

Lives on the Frontlines

Climate Change and Survival in Bangladesh

Photo Essays and Stories by Harunur Rashid Sagar



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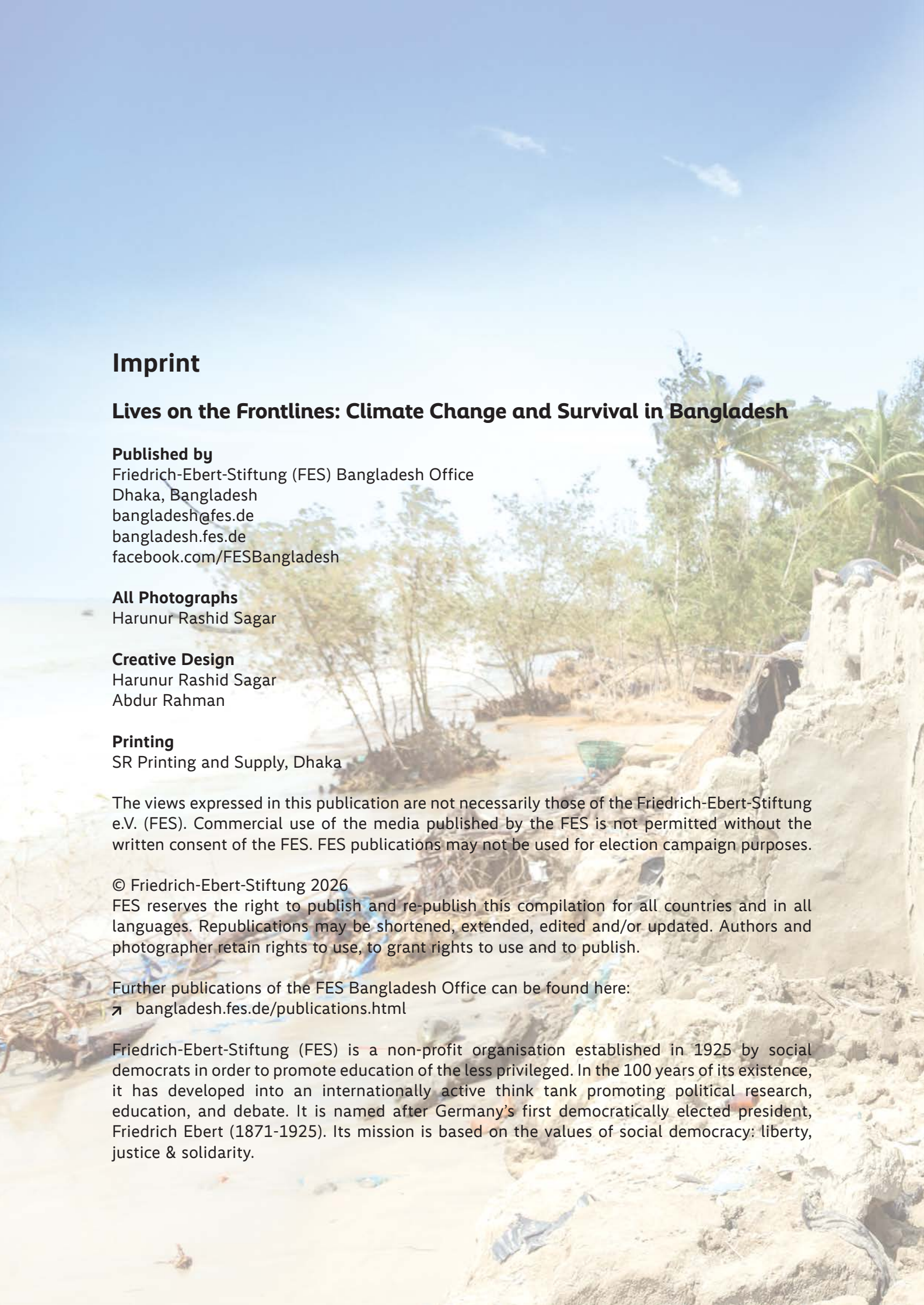
Bangladesh Office

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Imprint

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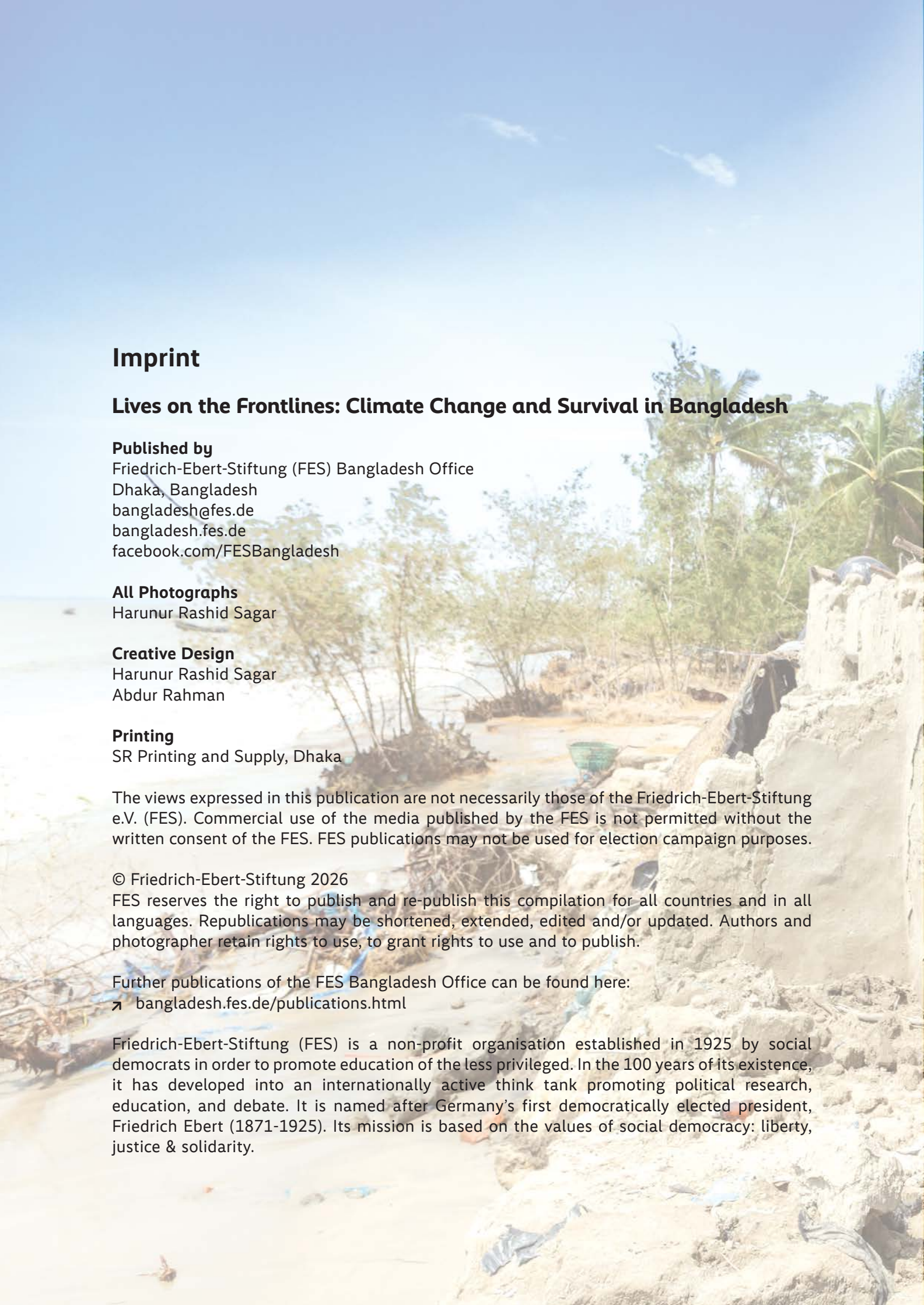
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PREFACE

Seeing the Frontlines

Climate change has never been an abstract scientific concept to me. It is a lived reality, shaped by questions of justice, equity, and human dignity. Growing up in Bangladesh, one of the most climate-vulnerable countries in the world, has profoundly influenced both my worldview and my professional path. Cyclones, floods, and salinity intrusion were not distant or occasional crises; they were part of the everyday landscape of my childhood. Over time, I came to understand that climate change is not only an environmental challenge, but a deeply social and moral one that disproportionately affects those who contribute the least to it.

My journey, from working as a journalist amplifying marginalised voices to engaging as a development practitioner in climate advocacy, has reinforced a central conviction: addressing climate change requires more than technological solutions. It demands a transformation in how we understand vulnerability, power, and responsibility. It requires governance that is inclusive, evidence-based, and responsive, as well as collective action grounded in empathy and justice.

Bangladesh's National Adaptation Plan (NAP) 2023–2050 identifies 11 distinct climate stress areas, each representing unique ecological and socio-economic vulnerabilities. These zones guide over 110 adaptation interventions addressing 14 major climate hazards. This framework not only reflects the scale and diversity of climate impacts in Bangladesh but also underscores the urgency of targeted, context-specific responses.

The idea for this body of work emerged modestly. In late 2023, under a new climate justice initiative, I was asked to capture a set of photographs illustrating climate change impacts. What began as a small assignment, gradually evolved into a larger vision. With the encouragement of Felix Kolbitz, then Resident Representative of FES Bangladesh, I began to explore the possibility of combining photography and narrative to produce web-based photo stories. I remain deeply grateful for his trust and appreciation, which laid the foundation for this work.

My professional background in journalism and academic engagement with photography, particularly on environmental themes, has long nurtured an interest in documenting climate realities. When this opportunity arose, I felt compelled to go beyond conventional reporting. I wanted to create something that could bridge the gap between data and lived experience, between policy discourse and human stories. A key turning point came through discussions with Sohanur Rahman, Executive Coordinator of YouthNet Global, who suggested aligning the work with the NAP's 11 climate stress areas. This provided both a conceptual and geographic roadmap. Although this volume does not yet cover all 11 zones, it represents a deliberate attempt to document diverse climate realities across multiple regions. I am thankful to him and his team for their invaluable support during fieldwork.

I began in the southern coastal belt, where salinity intrusion has profoundly altered ecosystems and human health, particularly affecting women. These initial explorations resulted in two photo essays published on the FES Asia-Pacific website in November 2023, focusing on coastal women's health and livelihood insecurity. Being from the southern part of Bangladesh myself, these realities were both professionally compelling and personally resonant.

With continued encouragement and kind support from Dr. Felix Gerdes, the current Resident Representative of FES Bangladesh, the work expanded both geographically and conceptually. His academic perspective brought additional depth and critical engagement to the process. In 2024 and 2025, I travelled to northern riverine areas and the Haor wetlands, including Tanguar Haor, a Ramsar site of global ecological significance. These visits resulted in further photo essays examining river erosion, flooding, and the fragile ecological balance of wetland livelihoods. Special thanks to Candy (Phatsurang Dechabuddharungsi), our former Regional Communications Coordinator, and Max (Sirichai Leelertyuth), the current Coordinator, for their continuous support, appreciation, and dedicated efforts in publishing these photo essays. I would also like to express my sincere gratitude to Maeha Emannum Tithi, for her invaluable support in identifying and sourcing relevant scientific data, research, and academic materials.

There exists a vast body of research, policy papers, and academic literature on climate change in Bangladesh. However, access to and engagement with these materials often require specialised knowledge and institutional access. For many, these important insights remain distant and abstract. Visual storytelling, in contrast, has the ability to transcend such barriers. A single image can communicate complexity, urgency, and emotion in ways that written text alone often cannot. This is where the necessity of visual evidence becomes critical. Photographs do more than document; they bear witness. They translate statistics into human faces, policy failures into lived consequences, and distant crises into immediate realities. In contexts where marginalised communities are frequently excluded from decision-making processes, visual narratives can amplify voices that might otherwise remain unheard.

Throughout this work, I have sought to combine visual documentation with grounded research, ensuring that each story reflects both empirical realities and lived experiences. The images presented in this book are not isolated moments; they are part of broader socio-ecological systems shaped by climate change, economic pressures, and governance challenges. By situating these photographs within their wider context, I aim to create a form of storytelling that is both accessible and analytically meaningful. All photographs were taken with mutual understanding and verbal consent, with careful attention to upholding the dignity and rights of the individuals portrayed.

At its core, this book is about visibility and voice. Climate change is often discussed at global forums and within policy frameworks, yet the people most affected by it are rarely at the centre of these conversations. Coastal women dealing with salinity-related health issues, workers

navigating precarious livelihoods, communities displaced by erosion, and families living on boats or beside polluted rivers are frequently rendered invisible in mainstream narratives.

Lives on the Frontlines: Climate Change and Survival in Bangladesh seeks to challenge that invisibility. It brings together five photo essays and two photo stories that collectively document the human cost of climate change across some of the country's most vulnerable regions. It also moves beyond land-based narratives to include the lives of the Manta community, who exist entirely on water, and the story of the Buriganga River, once the lifeline of Dhaka and now a symbol of environmental neglect. This volume represents only a beginning. It does not claim to be exhaustive, nor does it capture all dimensions of Bangladesh's climate reality. Rather, it aims to open a space for dialogue, reflection, and engagement. It is intended as an entry point for policymakers, researchers, activists, journalists, and civil society actors to better understand the human dimensions of climate change and to act upon them.

Every field visit has been a reminder of the ethical responsibility that comes with documentation. When I arrive in a community with a camera, a notebook, and questions, people often assume that I can bring solutions to their struggles. They place hope in the act of being seen and heard. These expectations are both humbling and deeply challenging. The people I have met are resilient. They adapt, rebuild, and continue despite immense adversity. Yet resilience should not be romanticised. It should not be used to justify inaction or to overlook systemic inequalities. Behind every story of resilience lies a demand for justice, recognition, and meaningful support.

The faces and voices I encounter, remain with me long after I leave. They shape my understanding of climate change not as an abstract global issue, but as a series of deeply personal and urgent realities. Their questions remain constant: What will happen next? Who is listening? Will anything change?

This book is an attempt to respond, however modestly, to those questions. It follows a simple but essential principle: nothing about us, without us. By bringing these stories to light, it seeks to contribute to a more inclusive and just climate discourse, one that recognises and respects the lived experiences of those on the frontlines.

Ultimately, the power of this work lies not only in the images themselves but in what they compel us to confront. They ask us to see, to listen, and to act.

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INTRODUCTION

Climate, Image, and the Aesthetics of Survival

A Visual-Analytical Reading of Bangladesh Through the Work of Harunur Rashid Sagar

Mohammad Rakibul Hasan

Climate Change and the Necessity of Visual Voice

Climate change is often described through data, projections, and policy frameworks. Numbers quantify temperature rise, sea-level increase, salinity intrusion, and displacement. Yet numbers alone cannot fully articulate what it means to live through climate transformation. The crisis unfolds not only in atmospheric chemistry or hydrological cycles, but in bodies, homes, gestures, and everyday survival. It is experienced sensorially, emotionally, and socially. This gap between measurable change and lived experience creates a profound need for visual voice.

Photography, especially documentary practice, becomes a critical medium in this context. It translates abstraction into embodiment. It renders visible what is otherwise slow, dispersed, and often ignored. Climate change frequently operates as what can be described as a temporally stretched phenomenon. Its violence is incremental rather than explosive. This makes it difficult to perceive without sustained attention. Visual storytelling intervenes by compressing time, revealing patterns, and making visible the accumulation of harm.

The work of Harunur Rashid Sagar stands within this space of translation between science and lived reality. His photo stories on Bangladesh do not merely illustrate climate change. They construct a visual epistemology of survival, where images function as knowledge systems. His practice moves beyond representation, toward what may be described as a visual anthropology of climate precarity, grounded in the everyday lives of marginalised communities across Bangladesh.

The notion of an aesthetics of survival becomes central here. Aesthetics, in this sense, is not about beauty in a conventional sense. It is about the sensory, perceptual, and affective dimensions through which survival is lived and understood. It is

about how endurance, resilience, and vulnerability are visually articulated. In Sagar's work, survival is not heroic or romantic. It is repetitive, exhausting, and deeply embedded in ecological transformation.

Philosophically, this aligns with the idea that existence is always relational. Humans are not separate from nature but entangled within it. Climate change reveals this entanglement with brutal clarity. The environment is not an external backdrop but an active force shaping bodies, identities, and futures. Sagar's images bring this relational ontology into focus, showing how environmental change is simultaneously social, biological, and political.

Women, Salinity, and the Body as Landscape

In the photo essay on coastal women, climate change is inscribed directly onto the body. Salinity intrusion transforms water, and through water, it transforms health. The testimony of a woman from Satkhira, who speaks about using saline water during menstruation and experiencing infections, becomes a critical entry point into understanding climate change as a biocultural phenomenon.

The body here becomes a site of environmental inscription. Scientific discourse might describe salinity in terms of parts per thousand or groundwater contamination. The photograph and the narrative translate this into lived experience. The disruption of reproductive health, the discomfort, the infections are not secondary effects. They are central to the way climate change is experienced. The photographs, visually, construct a poetics of endurance. There is no spectacle of disaster. Instead, there are gestures. Carrying water, washing, and waiting. These gestures function as indexical signs, pointing to larger structural conditions. Repetition becomes a visual strategy. Through repetition, the viewer begins to understand that this is not an isolated moment but a continuous condition.

Water, traditionally associated with life, is re-signified, and without water the whole life system on earth will be obsolete. But when water becomes a vector of harm, the semiotics of water shift from nourishment to contamination. This transformation is both ecological and symbolic. It alters not only material conditions but also cultural meanings. From a feminist perspective, the work reveals the gendered distribution of environmental burden. Women are positioned at the intersection of domestic labour and ecological crisis. Their bodies absorb the effects of environmental change in ways that remain largely invisible in policy discourse in Bangladesh. The photographs make this invisibility visible.

Livelihood Transformation and the Landscape of Dispossession

The transition from agriculture to shrimp farming in coastal Bangladesh represents a profound transformation of both economy and identity. In Sagar's work, this shift is framed not as progress but as forced adaptation.

Salinity intrusion renders traditional farming unsustainable. In response, communities turn to shrimp cultivation. This appears economically viable in the short term. Yet it deepens ecological degradation, creating a cycle of dependency and vulnerability. This can be understood as maladaptive resilience, where adaptation strategies undermine long-term sustainability. Photographically, this transformation is captured through territorial contrasts. Former rice fields become saline water bodies, the examples are coastal belt of Satkhira, Bagerhat, and Khulna. Green landscapes turn reflective and barren. The land itself becomes an archive of ecological change. It records the transition from fertility to precarity.

Human figures within these landscapes often appear in transitional positions. Standing between water and land. Engaged in activities that reflect uncertainty. These compositions evoke a sense of liminality, where individuals exist between past and future, stability and instability. In

this context, many people had to switch their occupations, which is not merely economic. It is cultural. The loss of farming represents a loss of identity. The photographs reveal this through subtle visual cues. Tools, gestures, and environments that once signified agricultural life, are replaced by new forms that lack the same cultural grounding.

Water, Time, and the Instability of the Haor

In Tanguar Haor, climate change manifests as hydrological unpredictability. The rhythm of water, which once structured life, becomes unstable. Too much water destroys crops. Too little disrupts ecosystems. This creates a condition of temporal uncertainty. The testimony of Md. Mudassir Alam (a headmaster) reflects this uncertainty. His fear of losing school, crops, and future speaks to the collapse of institutional and ecological stability. The haor becomes a space where time itself is disrupted.

Water dominates the frames of photographs. It appears in different states. Flooded expanses. Dry patches. Transitional spaces. This creates a dialectic of abundance and absence. Water is both presence and threat. The scale of the landscape often dwarfs human figures. This creates a sense of diminished agency. The viewer perceives the human as small within a vast and unstable environment. This aligns with the idea of the Anthropocene sublime, where human control is revealed as limited.

The concept of adaptive fatigue emerges here. Continuous exposure to environmental stress erodes the capacity to cope. The photographs capture this through subtle expressions, body language, and repetition of labour.

Labour, Displacement, and the Political Economy of Survival

In the story on coastal workers, climate change reshapes labor systems. Farmers become wage labourers. Land-based livelihoods give way to mobile, precarious work. The voice of Md. Didar Ali, who can no longer grow paddy due to salinity, reflects this transformation. His movement into brick kiln labour represents a shift from ecological belonging to economic survival.

The photographs construct a toxic geography of labour. Brick kilns, polluted environments, and physically demanding work create a visual narrative of exploitation. The body becomes a site of labour extraction. From a theoretical perspective, this can be understood as proletarianisation under environmental pressure. Climate change accelerates the transition from subsistence economies to wage labour systems. This transition is not voluntary. It is driven by ecological collapse.

The imagery emphasises movement and repetition. Carrying bricks. Walking long distances. Engaging in continuous labour. These gestures reflect a kinetic temporality, where time is structured by work and survival. Migration becomes a central theme. Yet it is often temporary and cyclical. Workers move for survival but remain tied to their original communities. This creates fragmented identities and unstable social structures.

Erosion, Memory, and the Unmaking of Geography

River erosion in northern Bangladesh introduces a different dimension of climate impact. Land itself disappears. Villages vanish within days. This process can be understood as geographical unmaking. The stability of land, often taken for granted, is revealed as temporary. The photographs capture this through absence. Empty spaces. Collapsed structures. Displaced families.

The concept of iterative displacement emerges here. Communities are repeatedly displaced without leaving the region. They move, rebuild, and move again. This creates a cycle of instability. The edge becomes a powerful motif in visuals. The boundary between land and

water is unstable. Human figures positioned at these edges symbolise precarious existence. Memory plays a crucial role. People remember the land that no longer exists. This creates a mnemonic landscape, where memory and physical reality diverge.

Floating Existence and Statelessness

The Manta community represents an extreme form of displacement. Their lives unfold entirely on water. Boats function as homes, workplaces, and social spaces. The statement by a community leader about lacking identity and recognition reflects a condition of institutional invisibility. Without land, they lack access to rights and services. The photographs construct a floating lifeworld. Space is compressed. Activities overlap. Domestic, economic, and social life coexist within limited physical boundaries.

Children growing up in this environment experience aquatic socialisation. Their relationship with space differs from land-based communities. Movement, balance, and interaction with water become fundamental. The concept of structural entrapment is evident. Mobility does not lead to freedom. It reinforces marginalisation. The absence of land becomes an absence of citizenship.

The Dying River and Urban Ecological Collapse

The Buriganga River in Dhaka represents the intersection of urbanisation and environmental degradation. Once a lifeline, it is now described as biologically and hydrologically almost dead. The accumulation of industrial waste, sewage, and toxic materials transforms the river into a hazardous ecosystem. The photographs capture this through dark water, floating debris, and industrial activity.

The concept of a necroscape becomes relevant. The river is not entirely dead. Life persists within it. Yet this life exists within conditions of toxicity and degradation. Human activity continues along the river. People work, bathe, and live in proximity to polluted water. This creates a normalised risk environment, where danger becomes part of everyday life. The river also reflects broader issues of governance and development. Unregulated industrial growth, lack of infrastructure, and environmental neglect converge to produce ecological crisis.

Visual Ethics, Witnessing, and the Responsibility of Representation

The act of documenting climate-affected communities carries with it a profound ethical responsibility, particularly when the subjects are already positioned within layers of vulnerability, marginalisation, and structural neglect. In the work of Harunur Rashid Sagar, photography operates not as extraction but as a form of ethical witnessing, where the camera becomes a mediator between visibility and dignity. This raises critical questions within visual anthropology and documentary practice, *what does it mean to look at suffering? Who has the authority to represent it? And how can images avoid reproducing the very inequalities they seek to expose?*

The photographs across these stories resist the trap of spectacle. There is no denationalisation of pain, no exaggerated dramatisation of crisis. Instead, the images remain grounded in the everyday textures of life, allowing subjects to retain agency within the frame. This approach aligns with an ethics of relational representation, where the photographer is not an external observer but part of a network of relationships that includes trust, proximity, and accountability. The gaze is not intrusive but attentive. It lingers rather than captures.

This ethical positioning is particularly significant in the context of climate storytelling, where there is a persistent risk of reducing communities to symbols of victimhood. The repetition of images of suffering bodies, flooded homes, or degraded landscapes can create what may be described as compassion fatigue, where viewers become desensitised to crisis. Sagar's work counters this by shifting the focus from suffering alone to continuity of life within crisis. People

are not only shown as victims of climate change but as individuals navigating, negotiating, and enduring within altered ecologies.

The concept of dignified visibility becomes central here. Visibility is not inherently empowering. It can expose, objectify, or commodify. Ethical visual practice requires a balance between revealing injustice and preserving the integrity of those represented. In these photo stories, dignity is maintained through compositional choices, proximity, and narrative framing. Subjects are not reduced to anonymous figures but are situated within their environments, their gestures, and their voices.

There is also an implicit critique of the politics of invisibility. Many of the communities represented, whether coastal women, displaced farmers, haor residents, or river dwellers, exist at the margins of policy and governance. Their struggles are often unrecorded, unacknowledged, or rendered statistically insignificant. Photography, in this context, becomes a form of counter-visibility, challenging dominant narratives and making visible what systems of power tend to ignore.

At a philosophical level, this raises the question of responsibility. To see is not neutral. To witness is to become implicated. The viewer is no longer detached but positioned within a moral relationship to what is seen. The images demand a response, not necessarily in the form of immediate action, but in the form of recognition. Recognition that these lives, these struggles, and these environments are part of a shared world shaped by interconnected systems.

In this sense, the work extends beyond documentation into the realm of ethical engagement. It asks not only how climate change is represented, but how it is perceived, understood, and felt. The responsibility does not lie solely with the photographer but extends to the viewer, who must decide how to carry forward what has been seen.

Visual Knowledge

Across these photo stories, a consistent pattern emerges. Climate change is not a singular phenomenon. It manifests differently across regions, ecosystems, and communities. Yet these manifestations share a common thread. They reveal the entanglement of environment, society, and power.

The work of Harunur Rashid Sagar provides a critical framework for understanding this entanglement. His images do not simply document. They interpret. They create a visual language through which climate change becomes legible. The concept of aesthetics of survival offers a way to understand this language. Survival is not abstract. It is embodied. It is performed through daily practices. It is shaped by ecological conditions and social structures. Visual storytelling becomes essential because it engages perception, emotion, and cognition simultaneously. It allows viewers to see what is often overlooked. It creates a space for ethical engagement. Climate change demands not only scientific understanding but also sensory awareness. It requires ways of seeing that recognise complexity, vulnerability, and resilience. Photography, in this context, becomes a form of knowledge production.

Through these images, the viewer is invited to confront a difficult reality. Climate change is not only about the future, but also an everyday reality. It is already shaping lives in profound ways. The aesthetics of survival is not about beauty. It is about endurance, adaptation, and the persistent struggle to live within changing worlds.

Conclusion

The visual narratives brought together in *Lives on the Frontlines: Climate Change and Survival in Bangladesh*, produced by Friedrich-Ebert-Stiftung (FES) Bangladesh, and photo essays and stories by Harunur Rashid Sagar, form more than a documentation of crisis. They construct a

layered understanding of how climate change is lived, negotiated, and endured across diverse ecological and social landscapes. Across coastal belts, riverine zones, haor ecosystems, and urban margins, the photographs and testimonies reveal that climate change is not a singular event but a continuous condition that reshapes bodies, livelihoods, identities, and geographies.

This publication, comprising five photo essays and two photo stories, draws upon nearly two hundred images to articulate a visual grammar of survival. Each frame contributes to an expanded understanding of climate reality that cannot be contained within policy discourse or statistical abstraction. The coastal woman negotiating saline water, the worker displaced into precarious labour, the haor resident living within hydrological uncertainty, and the communities facing erosion, pollution, and statelessness all embody interconnected dimensions of climate precarity. Through the lens of Harunur Rashid Sagar, Bangladesh emerges not merely as a site of impact but as a critical space through which global climate injustice becomes visible and urgent.

In this context, visual interpretation becomes essential. As outlined in the scope of this work, this introductory essay critically engages with these images, offering analytical depth grounded in documentary practice. The photographs function as both evidence and interpretation, inviting readings that move beyond representation toward lived experience and relational ecologies. This work reflects a broader commitment to climate storytelling. These images ask not only to be seen, but to be understood, remembered, and carried forward within ongoing conversations on climate justice, representation, and the ethics of witnessing.

Mohammad Rakibul Hasan is a Bangladesh-based documentary photographer and filmmaker

PHOTO ESSAYS





Salinity's Impact on Coastal Women's Health in Bangladesh



“It started with frequent lower abdominal belly pain, fever, urinal pain, cough, etc. Sometimes, there was blood in my urine if I did heavy work as a day labourer at a grocery shop or fish farm at that time. I used to take medicine from a non-professional local doctor because there are no proper treatment facilities here, and I couldn’t afford it. My condition was getting worse, and I had to have my uterus removed later.”

Rahima (38) from Gabura Union under Shyamnagar Upazila (Satkhira, Bangladesh) explained how she lost her uterus one and a half years earlier. She lives with two small children and does home-based tailoring for a living now. Her husband left them and settled another family somewhere else four or five years ago.

Like Rahima, many girls and women from coastal regions suffer from various diseases of the reproductive organs due to the harsh consequences of climate change, specifically salinity. With fresh water increasingly scarce, women and girls must wash their menstrual cloths and other sanitary items in water that is often dirty, salty or both, with serious consequences for their health. Some even resort to buying birth-control pills they can ill afford to stop their periods, especially during the dry seasons.

The people of the coastal areas of Bangladesh are fighting more with different disasters like salinity, floods, cyclones, river erosion, and thunderstorms than others.

Note: Salinity is the concentration of salt, mainly sodium chloride, in water or soil. It is measured in parts per thousand (ppt) or parts per million (ppm). Salinity levels can affect the suitability of water for drinking, agriculture, and aquatic life, making it a critical factor in environmental and agricultural management.



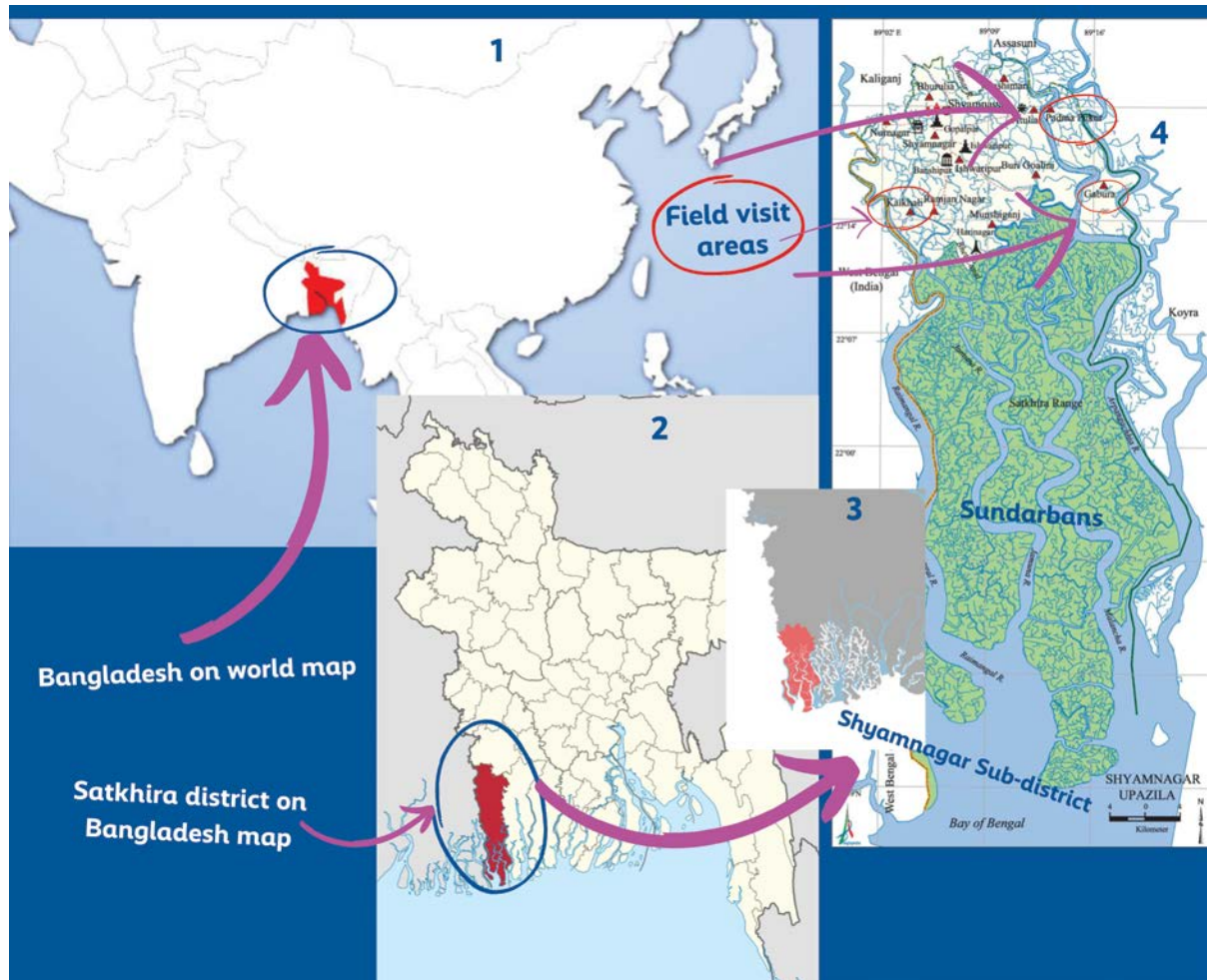
The people of the coastal areas of Bangladesh are fighting more with different disasters like salinity, floods, cyclones, river erosion, and thunderstorms than others.

Geographical location makes Bangladesh one of the world's most disaster-prone countries. According to German Watch's Global Climate Index, Bangladesh is the 7th country most affected by climate change, with related economic losses of 12 billion USD in the last 40 years. The people of the coastal areas of Bangladesh are facing more disasters linked to salinity, floods, cyclones, river erosion, and thunderstorms than those in other countries.



Climate change, due to natural and human-induced causes, is characterised in many regions by sea level rise, contributing to salinity intrusion.

Bangladesh's coastal area is a considerable part of the country. About 29 per cent of the population live in the coastal areas (Ahmad, 2019). The entire southern region of our country lies just 2 metres above sea level.



1. Bangladesh on world map 2. Satkhira district on Bangladesh Map 3. Shyamnagar Upazila (Sub-district) on Bangladesh Map 4. Shyamnagar map and three main field visit areas (Gabura, Padmapukur, and Kaikhali union) in November 2023.

Before diving into the current reality and sufferings, some geographical context helps understand the issue's importance. Almost all of the country's 19 coastal districts are affected by moderate to severe salinity, which has increased in the last five years due to the impact of different cyclones over a small area (Kabir et al., 2016). Satkhira district is one of the more severely saline-affected regions. It is bounded by the Jashore district to the north, the Bay of Bengal to the south, the Khulna district to the east, and 24 Parganas district of India to the west. The district is divided into seven upazilas (sub-districts), of which Shyamnagar Upazila is adjacent to the Sundarbans. Three unions in this upazila (Gabura, Burigoalini, and Padmapukur) were the most affected by salinity after cyclones Sidr (2007) and Aila (2009) (Rezoyana et al., 2023).



Three Union of this Upazila (Gabura, Burigoalini, and Padmapukur) were affected mainly by salinity after the two significant cyclones, Aila and Sidr.

As these unions are in one of Bangladesh's most climate change-stressed and vulnerable areas, people (especially women) face multi-dimensional impacts. Critical shortages of drinking and fresh water as well as food and livelihood insecurity are the most significant, and are both connected to many other problems.



Drinking water is the most precious thing in the salinity-affected coastal areas.

The crisis of fresh water is illustrated by a quotation from the conclusion of a study titled Water Quality of Different Sources at Buri Goalini and Gabura Unions of Shyamnagar Upazila, Bangladesh, published in June 2019:

“Most of the Electrical Conductivity (EC) values of the samples exceeded the WHO prescribed standard values. It can be concluded that the water sources of Gabura were more affected by EC and salinity as compared to Buri Goalini Union. The EC and salinity were much higher in pond water of Gabura and deep tubewell water of both the Unions. They were not suitable for drinking purposes.” (Shaibur et al., 2019).

The local Kholpetua river has overflowed many times since this research, and the situation worsens daily as well as spreading to other areas. And you don't have to be an expert to know that many critical diseases are waterborne.

Note: According to the World Health Organization (WHO), Electrical Conductivity (EC) is a measure of a solution's ability to conduct electrical current. It is related to the concentration of dissolved salts, including ions like sodium and chloride. High EC levels in drinking water can indicate elevated salinity or contamination, impacting water quality and its suitability for consumption.



Anjali Mondal is describing the sufferings for drinking water.

The main crisis in these coastal unions is safe drinking water. Local housewife Anjali Mondal (44) said:

“We get drinking water by preserving rainwater during the monsoon, but it’s only for four to five months. We used to face serious crises during winter and summer. A few NGOs provide drinking water for 60 poisha [0.60 BDT, equivalent to around half a USD cent] per litre. Still, we have to go very far to collect water and carrying 10-15 litres of water from that far is very painful.”



Long walk for drinking water.

Water tanks are available but expensive, with a 20,000-litre tank costing around 14,000 BDT.

“Usually, people from marginal income can’t afford this kind of rainwater-preserving setup, so many people used to drink directly or indirectly from the unsafe pond water. That’s why many diseases are increasing,” she added.



Many people are forced to drink directly from the unsafe pond water.

In the nearby unions of Padmapukur, Burigoalini, and Kaikhali, the salinity of the pond water is slightly lower (Rezoyana et al., 2023). There is one freshwater pond left, named *Drishtinandan Pukur* (Eye-pleasing Pond), but that is also at risk of salinity.

“The river [which is saline] is very close [50 to 60 m] to the *Drishtinandan Pukur*,” said Omar Faruk, Assistant Teacher at 173 Number Sora Government Primary School, Gabura. “There is a dam to protect this union from flood, but it is too fragile to fight against cyclones. Every year, this dam breaks due to cyclones and river erosion, then villagers repair it on their own initiative as the necessary support from the authority is insufficient.”



Drishtinandan Pukur is the only freshwater pond at Gabura which is also at risk of salinity because of its proximity to the saline river.

The people from these coastal areas are suffering from a shortage of safe drinking water and fresh water for household work, bathing, cooking, and cleaning, so they are forced to use saline water.

“We even get salty water from the deep tube well at Gabura,” added Hafizur Rahman, another Assistant Teacher from the same school. “If you bathe in the saline water from the river daily, it is good in a way because it’s cleaned by the tide every day. But suppose you do this from a closed saline water body. In that case, it is more harmful to health because many people use the same water source daily and very easily spread diseases.”



Due to salinity local people cultivate vegetables inside plastic sacks.

Local people say, they used to plant different types of vegetables and fruit trees around their homestead. Now, vegetables and fruit trees will not grow due to increased salinity. They are affected by various types of fungi, including leaf rot. That's why many people cut plastic bags and cultivate vegetables in them.



Options are very limited with only salty water available for household work and bathing.

This has been happening for a long time in the area. People suffer from many chronic diseases related to skin, stomach, blood pressure, menstrual health, reproductive system, appendix, etc. Women and girls suffer the most since they use the salty water the most for household tasks and maintaining menstrual hygiene.





Daily life around the salty water.

Many patients, like Rahima mentioned above, are sufferers of uterine and urinary infections, and various skin diseases.

“My entire family are affected by these types of diseases,” said Khadija, 25. “I had stomachache and urinal pain before finding uterus infection. I took treatment and am now feeling better. However, my sister Mahfuja, 26, still treats her urinal and uterus infection-related diseases. My other sister had to suffer during her caesarean section. My mother suffers from an ulcer, and my brother has a skin allergy and used to have rash while working with salty water.”



Dr. G M Tariqul Islam, Resident Medical Officer from Shyamnagar Upazila Health Complex.

“In the case of women, various diseases are occurring related to the uterus due to salt,” said Doctor G M Tariqul Islam, resident medical officer with the Shyamnagar Upazila Health Complex. “For example, urinary tract infections and Leucorrhoea [vaginal infection] are increasing. Due to these, pelvic inflammatory disease, irregular periods, and infertility are occurring more.”

“Most of the women over 40 who come for the treatment have had hysterectomies [surgical removal of the uterus]. If uterus is removed before a certain age, it creates various hormonal problems later, including osteoporosis, sleeping problems, irritable mood, and various mental problems which also creates problems in the patient’s family and social life.”



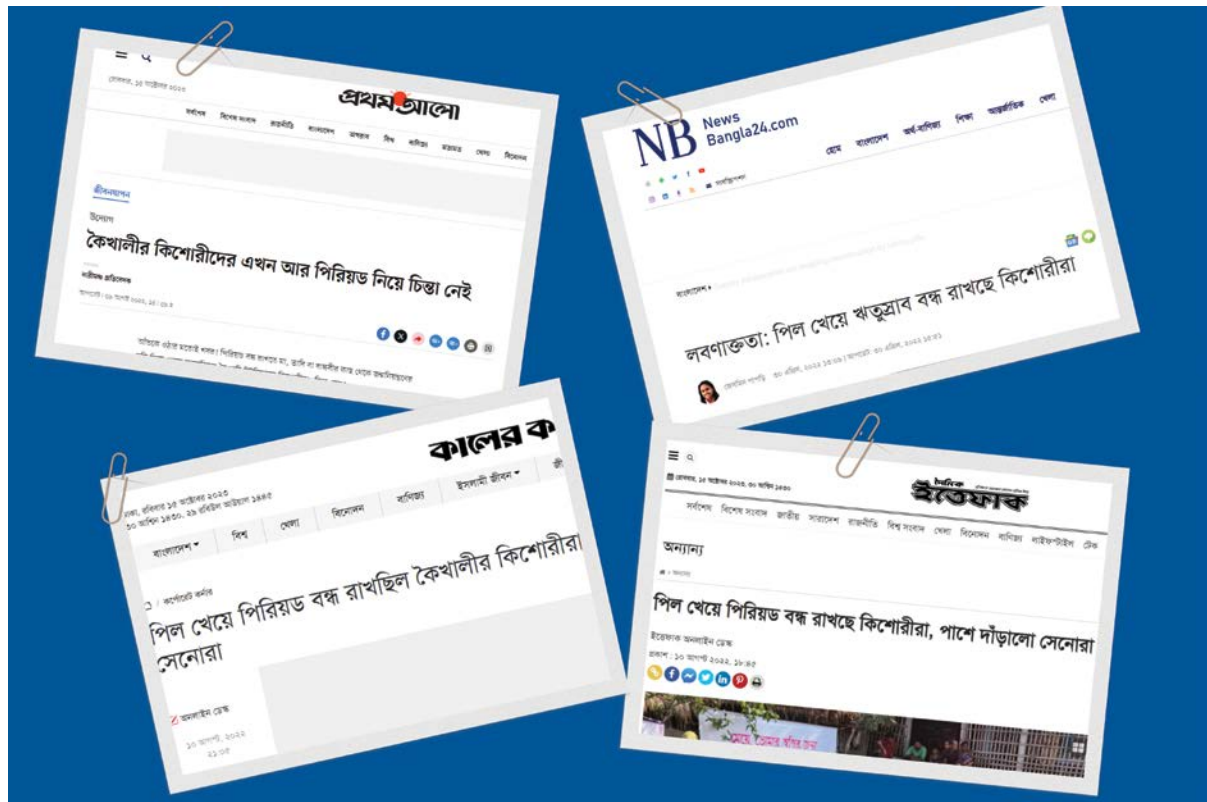
Mahfuja (top) and Khadija (bottom), both sisters have suffered from the uterus infection due to salinity.



Khadija lives with her parents, and the place is surrounded mostly by shrimp farms, which use fully saline water. She has a 10-year-old boy and has been left by her husband. Marginal women like Khadija mostly work on the shrimp farms, as one of the only remaining livelihoods available. Things were very different 15 or 20 years ago, when most of the land was used for paddy cultivation using fresh water. This provided better livelihoods and had much less impact on health. Now, at least 70 per cent of agricultural land on the south coast is affected by different degrees of soil and water salinity (Ziaul & Zaber, 2013) due to climate change and human activities like shrimp cultivation, which directly allows saline water to the locality. The poverty and the impoverished conditions are compounded by the saltwater intrusion.

“You will get patients like us in almost every house at Gabura,” Mahfuja added. “They don’t have that much understanding as well as any option to use anything other than salty water.”

Many were also shocked when it was reported in national media that the girls of Kaikhali Union were taking birth control pills from their mothers, sisters or female friends to stop their periods and avoid hygiene problems.



It was reported in national media that the girls were taking birth control pills to stop their periods.

Even affording three meals a day is a challenge for the ordinary people of these coastal areas. It is difficult for girls and women there to think of spending 100 to 150 BDT every month on sanitary pads. So they use old clothes during the period. Naturally, those clothes cannot be washed in the bathing pond. They wash the used clothes in the nearby dirty and salty water and use them again, leading to the various problems of the uterus. Many of them resorted to sukhi pills (free birth control pills distributed by the government’s Family Planning Department) that were close at hand to stop menstruation during the winter, when clean fresh water is scarcest. Many non-governmental organisations working on family planning distribute birth control pills to married women mostly for free.

Experts say taking birth control pills without a doctor’s advice can cause serious harm. The user can suffer from irregular periods, brain and physical damage, and permanent infertility.



Girls (top) and teacher Papia Ray (bottom) from Kaikhali S R High School.



Papia Ray, a senior teacher from Kaikhali S R High School, said: “As we know, talking about periods and menstrual health is a very sensitive topic to discuss and taboo in the socio-cultural context in Bangladesh, especially in the village areas. I know about [some girls] using pills to stop periods during winter and summer when people face the worst freshwater crises.”

“As a teacher, I try to make our female students as aware as possible. Also, some initiatives are taken regarding the proper sanitary napkins and use of safe water during periods by a few organisations. Now, the use of pills is less than before, I think. Still, as salinity is notably increasing daily, people need more support,” she added.

Another crucial fact pointed out by a local climate activist from Gabura Union, Md Ashikur Rahman, is how salinity influences child marriage and separation.

“Due to the continuous use of saline water, girls started suffering from permanent skin diseases after the age of 18 to 20,” he said. Their skin has darkened due to salinity. Mostly, no one agrees to marry a girl with skin diseases and a dark tone in the village context. So, parents expect their daughter to be married between the age from 10 to 15; otherwise, it will be a burden later them, they think.



Due to the continuous use of saline water, girls started suffering from persistent skin diseases after the age of 18 to 20.

“The irony is they started facing those skin diseases mostly after their twenties, their husbands leave them and marry another adolescent girl. And they return to their parents with two to three kids and more liabilities. So, at any cost, we have to protect our coastal areas from salinity impact before everything goes out of control,” he said.

As Doctor Islam explained, due to the density of salinity many people, especially women, are suffering from hypertension (high blood pressure), which causes cardiovascular diseases and stroke. High salt levels also cause iron deficiency, and lead to poor digestion and malnutrition. Rates of vitamin B12 deficiency have also increased, contributing to a rise in anaemia in these regions. Pregnant patients who come for treatment often suffer from iron deficiency, which has long-term effects on the babies.



Fight against salinity is not only a necessity but a testament to the strength of the human spirit in the face of adversity.

These women—many others along with Rahima, Khadija, and Mahfuja—are examples of bravery and tenacity in the face of overwhelming obstacles, bringing attention to the critical need for support, freshwater solutions, and sustainable development in these vulnerable coastal areas. They receive hope and believe there will be a solution when they meet someone like this essay writer who is documenting their sufferings through images and notes. They sincerely request, “Please, write this” and “Please, don’t forget to note that,” etc. Their testimonies are a call to action as well as a powerful reminder that the fight against salinity is not only a necessity but a testament to the strength of the human spirit in the face of adversity.

Voicing the collective plea of her sisters along the coast, Khadija’s words resonate:

“We are drowning in a hardship of salinity. What has happened to us we had to suffer but at least our children should get a good environment.”

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The Challenging Quest for Coastal Food and Livelihood Security



Bangladesh's location has made it one of the world's most disaster-prone countries. According to German Watch's Global Climate Index, Bangladesh is the 7th most affected country in the world, with related economic losses of 12 billion USD in the last 40 years. The people of the coastal areas of Bangladesh face more disasters such as salinity, floods, cyclones, river erosion, and thunderstorms than others. Bangladesh's coastal area is considerable. About 29 percent of the country's population live in the coastal areas (Ahmad, 2019). The southern region of the country lies just 2 metres above sea level. Climate change due to natural and human-induced factors is a significant cause of sea-level rise, contributing to salinity intrusion.



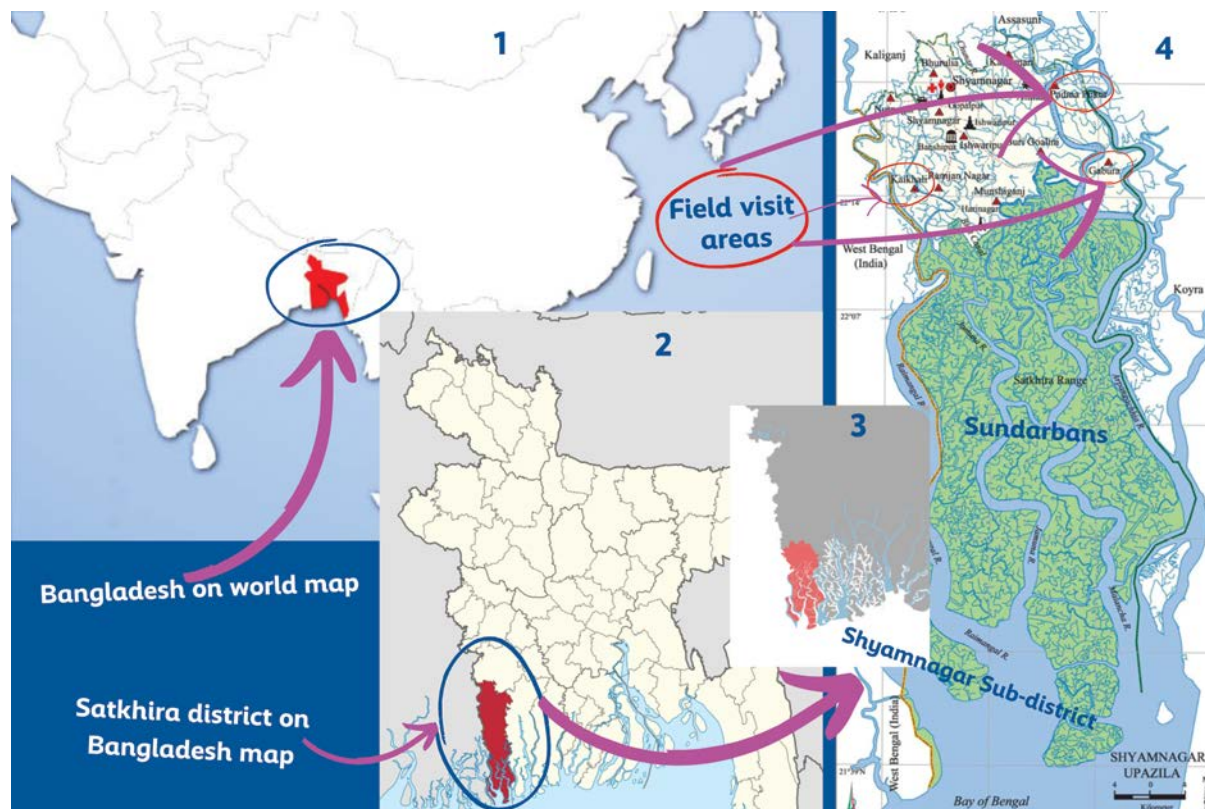
Climate change due to natural and human-induced factors is thought to be responsible for sea-level rise, contributing to salinity intrusion.

Note: Salinity is the concentration of salt, mainly sodium chloride, in water or soil. It is measured in parts per thousand (ppt) or parts per million (ppm). Salinity levels can affect the suitability of water for drinking, agriculture, and aquatic life, making it a critical factor in environmental and agricultural management.



The people of the coastal areas of Bangladesh have to contend with more disasters than in other areas.

Before diving into the current reality and sufferings, a brief geographical context is important to help understand the issue's importance. In the 19 coastal districts, almost all areas are affected by moderate to severe levels of salinity, which has increased in the last five years due to the impacts of several cyclones in a small area (Kabir et al., 2016). Satkhira district is one of the severe saline-affected regions of Bangladesh. It is bounded by the Jashore district to the north, the Bay of Bengal to the south, the Khulna district to the east, and the Indian district of 24 Parganas to the west. The district is divided into seven upazilas (administrative units) and Shyamnagar Upazila is adjacent to the Sundarbans. Three unions (a smaller administrative unit) of this upazila, namely Gabura, Burigoalini, and Padmapukur, were particularly affected by salinity after cyclones Sidr in 2007 and Aila in 2009 (Rezoyana et al., 2023).



Bangladesh in the global context, Satkhira district, Shyamnagar Upazila, and the three field visit (November 2023) locations—Gabura, Padmapukur, and Koikhali unions.

As these unions make up one of Bangladesh's most climate change-stressed and vulnerable areas, people, especially women, face multi-dimensional impacts. The most important of those are food and livelihood insecurity as well as drinking and fresh water, which also connect to many other problems.



A study shows that the livelihood of 62.7% of people has been changed due to salinity.

The main occupation of the coastal people is agriculture and fishing. Rice is the main crop and staple food for the people of Bangladesh. After the cyclones Sidr and Aila hit the southern part, the salinity in that area increased radically, and farmers saw their yield of Aman rice fall in the following years (Rabbani et al., 2013). At least 70 per cent of agricultural land on the south coast is affected by different degrees of soil and water salinity (Ziaul & Zaber, 2013).



Abdur Rashid Khan, a local farmer, now works in a crab farm after rising salinity made traditional rice cultivation increasingly difficult.

“People in low-lying, salination-prone areas are trying to cope in various ways,” said Abdur Rashid Khan, a local farmer who had to convert to working on a crab farm. “They are trying to cultivate a crop, white fish, where the high saline areas like Gabura has no choice except shrimp farming. Shrimp culture is one of the few viable livelihoods [using salt water] and allows for instant money earning, so it influences farmers to allow the saline water in agricultural land and do shrimp cultivation, which is rapidly decreasing the crop production in the land.”



At least 70 percent of agricultural land on the south coast is affected by different degrees of soil and water salinity.

Another worker, Abdul Alim, said: “With the illegal water channel [locally known as switch gate], they directly divert salty water from the river to shrimp farm. You will see this everywhere, and it is responsible for increasing the salinity in the agricultural land. The problem related to salinity was not much when most of the land was used for rice cultivation by fresh water [15 or 20 years ago].”



Shrimp cultivation ponds where saline water from nearby rivers is used for commercial shrimp farming, a major driver of soil and water salinisation in the region.

Politically-powered and wealthy farmers have taken control of the shrimp farming process. They compelled the farmers to give up their lands for shrimp cultivation, and the number of landless people has increased. Salinity has affected mostly the agriculture-based livelihood, according to locals.



Illegal water channel ("switch gate") diverting saline river water into shrimp farms, contributing to the spread of salinity in nearby agricultural land.



Shrimp cultivation using salty water diverted from the river, which is also responsible for increasing the salinity in the agricultural land.



Salinity-affected agricultural land in coastal Satkhira, where rising salt levels have significantly reduced crop productivity.



Due to the profit of shrimp culture, some people benefit more, and some labourers who have no land are deprived and suffer from food crises.

Because of unstable occupations due to rising levels of salinity, people of this area have to rely upon two or more livelihood options for a living. A study shows that the livelihood of 63 per cent of people has been changed due to the increased salinity. The conditions have driven many people to change livelihoods two to three times in the last 10 years (Rezoyana et al., 2023).



People of the coastal areas have to rely upon two or more livelihood options for a living.

A deep relation exists between salinity, livelihood, and food insecurity. Shrimp cultivation is profitable, but only benefits some, while labourers who have no land are deprived and suffer from food crises. The decline in agriculture also contributes to higher rice prices. People among the three unions spoke of the high price of essential goods, including rice. Before salinity, most people were able to grow most of the rice for their own households. Now this is not possible, and they can only eat the rice they can afford to buy commercially. Thus, livelihood and food insecurity harshly affect the overall socio-economic mechanism, causing psycho-social crises, illegal activities, etc.



Livelihood and food insecurity harshly affect the overall socio-economic mechanism.

Here, another vital thing that people mentioned when spoken to, was that many people from these areas migrate to urban or other areas for jobs and shelter. Migrants previously working in rice cultivation or other agricultural labour, when outside their home unions primarily end up working as day labourers, rickshaw pullers or garment workers. Men who go to work outside in brickfields or in small factories making garments, etc., usually have to stay six to nine months. Most of them are married and have children in their home areas, but mostly re-marry in their new working areas and leave their previous families.



Coastal residents pursuing multiple livelihood options, reflecting how increasing salinity and environmental stress force households to diversify income sources.

Lack of work opportunities and loss of homes or land by natural disasters, are forcing people to leave for their safety, livelihood, and food security. Farmer Dinbandhu Mondal, 57, said that about 20 families are leaving every year from his union of Padmapukur.



Many people have changed livelihoods two to three times in the last 10 years.



Climate migrant Nur Mohammad and his family living temporarily beside an embankment after losing their home and land to river erosion.

“I lost my home and land by river erosion,” fisherman Nur Mohammad (52) described, despair in his voice. “Nowhere to go with my family of seven members. We are temporarily staying beside this dam on the [Kholpetua] river but don’t know how many days we can stay due to upcoming cyclones and floods. We are still in so many sufferings. If the government gives us a safe place to stay, it would be a great help.”

He relocated here from the town of Protapnagar four years earlier. According to the World Health Organization, more than 7.1 million Bangladeshis were displaced by climate change in 2022, which could reach 13.3 million by 2050.



Coastal people need support in paving the path toward a future that is safer and more resilient, not as a privilege but as a basic human right.

Now is the moment to stand with Nur Mohammad, and with all the coastal people and climate migrants who bear the brunt of our planet's changing climate. Their plea is simple yet profound: for strong, sustainable infrastructure, access to clean water, and the preservation of their way of life. The decision should be simple: support them in paving the path toward a future that is safer and more resilient, not as a privilege but as a basic human right.



Majeda, 80, a partially blind climate migrant living alone on the riverbank after losing her home to climate-induced erosion.

In the midst of this struggle, the voice of Majeda, an 80-year-old climate migrant, echoes through the salty air, “We have lost our land and homes. I cannot see properly. No one is here to look after me. I have a daughter left by her husband with two children. She is also struggling a lot to feed her kids. She doesn’t get many opportunities to see me as she goes from one place to another to find work as a day labourer. Our suffering knows no bounds.”

“People helped me to build this house, and I am residing on the bank of this river. We older people suffer most during the rainy season when the river overflows. Somehow, I am passing the days with the help of the local people as I cannot work. Don’t know how many days I can survive like this,” she added hopelessly.

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How Climate Change Is Threatening Livelihoods in Tanguar Haor, Bangladesh



“If this continues for another few years, I fear we’ll have no school, no crops, and no future left in Tanguar Haor,” said Md. Mudassir Alam, headmaster of Janata High School, gazing across the horizon where water had once blessed the soil but now overflows with destruction at times and goes lacking in others. His voice carried the weight of generations who have lived in this wetland, thrived on its resources, and successfully taken on nature’s challenges—until now.

Tanguar Haor, a sprawling seasonal wetland in the Sunamganj district of north-eastern Bangladesh, covers 9,727 hectares and supports the livelihoods of more than 70,000 people across 46 villages. Declared a Ramsar site (a wetland of international ecological importance under the 1971 Ramsar Convention) in 2000 for its rich biodiversity, the Haor is both a sanctuary and a sustainer: yielding fish, crops, and water that feed the nation and its people (Rahaman et al., 2016). But this balance is being rapidly upended by the impacts of climate change.



Tanguar Haor is home to 135 fish species and 208 bird species, including 92 waterbirds, 98 migratory birds, and several threatened species listed by IUCN and CITES.

The Surma-Kushiyara river system, encompassing the haor basin, is increasingly under stress due to changing temperatures and rainfall patterns. This unique area faces profound vulnerabilities arising from climate change, particularly impacting the livelihoods of its communities. Recent scientific data indicates that rainfall in the Tanguar Haor region has significantly decreased over the last few decades. From 1980 to 2008, the total annual rainfall fell by 582 mm, while the average temperature increased by more than 1.4°C (Rahaman et al., 2016). According to Raihan and Hossain (2021), temperature continues to rise in this region at an accelerated rate, with an observable upward trend in maximum and minimum annual temperatures over the past 39 years. These climatic shifts directly affect crop cycles, fish habitats, and the overall hydrology of the haor.



River erosion along the Kushiya and Surma River deepens, driven by climate change and reckless, unplanned development that ignores environmental safeguards.

From the perspective of a local environmental activist, the problem stems from ignoring nature in development plans. This ultimately harms both the environment and local inhabitants.

“Development isn’t just about infrastructure,” said Ruhul Amin, chief coordinator of the local organization known as “Amra Haorbasi” [we the Haor-people]. “It feels like we’re fighting against nature—but that’s not how it should be. We need to live in harmony with it. If we don’t, the consequences will be worse than we can imagine.”



People live by and with the water. But with little protection, extreme weather brings devastation.

Farmers in Tanguar Haor have long relied on a single annual harvest of Boro rice, planted in the dry season [October – March] and harvested just before the monsoon [which has historically started in June]. But the once-reliable calendar has turned hostile.

“We used to rely on a single Boro rice harvest. Now, even that has become uncertain. The floods come too early, and the dry months are harsher than before,” shared a farmer from the upazila (sub-district) of Tahirpur.

According to Jakariya and Islam (2017), flash floods now frequently strike in late March or early April—weeks earlier than before—wiping out near mature crops and pushing families deeper into poverty.



Rice agriculture makes an important contribution to local livelihoods. Yet more unpredictable weather exposes it to greater risks.

The changes in climate are compounded by the impact of human behaviour.

“I believe one of the main causes of flash floods is overpopulation. People are building houses and expanding farmlands by filling up the canals and ponds that connect to the main rivers, which blocks the natural water flow,” said Md. Noman Ahmed, Headmaster of Satgaon Jibdara High School (Shantiganj upazila, Sunamganj district). “Many unplanned embankments are built. As a result, water overflows during the rainy season, leading to flash floods. The situation is made worse by heavy rainfall and the reduced depth of rivers like the Surma and Kushiyara due to siltation,” he added.

The damage extends beyond agriculture. Fishermen are grappling with dwindling catches as once-abundant fish species have either migrated or sharply declined due to disrupted breeding cycles, polluted waters, and shrinking habitats.

“We chase the fish deeper into the haor every season. They’re fewer now, harder to find,” said Md. Eyasin, a veteran fisherman from Tanguar Haor.

Recent studies also reveal that erratic rainfall, rising temperatures, sedimentation, overfishing, and the degradation of swamp forests have severely impacted fish diversity in Tanguar Haor, upsetting the ecological balance and local livelihoods (Sultana et al., 2022; The Business Standard, 2022).



Fishermen face shrinking catches and uncertain futures as once-abundant fish vanish—driven away by erratic rainfall, rising heat, overfishing, and the loss of vital swamp forests.

The ripple effects of climate change are felt deeply in education and health sectors. During peak flood season, schools become inaccessible. Children either drop out or miss classes for weeks or months.

“During floods, our school remains closed, and our studies come to a complete halt for three to four months,” said Subarna Akter Jui, a 9th-grade student at Janata High School. “We face serious difficulties before major board exams because of the long gaps in our learning.”

Some 77 percent of local inhabitants in the region have no or only basic education, compounding the difficulty in adapting to new climate challenges (Jakariya & Islam, 2017). Nationally, only about 24 percent of individuals aged 7 and above are illiterate (Bangladesh Bureau of Statistics, 2022).



Floods disrupt education, forcing children out of school for weeks or even months.

Women and girls bear the heaviest burden. With water sources contaminated during floods, women struggle most given the burden on them to access fresh, safe water and maintain menstrual hygiene. They often skip meals so their children can eat. According to Raihan and Hossain (2021), lack of access to basic services—especially for women—is a key driver of vulnerability in the haor region. Their study also highlights that during disasters in general, women are disproportionately affected due to limited mobility, lower income, and fewer alternative livelihood options.



Intense floods break through embankments, cutting off vital roads and exacerbating flooding.

Local leaders echo the frustration. “Every year, the embankments—many of which also serve as roads—collapse as floods and rainfall become more intense,” said Md. Ali Hyder, Union Parishad Chairman of Sreepur North (Tahirpur). “When that happens, our suffering knows no bounds. We urgently need a long-term solution. I urge this to the responsible authority.”

Infrastructure such as roads and protective embankments remains fragile. In a region where water is both friend and foe, strong infrastructure can mean the difference between survival and loss.



In Tanguar Haor, strong infrastructure is the line between survival and loss.

Boatmen, essential to the region’s transport and trade during the monsoon, face their own challenges.

“Some years the haor dries up too fast, and boats are useless. Other times, floods and heavy rainfall are so severe, we risk our lives ferrying people,” said Delwar Hossain, a boatman from Current Bazar (Tahirpur).

Fuel prices are up, and fewer passengers can afford to pay for transport—another blow to income stability.



In Tanguar Haor, boat transport is vital for mobility—but changing weather patterns renders it unreliable. Some years, waters vanish too soon; other times, floods turn every journey into a life-threatening risk.

Still, amid the struggle, the people of Tanguar Haor are not passive victims. Adaptation strategies are emerging, some age-old, others new. Crop diversification, homestead gardening, cage aquaculture, and raised seedbeds are now being tried across villages (Raihan & Hossain, 2021). NGOs and local organizations have started training sessions on climate-resilient farming and emergency preparedness. Women are also increasingly involved in alternative livelihoods such as tailoring and poultry farming to supplement household income.



Crop diversification, homestead gardening, cage aquaculture, and raised seedbeds are now being tried across villages.

Recommendations from civil society suggest several priorities: First, rivers should be regularly excavated and connecting canals reopened to ensure natural water flow. Second, a seasonal lockdown period should be implemented in the haor to allow fish and other species to breed and grow properly. Third, infrastructure investment should prioritize embankments, flood-resistant roads, and solar-powered water purification systems. Fourth, education and vocational training tailored to the needs of the haor communities should be rolled out with urgency. Last but not least, awareness campaigns among both the community and tourists are vital to protect the biodiversity of the haor.



Infrastructure is fragile and needs investment.

International frameworks such as the UN Sustainable Development Goal 13, which calls for urgent action to combat climate change and its impacts, should guide Bangladesh's national and local strategies. Tanguar Haor, as a critical ecological and economic zone, deserves focused attention—not only to save a wetland, but to secure the lives it supports.



*Tanguar Haor, is a critical ecological and economic zone
deserving focused attention.*





Tanguar Haor's future depends not only on nature's mercy but also on human action—coordinated, inclusive, and urgent.



As the sun sets over the water, casting golden hues on partially submerged homes, Ruhul Amin reflects: “Save the Tanguar Haor, save Sunamganj.”

His words capture both the urgency and the dignity of a people who refuse to give up.

Tanguar Haor is more than a geographic location. It is a living, breathing ecosystem and a lifeline to thousands. Its future depends not only on nature’s mercy but also on human action—coordinated, inclusive, and urgent. In the story of climate change, the people of Tanguar Haor are not just characters; they are the frontline authors, writing a tale of survival, resilience, and hope.

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The Unseen Burden of Climate Change on Coastal Workers in Bangladesh



One of the hard-hit areas is Shyamnagar, a sub-district of Satkhira in southwestern Bangladesh. Flanked by the Sundarbans and dissected by once life-giving rivers, Shyamnagar is now a frontline of the climate crisis. The same rivers that nourished the land are turning brackish. Once-thriving paddy fields now lie cracked and fallow. And for the thousands of peasants and fishermen who rely on the coastal ecosystem for their livelihoods, the situation grows more precarious with every passing season.



In Shyamnagar, Satkhira, coastal workers face growing hardship as rising salinity and climate extremes threaten their traditional livelihoods.

The damage here is no longer creeping; it is crashing. With sea levels rising and salinity intruding into freshwater sources, farming is often no longer possible. According to Chowdhury et al. (2024), salinity has affected more than 60% of agricultural land in Bangladesh's coastal belts, pushing families to abandon traditional subsistence farming. The economy is partly adapting, but frequently to the benefit of those who are more resourceful and are able to invest.

Md. Didar Ali, once a farmer and now a brick-carrying day labourer from Gabura union (Shyamnagar), shares "I grew paddy on my own land for almost twenty-five years. Now the land's too salty—nothing grows. I had to sell it to a crab farm owner. These days, I work at a brick kiln just to survive."

Climate change here is reinforcing a trend of growing inequity, the opposite of what is termed a "just transition". Brick kilns operate seasonally, offering low wages under hazardous conditions but no stable income.



Rural migrant workers preparing clay bricks for baking, working in various roles without protective gear.

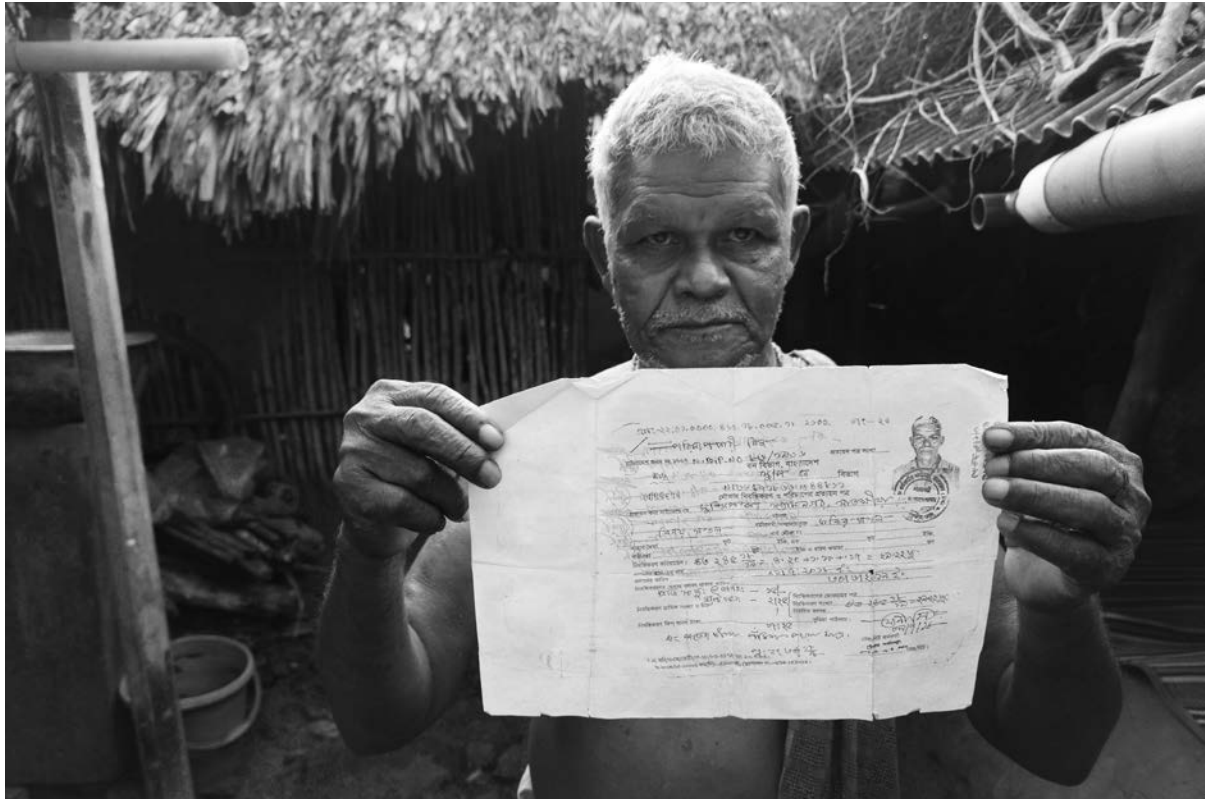
The erosion of traditional livelihoods is pushing many into distress-driven, seasonal migration. As agriculture, fishing, and forest-based work such as honey and golpaata (Nipa Palm) collection are no longer viable year-round due to salinity and erratic climate patterns, thousands of coastal workers are forced to travel long distances in search of alternative employment. One of the few options left is work in brick kilns—harsh, toxic, and exploitative. These jobs are often located far from their communities, leading to fragmented families and climate-induced internal labour migration.



Ambia, badly injured in a bus accident that killed six other workers on their way to a brick kiln job last year (2024), is yet another cost of climate-driven migration for work.

A recent study by Torikul et al. (2015) found that over 30% of surveyed coastal households in Khulna and Satkhira had at least one member working seasonally in brick kilns, primarily due to the collapse of traditional income sources. The loss of a stable income also pushes more and more peasants into debts, strengthening the hold of rural land-owning and money-lending elites.

“Every winter, we have to travel over two hundred kilometres to work at a brick kiln for around five months. I leave my family behind. We take high-interest loans just to cover their expenses while I’m gone, hoping to pay it back with the kiln wages—but sometimes we don’t even get what we were promised,” Didar Ali added.



Veteran fisherman Binoy Mondal, whose family has fished these waters for generations, shows his official permit.

The rivers, too, are turning hostile. Fish populations are collapsing under the strain of salinity, erratic rainfall, and rising temperatures.

Md. Mosharraf Hossain, a veteran fisherman says, “We hardly catch any fish these days—too much salt in the water, the weather’s all messed up. And then there’s the ban from June to August for fish breeding season, which we respect. But some fishermen still go in, cut deals with forest officials, and fish anyway. It’s not fair. This kind of unchecked fishing is making it worse for all of us.”



Md. Mosharraf Hossain, a veteran fisherman, explains how the growing use of poisonous bait is threatening fish stocks and endangering the fragile Sundarbans ecosystem.

According to research by Ali (2018), over 40% of traditional fishers in the southwestern coastal belt have lost access to sustainable fishing practices within just one generation.

“There are allegations that fishermen adjacent to the Sundarbans, in collusion with some corrupt officials of the Forest Department, are fishing with poison and also hunting crabs along with fish. There are many reports published in newspaper on this matter”, Mosharraf added.

Fisheries and crab businesses now teeter on the edge of collapse. Sudden tidal surges flood ponds unpredictably, causing devastating losses. According to Moniruzzaman et al. (2018), climate-related damage to aquaculture has pushed over 20% of crab and shrimp entrepreneurs into unrelenting debt cycles.





Fish populations in the coastal rivers are collapsing under the strain of rising salinity, erratic rainfall, and increasing temperatures.

Some, unable to survive in their original trades, have become climate labourers—working odd jobs in construction or domestic work. They are part of a growing tide of displacement across Bangladesh’s coastlines that is qualitatively different from the classic rural-urban migration.

The Sundarbans—Bangladesh’s vital green shield—is increasingly inaccessible and unpredictable. Honey and *golpaata* (Nipa Palm) collectors who once ventured into the forest with reverence now do so with fear. Their peril is worsened by the constant risk of tiger attacks and sudden cyclones, which have become more frequent and violent due to shifting climatic patterns (Mohiuddin & Nowreen, 2023). In recent years, stronger cyclonic activity—such as Cyclone Amphan and Cyclone Sidr—has not only devastated coastal infrastructure but also damaged large swaths of mangrove habitat, making forest paths more treacherous and navigation more difficult. As reported by The Guardian (2013), over 70% of the forest edges in parts of the Sundarbans are eroding at a rate of up to 200 meters per year, dramatically shrinking accessible zones for traditional forest-dependent activities. Furthermore, rising salinity has weakened the natural regeneration of mangrove species like *golpata*, forcing collectors to go deeper into increasingly dangerous forest zones. At the same time, tigers—facing their own habitat stress and food shortages—are venturing closer to human settlements and into commonly accessed areas of the forest. These intersecting risks—environmental degradation, wildlife stress, and climate extremes—are making the age-old practices of forest-based livelihoods both hazardous and unreliable.



Traditional honey collection in the Sundarbans—an age-old livelihood now threatened by climate change and forest degradation.

“I lost my two husbands because of tiger attacks. I was labeled as ‘Opoya’ [evil], ‘Olokkhi’ [inauspicious], and ‘Oshoti’ [unchaste]. Consequently, they started calling me ‘Swami Kheko’ [husband eater]. These curses pushed me to think about suicide, but I couldn’t because I had a seven-month-old child to look after”, said Sonamoni, a resilient woman now in her seventies.

There are many women like Sonamoni who are still fighting against many odds. However, over time, several NGOs launched development projects specifically aimed at supporting these vulnerable women, referring to them as “Bagh Bidhoba” (tiger widows). As a result, the term “Bagh Bidhoba” has gradually become a widely recognized label used to identify them.



Sonamoni, a tiger widow, faced social exile after losing two husbands to tiger attacks but continues to fight back with quiet resilience in a climate-stricken land.

Local women entrepreneurs like Mst. Shefali Bibi have stepped up to support families who rely on the Sundarbans for their livelihoods, helping them cope with growing insecurities. She founded a grassroots development organization focused on empowering women through alternative income opportunities.

“I always tell the women in our community to try doing something—like making pickles, handicrafts, hand-stitched clothes—anything to earn a little on the side,” she says. “When I started this organization back in 2018, most women didn’t want to come. But now, I see many of them trying to do something to support their families.”



Mst. Shefali Bibi, a local entrepreneur, empowers Sundarbans-dependent women through a grassroots initiative offering alternative livelihoods amid growing climate insecurity.

Women also face a uniquely cruel burden. As freshwater becomes increasingly saline, they must walk farther for clean water, often falling ill due to constant exposure. A photo essay by FES Asia (2023) cites Dr G M Tariqul Islam, resident medical officer at Shyamnagar Health Complex, observing:

“We’re seeing rising rates of urinary tract infections and Leucorrhea among coastal women—salt in the water is directly causing pelvic inflammatory disease, irregular periods, and even infertility.”

Additional research in the southwestern coastal region confirms this alarming trend: among 420 women surveyed, 56.9% suffered from urinary tract infections, and over 36% experienced vaginal infections (Ghosh et al., 2025).



Navigating saline waters, two coastal women are fishing near the Sundarbans—a routine work that carries serious reproductive and other health risks.

Md. Hafiz, a young climate activist from Shyamnagar and volunteer with YouthNet Global—a youth-led grassroots organization promoting climate justice—strongly stated, “Remote areas like Shyamnagar are bearing the brunt of climate change, yet our voices remain the weakest. For true climate justice, the leadership and lived experiences of Shyamnagar’s people must be brought to the forefront.”



People of Shyamnagar emphasize the urgent need for durable embankments that can withstand frequent storms and protect their homes and livelihoods.

Most people here emphasize the urgent need for strong, lasting embankments that don’t break every time a storm hits. They envision desalination and water filtration systems in every village and call for training in climate-resilient crops, such as salt-tolerant rice and vegetables, to help them adapt and survive.



The story of Shyamnagar is one of resilience against the backdrop of climate injustice—where those who contributed least to the crisis bear the heaviest burdens.

One local development worker puts it plainly, “What we need most is enough clean water to drink and some kind of work security so we can survive here. Otherwise, we’ll have no choice but to leave our homes.”



The story of Shyamnagar is not just about changing weather patterns—it is about structural injustice. These communities contributed the least to the global climate crisis, yet suffer the most. Their stories—of salt in the soil, sickness in the water, and dreams drowned by rising tides—are not just narratives of loss. They are warnings. They are roadmaps. And above all, they are calls to action.

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Floods, Erosion, and the Fight to Survive amid Bangladesh's Changing Climate



During this year's monsoon, dozens of families and their livestock converged on Jatrapur school in Kurigram, northern Bangladesh. The facilities, built by Friendship Bangladesh at Char YouthNet, were the only place in the community to be spared by the floods.

"This school ground is slightly elevated," one teacher explained. "There is no other shelter in my area. Every house is under water, and 20 to 25 families have taken shelter here, along with their cows, calves, ducks, chickens, goats, and sheep," said Md. Rezaul Karim. "If the flood water continues to rise, these families will have nowhere to go."



Families along with their livestock crowd the Friendship School, the only elevated ground for miles, as floodwater submerges homes across the Jatrapur char lands.

"There is no other shelter centre in this area," said health worker Mst. Shahina Akter. "There is even no place like that at many *chars* for shelter."

The floods have become an annually recurring crisis. The photographs documenting the floods featured in this essay were captured in July 2024, yet community members repeatedly emphasized that these scenes were not exceptional events but part of a pattern that returns almost every year with increasing intensity.

Similar situations unfolded across other *chars*, as lone schools, raised earthen mounds, or half-built government structures turned into spontaneous shelters as families arrived by boat, carrying their livestock, bundles of clothing, and metal boxes containing their last savings.

When the author visited Kurigram in July 2024, across the district boats were moving between submerged homes and temporary shelters at all times of the day, as people tried to retrieve whatever belongings remained above water. Rooms filled with rising floodwater could be seen across villages, and countless homes were cut off completely, forcing people to wait for hours before an accessible route appeared.



Floodwater rises inside a living space, swallowing beds, utensils, and daily routines with little warning.

Local families have become used to rebuilding or moving their mobile shelters sometimes multiple times a year. Livelihoods change adjusting with the situation as fields fall into the river. The district reveals a widening crisis shaped by climate change, where the boundaries between land and water shift constantly, and life must shift with them.

As many as 12 million people are estimated to live on *char* lands in Bangladesh, the impermanent, moving islands and bars that cover 5 to 6 percent of national territory. Each year, nearly 10,000 hectares of land are lost to riverbank erosion, leaving more than a million people homeless or displaced (Rahman and Rahman 2015, Islam and Rashid 2011). There is some modest coastal accretion as sediment is deposited in the estuaries, but this does nothing to offset inland riverbank losses in floodplain districts like Kurigram, one of the worst affected. With advancing climate change, flooding arrives earlier, lasts longer, and returns more frequently. Erosion now removes entire villages within days, erasing homes, croplands, schools, and community structures.

Kurigram is a city and district in northern Bangladesh, at the centre of one of the world's most dynamic river systems shaped by the Brahmaputra, Dharla, and Teesta rivers, as well as the larger Bengal Delta. This delta, created through centuries of silt and sand deposition from the Ganga-Padma, Brahmaputra-Jamuna, and Meghna basins, continuously forms and erases *char* lands that millions depend on for settlement and cultivation (Rahman and Rahman 2015, Sarker et al. 2003). These shifting river islands expose them to some of the country's most severe hazards (Islam et al. 2011, Alam et al. 2018).



Children are kept on the safest spot available as floodwater deepens inside their home.

“During flood it’s very tough to eat and drink,” said Kurigram resident Md. Rafiqul Islam. “Knee-deep flood water always goes inside the house and it’s very challenging to maintain proper care for the children. The way water level is rising, I had to shift them to boat from bedstead. Now we are staying on the boat and eating very little.”



Rapid erosion tears away Kurigram’s fragile char land, where entire settlements vanish as the river shifts without warning.

In most *char* lands this season, floodwater entered homes within hours, leaving families with only the height of their bedsteads to protect small children and necessary belongings. Community people described the same struggle to keep food dry, to find a place to cook, or to access safe drinking water once the handpumps disappeared beneath murky floodwater.



Families struggle to keep food dry and find safe water as rising floods overwhelm their homes.

“People suffer a lot due to floods,” said Mst. Shahina Akter, the health worker. “People worry about cows, goats, and poultry during flood. When they will cook and eat, they have no clue. If you get sick, there is no place to get treatment here. There is no place for expectant mothers to deliver during flood. Women face more challenges to maintain menstrual hygiene.”

Her voice emphasizing the intense vulnerability when animals, livelihoods, and human health all hang in the balance.



Essential shops and market stalls disappear under floodwater, creating shortages of food and basic goods.

Across the *chars* of the district, shops were also submerged, creating shortages of food, medicine, and basic supplies. Villages turned into islands with no visible paths to safety. Even town centres in Kurigram Sadar were not spared, as water rose quickly along key roads, cutting off transport and communication.



An entire char village lies underwater, a stark reminder of how quickly these fragile islands can vanish.

This year the floods arrived earlier, stayed longer, and returned more often than in previous years. Research on Kurigram confirms what residents have repeatedly described: that intensified monsoon rainfall and unpredictable upstream flow patterns are closely linked to climate change. These changes have increased the probability of widespread flooding and deepened the vulnerabilities of river-dependent communities (Islam and Parvin 2019; Hossain et al. 2021; Reza 2025).



Families who do not own a boat wait for transport to the flood shelter as water surrounds their home.



Even urban areas in Kurigram Sadar are inundated as swelling rivers cross embankments and roads.

Yet the water that enters homes is only part of the destruction. The deeper and more permanent loss comes from riverbank erosion, which is now occurring at a rate previously unseen across large sections of the district. During this photo essay journey, erosion sites were visited in Kurigram Sadar, Chilmari, Phulbari, and Ulipur in December 2025. The conditions were almost identical: large cracks opening suddenly in the earth, rivers carving out massive chunks of land within days, and families watching their last pieces of homestead disappear.



Homes stand on the last strip of land, likely to disappear into the river within days.

Entire settlements have been lost in the span of months. Community clinics, flood shelters, madrasas (religious schools), Eid prayer fields, playgrounds, offices, mosques, and markets have been consumed by the river. In several villages, only the remains of brick foundations were visible under the water's surface. Many primary schools stood dangerously close to the edge, their future compromised by the land loss. Along one eroding stretch, a line of homes stood only steps away from collapse, their owners preparing for the inevitable. Some were taken by the river before this essay was completed.



Community institutions, including clinics, markets, offices, madrasas, flood shelters, and mosques, have already fallen into the river, such as this primary school.

The story of Kohinur Begum echoes the experience of countless others across the district. She and her husband, a day labourer, lost three homes in seven months as they moved from one place to another.



Kohinur Begum stands with her children after losing three homes to erosion in only seven months.

Her words captured the exhaustion that has become common across the *chars*: “Every house is rebuilt with whatever we can gather, but the river keeps returning. Now we are temporarily staying on another person’s land. With five daughters and a small boy, there is no answer to the question of where we will go next.”

Her situation is repeated in hundreds of households across Kurigram, where women carry the weight of rebuilding while ensuring water, food, and safety for children.



A last attempt is made to save remaining paddyland before the river claims it completely.

Farmers across multiple *chars* described similar uncertainty as paddyland vanished ahead of harvest season. One such farmer, Abdul Khalek, lost his home eight months earlier. Now the river had reached the last fragment of his paddy plot. His crop had to be harvested prematurely.

His voice carried the same grief heard throughout the district: “The land has fed us for years. Now it is being taken before the crops can ripen.”

His grief was not just for the land but for the future it once represented.



Farmers cut premature crops as erosion approaches faster than expected, destroying plans for the harvest season.

Further along the river, houses were being dismantled systematically as families tried to salvage whatever they could before erosion made retrieval impossible. This pattern of displacement has become a defining feature of life in Kurigram. Families are now having to move not once or twice but multiple times within the same year. Every relocation means losing established social networks, farmland, livestock, and any sense of permanence.



Household materials are stored temporarily as families search for safer land to rebuild.

Eleven years earlier, Afzal Hossain and Jobed Ali had crossed the river to escape severe erosion in their old village. Now the river had reached them again.

“The river pushed us here, and now it is pushing us again. There is no direction left,” they said, standing beside a crack in the earth that had widened overnight.

Their uncertainty reflects a larger crisis in Kurigram: no part of the district feels secure enough to promise stability.



Families dismantle their houses piece by piece in a race against the advancing erosion line.

Across erosion zones, bamboo stacks, sandbags, and geo-textile bags had been placed along the banks in efforts to delay collapse. These protections, though essential, often last only a short time against the powerful currents. People gathered daily along the banks to monitor the progression of cracks, knowing that their homes, trees, and memories could disappear at any moment. Such scenes repeated themselves in *char* after *char*, and each visit revealed more of the emotional weight carried by those living on such unstable land.



People gather to witness the flood defences being washed away.

Children in Kurigram experience childhoods shaped by movement. They learn how to prepare for evacuation, how to climb onto boats quickly, and how to sleep on high beds when water begins entering their rooms. They grow up surrounded by geo-bags and sand walls, fragile defences meant to withstand the unpredictable force of the river.

One mother in Chilmari described the situation with quiet resignation: “Our children are growing up surrounded by protections that were only meant to be temporary.”



Children walk past layers of geo-bags, a fragile barrier that represents the uncertain future of riverbank communities.

Despite the scale of hardship, life continues with remarkable determination. Families salvage crops before erosion reaches them, rebuild homes on new patches of land, and gather mud or bamboo to repair structures damaged by water. Women continue cooking for their households even when kitchens are partially submerged. Men continue cultivating and fishing in risky currents to provide food. Community members come together to rescue those stranded during sudden surges of water. These actions reflect resilience, but they also reveal the burden of survival in a region pushed to the extreme by climate change.



Geo-bags and blocks are placed in a bid to save a school just metres from the collapsing riverbank.

Research on Kurigram shows that more than half of households in highly exposed *chars* face displacement every one to three years (Hossain et al. 2021). Landlessness increases sharply with each cycle, and many families fall into debt traps and poverty that becomes nearly impossible to escape. Women face heightened risks in terms of health, safety, and workload during displacement. Access to healthcare becomes extremely limited during flooding, and the absence of dedicated shelter centres means pregnant women often lack safe spaces for delivery.

This photo essay reflects not only the losses witnessed across these *char* lands but also the broader challenge facing Kurigram. The district stands as a frontline witness to the accelerating impacts of global climate change. Research has repeatedly shown that intensifying floods, unpredictable river flows, and rapid erosion are all connected to changing climate systems (Islam and Parvin 2021; Reza 2025). Kurigram offers a stark reminder that those who contribute least to global emissions often bear the greatest burden of their consequences.



Villagers reinforce the bank with sandbags and bamboo in an effort to slow the erosion.

Across the *char* lands of Kurigram, people repeatedly voiced the need for safe shelter, reliable drinking water, and secure embankments as the most urgent demands for survival. Residents emphasized that permanent multipurpose shelters must be built on high, reinforced ground, since the existing schoolyards cannot protect large populations when floods intensify. Many called for accessible rescue boats, emergency dry food stockpiles, and mobile medical teams that can reach isolated villages during peak flooding. Locals also stressed that drinking water systems should be elevated above flood levels and that early warning messages should be made clearer and more frequent.



Families move through submerged homes, highlighting the urgent need for safe shelters, rescue boats, and elevated water sources.

Meaningful protection will require both structural and social interventions, explained Rakibul Islam Tanim, a young climate activist from YouthNet Global who has worked closely with *char* families for years.

He highlighted the need for climate-resilient housing, riverbank reinforcement through sustainable embankment technologies, and relocation plans for the most vulnerable erosion-prone settlements. In his view, long-term adaptation in Kurigram depends on strengthening local governance, ensuring equitable access to relief, expanding livelihood training beyond agriculture, and creating youth-led community emergency response groups.



River erosion steadily claims land in Kurigram, highlighting the urgent need to protect Bangladesh's vulnerable char communities through stronger climate adaptation measures.

Kurigram stands at the frontline of Bangladesh's climate crisis, where rising floods and relentless erosion repeatedly erase homes, croplands, and entire communities. Yet families continue rebuilding on shifting ground, carrying lives shaped by uncertainty. Their struggle reveals how those contributing least to climate change bear its heaviest cost. Protecting Kurigram now demands urgent, sustained action through stronger shelters, safer embankments, and climate adaptation efforts that reach every *char* before more ground is lost.

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PHOTO STORIES





Lives Without Land



Along the rivers of southern Bangladesh, small wooden boats drift quietly with the currents. For the Manta community, these boats are not simply vessels. They are homes, workplaces, and the fragile boundary between life and death. Entire families are born, grow up, struggle, and often die on these floating worlds. On the rivers of Barishal, Bhola, and Patuakhali, the Mantas have lived this way for generations, people with no land beneath their feet and no fixed address on the map.

The Mantas are a nomadic river-dwelling fishing community often described as Bangladesh's "boat people." Historically, many of their ancestors were farmers or fishers living along the riverbanks. But relentless riverbank erosion and shifting river channels gradually swallowed their homes and farmland. Displaced from the land, they moved onto boats as a last resort for survival, turning the rivers themselves into their permanent settlement.

Today, thousands of Manta families live entirely on small wooden boats anchored along riverbanks or drifting between char lands and fishing grounds. These boats, usually around 20 feet long and only a few feet wide, serve as cramped living spaces where families cook, sleep, mend fishing nets, and raise children. Fishing is their only livelihood. At dawn the men head into the river with nets and hooks, returning at dusk with whatever catch the water offers. On good days the fish bring enough to buy rice. On bad days, hunger settles silently across the boats.

Life on the water is precarious. Families often spend up to twelve hours a day fishing, yet fish stocks are declining due to overfishing, commercial competition, and changing river ecosystems. As the river shifts with the seasons, the Mantas must constantly move in search of fish, rarely staying in one place for more than a few months. This constant mobility keeps them largely invisible to authorities, leaving many without national identity cards, fisher registration, or access to government support programmes.

Their exclusion from formal systems deepens their vulnerability. Without legal documentation or a permanent address, Manta families struggle to access healthcare, education, or social protection. Children grow up learning to row boats and cast fishing nets rather than attending school. Illiteracy remains widespread, and early marriages are common among teenage girls. For many families, generations have passed without stepping inside a classroom or a hospital.

The impacts of climate change are making this fragile life even more uncertain. Rising river levels, stronger storms, and increasingly unpredictable weather patterns threaten the small boats that sustain them. Heavy rains and violent winds can easily overturn vessels or sweep children into the water. Extreme weather events, which are becoming more frequent with climate change, place the Mantas among the most vulnerable communities living along Bangladesh's river systems.

At the same time, slow onset climate impacts are reshaping the rivers themselves. Riverbank erosion continues to devour land across Bangladesh, pushing more families toward displacement and deepening the Mantas' sense of uncertainty about the future. Their boats must be repaired frequently as changing salinity and rough waters damage wooden hulls. Anchoring places disappear as riverbanks collapse, forcing the community to move again and again across shifting waters.

Despite these hardships, life on the boats follows its own rhythms. Women cook meals over small clay stoves while children swim beside the vessels. Men repair nets and prepare for

another day of fishing. Babies are often born on the boats themselves, and children grow up learning to navigate the currents before they can read or write. In this floating world, the river becomes both provider and threat, a source of food but also a force capable of taking everything away.

Yet beyond the daily struggle lies a deeper demand for recognition and rights. As one Manta community leader expressed, “We are citizens of this country, but we live as if we do not exist. We need identity cards, education for our children, and a place where we can live with dignity, not just survive on the river.”

Even death carries the mark of displacement. With no land of their own, the Mantas must rely on the goodwill of nearby villagers to bury their dead on riverbanks. Their lives may pass entirely on water, but their final resting place still depends on the fragile acceptance of those living on land.



The story of the Manta community reveals an overlooked dimension of the climate crisis. Their struggle is not only about environmental change. It is about displacement, invisibility, and survival at the margins of society. As rivers continue to reshape Bangladesh's landscape, the lives of the Mantas illustrate how climate change can quietly push entire communities into forms of existence that remain largely unseen.

These photographs document fragments of that life, the narrow boats that hold entire families, the nets cast into uncertain waters, and the daily resilience of a community navigating the shifting currents of climate change. They tell the story of people who live between river and sky, people whose lives drift with the tide yet whose struggle for dignity and recognition continues to endure.

Born, raised, and buried on boats, Manta families live entire lives adrift on Bangladesh's rivers without land or permanent shelter.





Daily life unfolds on fragile wooden boats where Manta families cook, rest, and prepare for another uncertain day on the river.





A Manta child grows up surrounded by water, where boats serve as playgrounds, homes, and the only world they know.



Early marriage traps many Manta girls in cycles of health risks, poverty, and exposing them to lifelong economic and social vulnerability.

*Children of the Manta community
inherit a drifting future shaped by
displacement, poverty, and the
uncertainties of life on water.*





Continuous exposure to saline and polluted river water often causes health problems among children growing up on the boats.







Fishing is the Mantas' only livelihood, with nets cast daily into uncertain waters that determine whether families eat or go hungry.





Manta women carry immense burdens, managing households on cramped boats while sustaining families amid hardship and constant displacement.

Displaced by relentless river erosion, Manta families turned boats into permanent homes, surviving on rivers that once took their land.









Manta community members demand recognition, identity cards, education for their children, and a dignified life beyond mere survival on water.





Despite relentless hardships, the Mantas endure with resilience, navigating changing rivers while holding onto hope and collective strength.

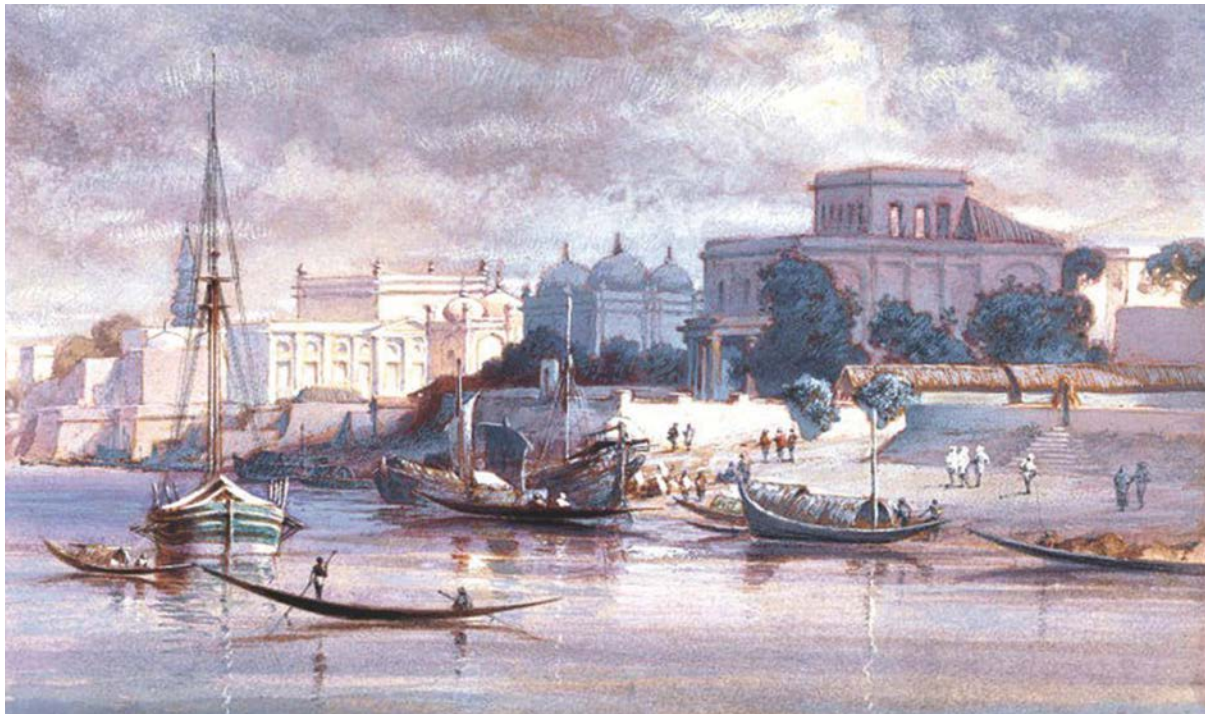


The Dying River



For centuries, the Buriganga River flowed as the lifeline of Dhaka. The river, whose name means “Old Ganges,” once carried trade, culture, and daily life through the heart of the city. Markets, ports, and settlements grew along its banks, transforming the river into the economic artery of the capital. Boats filled its waters carrying goods, passengers, and stories from distant regions. Fishermen cast their nets into abundant waters, and riverside communities relied on the Buriganga for food, transport, and livelihood.

Dhaka itself grew around this river. During the Mughal period, the Buriganga served as the principal route of commerce and communication. The river connected the capital to the vast river networks of Bengal, enabling trade and movement that shaped the city’s economic and social identity. For generations it was a vibrant ecosystem and a source of prosperity. But the river that once sustained Dhaka is now struggling to survive.



Once Dhaka’s lifeline, the Buriganga now carries toxic waste and sewage through the heart of the city. View of the river Buriganga, a painting by F. W. A. De Fabeck, Dhaka, 1861 (Photo Courtesy: Victoria and Albert Museum).

Rapid urbanisation and industrial expansion have gradually transformed the Buriganga into one of the most polluted rivers in Bangladesh. Today the river receives enormous volumes of untreated waste from factories, households, sewage lines, and drainage canals across the city. Dhaka generates around 4,500 tons of solid waste each day, and much of it ultimately finds its way into the Buriganga. Industrial clusters around the capital discharge toxic effluents, while tanneries historically released vast quantities of chemical waste directly into the river. Studies estimate that thousands of tons of liquid waste are dumped into the river every day. Industrial wastewater from textile mills, dyeing factories, chemical plants, and leather processing industries mixes with domestic sewage and plastic waste, turning the river into a vast dumping ground. This continuous discharge of untreated waste has devastated the river’s ecological balance.

Scientists describe the Buriganga as biologically and hydrologically “almost dead.”

The water quality has deteriorated so severely that aquatic life struggles to survive. Toxic metals such as chromium, lead, mercury, and arsenic accumulate in the river sediments, posing severe risks to ecosystems and human health. During the dry season the river water often turns dark black and emits a strong foul odour. Instead of flowing water, the Buriganga becomes a slow-moving channel of industrial effluents, sewage, and floating garbage. Fish populations have declined sharply, and many species that once thrived in the river have disappeared.

The consequences extend far beyond the river itself. Pollution in the Buriganga threatens the health and livelihoods of millions of people who live along its banks. Contaminated water carries harmful bacteria and toxic chemicals that can cause skin diseases, gastrointestinal infections, respiratory problems, and other serious health risks. Studies have also detected pathogenic microbes and antibiotic resistant bacteria in the river, highlighting the growing public health threat associated with polluted waterways.

Communities living near the river are exposed to polluted air and water every day. Many residents continue to use river water for washing, bathing, and other household activities despite the contamination. For workers in river transport, boat repair yards, and informal settlements along the banks, pollution is not just an environmental issue. It is part of their daily reality.

The ecological damage also contributes to broader environmental and climate challenges. Rivers like the Buriganga play an important role in regulating urban ecosystems. They support biodiversity, sustain fisheries, and help maintain natural water circulation. When these rivers become clogged with waste and toxic chemicals, their ability to perform these functions weakens.

Polluted waterways also reduce the resilience of cities facing climate change. Dhaka already struggles with flooding, waterlogging, and extreme weather events. Healthy rivers and wetlands act as natural drainage systems that absorb excess water during heavy rains. When rivers are choked with waste and encroached upon by urban expansion, the city becomes more vulnerable to climate related disasters.

The story of the Buriganga is therefore not only about pollution. It is also about the consequences of unchecked urban growth, weak environmental governance, and the widening gap between development and sustainability. Yet the river remains deeply intertwined with the identity of Dhaka. Along its banks, thousands of people continue to work in ports, shipyards, and informal markets. Boats still navigate its waters carrying passengers and goods across the city. Life continues around the river even as its waters struggle under the weight of pollution.

This photo story documents the unfolding reality of the Buriganga River today. It captures the contrast between a historic waterway that once shaped the rise of Dhaka and the polluted river that now bears the burden of the city's waste. Through images of contaminated waters, riverside communities, industrial discharge, and the daily lives connected to the river, these photographs reveal a powerful story of environmental degradation and human resilience. They invite us to confront a difficult question:

Can a river that once sustained a city be brought back to life, or will the Buriganga remain a silent witness to the cost of uncontrolled urban growth?









Industrial effluents and urban waste turn the Buriganga's waters dark, suffocating aquatic life and degrading the river ecosystem.









Residents continue daily activities beside heavily polluted waters, exposing communities to severe environmental and health risks.









Plastic waste and untreated sewage accumulate along the Buriganga's banks, turning the river into Dhaka's dumping ground and often change the colour of its waters with toxic pollution.









A canal connecting to the Buriganga, narrowed by construction, now clogged with plastic waste and urban debris.









Buriganga's banks are overwhelmed with plastic and polythene waste. Informal waste pickers collect recyclables from across Dhaka, sorting them along the riverbanks before supplying nearby unlicensed factories that produce cheap, low-quality plastic products.

Lives on the Frontlines: Climate Change and Survival in Bangladesh

This book brings together seven powerful visual narratives that document the human cost of climate change across some of Bangladesh's most vulnerable regions. Through five photo essays and two photo stories, the publication captures how climate change is reshaping lives, livelihoods, and ecology.

From the silent health crisis faced by coastal women due to salinity intrusion, to the daily struggle for food and livelihood security, the book reveals the layered impacts of climate stress. It explores the precarious existence of workers on the coast, the slow devastation of floods and river erosion, and the fragile livelihoods in the ecologically sensitive Tanguar Haor (a wetland of international ecological importance). The volume also moves beyond land to water, portraying the lives of the Manta community who live entirely on boats, and the Buriganga River, once Dhaka's lifeline, now choked by pollution.

Blending visual storytelling with critical insight, this publication offers a compelling account of resilience, inequality, and survival on the frontlines of climate change.

Further publications of the FES Bangladesh Office can be found here:

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