KEY HIGHLIGHTS:

- Fishing is a major livelihood option for women in the coastal belt, they choose to live in this climate hazard-prone area considering their easy access to fishing (mostly in rivers, in some cases Sundarbans).
- Women have more exposure to saline water than men as most of the women catch fingerlings/do fishing in waist-level water in the river, while most of the men do fishing sitting on boats.
- Every woman is found to suffer from different health problems, while a vast majority of them have been suffering reproductive health problems and many have lost their uterus.
- Women face violence (teasing, verbal abuse, sexual harassment etc.) while staying in cyclone shelters and travelling to distant places for fetching water.
- More than 90% of women in this study have experienced the loss and damage of their household at least once in their lifetime.
- Women in many areas are compelled to bribe the local representative to get access to social safety net programs.

BACKGROUND

The nexus between ‘Human Rights and Climate Change’ has commonly been understood from the denial/violation of fundamental rights of the climate migrants who are constantly being forced to compromise enjoying many of the fundamental rights. They are namely the right to self-determination (ICCPR, ICESCR, Art. 1)1, right to life (ICCPR, Art. 6)2, right to health (ICESCR, Art. 12), right to water (CEDAW, Art. 14), means of subsistence (ICESCR, Art. 1), standard of living and adequate houses (ICESCR, Art. 12), culture (ICCPR, Art. 27) and right to property (UDHR, Art. 17)3 (Leckie, 20084; UNHCR 20095; McAdam and Soul 20106). The basic principle of these human rights instruments is that human life can be compromised in no circumstance. Human rights violation is also understood by the disproportionate impacts on the already poverty-stricken, socio-politically excluded people and communities who are being increasingly exposed to both climate and non-climate factors.

The World Conference on Human Rights in 1993 declared that women's particular human rights are “inalienable, integral, and indivisible.” Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) outlines women’s fundamental human right to reproductive health and choices (family planning, provisions for child care, work and family conflicts) and addresses cultural impacts on gender relations (customary constraints on women’s mobility; the gendering of private and public space).

Despite the fact that everyone is affected by climate change, not every person faces the impacts equally. Based on factors including gender, race, caste, ethnicity, and financial level etc., the effects of climate change are disproportionally distributed and have many different dimensions. Among these, the gender perspective of climate change impacts is of major concern because, in a certain socio-economic, religious, and cultural setting, gender relations serve as the foundation for the roles and status of men and women (Hai & Smyth, 2012)7. This implies that the degrees and types of vulnerabilities that women and men face to disasters, particularly those born on by climate change, differ (ibid). In Bangladesh, a large number of women are

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2 https://www.ohchr.org/en/calls-for-input/general-comment-no-36-article-6-right.html#:~:text=Article%206%20of%20the%20International,%20life%20and%20the%20nation.
more vulnerable than their male counterparts to disasters due to their gender identity. In other words, the existing gender inequality between men and women in our society is aggravated by the climate change scenario. In many developing nations, women face gender-based discrimination in a number of areas, including access to human rights, political and economic power, ownership of property, living conditions, exposure to violence, education, and health (Osman-Elasha, n.d.)\(^9\). Adaptation and mitigation strategies may not work properly if the differentiated vulnerabilities of different gender (and/or other) groups are not addressed properly.

**METHODOLOGY & STUDY AREA**

This research intended to explore the diverse and disproportionate climate change impacts on women and their implication to human rights violations throughout the impacts chain extended to secondary and tertiary levels. Earlier research has mostly focused on the health issues of women; however, no such extensive research has been found pertaining to the violation of women’s rights due to the chain impacts of climate change in Bangladesh. To select the right sample group and study area, we carried out pilot studies in three climate hotspots, i.e., North-west Barind tract (Godagari upazila of Rajshahi district), North-east Haor areas (Dowarabazar upazila of Sunamganj district) and South-west coastal belt (Mongla upazila of Bagerhat district and Shyamnagar upazila of Satkhira district). After considering women’s vulnerability and profoundness of sufferings and loss and damage situation, this research was finally conducted in Mongla upazila (i.e., Chila Union, Chandpai Union and Sunderban Union) of Bagerhat district and Shyamnagar upazila (i.e., Munshiganj Union, Buriganga Union and Gabura Union) of Satkhira district. Using a mixed research approach, primary data were collected through 260 semi-structured questionnaire surveys (143 in Mongla and 117 in Shyamnagar), 15 Focus Group Discussions (5 in Mongla and 10 in Shyamnagar) and 17 case stories.

**FINDINGS OF THE STUDY**

**Socio-economic Profile of the Respondents**

All respondents of this study were female representing individual families. The study has included respondents of all age groups (except the children), where most of the respondents were aged 35-60 years (51% in Mongla and 56.4% in Shyamnagar). In Mongla 40.6% of respondents completed the primary level of education, while in Shyamnagar the highest proportion of respondents are illiterate (47%) (or can sign only). In both areas, most of the respondents have reported themselves as the wife of the family head (65.7% in Mongla and 82.9% in Shyamnagar). The majority of the respondents (62.9% in Mongla and 76.1% in Shyamnagar) belong to small households consisting of up to 4 members. In Mongla, the highest percentage (36.4%) of the households have been found with an average monthly income of BDT 5,000-10,000 and in Shyamnagar, the highest proportion (35%) of households fall in BDT 10,000-20,000 category of average monthly income. Results show that in both study areas, around half (55.9% in Mongla and 48.7% in Shyamnagar) of the sampled families depend on the income of both male and female members of family. Apart from homemaking, the most prominent occupation pursued by the respondents is fishing at nearby rivers (58.7% in Mongla and 42% in Shyamnagar). Women in both study areas have been found to catch mostly shrimp fingerlings. In Mongla, around half (50.3%) of the households own their homestead land and almost all (99.3%) of the households own their house, whereas, in Shyamnagar, most of the households (64.1%) own their homestead land while a significant portion (33.3%) of them are dwelling on government fallow (khas) land.

**Recent Increase in Occurrence Rate of Disasters**

Although the scientific evidence of climate change impacts in Bangladesh is quite evident and pronounced, in this study, we tried to capture the knowledge, perception and understanding of people (especially women) on climate anomalies in vulnerable areas. This is due in part to the fact that knowledge is a key determinant of one's capacity for adaptation (Williams et al., 2015)\(^10\). The pattern and behavior of weather conditions have

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altered significantly as said by most of the participants of this study. A substantial number of people in Focus Group Discussions (FGDs) have mentioned the changes in rainfall patterns in their areas. 92.3% of respondents of Mongla and 94% of respondents of Shyamnagar think that recently the occurrence rate and/or intensity of various natural disasters has increased in their localities. Such disasters include cyclones, salinity, riverbank erosion, tidal water intrusion etc. According to the respondents, disasters that affected their lives and livelihoods the most are: in Mongla: cyclone (88.8%), salinity (45.5%), and riverbank erosion (48.8%); in Shyamnagar: cyclone (97%), storm surge (53%), and salinity (53%).

**Child Marriage, School Dropout**

The occurrence of child marriage in the families under the study varied significantly between Mongla and Shyamnagar. In Mongla, only 15.4% of respondents have said that girls below 18 years in their family got married, while in Shyamnagar, the figure stands at 38.5%. Only 2.1% of respondents in Mongla confessed about giving dowry to marry off their girls. However, the percentage is quite high in Shyamnagar, i.e., 28.2%. About 56% of respondents in Mongla and 72.8% of respondents in Shyamnagar reported dropping out of at least one child from school in their family. In Shyamnagar, responses confirm a higher rate of dropout among girls (28.6%) than boys (21.4%). In many families (38.3% in Mongla and 50% in Shyamnagar) both male and female children dropped out from school before completing Secondary School Certificate (SSC) level. Among female dropout incidences in both areas, more than half were permanent dropouts (57.4% in Mongla and 66.7% in Shyamnagar) with disaster-induced financial crisis/poverty being the most salient cause of permanent dropout for both male and female children. “If I could complete my education, I could at least earn some money and contribute to my family. I would then have a voice here. What I dreamt to be and where I am now!” exclaimed Sabikun Nahar of Gabura union of Shyamnagar with grave frustration, who is a dropout and a victim of child marriage. She was forcefully married off as her parents could no longer bear the cost of her education.

**Problems with Women’s Clothing during the Disaster**

In both study areas, women have reported wearing three major types of clothing in general, namely- Saree (65% in Mongla, 76% in Shyamnagar), Salwar Kameez (42% in Mongla, 44% in Shyamnagar), and Maxi/gown (54% in Mongla, 62% in Shyamnagar). Among all the respondents, 65% in Mongla and 73% in Shyamnagar have reported some specific problems associated with their regular attires (especially Saree and Maxi), which they faced during natural disasters. These problems include difficulty in swimming, trouble in moving to a safe place, carrying babies, difficulty in helping/rescuing others, difficulty in changing Saree at the cyclone shelter, and tangling of Saree while wading through the water. Some of the fisherwomen put on pants/trousers and shirts while fishing but most of the respondents still manages somehow wearing Sarees while fishing, because it is socially unacceptable to wear something else. Shahanara Khatun from Shyamnagar, Satkhira said that a few years back she fell into a pond with her baby on her lap while going to cyclone shelter during a cyclone because her Saree got wet and tangled. She and the baby survived eventually but the incident still haunts her.

**Sufferings of the Pregnant Women during Disaster**

Around half (41% in Mongla and 52% in Shyamnagar) of the respondents in both study areas have reported that either they themselves or someone in their family faced some miseries during natural disasters due to pregnancy. These issues include problems with movement, trouble in reaching a safe place, being stuck in the disaster-affected area, unavailability of medical services and medicine, sanitation problem, and facing accidents while rushing to cyclone shelters. Cases have been found where pregnant women had to face grave consequences as they became stranded at places from where they could not avail themselves of emergency medical services. Nasima Khatun (46) from Dumuria village of Gabura union, Shyamnagar is one such victim who lost her twin unborn babies during the landfall of cyclone Aila. Nasima and her family were stuck at the embankment from where they could not find any transport to take her to the hospital. After a while, her parental family rescued and took her to the hospital but by then it was too late.

**Displacement and Related Issues**

45% of respondents in Mongla and 29% of respondents in Shyamnagar have said that their families have been displaced due to natural disasters at least once in their lifetime. Disasters that caused most of the displacements
are riverbank erosion and cyclone in Mongla, and cyclone and flood in Shyamnagar. After displacement, the most common temporary residence of people of both areas is on/along embankments or in open places by the side of roads. After displacement, women (68% in Mongla and 82% in Shyamnagar) faced some distinct difficulties while staying at their temporary residence, which includes but are not limited to sanitation problems, increased workload, unpleasant behavior by neighbors, risk of violence or sexual harassment, and being more vulnerable to natural disasters. Around 80% respondents of Mongla and around 70% respondents of Shyamnagar have been found afraid of being displaced from their current home due to future natural disasters. “We need a safe place to stay which is protected from the river’s gulp, the devastation of cyclones, and where there will be enough water to drink. That is all we want” said Minara Begum from Kanainagar village, Chandpai Union, Mongla, Bagerhat. Minara’s family is a victim of riverbank erosion. The river already took all their cultivable land and a portion of their house too. They have been desperately trying to move further inward of the village but have not yet got any place to move.

**Experience regarding Cyclone Shelters**

Almost one-fifth of respondents from Mongla Upazila, Bagerhat and half of the respondents from Shyamnagar Upazila, Sathkhira have expressed their unwillingness to go to cyclone shelter considering their emotional attachment to and fear of losing their belongings during the storms. Moreover, the distant location of cyclone shelters, ranging from 1 to few kilometers away, fuels their unwillingness to move further, while fragile roads have put an extra burden on them. In an FGD conducted at Sindurtola, Chila Union of Mongla Upazila, participants uttered, “We can’t go that far as the road becomes muddy and impassable. There’s no chance to go. We don’t have a shelter. So, we have to stay here. As the road gets muddy, we cannot move easily during hazards. Water rises knee-deep or above, even sometimes it gets higher than our waist”. Contrarily, women who often go to the shelter during storms have reported that all shelters become congested and there is rarely any open space (64% in Mongla and 100% in Shyamnagar). Besides, water and sanitation facilities are always insufficient in the shelters, which often creates problems in menstrual hygiene management (41% in Mongla, 31% in Shyamnagar). Furthermore, there is rarely any separate room for pregnant women and children (uttered by 45% and 57% of women in Shyamnagar and Mongla, respectively). Though not frequent, eve teasing and verbal abuse have also been (reported by less than 10% of women in both upazilas) experienced by women in cyclone shelters.

**Health Issues of Women**

Women in the study areas have been suffering from some dire health conditions which have a linkage with the water salinity as they perceive about it. In both upazilas, women who usually drink salt water or water of poor quality (from ponds or rivers) often suffer from diarrhea (83% in Mongla and 86% in Shyamnagar) and hypertension (25.4% in Mongla, 46% in Shyamnagar). Due to constant use of and contact with saline water, women are found to suffer severe skin diseases (69.7% in Mongla and 92% in Shyamnagar), hair fall (33.8% in Mongla, 42% in Shyamnagar) and paleness of skin is also common (reported by 42.3% women in Mongla and 35% women in Shyamnagar). As a significant number of respondents were fisherwomen who wade into waist-deep water and catch fingerlings in the rivers, they have reported a number of reproductive health problems which they perceive are attributable to the use and involvement with saline water of rivers or ponds. 64% of the responding women in Mongla and 54% in Shyamnagar have been suffering from infection or inflammation in reproductive organs (i.e., vagina, uterus, fallopian tubes, and ovaries).

Besides, urinary tract infections (reported by 10.2% respondents in Mongla, 54% in Shyamnagar), miscarriage (11.4% in Mongla, 20% in Shyamnagar), pre-eclampsia (23.9% in Mongla, 11% in Shyamnagar) and irregular menstrual cycle have also been testified. A number of women (1.1% in Mongla and 13% in Shyamnagar) are found who lost their uterus (removed by surgery) due to prolonged bleeding or infection or tumor. Though not significant in number, some women have been identified (4.9% in Mongla, 6% in Shyamnagar) who take contraceptive pills to change the time of menstruation so that they can go fishing in the river without any interruption. Some FGDs have also revealed such practices among adolescent girls. A fisherwoman Maria Biswas (57) from Kanainagar Village, Chandpai, Mongla, Bagerhat stated that she had experienced miscarriage four times due to her constant contact with saline water (as she perceives). She also has itching.
and an infection in her uterus. She even used to collect fingerlings wearing saree during her pregnancy as she had no other livelihood option in her area then. When the Saree got wet, the extremely saline water would burn the body including the vaginal area. During the pregnancy of fisherwomen, that burning sensation turned acute. She would also take pills to prevent conception as child-raising required a handsome amount of monetary resources for a poverty-stricken family like hers. Eventually, she experienced miscarriages four times. During her fourth pregnancy, her water-breaking (leakage of amniotic fluid) started when she was gleaning fingerlings. She had been admitted to the local hospital for four days and was bedridden for more than a month after she had reached back home.

**Drinking Water Sources and Related Issues**

People in both areas mostly depend on more than one source for drinking water. Almost 55% of respondents in both areas uttered that they often collect water from PSF (Pond Sand Filtration) systems or ponds having less salinity. Some people also drink river water (42.7% in Mongla, while only 7% in Shyamnagar). A few respondents also stated about rainwater harvesting which solely depends on having infrastructure for water storage), while some others buy container water (25 to 40 taka for 30 liters). This study has found that mostly the women (58% in Mongla, 78% in Shyamnagar) are responsible for collecting water for household consumption and they face problems like abusive behavior of neighbors (57.8% in Mongla, 76% in Shyamnagar), eve-teasing (almost 10% in both areas) and physical injury (just below 70% in either area) while fetching water. In an FGD conducted at Munshiganj, Shyamnagar, a woman said, “Bad words from people are very common, and even violence happens while fetching water. We have to take water by a long queue. Teenage girls face problems like eve teasing and bad words from others.” Rainwater harvesting is the cheapest and the most easily accessible option for remote and isolated areas like Gabura, according to the respondents. However, everybody cannot afford to buy large reservoir tanks to store enough rainwater for year-round use and some microcredit local NGOs started a venture of selling tanks on monthly installments that have added to the economic burden on the shoulder of poor people.

**Surviving Losses and Damages**

More than 90% of the respondents from both upazilas have experienced the destruction of their houses due to cyclones, riverbank erosion and storm surges. In addition, these hazards caused the death/loss of poultry, cattle, standing crops and many have become jobless due to frequent sickness (18.9% in Mongla, 36% in Shyamnagar). To recover from the losses and damages caused by disasters, they often get entangled with Dadon loan11 (46.9% in Mongla, 19% in Shyamnagar), take loans from Mahajans (local money lenders) (13.3% in Mongla, 20% in Shyamnagar), mortgage their assets and valuables like ornaments (18.9% in Mongla, 15% in Shyamnagar), take less food to save money (almost 29% in both upazilas). A woman Rashida Parvin (46) from Chuna village, Burigoalini Union, Shyamnagar, Satkhira said, “We get sick, borrow money for treatment and then again work hard to repay the debt. It is like a never-ending cycle.”

**Access to Social Safety Nets**

The people under this study are already underprivileged and burdened with health problems and recurrent loss and damage. Their sufferings have got intensified over the years as they do not have proper access to social safety net schemes. Some women have been found who receive Widow allowance (500/month), Old Age allowance (500/month), Disabled allowance (850/month), Pregnancy allowance (800/month), Abandoned Women allowance (500/month) and Tiger-Widow allowance (500/month); however, they have to pay a share of the allowance or have to bribe the local influencers/local representatives to get registered for the govt. allowance as stated by almost one-tenth of the respondents from both areas. In most cases, women must bribe 1000-5000 taka to get registered for any of the allowances. A woman in an FGD conducted in Gabura of Shyamnagar upazila said, “I am trying to get widow allowance card for the last 4 years. I applied for an

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11 Dadon loan is the process of providing advance money to the farmers/fishermen for cultivation or buying necessary staffs for fishing. The borrowers are bound to sell their products to the lenders only, usually at a significantly lower price compared to the market price.
CONCLUSION & WAY FORWARD
The study explored diverse and disproportionate climate change impacts on women and their implication for human rights violation throughout the impacts chain extended to secondary and tertiary levels. The study has explored an obvious linkage of the violation of the Right to life and security (Art. 3, UDHR; Art. 6, ICCPR), Right to means of subsistence (Art. 1, ICESCR, ICCPR), Right to health (Art. 12, ICESCR), (Women’s) Right to water (Art. 14(2(h)), CEDAW), Right to the standard of living including adequate houses, food, water, sanitation (Art. 11, ICESCR; Art. 25, UDHR; Art. 14, CEDAW)), Right to education (Art. 13, ICESCR; Art. 10, CEDAW) etc. with incessant losses and damages caused by the climate change-induced hazards. Collectively, these are violating gender rights as the vulnerability of women is greater than men. In fine, it’s quite conspicuous how the impacts of climate change-induced hazards are violating the rights of women by causing economic, and non-economic losses & damages and unbearable health crises. This study recommends following issues to be taken into the consideration:

- Water salinity has been causing malignant health effects on coastal women. Their contiguity to the saline water for their livelihood purposes has made them extremely vulnerable to diverse health impacts including reproductive health problems. The only option to keep them away from the saline water of rivers is to introduce new ventures of innovative livelihood options which can be gained through proper training in craftsmanship or by proving enough support to grow small and medium enterprises.
- Women have been found reluctant to see male doctors for their reproductive health issues out of shame. This at times turns lethal, leaving the disease to grow. Hence, government must recruit female doctors in the hospitals in these coastal areas especially for treating these health issues of the local poor women.
- Corruption has spread like an epidemic. To ensure access of coastal women to the social safety net, the process should be made more public-oriented, for instance, community-based committees can be formed, which will choose the most suitable person for the safety net program. If the process depends on public representatives like Union Parishad Chairman or Member, nepotism or corruption will prevail and underprivileged people will never get proper access to the safety nets.
- Cyclone shelters in the coastal belt must be upgraded with enough water and sanitation facilities. Moreover, there should be separate rooms and toilets for women and provisions must be kept for managing menstrual hygiene as well. Each cyclone shelter should contain necessary medical facilities and emergency rooms for pregnant women.
- As an adaptation option, many impoverished women are willing to practice rainwater harvesting to minimize their freshwater crisis. However, they should be supported with enough infrastructure to store rainwater. It can be done on a cluster basis. Few households can be supported with a large tank where they will have equal access and will also be responsible for equal maintenance.
- Government should strictly monitor the loan schemes being run in the aforementioned areas. Some micro-financing organizations and money lenders (Mahajans) are exploiting marginalized people in the name of loan support. This study has found women who have been provided with loans on more than 500% percent interest (yearly) by money lenders (Mahajans), but borrowers do not understand this as they don’t have enough literacy and they pay the installments weekly.