

Feminist Community-led Perspectives on Disaster Adaptations: Stories from Wetland Local Women Communities in Bangladesh

by Margot Hurlbert, Barsha Kairy, Ranjan Datta

Abstract: This paper offers an in-depth exploration of the critical role played by women within vulnerable wetland communities in Bangladesh, particularly in the context of disaster adaptations. As climate change-induced disasters become increasingly prevalent, it is essential to recognize women's agency, knowledge, and resilience within these communities, and between minority Hindu and majority Muslim women. Employing a feminist framework, this research delves into the nuanced dynamics of gender, faith, and community-based disaster adaptation strategies. Through narratives and stories from local women, the paper unveils the innovative and adaptive approaches often overlooked in conventional disaster management practices, the heightened agency of majority Muslim women and their "witnessing" of the suffering of the minority Hindu women. It highlights the intersectionality of gender, faith, poverty, and environmental vulnerability, shedding light on the unique challenges faced by women in wetland areas, especially vulnerable Indigenous and Hindu minority women. The findings of this paper underscore the need for more inclusive, gender-responsive disaster policies and programs, and call for a shift away from top-down approaches to more participatory, community-led solutions. By amplifying the voices and experiences of local women in Bangladesh, this paper contributes to a broader discourse on sustainable disaster adaptation strategies, ultimately striving for greater equity and resilience in the face of climate-related challenges.

Keywords: conventional disaster management; resilience; sustainable disaster adaptation; women-led disaster adaptation

Résumé : Cet article explore l'importance du rôle des femmes dans les communautés vulnérables des zones humides du Bangladesh, surtout en ce qui concerne l'adaptation aux catastrophes. Alors que les catastrophes liées aux changements climatiques se multiplient, il est essentiel de valoriser le rôle, le savoir et la résilience des femmes dans ces communautés, y compris entre les femmes hindoues minoritaires et les femmes musulmanes majoritaires. En adoptant un cadre féministe, cette recherche étudie les dynamiques nuancées du genre, de la foi et des stratégies d'adaptation communautaire face aux catastrophes. Grâce aux récits et aux histoires de femmes locales, cet article révèle les approches novatrices et adaptatives qui sont souvent négligées dans les méthodes conventionnelles de gestion des catastrophes, le rôle prépondérant des femmes musulmanes majoritaires et leur « témoignage » de la souffrance des femmes hindoues minoritaires. Il souligne l'intersectionnalité du genre, de la foi, de la pauvreté et de la vulnérabilité environnementale, mettant en lumière les défis uniques que rencontrent les femmes vivant dans les zones humides. Les conclusions de cet article soulignent la nécessité de mettre en place des politiques et des programmes de gestion des catastrophes plus inclusifs et sexospécifiques. Elles appellent à l'abandon des approches descendantes au profit de solutions plus participatives et communautaires. En donnant la parole aux femmes locales au Bangladesh et en relatant leurs expériences, cet article enrichit le débat sur les stratégies d'adaptation durable aux catastrophes, qui ont pour objectif de renforcer l'équité et la résilience face aux enjeux climatiques.

Mots clés : gestion conventionnelle des catastrophes; résilience; adaptation durable aux catastrophes; adaptation aux catastrophes menée par les femmes

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Introduction

This article is part of a broader project aimed at developing practices and policies for Bangladesh's vulnerable and Indigenous populations in Bangladesh. Research on feminist community-led perspectives on disaster adaptations in South Asian Indigenous and local land-based communities reveals notable gaps that warrant critical attention (Khalil et al. 2020; Parekh 2023; Rodríguez et al. 2007). There is a deficiency in acknowledging and analyzing the intricate intersections of religions, gender, class, caste, and ethnicity within these communities. Studies have documented enduring colonial and patriarchal power structures that increase vulnerability, especially in times of disaster in Bangladesh (Dewan 2021; Dewan and Nustad 2023; Dewan 2023; Paprocki and Cons 2014). Existing studies often lack a nuanced understanding of how these intersecting identities shape the vulnerabilities and adaptive capacities of Indigenous women. Moreover, the limited representation of local knowledge systems in disaster literature remains a significant gap.

The power dynamics within local wetland communities in Bangladesh, particularly concerning western structures (i.e., mostly outsider-led), have been insufficiently examined in the context of disaster adaptations (Haque 2016; Nawaz and Rahaman 2019). There is a need to investigate how power relations influence decision-making processes and thereby impact women's agency in shaping and implementing adaptive strategies. Additionally, the voices and experiences of local women are often marginalized or silenced in the discourse on disaster adaptations (Choudhury, Haque, and Habib 2018; Khan and Haque 2010). Research should strive to amplify these voices, shedding light on the nuanced perspectives of Indigenous women regarding vulnerabilities, adaptive capacities, and the complex interplay of their intersecting identities. Addressing these research gaps is crucial for fostering more inclusive and effective community-led strategies that account for the diverse experiences and needs of local wetland women in the face of disasters in South Asia.

The Oxford English Dictionary online (2025) defines Indigenous as "born or originating in a particular place; *spec.* (now often with capital initial) designating a people or group inhabiting a place before the arrival of (European) settlers or colonizers. Also, with *to* introducing the place in question." In our research, many participants emphasized

that Indigeneity is deeply rooted in land-based spirituality, cultural education, and everyday practices. For many, the land is not merely a physical space but is regarded as sacred understood as a living entity, a family member, or an extension of the body. Indigeneity, as expressed by participants of this research, is centered on responsible and reciprocal relationships with the land, shaped through spiritual, cultural, and embodied connections. In recognition of this diversity and relational understanding, we intentionally chose not to impose a rigid definition of Indigeneity. Instead, we approached it as a fluid and hybrid concept, shaped by localized meanings, practices, and histories.

Severe climate events such as floods, droughts, hurricanes, and coastal storm surges pose a worldwide danger to both human lives and livelihoods due to their significant impact on crops, businesses, and critical infrastructure, significantly affecting local women communities in wetland areas, in particular in Bangladesh (Bamforth 2017). Within marginalized¹ households in wetland areas, challenges such as malnutrition and gender discrimination arise due to limitations on women's employment and temporary migration of their husbands (Kamal et al. 2018; Sharmin and Islam 2013). This vulnerability is rooted in women's roles as primary resource users and their reliance on natural resources for livelihoods, making them particularly susceptible to hazardous situations (Enarson and Chakrabarti 2009; Sharmin and Islam 2013). Minority women and their children can be adversely affected by social and cultural norms that favour individualistic resilience strategies over communal ones (Datta, Kairy and Hurlbert 2024), hindering organizations' ability to alleviate the suffering caused by climate change-induced natural disasters (Crosweller and Tschakert 2020). Building a sustainable community necessitates diverse perspectives and local government support influenced by political orientation, mandates, and civic leaders. Digital tools, media, and networks enhance collaboration among community members, particularly during crises and emergencies (Wahid et al. 2017).

In the wetland areas of Bangladesh, we focus on feminist community-led approaches to mitigate the effects of climate change, with special attention to the women most affected. This project is part of a broader study aimed at developing practices and policies for Bangladesh's vulnerable and Indigenous populations. We draw upon the experiences and insights of women in wetlands, delving into their understanding of climate change, the challenges they face, and their adaptation strategies. Our research focused on Indigenous and land-based community perspectives on climate change and adaptation, with particular attention to flooding as a key impact. The community (described below) experienced a severe flood in August 2022, which significantly shaped their concerns and priorities. As a result, much of the community's adaptation efforts have centered on flood-related resilience.

The objectives of this paper are threefold: 1) to explore the distinct impacts of floods in Bangladesh's wetlands from the perspective of women, 2) to investigate women's participation during floods, and 3) to compile solutions proposed by the community's women. To accomplish these objectives, we describe our positionality and theoretical framework, followed by details about our methodology and theoretical framework. We then present the outcomes of our data analysis, organized into themes and sub-themes. Finally, we address the issues raised by the women storytellers and offer recommendations based on our findings. Ultimately, we reflect on lessons learned and discuss potential areas for improvement.

Researcher Positionality

The role of researcher positionality is of utmost importance in Indigenous research, as it significantly impacts the research process and raises ethical considerations (Datta 2018; Wilson 2008). It is essential to recognize that Indigenous research frequently delves into sensitive subjects and engages with marginalized communities. Researcher positionality encompasses their cultural background, personal experiences, and social identity, all of which can profoundly influence their interactions with Indigenous participants and their comprehension of the issues at hand. Acknowledging and understanding one's positionality is crucial for approaching research with humility and respect, reducing the risk of inadvertently perpetuating harmful stereotypes or colonial attitudes. It empowers researchers to establish trust within Indigenous communities, nurture meaningful collaborations, and formulate research questions that are culturally sensitive and aligned with Indigenous worldviews.

Margot Hurlbert: I am a climate change adaptation and governance researcher in Canada with experience working with Indigenous peoples and communities in Canada, South America, and South Asia. My goals are to build the adaptive capacity of people, especially women, and their community, address climate change, and advance climate justice.

Barsha Kairy: I am a member of an Indigenous community in Bangladesh and belong to one of the minority communities in the country. My involvement in this research stems from a desire to give voice to the unheard. With enthusiasm, I listen to the stories and aim to become a storyteller on behalf of vulnerable communities to the wider world. My affinity with other communities motivates me to collaborate with them.

Ranjan Datta: I am a land-based and decolonial community-based researcher with 17 years of experience in conducting research with Indigenous and non-Indigenous communities in Canada and South Asia. As a minority scholar, I have developed a strong understanding of decolonial and anti-racist research frameworks, and my current research program is supported by a network of Indigenous, visible minority immigrants, refugees, and Black communities, scholars, students, practitioners, and professionals. Research is a lifelong commitment for me.

Our positionality is pivotal to addressing historical power imbalances in Indigenous research, where Indigenous communities have often been treated as subjects of research rather than active participants or collaborators. Through a critical examination of our positionality, we have redefined our research agenda to ensure that it aligns with the community's needs and benefits. Our positionality is fundamental for nurturing ethical, respectful, and empowering research relationships with Indigenous communities and advancing knowledge that genuinely serves their interests and well-being.

Theoretical Framework and Methodology

The decolonial feminist research framework holds a critical and transformative role in the context of disaster research within the wetlands of Bangladesh (Shefer and Bozalek 2022; Wijsman and Feagan 2019; Väyrynen et al. 2021). This region has rich cultural diversity and historical legacy and has experienced disproportionate impact of disasters, which often exacerbate pre-existing inequalities (Väyrynen et al., 2021). Decolonial feminist research acknowledges the interconnectedness of gender, power, and culture in the disaster discourse, recognizing that women, particularly in marginalized communities, bear a significant burden during disasters (Chapola 2022). By centering the experiences and voices of women in disaster-affected areas, this framework seeks to unveil the gendered vulnerabilities and resilience strategies that are often obscured in traditional research (Chapola 2022). Decolonial feminist research also highlights the critical importance of respecting and empowering local communities in the process, particularly those who have been historically marginalized and silenced. Decolonial feminist research thus provides a comprehensive framework that challenges existing power dynamics and colonial legacies, making it a valuable approach to understanding and addressing disasters in wetland Bangladesh.

We employ the methodology of qualitative research which is ideal for considering environmental justice for those who live at the margins. Furthermore, doing so through the decolonial feminist lens is indispensable for disaster research in the wetlands of Bangladesh because it recognizes the complex web of structural injustices and historical oppressions that shape the disaster landscape (Datta 2024; Wijsman and Feagan 2019). This methodology goes beyond traditional research paradigms by scrutinizing not only the immediate impacts of disasters but also their underlying causes, which are often rooted in social, economic, and political hierarchies (Datta 2024). It exposes the inadequacies of top-down, technocratic solutions and emphasizes the need for community-driven, context-specific strategies that account for the intersectionality of identities and experiences. By engaging in dialogue with local communities, particularly Indigenous and minority groups, and addressing their unique vulnerabilities and needs, decolonial feminist research fosters a more inclusive, ethical, and equitable approach to disaster management by embracing participation and giving voice to the women in the community. Ultimately, this methodology aims to redress historical injustices,

challenge hegemonic narratives, and promote resilience, not just in the face of disasters but in the ongoing struggle for justice and equity in wetland Bangladesh.

In line with the decolonial feminist research framework, we embraced deep listening and storytelling as our powerful and meaningful research approaches. Formally, Bangladesh does not acknowledge Indigenous people and has not adopted the United Nations Declaration on the Right of Indigenous Peoples. This has prevented a wholesome Bangladesh practice for identifying as a member of an Indigenous group. In our research we interviewed four people of whom two self-identified as belonging to land-based minority Indigenous groups, and three of whom were living and engaging in Hindu land-based practices. In August 2023, we engaged in conversations with these women, exploring in semi-structured interviews their experience in relation to the most recent flood, and valuing their narratives. Approximately 1% of Bangladesh's population is Indigenous and 7.96% are Hindu (BBS 2022). Our article concerns mostly, but not exclusively, findings from three interviews conducted in the watershed described below and its emergency response to a 2022 flood. Other interviewees provided insight into disaster response in Bangladesh. Two interviewees identified as Muslim, another as engaging in Hindu land-based practices and identified as Hindu. We conducted a total of seven interviews.

Deep listening played a fundamental role in respecting and honouring the perspectives of the women from the wetlands. Given that Indigenous perspectives are intimately linked to the land, steeped in the language, and deeply rooted in the Nation of the people, storytelling served to reestablish a profound connection with land-based wisdom (Datta 2018) and our interviewees participation in crafting solutions. As the interviews were conducted with both Indigenous and non-Indigenous community members present, participants from land-based minority communities were unable to openly share their experiences of oppression and discrimination in front of members of the majority group. In separate interviews with land-based minority participants, they disclosed powerful and deeply personal stories of marginalization. However, out of concern for their safety and based on their explicit request, we have chosen not to include these accounts in our findings. This decision reflects our ethical commitment to protecting the confidentiality, well-being, and self-determination of research participants. Our commitment extended to following traditional Indigenous rituals and ceremonies alongside conventional research methodologies.

In addition to qualitative research, using deep listening and Indigenous storytelling, we embraced reflective writing to delve more profoundly into our research findings and experiences. This practice allowed us the autonomy and freedom to engage in thoughtful reflection. Ultimately, it enabled us to distill and value our discoveries more effectively, enhancing the depth and quality of our research. We upheld strict adherence to ethical protocols, prioritizing the privacy and confidentiality of the respondents while demonstrating our respect and gratitude. Given the vulnerable status of the participants as members of a minority community, preserving their privacy was paramount. Moreover, we ensured that their participation was informed and entirely voluntary, underscoring our commitment to ethical research practices.

In our research we talked to women in the Jagannathpur Upazilla at Sunamgonj District as depicted in Figure 1 below.



Findings: Learning Reflections from the Women of Wetlands of Bangladesh

Bangladesh boasts a diverse array of ever-evolving wetland ecosystems, encompassing mangrove forests, natural lakes, freshwater marshes, reservoirs, oxbow lakes, beels (permanent freshwater depressions), haors (deep depressions in the northeast forming a vast inland sea during the monsoon), fishponds, tanks, estuarine waters, and extensive floodplains that are periodically submerged (Bird Life International, 2004). The country is home to several wetland regions. We conducted our research in the Kolkolia union of Jagannathpur upazila, situated in the Sunamganj district within the Sylhet division of Bangladesh. In Sunamganj district the ratio of Muslim is 88.16 % and Hindu community is 11.67 % of the total population (BBS 2022, p-37). Therefore, the majority is part of the Muslim community.

In our research, we engaged in multiple listening sessions, each focusing on different aspects of the recorded stories from the women of the wetland. We included women from both communities in our research. Our objective was to unravel the central themes and related topics discerned by our female co-researchers. After sharing and re-listening to the stories, we individually took time to reflect on our newfound insights, fostering a deeper understanding through introspection. Our research journey involved the ongoing process of listening and reflective learning, resulting in the development of main themes and sub-themes (see Figure 2). The primary themes encompassed the women's knowledge and perspectives, the impact of floods from the women's viewpoint, the roles women played during floods, and, finally, the solutions proposed by the women of the wetland.

Feminist Community-led Perspective of Disaster and Adaptation			
Women's Perspective on Disaster	Impact of the flood-Women point of view	Women's Role	Solutions
<ul style="list-style-type: none"> Nature in the past Climate Change 	<ul style="list-style-type: none"> Damage to Housing Health Food crisis 	<ul style="list-style-type: none"> How they participate Barriers and what needed to be done 	<ul style="list-style-type: none"> Growing awareness of society Role of the government Role of the researchers

Figure 2: Main Themes and Sub-themes

Women's Perspectives on Nature, Disaster, and Climate Change

Within the wetlands, the women possess a profound understanding of nature. When asked about their perspectives on nature, one woman from the Muslim community, expressed, "We exist because of nature; it sustains us. While we endure the consequences of human activities impacting nature, we believe God created us and nature for the animal kingdom." Their awareness extends to the significance and various aspects of the natural world. This same woman, a primary-school teacher, shared her thoughts on disasters, stating, "I perceive it as the unusual behaviour of nature. We experience droughts, heavy rainfall, floods, and crop destruction." While they may not provide a precise definition of disasters, they recognize that nature occasionally behaves erratically, leading to destructive changes.

The women residing in the wetlands have observed a transformation in Bangladesh's climate over the past 20 to 30 years. They have acknowledged climate change, with one woman from the minority Hindu community remarking,

"Bangladesh used to have six seasons, but now we only experience two. I gauge climate change based on this trans-

formation. The weather in Bangladesh has become highly unpredictable.” Consequently, these wetland inhabitants believe that climate change is underway, leading to a considerable alteration in the local weather patterns. When inquired about the disparities in weather compared to the past, another woman from the community noted, “I believe the weather has indeed changed. Rain patterns have shifted, with heavy rainfall occurring at unexpected times. Winters now resemble what used to be a typical summer season, and the monsoon arrives either too early or too late, adversely affecting our crops.” The women in the wetlands, from all the communities, possess a commendable level of knowledge about nature, disasters, and climate change, an asset for their community.

Women’s Perspectives on Flood Disaster Impacts

In the wetlands, the people suffered greatly because of the flood, losing their houses, animals, and belongings. Also, their health was impacted, and they faced a food crisis during the massive flood. This section discusses the impact of the 2022 flood from the viewpoint of the women of the wetland.

Damage to Housing

In this wetland area, the flood in 2022 was of such immense magnitude that it forced people to abandon their homes. One woman from the minority Hindu community recounted her experience, saying, “My house was destroyed. My elder son attempted to repair it during the flood, but the water washed away the roofing. We lacked the means to restore it.” The residents in this region are facing significant economic hardship, making it exceedingly challenging for them to repair their homes after the flood. Their houses hold immense value and are, in many cases, the only possessions they have. These homes carry great sentimental importance. When asked how people coped with living through the flood, another woman from the minority Hindu community explained, “Those fortunate enough to have relatives with sturdier, elevated buildings moved in with them.” Relatives with more secure accommodations played a pivotal role in supporting the flood-affected individuals during these trying times. However, for those without well-off relatives, the hardships during the flood were severe, as they had nowhere to seek refuge, and the rising waters swept away their belongings. Another woman from the minority Hindu community further noted, “Livestock were perishing, and herders faced a difficult choice between saving themselves or their animals. Essential documents and valuable possessions were also lost to the floodwaters.” The general populace in the wetlands already grapples with economic challenges, and the loss of everything in the flood exacerbated their hardships, making life even more distressing. Losing their identity documents was akin to losing their very identity.

Health Impacts

For the women living in the wetlands, the flood struck suddenly and lasted for a period of three to four days. Its consequences were profound. The flood brought about substantial suffering, particularly in terms of health. A woman from the minority Hindu community emphasized, “Pregnant women bore the brunt, and it had a detrimental effect on their unborn children.” During the flood, the transportation system broke down, hindering people’s ability to reach hospitals. This lack of access to medical care was particularly detrimental to children and expectant mothers. Another woman from the minority Hindu community further explained, “In case of emergencies, people were unable to reach hospitals. During the last flood, the water level rose to such an extreme that even boats could not navigate.”

The adverse effects of the flood were not limited to physical health; the mental well-being of the community was also deeply impacted. A woman from the Muslim community observed, “I witnessed people becoming despondent. Concerns about the safety of family members and relatives weighed heavily on their minds, aggravated by the non-functional mobile network. People experienced anxiety as they had lost everything in the flood.” It is evident that the adverse mental health conditions had repercussions on their physical well-being.

As per the accounts of the women living in the wetlands, they faced significant challenges in maintaining proper nutrition during the extensive flood. Typically, they would gather some dry food supplies to prepare for disasters, but these reserves became inaccessible during the flood. A woman from the Muslim community explained the situation, stating, “Most of the food they had collected was washed away during the flood.” Consequently, they struggled to obtain adequate nourishment for an extended period, leading to malnutrition. While some individuals may have had access to food, they were still unable to consume it. Another woman from the Muslim community shared her experience, saying, “The flood swept away my daughter’s cooking utensils, and we endured considerable hardship, unable to prepare and eat food.” Initially, many people attempted to endure the flood within their homes, but as conditions became increasingly unbearable, they sought refuge in shelters. The woman recounted, “We eventually sought refuge in a shelter where we had access to some food.” The shelter provided a source of sustenance during this challenging time.

Our research demonstrates that women’s perspectives on flood disaster impacts, especially concerning health and food crises, reveal the disproportionate burdens they bear during such calamities, highlighting their vulnerability to physical and mental health challenges as well as nutrition deficiencies among family members. These perspectives underscore the urgent need for inclusive disaster management strategies that prioritize the well-being of women in the affected communities.

Roles of Local Women During the Disaster

Participation of the Women

During the flood, the wetlands lacked adequate shelters for the affected population. However, a college principal took it upon himself to transform his college into a shelter, where people from nearby villages sought refuge for over a month. The principal, supported by the youth and his wife, managed the shelter. The wife of the principal, shared their efforts, saying, “We endeavoured to assist the flood victims. My husband purchased puffed rice, candles, saline, and other essentials.” The shelter became a dependable resource for the affected individuals, although there were some distressing incidents. She recounted one such occurrence, saying, “A younger brother of one of my students passed away. We were unable to provide a proper burial, so his relatives resorted to floating the deceased body.” She expressed her sorrow over her inability to address the situation, as she would have gladly assisted if she had been able. She actively supported the women in the shelter by providing food, healthcare, engaging in discussions on various topics, and caring for the children. She mentioned, “We had individuals for maintaining the shelter’s cleanliness and a generator for electricity to ensure the safety of the women. Generous individuals sent relief supplies, cooked meals, and medicines.” The Muslim women visited the shelter twice daily to monitor its operations and ascertain if the people required any additional assistance. The schoolteacher who is also the wife of the principal acquired leadership abilities during the flood. Other women (Muslim teenage daughters) also helped her to manage the overall system of the temporary shelter in the college. The women in the shelter understood that they have the power to help one another.

Minority Hindu women expressed complete loss in relation to housing, cooking, and even their identity while the Muslim women described their roles watching the suffering. Though people from every community suffered, minorities suffered a great deal. One of our story tellers stated that “the mainstream community is not willing to help the minority community as they used to do before. The people who help them, they will help them due to the politics of vote.” Minority Hindu women did not directly state they were discriminated against but did point out they were more “disadvantaged” than Muslim women as they did not have access to the same resources during the flood and suffered more acutely than Muslim women after the flood. One of the Hindu women said, “In the mainstream community, if one person was affected, his rich neighbors and relatives would help him. Hindu people could not build their house and they are still suffering. They have survived by their own initiatives, by their own efforts, by their own hard work.” These findings evidence that investments in Bangladesh’s water infrastructure (Barbour et al. 2022; Co-

hen et al. 2022) have not alleviated the vulnerability of women, especially minority Hindu women who are often landless (Paprocki and Cons 2014).

We found that Muslim women played active roles during the 2022 flood. They helped impacted people, despite major obstacles and even in patriarchal settings where women's contributions are frequently underestimated. These findings question conventional gender roles and emphasize women's ability to lead during emergencies. While some Muslim women found agency and an ability to engage in social work during the disaster (a marked change from their inability to do so pre-disaster), many minority women were not able to engage in social work activities in the shelter, confirming existing literature that shows that Bangladesh disaster assistance fails to benefit the poor (Dewan 2021).

The minority Indigenous and Hindu women could not find any hope in their situation and therefore could not find the courage to assist others. They do not have the ability or financial backup needed to exercise power. Moreover, the minority communities lost everything in the flood. The minority communities in the wetlands do not have resilient systems such as shelters, disaster tracking systems, access to relief, or any kind of community-based disaster service (Datta, Kairy and Hurlbert 2024).

Barriers and Solutions

In Bangladesh's major cities, women engage in various activities, including income-generating pursuits, social work, and cultural endeavours. However, the situation differs significantly in rural areas, particularly in the wetlands. The primary-school teacher cited above emphasized this, stating, "Women in rural areas often find it challenging to participate in social work." This highlights the relatively limited involvement and awareness of social responsibilities among women in the rural areas, a situation that they stated leaves them dissatisfied and in despair. Women in rural settings frequently adhere to the directives of their male counterparts, and patriarchal dynamics continue to influence these regions, including the wetlands. Nonetheless, those women who have been involved in various activities find it deeply inspiring. A woman from the Muslim community expressed, "Sometimes, I feel disheartened that I cannot contribute to society as men do. During the flood, I made a sincere effort to serve, and I found it gratifying. We cannot bring about change while confined to our homes." She reiterated that women need to step outside their homes to make a difference. She also remarked, "These circumstances must change. If a man can serve society, why can't a woman? This flood altered my perspective, and I believe that women can also make valuable contributions during disasters." It is important to note that the permission for women to contribute during the major flood was granted due to the crisis. In the absence of such an extreme event, the men might not have readily allowed women to assist the affected people. We suggest that this deep-seated mindset needs to evolve for the betterment of society.

Suggested Community-based Women-led Solutions

In this section, we delve into the solutions for the issues described in this article, informed by the insights of the women in the wetlands. Three key themes emerged from our discussions with these women: growing awareness of women's role in society, the role of the government, and the role of researchers.

Growing Awareness and Women's Engagement

Growing awareness of women's role in the community is fundamental for addressing the climatic challenges in the wetlands. The women stressed the importance of early response and preparedness. A woman from the Muslim community highlighted the delayed response from the local authorities due to logistical challenges during the initial stages of the disaster. We suggest that, to enhance preparedness, people must be proactive and willing to evacuate, when necessary, rather than hesitating to leave their homes. A woman from the minority Hindu community noted that those who didn't relocate to shelters did not receive relief. To empower the community, particularly women, education and awareness about disaster response and the significance of collective support are imperative. Women in the

wetlands face limitations to engaging in social and voluntary activities; this norm needs to change. Education on disaster response and fostering a mindset of mutual assistance can facilitate involvement of women outside the home.

Our research underscores the common scenario in the wetlands where immediate disaster response is lacking, hindering rescue, treatment, and relief distribution activities. It suggests that women-led perspectives may save a great deal of time and prevent mistakes if impacted women could connect with and learn from the experiences of other women who have dealt with disaster-related issues. This urge for women-led disaster management is supported by studies that show women are deeply connected to their ecosystem and possess valuable knowledge for effective disaster adaptation (Aziz et al. 2021; Sarker and Uddin 2011; Van et al. 2014). While augmenting their role in prevention and planning, a disaster may also provide a window of opportunity for women to advance their role in the community. Gokhale (2008) argues that opportunities to lessen women's marginalization emerge early after disasters because the chaos that follows momentarily upends and weakens male-dominated family structures and social control norms. Therefore, recognizing the central role of women in disaster management ensures a more comprehensive and inclusive approach, tapping into diverse perspectives and harnessing the strengths of local communities for sustainable adaptations in the vulnerable South Asian wetlands (Deb and Haque 2011; Shi 2011).

The women's perspectives on improving disaster resilience informed our recommendations to raise awareness and increase women's engagement in government and academia. These perspectives highlight the need for women-led community strategies. Best practices in disaster risk reduction must be aligned with their education and include proactive planning for disasters and enhanced infrastructure. Furthermore, the women's request that scholars concentrate on workable, regional solutions emphasizes how critical it is to close the gap between scholarly research and community needs. A more comprehensive and successful framework for disaster management may be created by integrating women's capacity for leadership and lived experiences into practice and policy.

Role of the Local Governments

Policymakers must increase public awareness regarding the value of wetlands and ensure stakeholder involvement in wetland management to safeguard human well-being and livelihoods. The schoolteacher emphasized the need for individual shelters during floods, controlled canal construction, and planned infrastructure development. Strengthening national legal and policy frameworks for wetland conservation, as part of Bangladesh's National Adaptation Plan (NAP), is a critical and urgent task. A woman from the Muslim community suggested that educational institutions such as schools and colleges can be used as shelters during floods. Furthermore, she highlighted the importance of constructing houses at safer elevations, effective canal management, and well-planned infrastructure development to mitigate flood risks.

The Role of Researchers

According to the women, researchers and experts play a pivotal role in transforming the lives of Indigenous communities. Women from both communities emphasized that it is important for researchers to focus on adaptation and awareness-building programs. Researchers can contribute by incorporating practical knowledge into curricula, moving beyond theoretical teachings. By conducting studies on the wetlands, researchers can identify practical solutions and disseminate this knowledge to the community. One of the women further emphasized the need for practical knowledge, including pre-, during-, and post-flood measures, as well as making homes flood-resistant. Developing life skills and practical know-how is essential for the community to effectively cope with disasters. In summary, addressing the challenges faced by the wetland communities requires a multifaceted approach that involves raising awareness in society, policy changes and increased government involvement, and active contributions from researchers and specialists to empower these communities to adapt and respond effectively to natural disasters such as floods.

Conclusion

The findings of our research shed light on the insights and life experiences of the women who live in the wetlands of Bangladesh, especially as they relate to overcoming the difficulties caused by natural catastrophes such as floods. In addition to emphasizing women's distinctive contributions to comprehending disaster resilience from a feminist community-led viewpoint, this discussion places the women's insights within the body of existing literature. Wetlands in Bangladesh are highly susceptible to a range of natural calamities, including frequent floods during the monsoon season, lightning strikes, and droughts. These environmental challenges, poverty, food and water shortages, and the destruction of homes, severely impact the inhabitants' health and well-being. These impacts are expected to worsen with climate change. In this article, we explore the knowledge of women in these wetlands regarding climate change, the effects of floods, and the roles of women during flooding. We also propose solutions that are informed by our conversations with these women. The women of wetlands in Bangladesh have a deep connection to nature and are aware of the impact of climate change and the changes in Bangladesh's seasons on their lives. Previous research has shown that all women, Muslim and minority Hindu, face significant challenges and lack of agency which is a result of colonial powers (Dewan and Nustad 2023). During flood disasters, women face multiple challenges including housing destruction, health crisis, and food insecurity and these impacts align with global studies on gendered disaster experiences and highlight women's vulnerability due to pre-existing inequalities (Dewan et al. 2014). We suggest that structural inequalities exacerbate the adverse effects of disasters. Patriarchal systems and cultural norms frequently restrict women's capacity to participate outside of dire circumstances. Promoting gender-inclusive disaster resilience requires addressing these obstacles.

Decolonial intervention involves reimagining power, knowledge, and relationships to honour the diverse experiences of colonized communities. A feminist community-led approach, rooted in equity, care, and intersectionality, shifts focus from institutional solutions to grassroots efforts, prioritizing the voices and agency of women, Indigenous communities, and marginalized groups. Our research emphasizes the importance of women's engagement and leadership for gender equality. There is a need for women-led community-building initiatives that include both men and women, as individuals often work cooperatively with family members in the wetlands. Previous studies also found the gender engagement crucial in disaster adaptations in South Asia, particularly in Bangladesh (Alam and Rahaman 2019; Yadav and Lal 2018). As found in previous studies (Resurrección et al. 2019; Van Koppen 2017), women are primary caretakers and foster resilience and preparedness against environmental challenges like floods and cyclones. Recognizing and promoting women-led community building is essential in these regions.

Our research also suggests that women-led disaster management and leadership is important for decolonization. In the wetlands women use their traditional knowledge to devise adaptive strategies to face disasters. Their leadership is holistic, and it is important for timely disaster response. Similarly, previous literature found that women-led initiatives foster community solidarity and contribute to the resilience of vulnerable regions, recognizing and supporting their vital roles in resource management, agriculture, and community well-being (Choudhury, Haque, and Habib 2018; Karistie et al. 2023; Khan and Haque 2010). Crosweller and Tschakert (2020) recommend that governments incorporate strategies to address the socio-economic causes of vulnerability, inequality, and injustice directly into resilience policy frameworks. Augmenting the capacity and role of the minority Hindu community will be important.

Implementing women-led flood crisis response in the wetlands of Bangladesh through a decolonial framework could change the established power system. The future holds promising prospects for integrating feminist community-led perspectives in disaster adaptations in South Asia and globally. As awareness grows regarding the multifaceted impacts of disasters, there is a growing acknowledgment of the need for more inclusive and gender-sensitive approaches to resilience-building. We hope our feminist framework will become integral in shaping policies, interventions, and community-led initiatives, ensuring that the unique vulnerabilities and strengths of diverse populations, particularly women, are considered. By centering the voices and experiences of women, these perspectives aim to foster more equitable and sustainable adaptations that address the root causes of gender-based vulnerabilities.

Endnotes

1. Marginalized groups are generally considered to have limited self-representation. They are consistently ignored by powerful actors and are subject to neglect, bias, discrimination, and mistreatment even when they make a meaningful social contribution (Chowdhury 2021).

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