and soils degrade, many households resort to seasonal migration or rural exodus, which leaves women and children behind more vulnerable. Although most respondents from the quantitative data did not directly connect gender-based violence to climate stress, rising insecurity and property damage from floods were seen as major threats to household safety.

Bangladesh faced a different but equally disruptive set of pressures. Permanent land loss from riverbank erosion and sea-level rise has displaced thousands, with many ending up in overcrowded urban slums. There, migrants face intense competition for jobs, housing, and services, which frequently leads to rising social conflicts. At the local level, the expansion of shrimp farming into farmland has fuelled disputes over water and land rights. Declining freshwater resources also undermined traditional community solidarity. Both cases illustrate how climate change drives migration and exacerbates local tensions, destabilizing social structures.



Water scarcity causing farmer herder conflicts in Maidahini, Dosso region of Niger.



Daouda Moussa, Dosso Niger

Daouda Moussa, a seasonal farmer from Maidahini village near Farrey in Dosso, Niger, shares his experience with conflicts between farmers and pastoralists. **“This problem is often compounded during the wet seasons. In Maidahini, there are hardly any grazing areas for the animals, and the passageways have in most cases been turned into farmlands. The majority of herders do not have gazetted water sources, meaning they have to move around to get water for their animals. When the rainy season is short, or the dry season prolonged,**

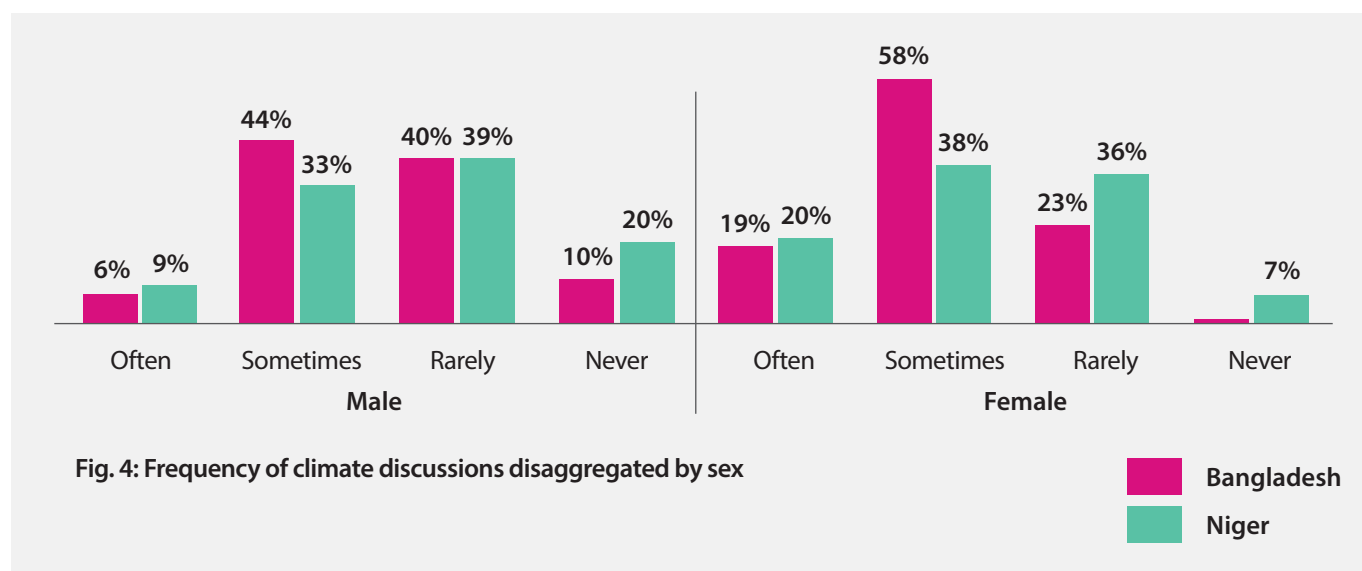
the herders have nowhere to take their cattle. This leaves the animals to descend on the villages in search of water and pastures, and they end up destroying our crops which causes the conflict. With blocked passageways, the alternative routes are through people’s farmlands, leaving them exposed to damages from the livestock.”

Poor rainfall has worsened the problem. “Sometimes the planting season is longer, allowing us to finish the farming cycle and collect our food before the herds return, but sometimes it is shorter, which

causes the herders to return to the village before the harvest is completed.”

Still, Moussa is positive that the two communities will manage to resolve their differences as they have been able to do so harmoniously amongst themselves in the past. He adds that in worst case scenarios, the intervention from the village chiefs to act as a mediator is often sought.

6. Community Perceptions and Emotional Impacts



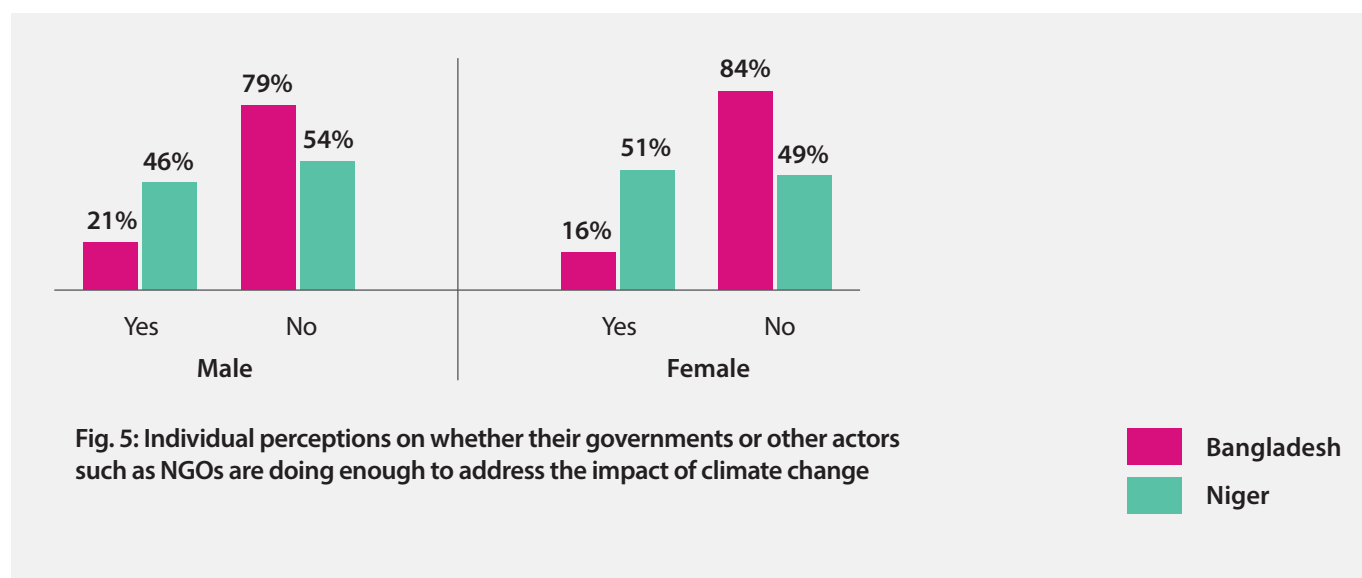
In both countries, communities expressed strong concern about the future. In Niger, 72 percent of respondents recognised the term “climate change,” with women displaying higher awareness than men.

Women engaged more frequently in discussions about climate issues (58 per cent and 38 percent) on average, often within savings groups supported by NGOs. Anxiety was widespread, particularly among mothers worried about their children’s futures regarding wellbeing, food, and education.

In Bangladesh, awareness of climate risks was also high, but active community dialogue was limited. Only 12 percent of households reported regularly discussing climate change with family or neighbours. Despite this, 76 percent of respondents expressed worry about climate change, and 80 percent believed that their children’s lives would be

more difficult than their own. Many expressed a sense of hopelessness, with the belief that “nothing will return to normal.” Taken together, the two case studies suggest that while awareness is rising, opportunities for collective action and dialogue remain uneven across contexts.

7. Support Received and Gaps



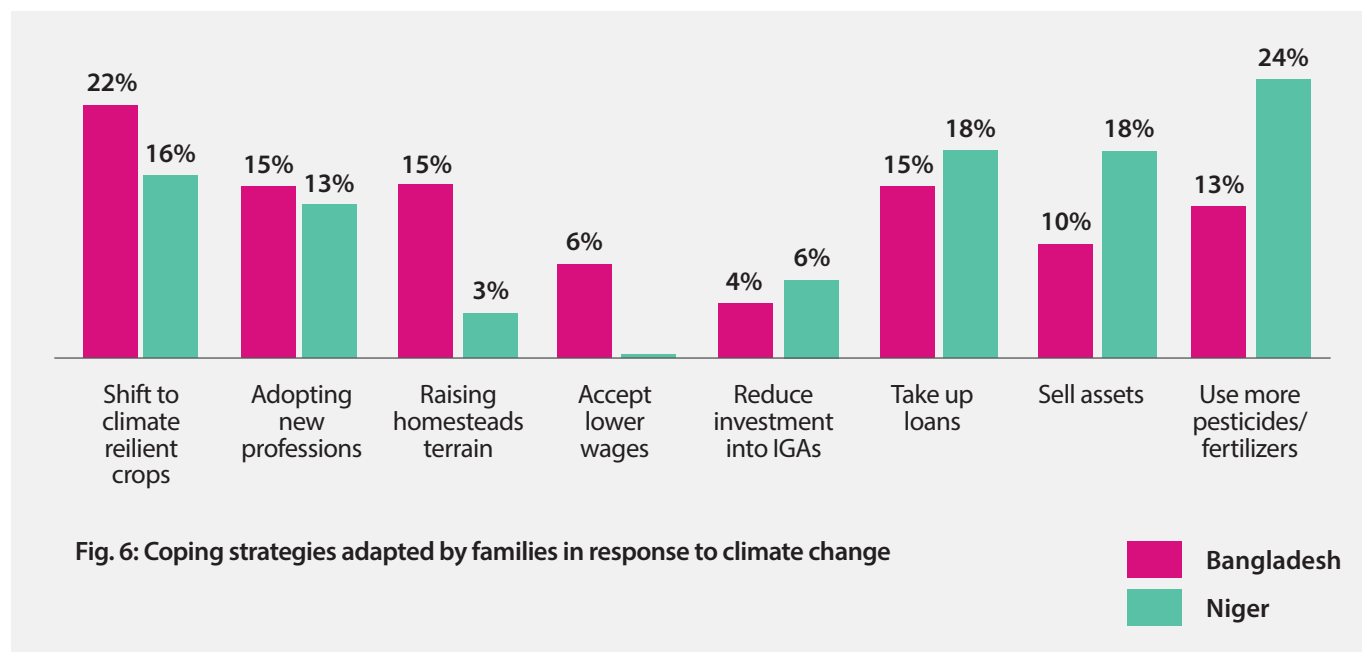
Support structures in the two countries vary significantly in type and strength. In Niger, external assistance was mostly limited to NGO interventions, such as training programs, women’s empowerment initiatives, and the promotion of small income-generating activities. The state contributed through food aid and subsidized agricultural inputs, but these measures were insufficient to meet the scale of demand. Communities consistently called for more reliable water infrastructure, resilient crop varieties, and improvements in schools and health centres.

Bangladesh, by contrast, benefits from a more robust institutional framework for adaptation. Government initiatives such as cyclone shelters, embankments. Bangladesh has adopted a Climate Change Strategy and Action Plan with subsequent updates, as well as the Climate Change Trust Act, and created national funds (e.g., Bangladesh

Climate Change Trust Fund) to underpin the implementation of the National 2023-2050 Adaptation Plan. NGOs like CODEC supplement these efforts with training, microcredits, and salt-tolerant seeds.

However, households still reported large gaps, particularly in access to safe drinking water, financial support, and climate-resilient education infrastructure. Despite different levels of institutional capacity, both Niger and Bangladesh face persistent adaptation deficits at the household level.

8. Adaptation and Coping Strategies



The adaptation and coping strategies are varied for both contexts and display ingenuity and resilience from the communities to respond to looming disasters and resilience.

Bangladesh (Bagerhat District)

Communities in Bagerhat have developed layered coping and adaptation responses, supported by stronger government frameworks at both local and national levels.

» **Agricultural Practices:** The introduction of saline-tolerant rice varieties has improved yields in affected areas. Some farmers have shifted cropping calendars or explored fish-/rice integrated systems. Despite these advances, many still rely on short-term measures such as increased fertilizer or pesticide use, which may erode resilience over time.

- » **Livelihood Adjustments:** Migration is a dominant coping strategy. Three-quarters of households reported sending family members away for temporary work, and nearly a third reported permanent migration. Households also reported selling assets, accepting lower wages, or reducing spending on food, health, and education.
- » **Housing and Infrastructure:** Communities elevate home steads, reinforce fishpond embankments, and plant trees to stabilize soils. Multipurpose cyclone shelters and raised roads have been introduced through government programs, though access remains uneven.
- » **External Support:** Bangladesh benefits from a stronger national adaptation framework, including the Bangladesh

Delta Plan 2100, early-warning systems, and international climate finance. NGOs Strømme Foundation and CODEC provide training, microcredits and salt-tolerant seeds. Despite these programs, households continue to note unmet needs such as safe drinking water, expanded WASH facilities, and more resilient education infrastructure.

Niger (Dosso region)

Communities in Niger’s Dosso region have developed a variety of strategies to cope with increasing climate pressures. Many of these are rooted in traditional knowledge but are increasingly combined with external support from NGOs and limited state interventions.

- » **Agricultural Practices:** Farmers rely on traditional techniques such as Zaï pits, assisted natural regeneration, and the use of drought-resistant crop varieties. These methods aim to conserve soil moisture and increase yields under erratic rainfall conditions. Grain banks have been established to buffer food shortages during lean seasons.
- » **Livelihood Adjustments:** Families often diversify their income through small-scale trading, seasonal migration, or engagement in informal labor. However, some of these strategies, such as selling assets or borrowing money undermine long-term resilience.
- » **Housing and Infrastructure:** Communities reinforce housing structures against floods and use local initiatives to manage water more effectively. Yet, access to boreholes and reliable water infrastructure remains insufficient.
- » **External Support:** NGOs such as Strømme Foundation and Halassay have introduced training, income-generating activities, and women’s savings groups. The government contributes through subsidized fertilizers, food distribution, and occasional crisis support. Despite these efforts, communities consistently report that interventions are not enough to match the scale of climate impacts.



Recommendations



Climate change affects us all. In Norway, we might enjoy a few extra hot summer days. We might also see, right where we live, more droughts and forest fires in the summer, more heavy rainfall and flooding during spring and autumn, and less snow in the winter. Farmers will struggle to adapt to a new climate, and for some it might be impossible. So, there are consequences in Norway, today, and more in

the future. But we don't cut back on food. We don't have to leave our country.

Life has taught the poorest of the poor how to be resourceful, how to use the little they have smartly, how to make the right choices. But for people in Bangladesh and Niger, climate change hits the very foundations of their lives. Being smart doesn't buy you a solar-powered water pump when your

last harvests were low. How can you make the right choice when it's between leaving your family hungry or leaving it behind? These people need support in order to face a crisis that we in Norway, among many other countries, have responsibility for.

Luckily, supporting individuals and communities in adapting to climate change often comes with other benefits.

'Community-based Disaster Risk Management' is an approach that helps communities to reduce the risks and impacts of, for example, dry spells or floods. Community members come together to analyse their own vulnerabilities and capacities, make decisions, and take collective action to reduce risks and enhance preparedness, response, and recovery. This does not only help to adapt to climate change, it also helps communities to better understand each other's needs, to better take care of the most vulnerable members such as children or persons with disabilities, and to take decisions and action together.

Climate shocks hit particularly hard when they affect a person's or family's single income source. Diversifying incomes both increases resilience to climate change and offers new opportunities for economic growth. Training on entrepreneurship or trades, coupled with start-up kits, creates small business that can give people, women and youth in particular, additional money and allow them to build up savings. Community-based savings and loan groups creates both a safety net for tough times, and provides capital to scale up profitable business.

Climate Smart Agriculture is the key to strengthen small-holder farmers cope with climate change, and to improve food security. Improved seeds cope better with new climatic conditions, whether drier, wetter or more saline. Community seed banks help farmers to respond to forecasts with the right varieties. Climate-smart sowing and irrigation techniques help germination and reduce costs, and agroecological practices such as Zai, hedgerows or crop rotation support productivity, decrease vulnerability and often also have positive effects on biodiversity. Community gardens can support the availability of nutritious food and increase resilience to crop failures.

Lastly, where agricultural inputs such as organic fertilisers and modern tools may be what is needed most.

Education is a basic human right and is essential for socio-economic development and for adapting to climate change. Increasing the climate-readiness of educational systems is of utmost importance. This means ensuring community infrastructure provides shelter from disasters outside of schools, for schools to withstand desertification and floods, and to allow students access during heatwaves and floods, through for example solar powered cooling and floating schools. Teachers and students need to be trained on climate change, and on adaptation. Strengthening families' resilience and income will support those who face economic challenges sending their children to school. School feeding programmes and gardens can supplement those initiatives.

Vulnerable groups including women, children, persons with disabilities or minorities are more affected by climate change than others. Including them in community planning for disaster response is essential to ensure their needs are known and addresses. Empowering them individually or collectively, particularly through income generation and inclusion, will help them beyond their coping with climate change.

Norway is a global frontrunner in providing development assistance and takes an active and supportive role in international climate change politics and initiatives. At the same

time, Norway continues to exploit and export oil and gas and thereby continues to fuel climate change. Therefore, it has a particular responsibility when it comes to supporting countries such as Bangladesh and Niger, which are strongly affected by climate change and have low adaptive capacity, but bear next to no responsibility for historic greenhouse gas emissions.

