This is a self-archived version of an original article. This version may differ from the original in pagination and typographic details.

Author(s): Tenhunen, Sirpa; Uddin, Mohammad Jasim; Roy, Dayabati

Title: After cyclone Aila : politics of climate change in Sundarbans

Year: 2023

Version: Published version

Copyright: © 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Franc

Rights: CC BY 4.0

Rights url: https://creativecommons.org/licenses/by/4.0/

Please cite the original version:

Tenhunen, S., Uddin, M. J., & Roy, D. (2023). After cyclone Aila : politics of climate change in Sundarbans. Contemporary South Asia, 31(2), 222-235. https://doi.org/10.1080/09584935.2023.2203903

Routledge
Taylor & Francis Group

Contemporary South Asia

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/ccsa20

After cyclone Aila: politics of climate change in Sundarbans

Sirpa Tenhunen, Mohammad Jasim Uddin & Dayabati Roy

To cite this article: Sirpa Tenhunen, Mohammad Jasim Uddin & Dayabati Roy (2023): After cyclone Aila: politics of climate change in Sundarbans, Contemporary South Asia, DOI: 10.1080/09584935.2023.2203903

To link to this article: https://doi.org/10.1080/09584935.2023.2203903

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 03 May 2023.

Submit your article to this journal

Article views: 91

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=ccsa20

CONTEMPORARY SOUTH ASIA
https://doi.org/10.1080/09584935.2023.2203903

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

After cyclone Aila: politics of climate change in Sundarbans

Sirpa Tenhunen[a], Mohammad Jasim Uddin[b] and Dayabati Roy[a]

[a]University of Jyväskylä, History and Ethnology, Jyväskylä, Finland; [b]Shahjalal University of Science and Technology Sociology, Sylhet, Bangladesh

ABSTRACT

This article compares the politics of climate change in the Sundarbans region in Bangladesh and India based on ethnographic fieldwork in four villages and among migrants from these villages in Kolkata and Khulna city by focusing on the long aftermath of cyclone Aila. The comparison highlights different policy options and framings of extreme weather events . Ten years after the cyclone, the aftermath of Aila continues in both regions we studied in Bangladesh and India, but partly for different reasons. In our study areas in Bangladesh, the aftermath of Aila reinforced the neglect of coastal livelihoods, whereas, in the communities we studied in India, Aila spurred new investments in the affected areas. By comparing how the political is interwoven with the natural, we demonstrate how Aila's lingering impacts have emerged as part of local power relationships and diverse forms of agency. We highlight the multiplicity of policy responses and people's practices not only between communities and countries facing a similar predicament but also within the communities themselves. We argue that the politics of climate change is not only about climate change policy to mitigate the impact of ecological disasters but also about the reconstruction of political agents and practices.

KEYWORDS
Climate change; politics; South Asia; disaster studies; patronage

Sundarbans, the world's largest mangrove delta, which spreads through West Bengal, an eastern Indian state, and its neighboring country Bangladesh, is a transitional zone between the freshwater originating from the Ganges River and the saline water of the Bay of Bengal (Chakraborty 2015, 27). The efforts to turn the low-lying mangrove forests of Sundarbans into agricultural revenue land began as a colonial-era land reclamation program that aimed to exploit the terrain through agricultural extension and revenue collecting as well as fishing (Cosgrove and Petts 1990; Lahiri-Dutt and Samanta 2013). The colonial state also contributed to the social structure of the area by bringing in groups of landless laborers and Adivasis to work in agriculture (Jalais 2014). The residents of Sundarbans in India and its adjacent areas in Bangladesh have always lived with fluctuating weather and an unsettled environment, which Lahiri-Dutt and Samanta (2013) labeled hybrid environments. Stretches of land (*chars*) are part land and water, and they have continuously been shifting—mangroves, trees, and bushes grow in brackish and saline swamps. These wetlands prevent erosion, protect the coastal communities from storms and flooding, and sequester carbon dioxide from the atmosphere (Nishat 2019). Today the low-lying, coastal Sundarbans is recognized as a region that is one of the most vulnerable to climate change.

CONTACT Sirpa Tenhunen sirpa.l.tenhunen@jyu.fi

© 2023 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

Many cyclones have hit the Sundarbans region—the known history of cyclones in the region dates to the sixteenth century (Nishat 2019, 27). Out of 500 storms that occurred during 1901–2010, 73 were severe cyclones, such as Bhola (1970), Aila (2009), Bulbul (2019), and Amphan (2020). Cyclone Aila remains the deadliest because it broke out during high tide submerging vaster areas than severe cyclones, which occurred during the low tide (Rudra and Lahiri 2021). Cyclone Aila became a watershed in the ecological and socio-political history of Sundarbans. It was not the first disaster in the region to induce political changes. For instance, the aftermath of cyclone Bhola, which swept across erstwhile East Pakistan in 1970, contributed to the political demand for autonomy and the creation of Bangladesh due to the government's failure to provide relief (Biswas and Daly 2021). Unlike the cyclones of the earlier decades, Aila epitomized the effects of climate change in Sundarbans and the adjacent regions due to the increasing circulation of climate change discourses. The images of Aila's aftermath in the global media portrayed Sundarbans as a showcase example of a region threatened by the rising sea level and needing international funds to mitigate the impacts of climate change (Harms 2018). Our interlocutors emphasized Aila's impact on their lives still ten years after the cyclone, even when they were coping with various other, more current, challenges. In this article, we explore why and how cyclone Aila continues to shape people's lives even ten years after the cyclone. We argue that the post-Aila state policies, which still continue, largely explain why Aila was experienced as such a decisive moment even though it was not the last cyclone our interlocutors had experienced. By focusing on the long aftermath of cyclone Aila in two locations, we seek to compare the politics of climate change in the Sundarbans region in Bangladesh and India. We thereby answer Paprocki's (2021) call to explore the opportunities the climate change crisis offers for the redistribution of power.

As Khilnani (1997) has argued, Indian democracy and state are the results of various ideas which have prevailed at different times. We follow Ferguson and Gupta (2002) in seeking to understand how state-citizen relationships are constructed through administrative routines and cultural struggles. We thereby answer to Lewis and von Schendel's (2020) call to understand the daily experiences of ordinary people as they encounter the local state in its service-providing role in South Asia. The concept of patronage has helped to understand how bureaucracy is able to do its work through personal relationships between the governed and state representatives in both Bangladesh and India. Lewis (2011) argues that the fragility of state institutions in Bangladesh has contributed to the thriving patronage relationships. However, the current ruling party, Awami League, has been able to solidify its power by replacing competitive clientelism with a more authoritarian single-party state patronage (Lewis and Hossain 2019). Consequently, local actors have been increasingly integrated as part of the state patronage relationships in Bangladesh. Political patronage relationships have also prevailed in India alongside and through party politics and electoral competition (Piliavsky 2014). The persistence of patronage relationships in different, changing political contexts demonstrates their many aspects and meanings as well as their practical value —since elites often play a crucial role in channeling benefits, one's lack of patronage networks may contribute to marginalization (Harms 2017). Scholarly works have reflected different aspects of patronage relationships: from patronal munificence and the client's service (*seva*) as selfless acts that affirm social relations, connectedness, and society as ultimate values (Piliavsky 2014) to corruption and systematic form of oppression, which prevents poor people from accessing benefits (Gupta 2012). Our interlocutors did not usually experience patron-client relationships as beneficial patronage, although they sometimes described them as being helped. They used the same expression, 'those in the middle must be fed,' as Gupta's (ibid.) interlocutors. Gupta (ibid.) argued that the interlocutor thereby recognized and gave meaning to different state levels. Hence, as Gupta suggests, the discourse of corruption helps reimagine the state (ibid.).

Research on the immediate aftermath of Aila in India (Bhattacharyya et al. 2010; Bhunia and Ghosh 2011; Mazumdar et al. 2014; Mukhopadhyay 2009) and in Bangladesh (Abdullah et al. 2016; Ahsan et al. 2016; Baten et al. 2010; Jahan 2012; Kabir et al. 2016; Khatun et al. 2017; Mallick and Vogt 2014; Sarkar and Vogt 2015; Tajrin and Hossain 2017) has pointed out the

inadequacies of relief efforts, revealing how people have been differently vulnerable to the effects of the cyclone. Since vulnerability is produced by human behavior and is unevenly distributed, it is, therefore, historically produced. For instance, Mukhopadhyay (2009, 20), who studied the disaster and politics of aid and relief, argued that the devastation after cyclone Aila in the Indian Sundarbans largely took place because of the absence of infrastructural facilities and a comprehensive development policy in pre-Aila Sundarbans.

States and private players often respond to disasters by furthering their own interests, be it capital accumulation, as in the United States after hurricane Katrina (Adams 2013) or Hindu nationalism in Bhuj, India, after a devasting earthquake (Simpson 2013). In Tamil Nadu, India, capital accumulation was combined with humanitarian soft power in the aftermath of the tsunami (Swamy 2021). In seeking to understand the long aftermath of Aila, we draw from these insights. However, Aila was not a randomly occurring disaster but one in a chain of various types of extreme weather phenomena in a region known as a climate change hotspot. We hence explore the long aftermath of Aila as part of the gradual impacts and politics of climate change among various agents. Latour (2018) argues that climate change, 'the present ecological mutation', has organized the whole political landscape. Indeed, the type of extreme weather phenomenon influences its aftermath; hence, impacts of climate change highlight forces of nature as active political participants (ibid.). Nevertheless, as the above-discussed disaster studies have demonstrated, framing natural disasters as exceptional events which determine social changes tends to overlook how the aftermaths are politically and locally produced. Framing of disasters and extreme weather events merely through climate change discourses diverts attention from the role of human action for impacts. People may not be able to choose the impacts, but they can shape them (Paprocki 2021). We identify how the impacts of the same extreme weather event are shaped differently in two geographically close locations which differ politically and historically. By delineating similarities as well as differences in how the political is interwoven with the natural, we demonstrate how Aila's lingering impacts have emerged as part of local power relationships and diverse forms of agency.

We have chosen to employ the ethnographic method as it enables developing an understanding of climate change as one among multiple processes of social change as well as people's perceptions of climate change and everyday practices. Our approach hence complements top-down approaches based on climate projections and modeled impacts (Conway et al. 2019). The article is based on ethnographic research, including observation, loosely structured interviews, and discussions by three researchers among the people who had migrated to urban areas after Aila or who still lived in the most Aila-affected region in India and Bangladesh. We mainly used the snowball method to select the informants. We determined the number of people to be interviewed based on interpretative saturation, which entails collecting more data until further interviews no longer elicit new insights or cultural meanings. Tenhunen and Roy, who worked in the adjacent communities, have been able to triangulate their findings. Tenhunen and Roy interviewed more women than men in Kolkata, and Roy in a rural area because they found it easier to meet women than men who stayed longer hours outside the home. It was, in turn, easier for Uddin, as a male researcher, to talk with men, especially in rural areas. Nevertheless, all three researchers could interview and discuss with both women and men. We studied both Hindu and Muslim communities—Hindus in India and Muslims in Bangladesh—but religion did not emerge as a crucial differentiating factor in how people managed the aftermath of Aila. Our Muslim and Hindu interlocutors shared many features of Bengali identity and culture. For instance, it reflects the commonalities and shared historical backgrounds of Sundarbans residents that both Muslims and Hindus worship Bonbibi as the divine power sent by Allah to protect those who enter the forest. We consider our analysis as representative of the communities we studied, but we do not claim that they represent all social strata or aspects of climate change impacts in the entire Sundarbans and its adjacent areas.

Our work in India was focused on people who had migrated from or still lived in Kultali block, an administrative division in South 24 Parganas, West Bengal. The overwhelming majority in these communities were Hindus who belong to Scheduled Caste categories reflecting the high share of

scheduled caste in the Kultali block.[1] Tenhunen conducted fieldwork for three months in 2018, interviewing 51 women and 25 men in an informal neighborhood of approximately 200 households in Kolkata among people who Aila had displaced. She also made three visits to the Kultali block. Roy conducted fieldwork for ten months in rural and urban areas. In Kolkata, she studied a settlement of over a thousand households where people from various regions of Sundarbans have been settling. There, she interviewed 72 women and 80 men. She then conducted fieldwork in two riverside villages adjacent to the forest in Kultali block from where her urban interlocutors had migrated. The two villages consisted of 275 households belonging to Scheduled Caste (SC) categories. She interviewed 51 women and 46 men representing a cross-section of the different SC titles in the two villages. She also discussed with panchayat and NGO representatives, governmental officials, and political activists in these villages. Uddin carried out fieldwork for two months in 2019 among families impacted by Aila in Bangladesh. He interviewed 32 men and eight women in Rupsha slum, Khulna city. He then carried out fieldwork in two villages, Golapata and Moynatali (pseudonyms), from where people he interviewed in Khulna city had migrated. These two villages with 572 households are located in the Dokkhin Bedkashi union, Koyra Upazila subdistrict of the Khulna District adjacent to Sundarbans sanctuary on an island surrounded by Kopotakko and Arpangachia rivers. He interacted with people from 55 households conducting four focus group discussions with ten participants and interviewing 11 men and four women individually. He also spoke with the local union council chairman and an NGO official. We will next analyze the practices of Aila-related aid and government policies within social hierarchies on both sides of the Sundarbans.

Aftermath of cyclone Aila amidst electoral politics in West Bengal, India

Aila caused a social rupture in the affected areas we studied in West Bengal—initially, the rich and the poor were equally affected. As a woman in her forties who left her native village to work as domestic help in Kolkata relates:

> What to do? The river embankments were completely broken. The fish were just dying, and one could not cultivate crops for 3–4 years. The land turned saline. Both large and small farmers lost everything. Everyone had to leave for Kolkata.

Aila's suddenness and force were experienced as a break with the past by people who had been living with gradual salt inundation caused by the high tides and receding ground water levels. Moreover, although gradual and much less unacknowledged by the media and public attention than cyclones, changes in the seasons have had devastating effects on agriculture not only in Sundarbans but in much of rural India (Amarnath et al. 2017). Aila raising the ground salt to a record level helped people struggling to make a living to make the decision to migrate. People from Sundarbans have always migrated for work, especially seasonally, but now migration became more long-term and prevalent. The growing volume of migration made it easier for even those to network and find jobs outside the Sundarbans who had earlier lacked translocal networks.

At the same time, the state government substantially increased its investments in the Sundarbans region. Most roads and embankments were fixed and built. Even the remotest parts of the region were provided with electricity. In addition to the subsidized food grains under the National Food Security Act, Aila-affected villagers are still—more than ten years after the cyclone —entitled to food grains distributed free of charge.

Salinity initially turned the land barren. However, the negative influence of salinity gradually decreased, while the newly built embankments, especially those made of cement, protected the cultivated lands from further salinity. Many farmers who returned have been able to recover from Aila and even increase their harvests. A middle-aged farmer and an owner of 2.5 acres of land with whom Roy talked attributed the improvement to how the rain and floods flushed the top layer of salt and harmful residues left from the use of fertilizers and pesticides.

Although assistance to victims of catastrophes is by no means exceptional, the timing of Aila largely explains the large aid volumes, which have continued for more than a decade. Aila hit in the middle of an intense fight for power between two regional parties— the Communist Party of India (Marxist), (CPI(M)), which had ruled the state since 1977, and its rival party, the All India Trinamool Congress (TMC). The competition between the two parties crucially influenced the rescue efforts as well as the immediate aftermath of the cyclone (Mukhopadhyay 2009). The steady growth of TMC motivated the CPI(M)-led government to compete with the rising opposition in distributing relief in the Aila-affected regions (Mukhopadhyay 2009).

These efforts to demonstrate state presence with the help of infrastructure projects and benefits did not prevent the TMC from coming to power in the state in 2011 and spiking the investments in aid. As a district leader of the TMC party in South 24 Parganas points out, the increased governmental activity in the region has continued due to the ruling party of the state, TMC, now being in power in most local units of governance, panchayats, as well. Aila-affected people can receive direct cash transfers for building houses under a special scheme. They are also eligible for house-building funding through a scheme organized by the central government in cooperation with the state government. Recently, one of the most Aila-affected areas, the South 24 Parganas district, has emerged among the highest recipients of this scheme in India (Sharma and Das 2018).

When I (Tenhunen) visited a village in the Kultali block in the South 24 Parganas, I was first escorted to a large farmer's house. They said they had not received any benefits after Aila, but as we continued the discussion, I learned that one of the brothers had received cash from the government to build a concrete house. This large joint family, which had now separated into several units, had also benefited from other government policies thanks to being protected by embankments and having received funding for a large irrigation pump. As I visited relatives of the people I had met in a Kolkata squatter settlement, we discovered a neighborhood of landless people in the same village. In this neighborhood, only people unable to work due to illness or old age remained. Much of the research on climate immobility has concentrated on those forced to stay due to a lack of resources and heightened vulnerability (Blondin 2020). In the Kultali block, immobility was not solely about vulnerability but also kinship-based survival strategies. Rural residents could receive food aid from the local government as well as remittances from their kin who had migrated.

Nevertheless, when I asked what kind of benefits they had received after Aila, the most common answer was that others might have received something, but they had not gotten anything—those who needed aid the most did not receive it. A woman in her thirties from the Kultali block of the South 24 Parganas district, who stayed there in a rented house, pointed out that only people who owned houses were entitled to housing aid. Moreover, benefits were administered by local authorities dominated by the local ruling party elites. Consequently, people explain their exclusion from governmental benefits by the nature of local politics. I was told that it was not enough to fulfill the criteria for getting the direct cash transfer for house building meant for poor people. To get one's name on the beneficiary list, one had to be close to the party leaders and have time to attend the meetings. In much of rural India, patronage relationships are part of cross-caste relationships. However, since the communities we studied consisted of SC people, our interlocutors did not usually experience caste hierarchies in their everyday lives. Most Sundarbans residents belong to Pod or Poundra Kshatriya and Namasudra, both of which are classified as SC. They interact with their immediate neighbors—Adivasis, Midnapuris (mainly OBCs), or Muslims (Jalais 2014, 45). The lack of hierarchical differences explains why our interlocutors emphasized the need to interact with the party elites—if the elites had belonged to higher castes, they would have had to consider maintaining a proper distance.

The need to interact with the party elites posed a problem for low-income people who have had to migrate to work in cities occasionally or year around. For those who received the funding, the new, cemented houses provide a place to live and receive food aid if they find themselves out of work in Kolkata. However, the new concrete houses could be empty or inhabited by some elderly, distant relatives as working-age people had migrated to find work. Children often stay in the villages

with their grandparents while their parents work in Kolkata. Migrants treat the Aila-related benefits as assets trying to remain entitled by keeping their ration cards with their village address.

One day I visited a household where a woman was living with her daughter-in-law in a Kolkata squatter settlement. It turned out that the rest of the family members, the husband, the son, and the children, were staying in their native village in the Kultali block, while the two women were working as maids in Kolkata to finance the building of a concrete house in the village. The state had given a lump sum for the construction, but the women's income was needed to complement that sum. Men of the family had, in turn, stayed in the village to maintain local relationships, which made it possible to receive the money for building a house. This novel gender arrangement was by no means unusual in this settlement. After Aila, women increasingly took the role of bread-winners, migrating to work in the cities even on their own. While women also still stay in the rural area as men migrate, women increasingly leave to work as domestic helps in Kolkata because this work provides a stable income and is often easier available than men's informal sector work. Both decisions—to stay in the rural area or migrate—provide women with challenges and opportunities (Bhatta et al. 2015). While women who stay experience a double burden taking care of the household and farming, women also may feel an increase in autonomy. Women who migrate to work as domestic helps increase their economic power among their kin groups but they also have to work long hours without any formal sector benefits like pensions—and usually leave their children in the rural area.

In the South 24 Parganas district, displacement has influenced people's ability to maintain relationships with influential people in the village. A large part of the working-age population moving more or less permanently out of the villages had created the possibility for local political leaders to solidify their power more than in many other parts of rural West Bengal, which have received significantly less aid than the Aila-affected regions. Unlike the Aila-affected regions, most districts in West Bengal have not witnessed a similar erosion of village socialities due to the large-scale migration; as a result, the rural communities outside the Aila-affected regions have been better able to protest against the malpractices of the local leaders (Roy 2013; Tenhunen 2018). Some regions, in turn, have suffered due to the absence of elites. As Harms (2017) described, the elites had migrated from coastal areas affected by land erosion in Sundarbans, leaving people without village-level leadership, which hampered their ability to secure governmental aid and services. In the case of the Kultali block, which is not affected by such drastic land erosion as the people inhabiting a submerging islet studied by Harms, the elites had stayed, but the landless people and small landholders had been forced to leave to make a living. Aid continued to flow to the Kultali block while the distribution was controlled and managed by the elites.

One source of intense criticism was how the local party elite and the panchayat leadership demanded bribes from direct cash transfers, especially the housing program. People said that money was demanded from them before they could receive the cash transfer. In Kolkata, local ruling party functionaries and the police demand money from migrants who often live and work there informally. People considered demands for cut money and bribes immoral, voicing strong criticism of the ruling party.

In addition to the distribution of state benefits, fisheries (*bheris*) have emerged as a constant bone of discontent. Mangrove forests have been cleared to set up fisheries on the riverside lands already since the 1990s. Fisheries have also been established on farming land; consequently, labor-intensive farming has been increasingly replaced by fisheries, which can be maintained through family labor. The fisheries weaken mud embankments as the fishery owners cut the embankments to drain water; hence, fisheries increase the saline water inundation of the agricultural lands and houses during cyclones. A prosperous farmer and a local leader of the Socialist Unity Centre of India (Communist) interviewed by Roy says:

> Laws stipulate how much land in a panchayat could be developed as bheries, but nobody abides by the regulations. Everything depends on the party. Since the government owns the rivers, it could take action against the

violators of the laws, but the government officers remain mute spectators. The village politics revolves around the grab and hold of the bheries.

The bheries and the residential settlements on chars can even block the river flows entirely. While landowners and bheri owners have benefited, landless people and fishers have had to withstand the worst of this new economy. People are also no longer able to make a living by catching shrimp fry or collecting other forest products as their entry to the forest has been barred by the forest department. As Mehtta (2021) has noted, the conservation activists and the forest officials give disproportionate attention to poor people's minor violations in Sundarbans—she attributes the disparity to how they are unable to confront larger and more fundamental ecological threats to the region.

Contrary to images of climate change hotspots like Sundarbans as passive victims of forces of nature, the district of South 24 Parganas has emerged as an economically and politically vibrant region thanks to state investments in infrastructure and benefits for the affected people. The way most benefits get distributed follows the logic of patron-client relationships in that the local party leaders and panchayat officials decide and largely manage the distribution. Large-scale distribution of disaster aid or direct cash transfers creates different expectations from those elicited by patron-client relationships, which used to be based on large landowners' dominance. People were more focused on criticizing the way the aid was distributed than on demanding more benefits from the rival party. This discourse of corruption, in turn, helps reimagine the state (Gupta 2012). Large-scale distribution of benefits has led to a new sense of entitlement, which is manifested as an ability to imagine new types of political relationships and demands for changes.

Cyclone Aila and the politics of retreat in Bangladesh

Bangladesh politics has been dominated by two contesting political parties—the Bangladesh Awami League (AL) and the Bangladesh Nationalist Party (BNP). The Awami League came into power under the leadership of Sheikh Hasina only half a year before Cyclone Aila. Consequently, the governance of aid and relief in Aila-stricken areas was an extraordinary test for this newly formed government. The *Upazila* (sub-district) administration ran the relief distribution and rehabilitation programs with local political representatives, politicians, and elites.

Soon national newspapers, as well as researchers (Masud-All-Kamal and Hassan 2018; Mahmud and Prowse 2012), documented rampant corruption of relief and rehabilitation funds by local politicians, bank officials, and civil servants who worked in the affected areas highlighting the role of patronage in aid distribution. I (Uddin) found that many wealthy households, which were not supposed to be entitled, received governmental recovery cash (Tk 3000–5000). They even received multiple relief cards thanks to patronage from local political leaders and government officials. The poor households, however, were forced to pay bribes in exchange for emergency recovery cash. Moreover, the local union council chairman and members, as well as local leaders of the ruling party, prioritized their party members and supporters when they prepared the relief and rehabilitation lists. Consequently, poor households often got less relief than they were supposed to receive. The opposition party (BNP) criticized the government for the paucity and misgoverning of aid and relief in Aila-affected areas. Nevertheless, the BNP failed to turn the affected individuals' discontent into mass protests or movements due to its weak organization and the state suppression of opposition voices.

The worst-affected people were entitled to 20 kg of rice per month for one year under the Vulnerable Group Feeding (VGF) program. The government and NGOs such as BRAC and Islamic Relief Bangladesh initiated Cash-for-Work or Food-for-Work schemes to repair roads, embankments, and other rural infrastructure, which generated employment and income opportunities for the victims for a short period—usually for 40 days. The government gave Tk 20 000 in two installments to victims to build cyclone-resistant houses. However, I was told that many poor or low-income families were denied this assistance, whereas many better-off families received this money. Those

who received the funds said it was insufficient to build a house. Moreover, receiving the money required giving at least Tk 5000 as a bribe, and new houses could not help solve the problem of a lack of jobs. As a man who earns his living selling vegetable puts it, 'Having cyclone-resistant new houses may provide some reassurance for villagers in case a cyclone hits yet again, but that does not feed us.' I was told that local leaders and government officials visited victims, promising help but ending up doing very little. Instead, they siphoned off post-disaster recovery relief money and goods meant for affected people. The local union chairman and the members advised the affected people to collect a token number from the office to get post-disaster support; however, receiving the token number required networks and bribes. Many government officials who had been involved in the distribution of aid were transferred after Aila as a punishment for illegally enriching themselves in the aftermath.

Unlike in much of the Indian side of Sundarbans, the reconstruction of dams and roads has not been completed. People are still struggling to remake their lives against the onslaught of a continuing freshwater crisis and the frequent collapse of the damaged river embankments. Cyclone Aila increased farming land's salinity to the degree that cultivation is no longer possible—the water is not even fit for drinking. People are forced to drink unsafe water or spend much of their income traveling long distances to collect safe water or purchase water. The only freshwater source of two villages, a pond, became contaminated with saline water during Cyclone Aila. After Aila, influential locals leased the pond for fish cultivation, which resulted in the pollution of water with chemicals. The local government has started to repair the pond for storing rainwater. Yet, the water is still not suitable for drinking, and, as the villagers pointed out, fixing the pond would be useless unless the embankments are repaired. At times, the government and NGOs repair the embankments through the Cash-for-Work program, using mud and concrete blocks as materials, but these constructions are not durable. The embankments have become insecure; consequently, the area has emerged as an iconic site of river erosion, flooding, and climatic hazards.

The embankments have also been damaged by shrimp farming (*ghers*). NGOs started training people on how to set up shrimp farms already in 1995, fencing off riverside land. Saline shrimp farms have destroyed cropland and flora similar to Indian Sundarbans. Some large landowners have made holes or dug pipes into the embankments to channel salt water from the coastal rivers into their shrimp hatcheries, which has weakened the embankment. The embankments have been fixed using river mud, which rains and high tide wash away. Like the other residents of her village, Aysha (pseudonym), a 65-year-old woman, is in an unsafe predicament. She describes it thus:

> The main problem here is the fragile condition of the embankment, which breaks even during minor surges, letting in the saline water. The local representatives show the damaged embankments to the government representatives, receiving tens of millions taka to repair the embankment. Unfortunately, they deposit the money into their bank accounts and build palaces for themselves in Khulna and Dhaka.

An NGO official and a few other interlocutors confirmed Aysha's observations on how people intentionally damage the embankment before a storm or during high tide to get relief funds from the NGOs and local government. 'Disasters have changed the nature of the people in this area. They have developed a mentality for getting aid from others by any means,' an NGO official says.

The rich argue that Aila has meant an improvement for the poor since they are covered by various programs by NGOs, unlike the rich. Hence, the rich consider that they have been adversely affected more than the poor by Aila. Indeed, ten months after the cyclone, the very poor were earning slightly more than before the cyclone in the Koyra subdistrict (Abdullah et al. 2016). The poorest people had few material assets to lose and, although losses were significant, they could quickly resume mangrove resource collection and recover. The rich, who were doing profitable business as owners of large shrimp farms and agricultural land, lost everything but did not get help to restart their business and other activities. As depicted by a 50-year-old man, who is a shrimp farm owner:

> The poor do not repair their houses or build houses themselves. They get different types of small aid from NGOs and the government, but middle-income people and the rich do not get anything. The poor receive salt-tolerant seeds from the NGOs, money from the government to build new houses, and loans from the NGOs, but the people who lost their shrimp farms do not get any help. Before Aila, I lived very well from the income I earned from my shrimp pond, but now I do not have enough money to restart the business.

A Disaster Management Committee formed in 2017 by local government officials, NGOs, and community leaders seeks to support sustainable livelihoods in Dakshin-Bedkashi Union. Their initiatives include the installation of deep tube wells for safe drinking water, re-excavation and construction of ponds, reconstruction of cyclone centers and embankments, the distribution of agricultural inputs and saline-tolerant juvenile fish, small cash transfers for new livelihoods, as well as the promotion of awareness about ways to reduce disaster risks. However, the implementation of the action plan has remained limited due to a lack of resources and government approval; thus, the trail of destruction left by Cyclone Aila and tidal surges ten years ago is still visible in most parts of these two villages.

An NGO, CODEC (Community Development Center), provides training in tailoring, handicraft making, and electrician's work for the villagers. After Cyclone Sidr, CODEC distributed goats, but they died from drinking brackish water and eating salty grass. CODEC has tried to introduce a new variety of climate-smart goats. It has also presented a novel type of salinity-tolerant tilapia fish. The government and NGOs have sought to launch the cultivation of saline-tolerant rice; however, according to the villagers, the outcome has not yet been satisfactory. An NGO official laments that they have not been able to run their activities as planned due to local political interference. For example, a local NGO provided latrines and water tanks, but even these were administered through the local political representative, who demanded money in exchange for the benefits. I discovered that only a few households received these facilities. The difference in the way the emergency relief was distributed in the immediate aftermath of Aila is that the NGO benefits are no longer routed primarily to the wealthy. However, the Union chairmen tend to channel NGOs to run their activities in their own villages.

Many wealthy farmers have leased out their paddy fields, which used to employ seasonal workers, to urban businessmen engaged in fish cultivation. They have turned rice fields into salt-tolerant shrimp ponds, which essentially care for themselves. Hafiz explains: 'We lease our land for shrimp cultivation because agricultural production is not yet possible in our area. At least we get some income— it's better than nothing.' Sluice gates, which are public property, provide the controlling point on which many small- and medium-level gher owners depend to get salt water. The wealthy control sluice gates by leasing them from the government at a nominal cost. As reported by the villagers, when land is used for shrimp farming for 10–15 years, it becomes permanently salty and unfit for agriculture. A 48-year-old man, who works as a daily laborer, explains:

> The rich and businessmen now control shrimp farming. These outsiders have money as well as risk-taking capability. They start shrimp farming from a big plot of land and then gradually lease more land for this purpose. Previously, rich people grew paddy and vegetables. They employed many day laborers, but now they need very few laborers for shrimp farming. As a result, job scarcity has become an acute problem here.

According to the villagers, the most profitable source of income for the poor is the illegal catching of wild shrimp fry, crabs, and fish from the waterways of the Sundarbans Reserve Forest. They sell the shrimp fry to the gher owners, earning Tk 150–200 daily. They also collect wood, *golpata* (nipa palm leaves), and honey. The Sundarbans preservation law does not permit these activities except for licensed fishing. Fishers can obtain a boat license certificate (BLCs) eight times a year. However, people engage in these activities without a license either by renting BLCs from others or receiving permission from a forest official in exchange for bribes.

Most families have experienced food insecurity, job scarcity, and a portable water crisis, along with waterborne diseases. As a result, they have migrated either seasonally or permanently to different parts of the country. Some work as day laborers in the city, while others cut and husk

paddy in rural areas. Many work as bonded labor in the brickfields of Dhaka, Sylhet, and Rajshahi during the winter season. Before 2009, only men migrated, but after Aila, also women started to migrate. Aila-affected women in Rupsha slum in Khulna city often work as day laborers, construction workers, earthworkers, in shrimp-processing factories, and as domestic helpers.

Compared to the Indian side of the Sundarbans we studied, the absence of state investment in coastal infrastructure and livelihoods in the Bangladeshi field site is conspicuous. Climate change adjustment efforts by NGOs have proved fragmented and unable to support sustainable livelihoods for most people. Aila-affected regions in Bangladesh studied by Uddin have become iconic sites of land erosion and climate change due to the neglect of rural infrastructure and the promotion of fisheries at the expense of farming. The wreckage of rural livelihoods demonstrates the politics of retreat, built on the ideas advocated by development practitioners and international donors that the coastal areas are not inhabitable or suitable for farming (Paprocki 2021). NGOs have participated in patronage relationships with rural political leaders carving space for climate change adjustment projects that target the rural poor; however, they tend to remain small-scale experimental undertakings, many of which end up failing. Some NGOs have even promoted fish farming despite the devastating effect on the rural labor market.

Discussion: same disaster, different politics

Ten years after the cyclone, the aftermath of Aila continues in both Bangladesh and India in the villages we studied, but partly for different reasons. In our field sites in Bangladesh, the aftermath of Aila reinforced the neglect of coastal livelihoods. In contrast, Aila spurred new investments in the affected areas we studied in India. Recent works (Dewan 2021; Paprocki 2021; Cons 2018) on climate change mitigation policy and practice in coastal Bangladesh indicate that the neglect of rural livelihoods and infrastructures we witnessed in our study areas is not limited to them. In turn, the West Bengal government has continued to spur investments in the Sundarbans region (Nandi 2022). However, even though the West Bengal government emphasizes building back better thinking in dealing with the climate change impacts in Sundarbans, whereas the politics of retreat dominates climate change mitigation in coastal Bangladesh, we do not argue that this could be generalized to entire India or Bangladesh.

We found that Aila and the subsequent extreme weather events were framed differently in our research locations in Bangladesh and India. Although the issue of climate change rarely figures explicitly in local-level politics, neither in Bangladesh nor India, climate change has emerged as a common topic that rural people in Bangladesh can discuss. In contrast, on the Indian side of the Sundarbans, we had difficulties eliciting talk about climate change with our interlocutors. The greater awareness and international activity surrounding climate change mitigation and adaptation in Bangladesh compared to India have led to more significant dispossession and neglect of coastal livelihoods in our study areas as well as in other parts of coastal Bangladesh (ibid.). Climate change adjustment projects that have proliferated have not been geared at providing durable livelihoods in coastal areas except for fish farming—they have resulted in small-scale experiments with no future (Paprocki 2021). Support for farming we witnessed on the Indian side of Sundarbans demonstrates that agriculture is still viable in coastal areas. However, state benefits to landowners have exacerbated the divides between landless and landowners, and capital accumulation and displacement due to shrimp farming are shaping the economy more than state benefits.

In the Indian side of Sundarbans, where we carried out research, electoral concerns have overridden climate change issues— the electoral contest between the political parties ensured investments to the Indian Sundarbans. This does not mean that the population and politicians on the Indian side of Sundarbans are not dealing with the climate change impacts—they just do not frame the issues through climate change discourses. The federal political structure of India has contributed to how governance has remained less centralized and more dependent on inter-party competition than in Bangladesh. Moreover, state-building in Bangladesh has been wrought with different challenges

than in India, as the British colonial rule was followed by Pakistani control and a much later achievement of independence than in India.

In our study areas, post-Aila politics built on earlier political practices and structures; nevertheless, the aftermath of the cyclone provided an opportunity to reshape local hierarchies, political relationships, and practices. For instance, Aila helped a new ruling party solidify its position on both sides of the Sundarbans. The aftermath also led to transformations of local hierarchies. In our field sites in India, landowners could prosper as a significant part of the state investments were channeled to them. Nevertheless, the landless were not wholly excluded from housing and aid for the affected people. Small farmers and landless, who have migrated to work in urban areas, treat their rural governmental benefits as assets while earning a precarious living in the urban areas. In our field sites in Bangladesh, embankments remain broken, and land salinity continues; hence, farming has not reemerged as viable. Rural people have become impoverished and uprooted, while urban-based shrimp farmers have prospered.

In our field sites in both countries, the state is represented by local political leaders who distribute benefits and engage in transactional interaction as patronage relationships with the affected people. As the flow of governmental benefits has grown along with the migration of working-age people to work in cities, rural communities have been eroded while elites have gained power as mediators of benefits. However, state-citizen relationships are also profoundly influenced by the emerging critical consciousness as the distribution of aid and benefits has served to create a sense of entitlement among the affected people, especially in the communities we studied in India, where the scale of distribution has been greater than in Bangladeshi communities we studied.

Many state policies in India are directed at helping people to continue making a living in Sundarbans and its fringe areas. Yet, for instance, World Bank-funded reports (Sánchez-Triana, Ortolano, and Paul 2014; Sánchez-Triana, Ortolano, and Paul 2018) argue that Sundarbans is such a hazardous place to stay that people living in the riskiest zones should be encouraged to move out of the region to areas that offer more safety and better employment opportunities. As Paprocki (2021) notes, these large-scale displacement proposals lack realistic plans to rehouse and build livelihoods for the displaced. Instead of opting for either of these solutions, in our field sites in Indian Sundarbans, residents often maintain one foot in the city and another in the village, combining income from the insecure urban informal sector jobs with the rural safety net provided for the Aila-affected people. Kinship ties and gender roles have proven equally fluid as families have dispersed into small urban and rural units. Our research concurs with scholars such as Rao et al. (2019), who emphasize how, although men and women are impacted by climate change differently, women are not just victims, but they have agency even under challenging circumstances. In the absence of a policy on displacement and internal migration or concrete plans to relocate people from coastal areas and provide them with livelihoods, combining urban and rural assets emerges as an innovative way to create a safety net.

This article has demonstrated the value of combining studying the politics of climate change with an exploration of local state-citizen relationships. The comparison between our field sites in India and Bangladesh highlights different policy options and framings of extreme weather events demonstrating that people are not only coping with the aftermaths of extreme weather but also climate change discourses which circulate differently in India and Bangladesh. Extreme weather events are linked to social ruptures, which enable a reconstruction of local hierarchies and political relationships. The politics of climate change is not only about climate change policy to mitigate the impact of ecological disasters but about the reconstruction of political agents and practices.

Notes

1. While the share of the Scheduled Castes (SC) population in the district of South 24 Parganas was 32 per cent in 2009, their share in the Kultali block was 47 per cent the same year (Government of India 2012).

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This research was funded by the Academy of Finland as part of the project 'Sustainable Livelihoods and Politics at the Margins: Environmental Displacement in South Asia´ [grant number 318782].

Notes on contributors

Sirpa Tenhunen is an anthropologist who works as a senior university lecturer at the University of Jyväskylä. Her current research deals with climate change and digital technologies. Her most recent book is 'A Village Goes Mobile: Telephony, Mediation and Social Change in Rural India,' published by Oxford University Press in 2018.

Mohammad Jasim Uddin is a Professor of Sociology at Shahjalal University of Science & Technology, Sylhet, Bangladesh. His current research focuses on climate change, migration, social capital, and the sociology of development and under-development. He received a Ph.D. in Sociology from the University of Helsinki for his study on Microcredit, Gender, and Neoliberal Development in Rural Bangladesh. His book 'Micro-politics of Microcredit: Gender and Neoliberal Development in Rural Bangladesh' was published by Routledge in 2015. He served as the editor-in-chief of the SUST Journal of Social Sciences from March 2019 to March 2023.

Dayabati Roy is a senior researcher affiliated with the University of Jyvaskyla, Finland. Her research interests include democracy and development, environmental transformation and climate change, sustainability and conservation, with a particular focus on contemporary India. She is the author of 'Rural Politics in India: Political Stratification and Governance in West Bengal' (Cambridge University Press 2013) and 'Employment, Poverty and Rights in India' (Routledge 2018). She published articles in peer-reviewed journals like Modern Asian Studies, Economic and Political Weekly, and Forum for Development Studies.

References

Abdullah, Abu Nasar Mohammad, Kerstin Katharina Zander, Bronwyn Myers, Natasha Stacey, and Stephen Thomas Garnett. 2016. "A Short-Term Decrease in Household Income Inequality in the Sundarbans, Bangladesh, Following Cyclone Aila." *Natural Hazards* 83 (2): 1103–1123. doi:10.1007/s11069-016-2358-1

Adams, Vincanne. 2013. *Markets of Sorrow, Labors of Faith: New Orleans in the Wake of Katrina*. Durham, NC: Duke University Press.

Ahsan, Md Nasif, Kuniyoshi Takeuchi, Karina Vink, and Jeroen Warner. 2016. "Factors Affecting the Evacuation Decisions of Coastal Households During Cyclone Aila in Bangladesh." *Environmental Hazards* 15 (1): 16–42. doi:10.1080/17477891.2015.1114912

Amarnath, Giriraj, Niranga Alahacoon, Vladimir Smakhtin, and Pramod Aggarwal. 2017. *Mapping Multiple Climate-Related Hazards in South Asia*. Colombo: International Water Management Institute (IWMI).

Baten, M. A., A. A. Masud, K. S. Osman, and M. R. Rahman. 2010. *Cyclone Aila: One Year on Natural Disaster to Human Sufferings, An Assessment Report*. Dhaka, Bangladesh: Unnoyon Onneshan.

Bhatta, Gopal Datt, Pramod Kumar Aggarwal, Santosh Poudel, and Debbie Anne Belgrave. 2015. "Climate-induced Migration in South Asia: Migration Decisions and the Gender Dimensions of Adverse Climatic Events." *The Journal of Rural and Community Development* 10 (4): 1–23.

Bhattacharyya, Ranjan, Debasish Sanyal, Salil Kumar Dutta, Malati Ghosh, and Sumita Bhattacharyya. 2010. "Sociodemographic Comparison and Impact of Aila: The Supercyclone in Gosaba of West Bengal." *Indian Journal of Community Medicine: Official Publication of Indian Association of Preventive & Social Medicine* 35 (3): 429. doi: 10.4103/0970-0218.69280

Bhunia, Rama, and Soughata Ghosh. 2011. "Waterborne Cholera Outbreak Following Cyclone Aila in Sundarbans Area of West Bengal, India, 2009." *Transactions of the Royal Society of Tropical Medicine and Hygiene* 105 (4): 214–219. doi:10.1016/j.trstmh.2010.12.008

Biswas, Sravani, and Patrick Daly. 2021. "'Cyclone Not Above Politics': East Pakistan, Disaster Politics, and the 1970 Bhola Cyclone." *Modern Asian Studies* 55 (4): 1382–1410. doi:10.1017/S0026749X20000293

Blondin, Suzy. 2020. "Understanding Involuntary Immobility in the Bartang Valley of Tajikistan Through the Prism of Motility." *Mobilities* 15 (4): 543–558. doi:10.1080/17450101.2020.1746146

Chakraborty, Suvankar. 2015. "Investigating the Impact of Severe Cyclone Aila and the Role of Disaster Management Department – A Study of Kultali Block of Sundarbans." *American Journal of Theoretical and Applied Business* 1 (1): 6–13.

Cons, Jason. 2018. "Staging Climate Security: Resilience and Heterodystopia in the Bangladesh Borderlands." *Cultural Anthropology* 33 (2): 266–294. doi:10.14506/ca33.2.08

Conway, Declan, Robert J. Nicholls, Sally Brown, Mark G. L. Tebboth, William Neil Adger, Bashir Ahmad, Hester Biemans, et al. 2019. "The Need for Bottom-up Assessments of Climate Risks and Adaptation in Climate-Sensitive Regions." *Nature Climate Change* 9: 503–511. doi:10.1038/s41558-019-0502-0

Cosgrove, Denis, and Geoff Petts. 1990. *Water, Engineering, and Landscape: Water Control and Landscape Transformation in the Modern Period*. London: Belhaven Press.

Dewan, Camelia. 2021. *Misreading the Bengal Delta: Climate Change, Development, and Livelihoods in Coastal Bangladesh*. Seattle, WA: University of Washington Press.

Ferguson, James, and Akhil Gupta. 2002. "Spatializing States: Toward an Ethnography of Neoliberal Governmentality." *American Ethnologist* 29 (4): 981–1002. doi:10.1525/ae.2002.29.4.981

Government of West Bengal. 2012. *District Statistical Handbook. South 24 – Parganas, 2009*. Bureau of Applied Economics and Statistics. Kolkata: Government of West Bengal.

Gupta, Akhil. 2012. *Red Tape: Bureaucracy, Structural Violence, and Poverty in India*. Durham: Duke University Press.

Harms, Arne. 2017. "Citizenship at Sea." *Economic & Political Weekly* 52 (33): 69–76.

Harms, Arne. 2018. "Filming sea-Level Rise: Media Encounters and Memory Work in the Indian Sundarbans." *Journal of the Royal Anthropological Institute* 24 (3): 475–492. doi:10.1111/1467-9655.12856

Jahan, Israt. 2012. "Cyclone Aila and the Southwestern Coastal Zone of Bangladesh: In the Context of Vulnerability." Master's Thesis. Lund University: Centre for East and South-East Asian Studies.

Jalais, Annu. 2014. *Forest of Tigers: People, Politics, and Environment in the Sundarbans*. New Delhi: Routledge.

Kabir, Russel, Hafiz Khan, Emma Ball, and Kay Caldwell. 2016. "Climate Change Impact: The Experience of the Coastal Areas of Bangladesh Affected by Cyclones Sidr and Aila." *Journal of Environmental and Public Health*. doi:10.1155/2016/9654753

Khatun, Mst Rupale, Goutam Chandra Gossami, Shamima Akter, G. C. Paul, and M. C. Barman. 2017. "Impact of Tropical Cyclone Aila Along the Coast of Bangladesh." *International Journal of Scientific and Engineering Research* 8 (12): 1592–1599.

Khilnani, Sunil. 1997. *The Idea of India*. London: Hamish Hamilton.

Lahiri-Dutt, Kuntala, and Gopa Samanta. 2013. *Dancing with the River: People and Life on the Chars of South Asia*. New Haven: Yale University Press.

Latour, Bruno. 2018. *Down to Earth: Politics in the New Climatic Regime*. Medford: Polity Press.

Lewis, David. 2011. *Bangladesh: Politics, Economics, and Civil Society*. Cambridge; New York: Cambridge University Press.

Lewis, D., and A. Hossain. 2019. "Local Political Consolidation in Bangladesh: Power, Informality, and Patronage." *Development and Change*. July 8, 2019. doi:10.1111/dech.12534

Lewis, David, and Willem van Schendel. 2020. "Rethinking the Bangladesh State." *Contributions to Indian Sociology* 54 (2): 306–323. doi:10.1177/0069966720911733

Mahmud, Tavir, and Martin Prowse. 2012. *Corruption in Cyclone Preparedness and Relief Efforts in Coastal Bangladesh: Lessons for Climate Adaptation?* University of Antwerpen: Institute of Development Policy and Management.

Mallick, Bishawjit, and Joachim Vogt. 2014. "Population Displacement after Cyclone And its Consequences: Empirical Evidence from Coastal Bangladesh." *Natural Hazards* 73 (2): 191–212. doi:10.1007/s11069-013-0803-y

Masud-All-Kamal, Md, and S. M. Monirul Hassan. 2018. "The Link Between Social Capital and Disaster Recovery: Evidence from Coastal Communities in Bangladesh." *Natural Hazards* 93 (3): 1547–1564. doi:10.1007/s11069-018-3367-z

Mazumdar, Sumit, Papya Guha Mazumdar, Barun Kanjilal, and Prashant Kumar Singh. 2014. "Multiple Shocks, Coping and Welfare Consequences: Natural Disasters and Health Shocks in the Indian Sundarbans." *Plos One* 9 (8): e105427. doi:10.1371/journal.pone.0105427

Mehtta, Megnaa. 2021. "Crab Antics: The Moral and Political Economy of Greed Accusations in the Submerging Sundarbans Delta of India." *Journal of the Royal Anthropological Institute* 27 (3): 534–558. doi:10.1111/1467-9655.13551

Mukhopadhyay, Amites. 2009. *Cyclone Aila and the Sundarbans: An Enquiry Into the Disaster and Politics of Aid and Relief*. Kolkata: Mahanirban Calcutta Research Group.

Nandi, Soumitra. 2022. Sundarbans to be a Separate District: Mamata. Milleniumpost. 29.11. https://www.millenniumpost.in/kolkata/sunderbans-to-be-a-separate-district-mamata-500657 Accessed 20.3. 2023.

Nishat, Bushra. 2019. *Landscape Narrative of the Sundarbans: Towards Collaborative Management by Bangladesh and India*. The Hague: The World Bank.

Paprocki, Kasia. 2021. *Threatening Dystopias: The Global Politics of Climate Change Adaptation in Bangladesh*. Ithaca and London: Cornell University Press.

Piliavsky, Anastasia. 2014. *Patronage as Politics in South Asia*. Delhi: Cambridge University Press.

Rao, Nitya, Elaine T. Lawson, Wapula N. Raditloaneng, Divya Solomon, and Margaret N. Angul. 2019. "Gendered Vulnerabilities to Climate Change: Insights from the Semi-Arid Regions of Africa and Asia." *Climate and Development* 11 (1): 14–26. doi:10.1080/17565529.2017.1372266

Roy, Dayabati. 2013. *Rural Politics in India: Political Stratification and Governance in West Bengal*. Delhi: Cambridge University Press.

Rudra, Kalyan, and Jyotirindra Narayan Lahiri. 2021. *Bharatiya Sundorban: Ekti Bhougolik Ruprekha (Indian Sundarbans: A Geographical Outline)*. Kolkata: Ananda.

Sánchez-Triana, Ernesto, Leonard Ortolano, and Tapas Paul. 2014. *Building Resilience for Sustainable Development of the Sundarbans*. Washington, D.C.: World Bank.

Sánchez-Triana, Ernesto, Leonard Ortolano, and Tapas Paul. 2018. “Managing Water-Related Risks in the West Bengal Sundarbans: Policy Alternatives and Institutions.” *International Journal of Water Resources Development* 34 (1): 78–96. doi:10.1080/07900627.2016.1202099

Sarkar, Raju, and Joachim Vogt. 2015. “Drinking Water Vulnerability in Rural Coastal Areas of Bangladesh During and After Natural Extreme Events.” *International Journal of Disaster Risk Reduction* 14: 411–423. doi:10.1016/j.ijdrr.2015.09.007

Sharma, Aman, and Madhuparna Das. 2018. "Mamata Banerjee Didn’t Fail to Implement Key Rural Schemes in Bengal." *The Economic Times* 13.9.

Simpson, Edward. 2013. *The Political Biography of an Earthquake: Aftermath and Amnesia in Gujarat, India*. London: Hurst.

Swamy, Raja. 2021. *Building Back Better in India: Development, NGOs, and Artisanal Fishers After the 2004 Tsunami*. Tuscaloosa, Alabama: University of Alabama Press.

Tajrin, Suriya, and Babul Hossain. 2017. “The Socio-Economic Impact due to Cyclone Aila in the Coastal Zone of Bangladesh.” *International Journal of Law, Humanities & Social Science* 1 (6): 60–67. doi:10.3390/geosciences9110482

Tenhunen, Sirpa. 2018. *A Village Goes Mobile: Telephony, Mediation, and Social Change in Rural India*. New York: Oxford University Press.