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Unwrapping the Memory Box

Gendered Livelihoods in a Forest Community in the Sundarbans, Bangladesh

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Abstract

The Sundarbans, the largest mangrove forest in the world, has been undergoing significant ecological changes due to climate change-related weather events since the late 1990s. This forest, situated in south-west Bangladesh, provides livelihood services to 3.5 million people. The livelihood provision of the Sundarbans forest has been invented due to climate-induced disasters, such as cyclones, sea-level rise, salinisation, heat waves, and flooding. Considering the impacts of cyclones Aila and Sidr, this autoethnographic study closely examines the long-established perceptions of women and men about the resources of the Sundarbans. While doing so, this study uses feminist political ecology as a theoretical framework. This study examines how these two cyclones transformed lives and gendered livelihoods of the villagers of Shora in the Sundarbans forest.

Keywords

Sundarbans forest – cyclone – livelihood – gendered knowledge

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1 Introduction

Forests cover almost 30% of Earth's land surface. However, this diversified resource has been decreasing at an alarming rate around the world (FAO, 2010), affecting people who are dependent on forest resources for their existence. Forests have significant influence in maintaining the ecological balance in society with economic, social, and cultural implications in our lives. They work as the single most important carbon sink for mitigating the adverse effects of climate change and provide habitat to at least 80% of terrestrial biodiversity (World Wildlife Fund, 2019). Around 350 million people who live near dense forests depend on them entirely for their existence. Worldwide, forest industries provide employment opportunities for around 60 million people (Chiwana-Karltun et al., 2017). In developing countries, around 20–25% of the rural communities manage their livelihoods from forest resources. Indeed, about 200 million indigenous communities are almost wholly dependent on forests resources (Langat et al., 2016; Newton et al., 2016).

Over the years, the people of Shora in the Sundarbans in Bangladesh have acquired a thorough indigenous pattern of knowledge about the world's largest mangrove forest that they inhabit. This knowledge is discernible from the perceptions of informants about the region, its resources, and usage. To find out how inhabitants have acquired that knowledge about the forest, how forest-ranging has become a practice, and what services they can procure from it, it is useful to decode the structure of that knowledge. By exploring pertinent literature, this study interprets the assumptions of standpoint theory and, based on empirical data obtained from the study site, it focuses on the experiences of the forest-rangers about their use of available natural resources.

2 Gender and Livelihood Dependency on Forest Resources: An Overview from the Literature

Globally, about 1.3 billion people in low and middle-income countries, including ethnic groups or indigenous people, live below the poverty line and 70% of them are female (Anzum, 2019; WHO, 2002). There, communities are mostly dependent on forests for their livelihood. Studies show that forest management practices have differing roles for men and women (Chiwana-Karltun et al., 2017). However, the latter's role is often undervalued, and they are often denied the opportunity to participate in the forest management decision-making process. The gendered role in sustainable forest management practices is an under-studied field of inquiry. According to the World Bank (2002), gen-

der analysis is a valuable tool that helps obtain evidence on forest resource use, responsibility, perception, and necessities, and serves as the most crucial role in forest investment design (World Bank, 2008). Gender equality is needed for establishing livelihood sustainability (Phan et al., 2019). Hence, livelihood dependency on forest resources generally accommodate the needs of forest-dependent people, and if women are ignored, the sustainability of these assets may be stalled.

Forest dependency has different levels of implication for men and women. Traditionally, men are mostly into hunting and fishing, whereas women are responsible for collecting edible forest plants, fuelwood, water, medicinal herbs, and the like. These women travel long distances and work for extended hours to collect resources as nearby places are often affected by climate-induced disasters. Also, since fuelwood collection requires considerable physical effort, women may face health hazards by carrying heavy loads.

Many indigenous women in developing countries are involved in the production of non-timber forest products. However, as they constitute a marginalised group, they are always ignored and have traditionally been unwelcome in the market setup. They often face difficulty in participating in economic forest activities due to the disinterest of decision-makers to integrate them into economic and social processes (Jeanrenaud, 2001; Sunderland et al., 2014). Having the forest livelihood earning knowledge also plays crucial role because without proper knowledge, one cannot utilise the ways of earning a livelihood from forest resources. Lack of knowledge among women in this regard also facilities the marginalisation from fair and equal participation in earning a forest-based livelihood (Sunderland et al., 2014; FAO, 2019). Even in cases when women possess forest-related knowledge, they are intentionally kept away from forest governance (Mai et al., 2011; Roy, 2019). Often heavy physical workloads, responsibilities of unpaid domestic work, and family obligations create disparity in the number of participants (FAO, 2019).

The gendered roles in the forestry sector can also be analysed based on the typologies of forest management activities in different parts of the world. One of the practices in developing countries is community property resource management, which is one of the most efficient options for poverty reduction and economic development, with local communities being responsible. However, in some parts of the world, for instance, in Nepal, women are widely discriminated against as they have very little participation in the process, which is often dominated by elites or traditional decision makers. They are often unaware of rules and regulations, goals and policies of community forest management, and their recommendations are never valued in the process. Female-headed households are also highly disfavoured in resource gathering, being unable to

collect forest products in the way male-headed households do and to negotiate and influence forest management decisions on their behalf (Adhikari et al., 2004). Like Nepal, in many other places women are the victim of this acute discrimination in this forestry sector. Even though for ensuring sustainable livelihoods consideration of both genders is needed, in most cases the opposite picture is found (Langat, 2016; FAO, 2019). And while female members are collecting those resources, they hardly receive the authority to sell them and, as a result, the income does not bring them any decision-making power or financial empowerment (FAO, 2019).

In developing countries, the effects of environmental degradation are determined in gender-specific ways. The distribution of power, property, class, and gender structures determine people's relationship with nature. For instance, in India, women have been at the forefront of the environmental movement by maintaining a reciprocal link with nature due to their marginality (Agarwal, 1992). This is because women having better knowledge about agricultural processes and tree conservation, equal involvement in the agricultural sector, and better familiarity and access to products harvested from the forest (Fortmann and Rocheleau, 1985; Hoskins, 1982; Soroptimist International, 2019). Another feature in developing countries is men's greater interest in cash crops, while women tend to be allied to subsistence crops. Hence, decisions about forest management include the various needs of men and women. Often the better-off women participants are seen to dominate the formal and informal forest institutions due to their social status and education, but the poorer ones are left out of the planning process in sustainable forest management.

The socio-cultural status and relationships of men and women also determine the nature of their domination over forest resources. In the tropical region, many forest-dependent communities follow a patriarchal tradition where a masculinised system dominates the land ownership pattern and the overall system. The vulnerable societal status of women gets worse with the over-exploitation of forest resources by men for commercial purposes in an unsustainable manner. Though womenfolk play a crucial role in forest conservation, their contributions are hardly recognised in customary tenure and land rights arrangements. According to the International Union for Conservation of Nature (IUCN), though global REDD+ policies acknowledge the need to integrate indigenous people in the policy process, they do not recognise the "differentiated needs of women within these communities" and a strong male-ness in the forestry sector endures (Gurung, 2011:19–20). This is mainly influenced by the social norms and religious philosophies that determine the ethnic differentiations, castes, rural-urban communities, etc. Consequently, women always

fail to gain ownership of natural resources, and their dependency on the masculinised society continues (Aguilar, 2011) even though they are responsible for 70% of the world's work, they are disproportionately more vulnerable to climate change than men (Anzum, 2019). Hence, the deforestation and degradation of forest resources do not only worsen the environment; they also increase the hardships that women face.

In Bangladesh, women constitute nearly half (48.5%) of the total population who live in rural areas and are heavily dependent on forest products. In 1994, policymakers first recognised the need for women's participation in the conservation of forest resources from a social forestry perspective. The National Forest Policy recognised their role in the forest sector and sought to encourage them to participate in both homestead and farm forestry that focused on afforestation programmes. However, the declining natural resources often put constraints upon women due to their class position and gender and their enormous knowledge on natural resources has never been fully utilised. They usually work as wage labourers in the forestry sector and earn less than men even though their contribution is similar. At the same time, Bangladeshi women also face severe challenges from the perspective of land ownership. Policymakers often assume that men, being titleholders, would share the land equally with women, but in reality, the opposite is the case. As a result, women cannot participate in nursery development or obtain enough credit for the ventures they undertake. Moreover, landless women often represent the more impoverished group of the rural community. They are excluded from many forest activities due to their inability to meet the requirements of participation in NGO-based programmes.

In the coastal areas of Bangladesh, women are severely affected by disasters, saline intrusion, and the subsequent loss of resources. Men can go to urban areas for job opportunities, but women need to stay back to take care of the family. Hence, forest resources remain as the only option for their livelihood (Roy et al., 2013) that depends on the collection of fuelwood from the deep forest. These women are incredibly conservative due to the influence of various social norms and superstitions and put up with hardship to get away from extreme poverty. They are also forced to be involved in activities, such as shrimp cultivation, which pose various health hazards by having to remain long hours in the water.

The World Health Organization reported that women and children are particularly affected by disasters (WHO, 2009; Roy et al., 2013). Cyclones like Sidr in 2007 and Aila two years later devastated the life of these coastal people and women, in particular, suffered the most. Additionally, Bangladesh is also a home of various ethnic minorities who mostly live in the hilly regions. These

groups being highly disadvantaged, often feel detached from their behaviour and traditions. Due to deforestation and land degradation in the hilly regions, their livelihoods are also at risk. As indigenous women are responsible for fetching water, collecting fuelwood or fodder, their hardship is heightened with the disintegration of forests.

Women in Bangladesh have always been the nurturer and caregiver of the family. Yet, they are deprived and often denied opportunities to participate in the economic advancement of their households along with men. Hence, to pursue sustainable forest management, it is imperative to include women in the planning and decision making and to enhance their awareness and negotiation capacity to stand for their rights in the local, national, and global levels. Their rich knowledge and close relationship with nature can be a useful tool in the framing of a productive forest resource management policy.

3 Methods and Materials

The researchers followed auto-ethnography as an approach to research and writing that seeks to describe and systematically analyse (graphy) personal experience (auto), in order to understand cultural experience (ethno) (Ellis et al., 2011). This approach utilised two focus groups (one with the Shora females, and another with mixed group participants) and 48 interviews reflecting livelihood stories. Besides, direct observation was conducted in the Sundarbans forest and the households of the Shora people. A gatekeeper (a 22-year-old male college student) was recruited to introduce the researcher to the Shora community and in establishing rapport and trust with the villagers.

A total of 48 participants (24 males and 24 females) aged between 25 and 45 years were recruited by applying the purposive sampling technique. This focused group had combined male and female participants so that the scenario of both genders could emerge equally. Four categories of women ("tiger" widows, divorcees, married, and young women) and men with diverse vocations were recruited as participants. This age group was selected to allow the participants to share their memories of Cyclone *Aila*, along with its associated consequences on the livelihoods and local infrastructure. The fieldwork in Shora spanned three months.

Each focus group discussion (FGD) lasted 90 minutes, whereas each life story interview took around 50 minutes. Participants were familiarised with the study aims and their consent recorded. Participants shared livelihood-earning stories and described the impacts of *Aila* on livelihood activities in the Sundarbans and these were audio-taped. The transcribed focus groups and inter-

view data (Bengali texts, direct quotes) were coded. Later, thematic analysis (Braun and Clarke, 2006) was utilised to develop key themes and associated sub-themes of the study.

4 Acquainting with the Forest

The observational data from the area indicates extreme poverty with inhabitants living in penurious conditions that force them to a life of enduring struggle with local resources that they can access and avail (FAO, 2019). This is a phenomenon that transcends the boundary of the mundane life's struggle and encroaches into their entertaining and didactic rituals of story-telling. Typically, such stories are narrated by the senior members of the family, including parents and grandparents. Each story describes the tragic scenarios of their lives concerning the forest. The practice of story-telling, which has become a trend in the community, is allocated a suitable time slot, the late evening after dinner is the most usual one. Most often, their conversations with their family members involve the history of the Sundarbans, forest-related long-established practices and beliefs, their forbearers' access to the forest, and the present-day challenges they face.

During winter months, family members face the intense cold, windy weather as they all gather in the courtyard to keep themselves warm around a fire and converse with each other about what happens daily in the household. Besides, the discussion touches on what has been collected from the forest, the market value of the gathered forest resources, and the prediction of how long the market value will contribute to their welfare.

It is evident that for acquainting themselves with the forest, the children and youth prefer interacting with a *murubee* (a community elder) who is a pious, knowledgeable, experienced, and respectable person highly familiar with the Sunderbans, which they call *bada, mali*, or *jongol* (Roy, 2019). The dependency on any old member shows that the "experiences" that those older members have acquired, is considered valuable as that community lacks documented or scientific knowledge regarding the method of earning a livelihood. When the researcher requested one person with such experience to share his familiarity with the Sundarbans, he did so with great enthusiasm:

> The bada is like my son or daughter. Our existence is almost inconceivable without it. We were a joint family along with my grandfather and grandmother. My father was the sole earner who used to go to the forest regularly. Once when our home was at risk, with the permission from

> the community leader my father made a small house nearby the riverbank in 1970. I recall how I moved straw, wood and timber from bada to help my father and uncles build the house. My grandfather narrated my father's dedication in managing food and belongings for the family. It was a challenging task collecting forest resources and I was encouraged to support my father. As I was a kid, I could not meet his expectations. The wise grandfather once took me on a boatride in the river furrowing through the forest and chronicled history and livelihood supports of the Sundarbans.
>
> A Murubee, aged 73

Women informants are acquainted with the forest not only from lessons learned at primary school, but from listening to their fathers' forest-going narratives and husbands' descriptions. Their opinion about the forest is influenced by their subservient attitude to the patriarchal agent, a phenomenon that is part of the natural order of Bangladesh's patriarchal society. This order assumes women as daughters, wives, and mothers and where women's "ideological" stance at the community level is affected by the men's gender outlook (Sultana, 2010). Men, being the "head" of the family, make all the decisions and control women's voices relating to their forestry experience (Ifegbesan et al., 2016; Roy, 2019; FAO, 2019).

5 Forest-Going Patterns

The observation data reveals that women living with their husbands hardly have access to the forest. However, the study documents two categories of women, such as *jele-baoali* and "divorced women" who have access for their sustenance, as opposed to married women who only rarely venture outside the homestead. The former is socially vulnerable in the region and, consequently, are forced to venture into the forest for survival. The study also documents the characteristics that proliferate in connection with the forest-ranging of men.

5.1 *Jele-baoali Women*

Jele-baoali women belonging to the Muslim community in south Shora are involved in making nets and fishing all the year-round. These forest-going women set off towards the Sundarbans before daybreak in groups of five or six, usually plying wooden boats. Possessing an indigenous pattern of knowledge, they range deep into the forest and catch a wide array of fishes (mainly *pona*) from the canals using a special kind of net. They also collect firewood, twigs and dry leaves and cut dead trees from the river and canal-side areas. Two indige-

nous methods of cutting trees are followed, one by using *kolomchekur* (similar to a fountain pen) and the other known as *ar cope*—a local name of tree cutting.

The *jele-baoali* women are traditionally bounded to the community for three main reasons: being born into impoverished families, largely ignored by the relatively rich in the community, and typically construed as domestic servants after marriage. The representation of knowledge about the activities and experience of these women demonstrate a contextual picture of the study setting. It is equivalent to the "sciences from the below" notion argued by Harding (2008:15), which prioritises knowledge production on the women's experience from the grassroots level (e.g., the remote setting of a territory that is equivalent to the Shora). In interpreting Mohanty (1991), it is argued that the standpoints of the *jele-baoali* women depict the knowledge production of fishing community women of less-developed countries.

5.2 *Divorced Women*

The in-depth interview data reveals that the Shora men wed multiple times and, thus, turn polygamy into a common practice in their community. Forest-dependent men prefer to wed teenage girls for satisfying their sexual needs. It is said that fish enriched with iodine and protein increase their sexual "power." The physical attraction between men and women or teenage girls frequently leads to unprotected sexual relations, which often results in unplanned pregnancies. According to local customs, men are obliged to marry pregnant girls or women by divorcing their previous wives or taking their permission to do so.

Divorced women never receive maintenance (in the form of money) from their husbands. After being divorced, a woman must return to her father's house, unwelcome and without alimony. Such a stressful situation inevitably makes them a burden and they are socially excluded in the community, and both men and the married women stigmatise them.

Bedhoba pollie offers habitat for divorced women in a friendly environment where everyone is treated as a sister. A group consisting of four to five divorced women rent a boat for a day for a forest trip. This group of women calls the Sundarbans forest as *jongoli*, which they consider as the best option for generating income.

Forest-going divorced women worship the Hindu goddess, *Mabonbibi*, which is believe to be the symbol of women's power and they feel her presence in the forest. A live hen or goat is scarified to the forest in her name to safeguard them against dangers lurking in the forest. However, being Muslims, they also silently recite verses from the *Holy Qur'an* before entering the forest in boats to work collectively in search of olives, *kawra* (Soneratia Apetella) fruits, *omora*

fruits, *goran* (*Ceriops decandra*) timber, and small branches of mangrove trees. Sometimes, they sell green and ripe olives in the market to earn money. The divorced women do not possess the skills of furniture making, and thus they sell the *goran* wood at a cheap rate to the local agents of the timber houses, but the twigs of the mangrove trees are used as firewood for cooking at home.

The male-dominated society in the studied region makes the social acceptance of the divorced women living at the *bedhoba pollie* problematic. Because of patriarchal norms and values that place men in a breadwinner position both in the family and in the community, the conservative Islamic outlook of the community members, and the lack of inclusion of women in the local governance system (i.e., union councils), the divorced women are forced to set up their own agency and social skills in the community. These findings are well linked to the assumptions of Harding (2004b) who highlight the constitution of the relegated women group's perspectives and the power of dominant social and political institutions, including patriarchy and local governance. These also show the divorced women's social exclusion and marginalised position in the study setting where they are considered to be an oppressed group, and their social position is not recognised at the community or state level.

5.3 *Married Women*

The informants reported that with little schooling and without understanding about familial responsibilities, most girls in the region under the age of 20 are married off. In the post-marital phase, the wives take over conventional family roles, including cooking, childbearing, and caring for children and in-laws in the household. Extreme poverty and natural calamities, force them to engage in paid and unpaid activities outside their homestead, such as serving as housemaids, fetching water from a distant deep-well, vegetable gardening, maintaining children's schooling, etc. Beyond fulfilling these duties, rural women execute these unpaid works to uphold familial bonds in the way their husbands demand. Shora women spend four to five hours performing these tasks making it difficult for them to find time to undertake paid work. This practice of doing unpaid jobs outside the homestead started after the catastrophic cyclone *Sidr* had extirpated crops, vegetation, and other sources of living, degrading the already limited local resources in the area.

Women's sources of income from extremely poor families include crab catching, goat rearing, owning grocery shops, sewing mattresses, making dresses, and selling traditional garments. Generally, women from a well-earning family are unlikely to be involved in these activities. The limited number of entrepreneurial women obtain small loans from micro-finance programmes offered by several national and local NGOs (Grameen Bank, Broite,

Asha, and Muslim Aid). Such programmes enable women to operate entrepreneurial activities. The owner of a grocery shop stated that:

> The daily earning of my husband (boatman) is too meagre to afford food for five. With small amounts of money earned only during summer when tourists visit the forest, he always finds it difficult to lead a decent life. I recall starving along with my children, not being able to obtain three square meals a day. I could not tolerate their suffering. Taking a loan from Grameen Bank, I started a small grocery shop where Shora women and men would come to purchase daily essentials (plain rice, *muri* (puffed rice), *chira* (flattened rice), spices, sugar, salt and twine). Now I earn Tk. 150 to 200 a day. It has enabled me to provide ancillary economic support to the family.

6 Men and Forest-Going Patterns

The presence of male members in exploring forest resources is more evident than women. When asked about their understanding of the forest, the male participants pay specific attention, as although the marauding Royal Bengal Tigers lie in wait, it is a very beautiful forest for them to roam through and from which to earn an income. The male participants articulate that the green leaves of plants appear stunning on a sunny afternoon, and viewing the loping movement of the *mayibiehorin* (deer) in the daylight is an extraordinary spectacle. The male participants like to discuss when and how they visit the forest and what they do during their time in the forest. From the in-depth interviews, it emerged that the men go to the forest for periods of less than two days or periods longer than seven days in the dense part of the forest.

Regarding the short periods, the participants note that during summer months, especially in May, June, and July, they have to wake up before 3 am. After saying Fazar prayers (dawn Islamic prayer) and eating breakfast with *pantavat* (fermented rice), the men prepare to leave for the forest. The participants use *lungi* (sarongs), napkins and a fitted shirt as their uniform. They also anoint their entire body with mustard oil to keep it slippery, a process that they believe safeguards their skin from the attack of poisonous insects in the forest water. A group of 10–15 married men over 35, and some younger men aged around 25–30, hire a motorboat for ceremoniously entering the forest. Before stepping on the motorboat, they take entry cards issued by the local forest office, axes, ropes, shovels, knives, baskets, nets, handmade traps with *borse* (a locally manufactured fishing line), pieces of beef to be used as food for crabs, and drinking

water. Initially, they drive the motorboat very fast to vie with the sun's rays to reach the canal. The moment they get closer to the bank of the canal, everyone recites the *dowa* of the prophet Younus. They alight from the boat with their equipment and begin felling the timbers of the *hetal* (*Phoenix paludosa*), *kawra*, and *sundori* (*Heritiera fomes*) trees.

It takes approximately three to four hours to collect timber from its main roots, and after felling the tree, men strike at upper part of the trees with their sharpened axes. This process also involves shovels to separate the timber from soil and thus requires adequate muscular strength. Afterwards, the men strongly knot the separated timbers with ropes for placing it under the motorboat. Once the high tides from the river replenish the canals, the men depart with the timbers they have accumulated. While returning, each group forks into two sections on separate boats for placing the handmade traps in the river to hunt crabs. The men add a piece of beef to the *borse* for baiting the crabs into the traps. Whilst this is legal behaviour, illegal logging occurs deeper in the forest, and the poor honey-collector community, Mawali, breach the law by going into the forest during the Bengali months of Baishak and Chattro, as these are the best months for gleaning honey.

> I have seen my Mawali (honey-collector) father gathering honey from the deepest part of the forest. Collecting honey is a challenging task, as bees in the hive bite the collectors. However, before going to the forest, my father, along with his friends, planned a stay in a suitable corner of forest where the hives of honey were likely to appear. After the planning phase, they procured the foodstuffs and requisite cooking and sleeping instruments and loaded them on the motorboat. They set off for the journey at midnight, when the river, Kholpatura, swelled up with high water. It took them 48 hours to reach their destination. Before harvesting honey, the team uttered the Aitalkurse as a talisman to protect the area from the sudden assault of marauding animals. They collected honey by using their indigenous skills.
>
> Male participant, aged 75

7 Forest Providing Basic Needs

There are three kinds of crucial life-saving forest resources, such as honey, crab and shrimp, and numerous varieties of fish and trees. During the prolonged drought in the summer that parches the local tube-wells, the Shora people suffer from a dearth of safe and pure drinking water. The groundwater is irretriev-

ably contaminated with arsenic, and the water layer plummets unusually. The informants are all convinced that honey is the best natural gift created by God and the women who are often responsible for supplying water for the family reckon that taking honey saves them from going to a distant place for bringing water. Considered to possess medicinal properties, it is taken with bread for breakfast.

The study setting is known as the "White Gold" of Bangladesh precisely for the glut of shrimps available there, and especially for the women's professional involvement in this sector. The narrative documents women's shrimp catching in the forest canals:

> Shrimp catching is one of the primary sources of occupation for women in Shora. Small shrimps (fingerlings) are found in the saline water of the small rivers of the forest. They are caught twice a day. When the canal water swells, we set up nets in order to catch the fingerlings. After we collect and bring them home, the local middlemen, locally better known as the *furi*, purchase them from us. The middlemen then sell these shrimps to the local market at a far higher price than they buy with from us. Because women are impermissible to go to the market and are unaware of the current price of shrimps, we are often duped by the dishonest middlemen. With the pittance earned from catching shrimps, we have to eke out a living and affordable education for our children.
>
> Woman shrimp catcher, aged 43

Informants believe that the exquisite beauty of the *sundori* trees attracts tourists from afar. They prefer a trip by boat into the forest to savour the extraordinary spectacle of the mangroves. Ferrying them across the forest is a good source of earning money in the summer.

The timber of the *sundori, gaya, bain, posur*, and *hetal* trees is very useful. In fact, the Sundarbans is believed to have been named after the *sundori* tree. Its timber is resistant to moisture, so the aristocratic urban people buy it at a higher price to construct fashionable houses in the city. The prospect of earning higher value motivates the local people to fell the *sundori* trees for commercial purposes. On the other hand, the *gaya, bain, posur*, and *hetal* trees are collected for firewood and for making diverse things, including furniture and electricity poles. The wood used for making pencils is from the *dundol* tree. Also, pickles and *tok* (sour) come from the olive and *kawra* trees. However, by breaching the laws, the inhabitants damage the potential of the forest resources. The discussion that follows enlarges on the diverse ways the forest resources are used in the study setting.

8 Illegal Activities inside Sundarbans

Munanura et al. (2018) remark that poor people are the main forest users but allegedly commit illegal activities. The case is, more or less, similar in most of developing countries. The illegal felling of the forest trees results in gradual deforestation, a grave crime perpetuated by cartels acting from behind the scenes (Islam and Sato, 2012). Concurrently, illegal felling of trees by the local people and the malfeasance of the forest officials who often act in collusion with the cartels have been aggravating the situation. Despite the Forest Act of 1927 (legislated during the British colonial period), amended in 1974 and 1990, for the preservation and development of the Sundarbans, the stipulations have not been implemented (Ahamed and Ahamed, n.d.). Political instability, weak administrative forest policies, self-perpetuating grand corruption, bureaucratic malfeasance, and their collusion with the cartels impede the implementation of existing laws.

The infraction of the forest law by the rural people, including the members of the law-enforcing agencies, is a common practice in Bangladesh. The unrestrained human interventions, illegal logging, and administrative indifference have been causing the extinction of Sundarban's wildlife. The in-depth interviews found that approximately 95 % of the area's inhabitants and forestry officials violate the law by swindling forest resources for their own benefits. The meagre salary that the forest department pays to forest officials impels them to sell the valuable timber to dishonest businessman in the area, as claimed by the informants. Officials take extra money for endorsing the requisite forest entrance letter, an activity that continues throughout the year. Since the policemen and local leaders collude and connive with them, the officials feel emboldened enough to perpetrate such machinations. The extorted money is shared between law enforcement officers, forestry officers, and local politicians.

The focus group data reveals that forestry officers insist on disallowing women into the forest since they never pay bribes in exchange for the permission letter. When forest officials on duty locate any non-permitted women's shabby and hazard-prone boats in the forest, they capture them to extort money from their occupants eager to get them back in one piece. On the other hand, the permitted men's boats are secured against lucrative bribes.

It is claimed that there is no systematic training on how to use the Sundarbans in a sustainable way, as stipulated either by the forest department or NGOs working in the region. The lack of knowledge on the scientific use of the Sundarbans forest forces the informants to continue with the traditional practices for gleaning forest resources, often causing inadvertent harm to the forest as an

inexorable offshoot. The Forest Peoples Programme (2013) brought into focus the indigenous communities' traditional knowledge, customary practices, rituals and beliefs, unwritten rules and regulations, and the use of mangrove resources that serve their livelihood to a great extent.

9 Changes in the Use of the Mangrove Forest Resources

The most important sector of the Bangladeshi economy is agriculture, contributing almost 20% to the GDP and employing 63% of the population. But agriculture in Bangladesh relies heavily on the weather. Often at its mercy, the entire harvest can be lost when cyclones hit rural villages. Therefore, extremely poor villagers in the coastal belt must fight against environmental calamities to make their living sustainable. The *Dainik Pattrodut*, a popular local Bengali newspaper of the Satkhira district, reveals that Shora is the village most susceptible to cyclones in the country. The narratives of the victims document the changes in the use of the forest resources in the aftermath of calamities.

The informants recalled that though the temperature at Shora during the summertime was swelteringly hot, the steady cool breeze from the riverside and the shadows of trees made the habitat comfortable for them. They also recollected how on their way back home from the fields they stopped under the trees to ward off their exhaustion. During the rainy seasons, the precipitation was enough for the crops to thrive. They remembered cutting the branches of trees to make necessary agricultural equipment, like spades, harrows, and *kasi* (scythes). At harvesting time, wives accompanied their husbands to collect rice from the paddy fields. Earning an adequate income from the produce, they led a happy life. It is thus evident that the local economy primarily depends on agricultural production:

> I was once a very lucky farmer because the crops yielded optimum production in the locality. Although it was very difficult to invest the requisite amount of money to produce crops twice a year, we had enough precipitation to irrigate the land, which cut the expenditure drastically making this possible. Since I had little time while working in the paddy field, my wife brought food for me. While returning home, I sat beneath the banyans or date trees to cool off my body. The shadow of the trees served as the natural air-cooler. Overall, before 2006, most of the farmers like me at Shora were very happy.
>
> Male informant, aged 35

Before 2006, the informants were mostly dependent on agricultural production for sustenance. The arable lands were fertile for sowing paddy, wheat and vegetables. Mango, papaya, coconut palms, and banana trees in the homestead yielded enough for the community to mitigate possible vitamin deficiencies.

> In comparison to most other inhabitants of Shora, I had more milking cows in the cowshed. My pond was more abundant with fish (e.g., salmon, rouhe, mrigel, and tilapia); my land was replete with paddy and there was cash in hand; rice from the field and vegetables from the homestead would make up our satisfying everyday meal. Also, there was the smooth flow of cold air in the village and the shadow of trees made life refreshing and happy. Moreover, women were engaged in seasonal jobs (e.g., digging soil, serving as home-assistants, Food for Work programme of CARE Bangladesh, etc.). On the contrary, a few men and women with no land of their own or other sources of income used to go into the forest.
>
> Female informant, aged 33

It is manifest that before the cyclones, the people were less dependent on the forest for their livelihood since the crops from the field and other paid jobs were available. The accessibility to resources discouraged the area dwellers from using the forest on a grander scale for sustenance. The 2012 Special Report of the Intergovernmental Panel on Climate Change (IPCC) discovered the social as well as physical dimensions of vulnerability resulting from weather- and climate-related disasters. The report claimed that the extreme weather and climatic events impact on the increasing threats to populations and assets. Similarly, the informants in the study area bore the brunt of the aftermath of cyclones *Aila* and *Sidr*, forcing them to lead an inhumane life.

In the wake of the climatic disasters, the cultivable lands were inundated for long periods with saline water, causing loss of fertility and a massive loss of trees and houses. The cyclones also devastated the crops, causing a price increase of everyday essentials. With the diminishing source of income, countless families were compelled to migrate from the district to elsewhere. A women informant alleged her husband married a girl in the city to live a comfortable life there, away from the poverty inflicted by the catastrophes. Such a fate also befell several wives at Shora, forcing them into makeshift widowhood and thus being socially excluded. Their wretched condition forced them to the forest and, although they initially began collecting shrimps as part of their forest income, they expanded their work into collecting leaves, small timbers, and fruits.

The informants claimed to experience a sudden surge in temperature in the aftermath of the natural calamities. Due to the lack of trees now, the region closely resembles a desert and the umbilical cord between nature and the local people has been cut. With this offsetting of balance, the water is turning unsafe for drinking. Since the customary mode of occupations no longer exists in the region, people have to find different sources of income or venture into the forest for alternative income.

> The sudden attack of pirates and subsequent demand for a ransom inside the Sundarbans is a common phenomenon that puts a frightening challenge before the inhabitants of the locality. Before Sidr, people, especially women, never went to the forest. It is very daunting for a woman to be in the forest among the lurking pirates, but the calamity-induced poverty has left almost no alternatives but to go to the forest.
>
> Woman informant, aged 39

10 Gender Inequality and Forest Resources

Understanding gender relations is relevant when it comes to the topic of accessing forest resources. Previously-established literature has showed it that there is visible difference in the authority power in terms of access to forests, managing forestry products, or even the selling rights of those products among men and women (Mai et al., 2011; Sunderland et al., 2014; Roy, 2019; FAO, 2019). Ironically, even though women know a great deal about the forest, men term their knowledge as non-knowledge to prevent any competition. This act represents the patriarchal hegemony over women (Gurunani, 2002). Being blinded by such acts and due to growing up in a male chauvinistic society, women too consider their knowledge as useless and depend on the male members (Gurunani, 2002). Thus, male dominance in forest-based livelihood earning stays unbothered. On top of that, women's decisions over the collected products is also considered less significant and in most cases it is found that women do not get to sell their collected product in the market. Thus, their access to the market sector is also dominated and controlled by men (Ifegbesan, 2016; FAO, 2019). Even after all the mentioned circumstances, if women can ensure their access to market place, the discrepancy and male dominance still prevails. These women are paid less for their products, as well as for the services and labour they provide (Roy, 2018). From the interviews, it was found that women are mostly underpaid due to the established belief that women are inferior to men, so they are supposed to be paid less. Interestingly, the female members

also to some extent support this unjustified ideology (Roy, 2018). Therefore, it can be said that in spite of undergoing all the workload and pressure, women still fail to establish equality in market place, which does nothing but restrain their proper empowerment.

11 Conclusion

By utilising an auto-ethnographic method, this article has attempted to examine the struggle of the villagers in a small community in the Sundarbans (Bangladesh) in earning their livelihoods from forest resources. The several narratives of people there show the effects of a patriarchal society on familial and gender relations. The senior members of society acquaint the younger generation with forest-going myths. An enduring tradition, these myths are handed down from generation to generation. It is evident that men typically go to the forest. Although the *jele-baoalie* and other married women also venture into the forest, they constitute a smaller number than the men. Corruption caused by some venal officials acting in collusion with administration and law-enforcing agencies has hit the traditional way of life. Regarding the customary use of the forest, natural disasters in recent times compelled a greater number of people to go to the forest. However, their ventures often encountered disaster when pirates, including venal forest officials, impede their activities. In the post-disaster landscape, the displacement of men from the study area to the district town for them to obtain higher labour income may have generated an increasing divorce rate among women.

The deeply entrenched patriarchy in the country marginalises the divorced women to continue living within the periphery of society. However, this study first of all tried to shed light on how this forest-dependent community has been exploring the forest for earning livelihoods using their non-documented knowledge. Years after year, the senior members of the society are enlightening the new generation through their gained experiences. Additionally, this study unfolds how the presence of patriarchy is present in this process of earning livelihoods, which makes the whole process not so "innocent". Still the women participants are being cornered by patriarchal politics where their hard work is often going unnoticed and unacknowledged.

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