



Share-Net
Bangladesh

The Knowledge Platform on
Sexual and Reproductive Health & Rights



Intersectionality of Climate Change and SRHR

A Desk Review from Bangladesh
Evidence

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ACRONYMS AND ABBREVIATIONS

CC	Climate Change
CoP	Community of Practice
CPR	Contraceptive Prevalence Rate
CSE	Comprehensive Sexuality Education
CSO	Civil Society Organization
FP	Family Planning
FGD	Focus Group Discussion
GO	Government
IPCC	Intergovernmental Panel on Climate Change
IUD	Intrauterine Device
MHM	Menstrual Health/Hygiene Management
MNCH	Maternal, Neonatal, and Child Health
MOHFW	Ministry of Health and Family Welfare
MR	Menstrual Regulation
NAP	National Adaptation Plan
NAPA	National Adaptation Programmes of Action
NCTB	National Curriculum and Textbook Board
NGO	Non-government Organization
PAC	Post Abortion Care
RTI	Respiratory Tract Infections
SBCC	Social and Behaviour Change Communication
SGBV	Sexual and Gender-Based Violence
SRHR	Sexual and Reproductive Health and Rights
STI	Sexually Transmitted Infections
WHO	World Health Organization

EXECUTIVE SUMMARY

The complete spectrum of SRH services in the context of gender, equity and rights are missing in Bangladesh's health system, both in the public and private sector. When the spectrum is further linked with climate change, the spectrum hardly addresses any of the components of SRHR. Very few services are available within the system, for example, maternal care, infant care, contraception-related services, etc on the contrary, those limited services are again open only to people who are heterosexual and couple/married. As a result, most of the general population has grown to understand that SRH services are very confined, which is misleading. Hence, the SRHR services for other groups of people such as youth, unmarried people, and sexually diverse people remain largely ignored and un-addressed within the existing service delivery and regulations. Now, what makes it more complex is Climate Change and its direct and indirect connection to SRHR in Bangladesh's context.

The weather in Bangladesh is becoming more unpredictable every year, resulting in more cyclones, drought, longer dry spells, and frequent but devastating flash floods, among other things [\[25\]](#). As a result of these frequent natural disasters, more people are impacted, die, or experience forced relocation every year [\[21\]](#) [\[22\]](#) [\[23\]](#) [\[24\]](#). In Bangladesh, SRH services for women and girls have been severely disrupted by the outbreak of the pandemic and the public health response for SRHR has become less priority while the entire system of health has been blocked toward the emergency response of the pandemic. During this turbulent time, the prevalence of domestic and gender-based violence, child marriages, and mental health problems dramatically increased [\[19\]](#) [\[20\]](#). In this desk review, we aim to understand the correlation between SRHR and Climate Change and assess the impact, affordability and accessibility, of SRH services in climate-affected areas for women and adolescent girls. We are also trying to propose a way to create a future health system resilience for SRHR in Bangladesh.

BACKGROUND

Bangladesh has been identified as one of the most susceptible countries to climate change. Bangladesh is the most vulnerable of the 16 nations to climate change over the next 30 years [\[10\]](#), according to a Maplecroft study that looked at 42 indicators across 170 nations. For instance, Bangladesh is the 6th most densely populated nation in the world and has an extremely high population density of 1045/km². It has an extremely high poverty rate, with 35% of the population living in poverty and 29% of the population earning less than \$1 per day and 84% earning less than \$2 per day, respectively.

It also demonstrates the connection between climate change and gender, since women are more susceptible than men to the negative consequences of climate change. The most vulnerable populations in developing nations- the poor, the elderly, women, and minorities- suffer the most from the negative consequences of climate change [\[9\]](#). Due to gender inequality, women are more susceptible than other vulnerable groups. The disparate access to social and physical goods and resources is what causes differences in the roles played by men and women in the private (households/communities) and public (decision-making) realms. As a result, women take on duties as parents and caregivers, while males are traditionally seen as decision-makers and income earners [\[11\]](#). Important family planning services are not readily available for women in need during natural disasters and other calamities in flood-prone and disaster-prone areas, and pregnant women are in danger of death and injury. Women are also not taught

how to swim due to sociocultural standards, which lowers their probability of survival in natural catastrophes like floods [12].

Through a review of the literature, this study highlights the connections between SRHR and climate change by utilizing Bangladesh as a case study. To evaluate how climate change affects women's SRHR, two main categories have been identified. Infrastructure & Accessibility and GO-NGO projects are these. A collection of recommendations for policymakers, donors, and international organizations that create development programs to address climate change adaptation and mitigation are included in the paper's conclusion

OBJECTIVE

To assess the impact, affordability, and accessibility of SRH services in climate-affected areas for women and adolescents to bring out the existing operation plan and proposed initiatives by GO-NGOs to make a comparison with effective elucidations for the availability of SRH services.

METHODOLOGY

54 documents have been reviewed through Research Gate, Open Access, Google Search Engine, Google Books, Google Scholar, and university publications of peer-reviewed literature, newspaper articles, research articles, academic reports and blog posts published between January 2015 to June 2022 in English to understand the linkages between Climate Changes and SRHR impact on the population specifically on women, girls, and gender sexually diverse population residing in the most climate vulnerable nations including Bangladesh. In addition, the review also looked into the Covid-19 pandemic and man-made crises such as the Rohingya Refugee Crisis that impacted the aforementioned population's reproductive lives, health, sound mind and overall well-being.

Along with the academic journals, grey literature sources were also used to capture insight into the developing situation. To identify these sources, the authors searched ReliefWeb and other websites of relevant organizations, such as BRAC's James P. Grant School of Public Health (JPGPH), the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), and various United Nation (UN) agencies, including UN Women and United Nation Development Fund (UNDP), the United Nations Population Fund (UNFPA). Moreover, 9 informal talks with the organization's focal were conducted by telephone. Participants were identified from the professional networks of the authors, and the websites of key organizations (including BRAC JPGPH), and were selected from across the research and civil society.

KEYWORD THEME

- Organization Involvement
- Supply of knowledge, information and SRH products/commodities
- Infrastructure & Accessibility in the facilities
- Government initiative and policy
- Operational plan of NGOs/CSOs (International Donor Community and Multilateral Organizations)

- Adaptation plan

DATA ANALYSIS

For analysis 1 book, 18 academic reports, 3 partial chapters, 16 grey literature and 18 blog posts were screened. Information about the broader pandemic and pre-pandemic context was also gathered to contextualize findings around SRHR and MNCH (Maternal, Neonatal and Child Health) and Climate Change. Deductive Approach [thematic data with a ‘thick description’ analysis has been used in six stages as described by Braun and Clarke (2006). This method is chosen for precise key findings with depth observation of the data set. The study was explained as ‘thick descriptive’ in shaping the particular occurrence of the effect of SRH accessibility in climate-affected areas. Moreover, findings were coded, and themes were identified after which the findings were analysed. Two dedicated researchers were involved to ensure objectivity and reduce bias.

GUIDING QUESTIONS

- ❖ Can SRHR information be enough for disaster-prone areas/climate-affected areas or coastal areas? (Probe- is sexuality knowledge and information enough there? Probe- is the knowledge of menstrual management enough? Probe- is the information of STI/RTI/CPR enough for them there?)
- ❖ Can SRHR services be available enough among the facilities at specific times? (Probe- are reusable menstrual products a solution for thousands of girls and women living in disaster-prone coastal areas who are directly affected because of climate change?)
- ❖ Does a lack of knowledge about various SRH services restrict girls and women to seek them? (Probe- other reasons? Probe- social stigma, economic inability, lack of health priority etc.)
- ❖ Child marriage, unplanned pregnancy, MR, PAC, SGBV grey- what increased the most? (Probe- rural vs. urban. Probe- why did they increase so much during the pandemic? Probe- what is the connection considering the post-pandemic fact?)
- ❖ What is the infrastructure of the facility for accessing SRH services in the community of climate-affected areas? (Probe- is this enough? Probe- does a local organization/NGO/CSO have taken any initiatives for the improvement? Probe- government initiatives to be focused on?)
- ❖ Did climate change directly trigger changes and exacerbate the pandemic SRH crisis? (Probe- identify the challenges and constraints that emerge in trying to understand the SRHR lens to climate change?)
- ❖ Lobby the policymakers to integrate SRHR into the National CC Policy (Probe- local government initiates Keyword preventive facts. Probe- National operational plan regarding it. Probe- increase awareness and understanding of CC and SRHR issues among the policy makers)
- ❖ Advocate for SRHR services to women and girls during disaster/post-disaster (Probe- any campaign program/training program to address the issue among girls and women. Probe- is there any scope to engage men in the program? Probe- increase awareness and understanding of CC and SRHR issues among the community)
- ❖ Identify the gender impact of climate change concerning SRHR.

FINDINGS

Which organization is working?

1. Plan International Bangladesh: Plan International Bangladesh is working closely to support children, adolescents and youth. They work simultaneously on multi-dimensional projects regarding the understanding of climate change, its impacts, and how they can adapt. They work to encourage children to take the lead on climate change issues and adapt in the country and communities to make a positive impact and accessibility of SRH services.
2. The Asia Foundation: It works for natural resources of local livelihoods and national economies including population growth, rapid economic development, poor resource management and corruption, which have had devastating impacts on ecological systems connecting to women empowerment, health accessibility, and climate adaptation. The Asia Foundation approaches the challenges by facilitating stakeholder engagement, policy dialogues, and regional cooperation. The main goals of the organization are to; increase cross-sectoral cooperation in natural resource management, disaster risk reduction, and environmental conflict mitigation; increase attention to the environment and climate change in national and local development strategies; increase public and private investment in clean energy, sustainable infrastructure, and green growth.[1].
3. BRAC: A wider-level NGO working for social stability and community support. They have a designated climate change program department, where they are closely monitoring the environmental incidents and taking action immediately. They are now working under the advisory committee for technical suggestions on Climate Bridge Fund[2]. Besides this, to integrate the adaptation plan, they maintain a climate resilience framework to address any unpredictable and unavoidable issues[3].
4. UNEP: United National Environment Programme (UNEP) is running its program under an ecosystem-based national adaptation plan to address any challenge at the grassroots level. Recently an initiative has been taken, an adaptation plan till 2024 for the Barind Tract and the wetlands of the Haor Area of Bangladesh to provide a range of valuable ecosystem services to local communities that derive most of their income from agriculture and fishing. Besides this, a national strategy for recycling has been adapted to the burning concern of environmental pollution, toxic chemical impacts are gradually drawing attention to global and national policies[4]. Besides this, some terminal and mid-terminal evaluations are ongoing with other UN bodies to assess the driven process and to advance the national adaptation plans (NAPs)[5].

5. United Nations Development Program (UNDP): To create nations via sustainable, creative, and community-based development programs, UNDP collaborates with individuals from the local level up to the national and international levels of society. Even when focusing on current concerns, UNDP considers all disasters and serious problems to improve governance, poverty reduction, health, women's empowerment, and disaster resilience via programs of community mobilization, advocacy, and capacity building [6].
6. UNFPA: United Nations Population Fund works for women's reproductive health rights, especially in Rohingya camps, coastal areas, climate-affected areas, and all other urban and rural areas to combat child marriage, address sexual and domestic violence, good population density practice, women and youth empowerment through ensuring SRH rights mostly [7].
7. SERAC-Bangladesh: SERAC-Bangladesh is to establish a human rights-oriented and youth-focused friendly environment that provides spaces for achievable development in access to education, health, livelihood, and policy support for women, children, and youth, sustainable environment, climate action, and adaptation economy, and justice for the poor and vulnerable communities. SERAC is closely working with young people in all 8 divisions through a youth network to address climate issues through their capacity building and empowerment.
8. Movers: They connect the Movers Community, where anyone can ask for advice, share their achievements, and group pictures, look for workshops to attend, and find teammates around youth climate action.
9. Bangladesh Model Youth Parliament: This is a platform to express the mandate of developing innovative ventures by minds, facilitating leadership skills and thinking power, and increasing awareness on issues of local, national and global importance amongst young people. The Model Youth Parliament is a not-for-profit, non-political, support and learning platform committed to developing the uninhibited expression of young people to sustain a platform that enables young people to be effective and expressive agents of change created by youth to raise their collective voices to the members of the highest Policy-Making Body of the Government and civil societies. It is a chance to be heard at the highest levels of Government on a wide range of issues relevant to young people's lives.
10. Youth network on climate justice (YNCJ): A network connecting the youth and adolescents from all 8 divisions of Bangladesh, who work for climate justice and SRHR. They also work for the rights of urban migrated youth in slums or marginalized areas.
11. BYHAN: Bangladesh Youth Health Action Network is an organization to advocate health rights and access to quality and affordable health services in urban areas and climate-affected areas.

12. Speak & Act: This is a platform to act boldly for transforming the surroundings and thoughts of the opponent against women by ensuring women's empowerment.

13. World Vision: The organization is dedicated to working with communities to overcome poverty and injustice, conflict, or disaster; they serve the world's most vulnerable people especially children regardless of religion, race, gender or any other form of discrimination.

14. Save the children: The organisation contributes to improving the lives of children and adolescents through better education, health care, economic opportunities, a life without violence as well as providing emergency aid in natural disasters, war, and other conflicts.

15. CARE: CARE works worldwide to build a world full of hope, inclusion and social justice, where poverty has been eradicated and all people live in dignity and security with equal rights and opportunities.

16. FPAB: Family Planning Association Bangladesh ensures every woman, man and young person has access to SRH information through advocacy and services they need; defend the right of all young people to enjoy their sexual lives free from ill-health, unwanted pregnancy, violence and discrimination; support a woman's right to choose to terminate her pregnancy legally and safely; strive to eliminate Sexually Transmitted Infections and to eradicate HIV/AIDS.

17. BRAC JPG: They offer unparalleled real-life, community-centric teaching, learning and research experiences on critical and emerging national and global public health challenges. The school applies an interdisciplinary integration of Education, Training, Research and Advocacy to diverse health challenges such as Maternal & Reproductive Health, Nutrition, Gender Equity, Sanitation, Non-communicable Diseases, Urbanization, and Climate Change affecting disadvantaged communities.

18. International Center for Diarrhoeal Disease Research, Bangladesh (icddr,b): ICDDR, B is committed to solving public health problems through innovative scientific research—including laboratory-based, clinical, epidemiological, and health systems research. By developing, testing and assessing the implementation of interventions specifically designed for resource-poor settings, they aim to improve the health and well-being of people living in the world's poorest nations. Although the initial focus was on diarrhoeal disease, they now study multiple infectious diseases, other threats to public health, and methods of healthcare delivery. Their work has had a profound impact on health policy and practice.

19. UN Women: UN Women is dedicated to gender equality and the empowerment of women. UN Women supports UN Member States in achieving gender equality and works with governments and civil society to design laws, policies, programmes and services needed to

ensure that the standards are effectively implemented and truly benefit women and girls worldwide.

20. Wreetu Health and Well-being Foundation: Wreetu is building a period-friendly society through interactive MHM workshops (with Puberty and Period comic book, Wreetu Comic Book written in Bangla) with adolescent girls by involving their male peers, teachers, parents, religious leaders, community leaders and other community people. Hundreds of girls are now being oriented about puberty and menstruation through offline and online sessions and the girls are taking periods as normal biological events. Wreetu is very keen to reduce the plastic pollution that is contributing to climate change, so, from that thought, they have produced 1-year reusable sanitary napkin (approved by BCSIR) which is washable, breathable, comfortable, and affordable and it helped 7,000 girls and women to practice green menstruation during the last two years. Wreetu Napkin also helped to uplift numerous girls and women from period poverty amidst various disasters such as the Covid-19 pandemic, Amphan, flash floods etc. Gradually more women and girls are becoming aware of the consequences of single-use plastic napkin consumption because of their advocacy campaigns and opting for green period products.

Supply of knowledge information

1. Education: Girls are frequently the first to leave school during times of hardship in order to assist their families with financial matters, do household duties, or take care of their siblings. They are less likely to learn about climate change and how to combat its impacts if they are not in school.
2. Knowledge through SBCC materials: Directorate General of Family Planning, Directorate General of Health, UN Bodies, and several NGOs and INGOs provide knowledge and information through SBCC materials including posters, leaflets, brochures, infographics, flipcharts, stickers etc. Reach out to adolescents rather than waiting for adolescents to reach out because the mobility of adolescent girls is restricted and traditional gender norms, shyness, and transportation issues make it difficult for rural adolescents to access facilities. Despite the availability of the SRH service points, male adolescents, especially unmarried boys, hardly visit these facilities.

Supply of SRH products/commodities:

- Approximately 20 billion sanitary pads, tampons, and applicators are reportedly thrown into landfills each year, mostly in rural regions. Feminine hygiene waste that is packaged in plastic bags might take decades to decompose. Over the course of her lifetime, an average woman uses over 11,000 tampons, leaving behind residue. According to the National Hygiene Survey 2018

conducted by the Bangladesh Bureau of Statistics, some 29% of menstruating women in the country use sanitary pads, up from 14% in 2014 [8]. But disposable menstrual hygiene products have more environmental effects than just this enormous waste load. The processing of LDPE (low-density polyethylene, a thermoplastic produced from the monomer ethylene) used in tampon applicators and the plastic back-strip of a sanitary napkin, which required significant amounts of fossil fuel-generated energy, was determined to have the greatest influence on global warming.

- SMC (Social Marketing Company) is mostly involved in several SRH products nationally including Joya Napkins, 18-20 different contraceptives, and 6-8 types of mother and child nutrition foods. Besides this, other renowned companies also provide and manufacture SRH commodities including [Silk Treasure](#), [SMC Enterprise Ltd.](#), [ACI Limited](#), [GetWell Limited](#), [Square Toiletries Ltd](#), [Ella Pad](#), [Bashundhara Paper Mills Ltd.](#), [Babylon Group](#), [Proctor and Gamble Bangladesh](#), Wreetu and [J & J Bangladesh](#). Furthermore, DGFP and UNFPA have some joint initiatives to provide SRH commodities in the local areas.
- Disposable tampons and pads raise additional health issues. These goods contain dioxin, a carcinogen and hormone disruptor, while the Administration considers the quantities to be harmless. There have been sporadic reports linking the pesticides used in cotton farming to a variety of health effects, including infertility and neurological issues. Disposable menstrual products have been linked to irritation, yeast infections, and the potentially lethal condition of toxic shock syndrome (13). Washing, drying, and privacy issues related to menstruation hygiene continued to be major issues. Girls' confidence to talk about their periods increased thanks to puberty education, which also encouraged more support from friends and instructors.

Supplies of services

- Though moving from one location to another was reportedly one of the main issues during the flood, as there are no specialized health care services for sexual and reproductive health in the region, flood victims, particularly women, found it difficult to transfer from one site to another. Additionally, there were no distinct and separate health facilities available for women and adolescents there. Due to their geographical dispersion, poor economic standing, and socio-religious stigma, access to health care services is sometimes next to impossible.
- There are some significant health facilities run in urban and rural areas located the riverside places and coastal areas where people can access SRH services from the facilities including Urban Primary Healthcare, Mother and child welfare centers, Zila and upazila health complex, model clinics of medical colleges, Bango-Bandhu Sheikh Mujib Medical Institute, MCHTI, MFSTC, NGO clinics, GP chambers, others private clinics,
- A Case Studies around service accessibilities:
 - i. One of the FGD participants added that flooding poses serious issues for the reproductive health of women and young girls in this area. There are no sanitary products or services for

reproductive health care offered here. Additionally, because of where we live (a char region), it is considerably harder for ladies like us to survive during a flood. They spend the majority of their time in wet clothes and underwater, which leads to skin problems and bladder infections (16).

“Flood causes immense problems for the women and teenage girls of this area in respect to their reproductive health. Sanitary goods and reproductive health care services are not available here. Moreover, we live in a char area and during floods, it becomes much more difficult for women like us to survive. We remain underwater and in wet cloth most of the time which causes skin disease and urinary infection.”

The local healthcare providers had a variety of issues. All of the healthcare professionals who took part in this survey stated that they lacked the necessary tools to offer treatment for those who sought it, including qualified medical personnel—especially female physicians—an appropriate quantity of medications, and hygienic supplies.

“...women feel ashamed to visit male physicians for their reproductive health problems; they even think that it is a sin to share their problems with male person (locally called porpurush). But there are no MBBS doctors in our area and if we want to visit those doctors, we need to cross 10 kilometres from here. This becomes almost impossible for women. So, women of our area either stay at home or collect enchanted water (‘panipora’) from local religious priests.”

Additionally, they highlighted how ladies from far away didn't visit the community health centre during the flood because of the shaky communication system.

- ii. Three further case studies revealed that women experienced severe difficulties throughout their menstrual cycles as a result of a lack of reproductive health care services. One of the interviewees said that women were frequently submerged during the flood, including during their periods, but they lacked access to sanitary supplies. Additionally, they continued to wear damp clothing, which led to urinary infections. They concluded that the majority of the time the therapy they got at the community level did not heal them, but they had no other options to gain access to better care.

“My menstruation period (locally known as ‘mashik’) started during the last flood which made me suffer a lot. From the very beginning I ignored the problems; I mean the secretion of white fluids (‘sadaseraf’) and severe lower abdominal pain. ...I had to stay in wet clothes almost all day and I could not dry my clothes even at night as there was no proper space to do so. I passed 15 days through this situation and till now during my menstruation period excessive blood comes out with the menstrual rags.”

- lii. On the other hand, all of the participants claimed that they primarily relied on institutions at the community level, such as pharmacy stores, midwives, and healers.

“We do not get proper support from any institutions. So, we mainly rely on services from our community level. ... We mainly share our problems with aged women in our family or sometimes outside of our family. Sometimes we also go to ‘Maulana’ (religious priests) of the local mosque to have solutions for our personal problems. Besides, we also call midwives for pregnancy-related complications and birth delivery during the flood.”

Infrastructure & Accessibility

- Due to staff illness during the COVID-19 emergency, numerous facilities had to close or at least limit their operating hours or the burden on the remaining personnel. Health professionals who contracted Covid-19 were unable to give care.
- Although the divergent effects of migration and climate change are well known, the extent of services that are affected by climate migration is rather small. The SRH outcomes discussed in the literature are mostly concerned with a small number of SRH domains, with a preference for women and girls over boys. Engaging both genders across the spectrum of SRH outcomes and migration situations is necessary to achieve comprehensive and equitable SRH in the context of climate migration. In order to represent the variability of results and impact in the climate-migration-SRH nexus, this review emphasizes the need for further empirical data on the impact of climate migration on SRH, particularly research that is context-specific and involves communities.

Gender and SRH lens in climate-affected areas

- Girls are more likely to experience violence and exploitation, such as sexual and physical abuse and human trafficking, during and after extreme weather events. These dangers are increased when searching for food, water, and firewood or when using makeshift shelters.
- Women will experience the greatest hardships as climate change worsens due to these and several other variables. In reality, the Paris Climate Agreement has special safeguards to guarantee that women are supported in coping with climate change's dangers.
- Even though gender inequality is ubiquitous and entrenched, climate change is a global phenomenon that will affect everyone. Women are disproportionately affected by heat waves, droughts, increasing sea levels, and severe storms. That’s because women are more likely to live in poverty than men, have less access to basic human rights like the ability to freely move and acquire land, and face systematic violence that escalates during periods of instability.
- Disasters are gender-neutral; vulnerability is not (Kshirsagar, Shinde, & Mehta, 2006; Tom Mitchell et al., 2007). Regarding their reproductive health, flooding poses significant issues for women. Our investigation revealed that the study participants had low socioeconomic status and resided in a geographically dispersed location. Few responders have their source

of income. According to this conclusion, women needed to rely on their families to have greater access to healthcare services.

- Additionally, the family earnings of these people were modest. Again, the study's findings showed that while they experienced reproductive health issues regularly, those issues significantly worsened during floods. Women encountered issues of a similar nature during the Mumbai flood in 2005 and the Pakistan flood in 2010 (Ruth, 2009). (Ali, 2014). However, the results indicated that difficulties with women's reproductive health may have been indirectly caused by their clothing choices. Women's traditional dress, such as the sari, has often been shown to make it harder for them to run or swim during emergencies (Ali, 2014; Ruth, 2009).

Emergency crisis and SRHR needs on Climate affected areas

- Bangladesh's healthcare system was already overburdened before Covid-19. Then, particularly in the early stages of the pandemic, panic and uncertainty, resource redistribution, and a national lockdown caused SRHR and MNCH services to become even less accessible and to be severely disrupted. These included transportation and material resource issues (such as a lack of personal protective equipment) as well as provider restrictions on performing efficient triage. Health personnel were not available owing to fear, illness, or redeployment. Patients used fewer health services because they were afraid of the stigma, Covid-19, or being forced into solitude. Economic difficulties brought on by the outbreak and lockdown also affected people's ability to get care. Lower use may also have been attributed to a lack of knowledge about how to use adapted services or unhappiness with the quality of the services received.
- Evidence on how the pandemic has impacted menstrual hygiene, unplanned pregnancies, and other services linked to sexual health are also scarce, particularly as it relates to socially marginalized populations. The majority of the available material focused on the early pandemic phase, particularly the lockdown. As the health system changes in the aftermath of Covid-19, it will be crucial to keep an eye on the growing SRHR and MNCH service environment. Understanding and reducing digital exclusion, which disproportionately impacts women, will become more crucial.
- When it comes to data collection and analysis, everyday operations, and emergency response, Bangladesh's public and private health sectors seldom coordinate. It may be possible to improve coordination for SRHR and MNCH by mapping the actions, capabilities, and motivations of various parties. Furthermore, little is known about how communities themselves responded to the epidemic and the innovations, adaptations, and local resources they used to promote SRHR and MNCH. This includes communities as well as lower-level government institutions and civil society networks.
- Though the effects of SRHR and MNCH on overall health are not yet obvious, data does point to large increases in domestic violence and child marriage, with more economically susceptible individuals—such as impoverished and displaced women and girls—being disproportionately

affected. According to this Working Paper, there are still a lot of questions about how the pandemic affected SRHR and MNCH in Bangladesh and what this means for recovery, mitigating negative effects, and developing more robust, effective systems. For instance, more investigation is required to comprehend how the pandemic has affected service quality, including user and provider opinions, experiences, and obstacles, as well as fresh quantitative data on service availability and use.

- The health sector was completely unprepared for Covid-19's formal entry into the nation in March 2020. During the first few weeks and months, observers observed how widespread concern among medical personnel and a lack of resources led to many of them skipping work. Similarly to this, many individuals who needed care either did not ask for it or were unable to get it (Reza et al. 2020). Although preserving vital health and nutrition services were prioritized in the government's March 2020 Preparedness and Response Plan for Covid-19 (Mhajabin et al. 2022), this did not always happen for a variety of reasons.
- In a UNFPA research, it was noted that the rates of use of injectables, condoms, and oral contraceptives all significantly declined throughout the first five months of 2019 and 2020, falling by 20 percent, 34 percent, and 23 percent, respectively. The use of long-term contraceptives, including IUDs, implants, NSVs (scalpel vasectomy), and tubal ligations, declined dramatically as well, by between 24 to 64% (The Daily Star, 2020). The prevalence of pregnancy has considerably increased, particularly the prevalence of unintended pregnancies, as a result of the pandemic's lack of contraceptives and their accessibility.
- Due to a lack of access to contraception, sex workers are at significant risk of developing illnesses. The risk of having sex with a sex worker is always present. The chance of developing any STD, including HIV, is, however, significantly increased if sex workers do not use the recommended contraceptives (15).

Climate change, SRHR, and SGBV impact

- As a result of climate change, women and adolescents have been described as being particularly vulnerable to various types of SGBV, including forced marriage, trafficking, forced domestic and intimate partner violence, and sexual violence (such as harassment or rape when attempting to receive relief services like food or shelter).
- Girls and women may experience sexual harassment in the absence of male household members, which might lead to forced marriage and stigmatization even when the majority of migrants are males, like in the flood-prone Kurigram District of Bangladesh. Furthermore, compulsion into transactional sex may occur owing to some migrant women's extreme vulnerability (such as those without papers).
- People who were displaced primarily due to climate change were found to be more susceptible to diseases than those who were displaced for other reasons, such as political reasons, according to a study conducted in Bangladesh. This finding was explained by unequal exposure to unfavorable environmental conditions (18). While there are many risks and vulnerabilities associated with migration that affect SRH, we anticipate that there will be additional risks and vulnerabilities associated with climate-induced migration. These risks include changes in baseline health and

disease status, such as vector-borne diseases, malnutrition, and mental health stressors, as well as the failure to receive health services that recognize and address these complex health vulnerabilities (14).

- Many Bangladeshi families spend time in public shelters after natural disasters when the reputations of their unmarried daughters are particularly exposed (Ahmed et al., 2019). ---- Similarly, to this, families who fear losing their property due to riverbank erosion express a wish to marry off their daughters as soon as possible to preserve their residual possessions and avoid having to relocate to another area (Human Rights Watch, 2015). Women who got married during a prolonged dry period also had husbands who, on average, had less education and find domestic violence as an acceptable attitude towards their married wives. An increase in the rate of marriage during heat waves and a simultaneous decrease in the social standing of husbands points to the possible explanation that families seek out or accept proposals from less desirable marriage partners to reduce the cost of dowries or to hasten the timing of marriage.
- The Hijra, a group of transgender women who reside in certain socio-communal settings, experience regular prejudice and have been stigmatized as virus carriers throughout the epidemic (Jalil et al. 2020).
- To decrease social contact in the Rohingya refugee camps, several changes to health care, like the choice to use solely upper arm measures rather than height and weight to evaluate if a child is underweight, have raised concerns. This runs the risk of missing certain susceptible children who would therefore not receive immediate care since arm measures alone are insufficient to accurately distinguish states of malnutrition (Anwar et al. 2022). (17)

Adaptation plan

- Disaster Risk Reduction and Adaptation to Global Change: Past disasters have shown how deadly major climatic events, such as storms, cyclones, droughts, higher temperatures, floods, and tropical storms, can be. These events not only affected the surrounding climate but also caused a loss by killing more than lac people. Even such climate catastrophes regularly hindered regional and global economies from growing. It is scientifically established that these climate risks have been produced internationally, but that their effects have been most severe in low-lying nations like Bangladesh and other parts of South Asia (Alamgir, M. et el. 2018).
- The global temperature has increased by 0.8°C on land and 0.5°C at sea in the previous ten years. Due to anomalous human behavior, the ambiance of the climatic events is worsening (MoEF). The IPCC also emphasized the rise in sea levels, the invasion of freshwater reserves in coastal regions, and the increase in frequency, severity, and scale of severe weather patterns. Consequences include the destruction of Bangladesh's socio-economic infrastructure, the environmental crises, and the pressures brought on by its aging population.

Roles and Responsibilities of Government and other Agencies

- To boost the climate change adaptation programs in all policies and sectors, Bangladesh established two innovative funds: the Bangladesh Climate Change Trust Fund (BCCTF) from the Government's budget and the Bangladesh Climate Change Resilient Fund (BCCRF) with the support of

development partners. Bangladesh submitted the National Adaptation Programmes of Action (NAPA) in 2005 (revised in 2009) and prepared the Bangladesh Climate Change Strategy and Action Plan in 2009. A couple of landmark initiatives of relevant national plans and policies have already been prepared by GO and NGOs sides to take climate change global actions including; the Mujib climate prosperity plan up to 2030, national solar energy roadmap 2021-2041, promoting green technology, monitoring and reducing air pollution, clean development mechanism, Bangladesh National Action Plan (NAP) for Reducing Short-Lived Climate Pollutants (SLCPs), Forest and Carbon Inventories and National Action Plan for Clean Cooking, 2020-2030 for the urban development mostly (MoEF, 2020). The Government of the People’s Republic of Bangladesh defines climate finance as “...the flow of funds toward activities that are aimed to help societies in developing resilience to adapt to climate change impacts” (Bjornestad et al. 2016, p 120).

- Even non-government organizations are also participating actively in various economic and social sectors, intending to reduce people’s vulnerabilities in the urban area mostly. Several NGOs include Palli Karmo-Sahayak Foundation (PKSF), Rangpur–Dinajpur Rural Services (RDRS) in north-western Bangladesh, and Gana Unnayan Kendra (GUK), which focus on the Rangpur division (RDRS 2017, p 104), The Asia Foundation, Plan International, Network on Climate Change Bangladesh and BRAC are progressing with some concrete implementation plans in the urban area mostly. It is crucial to note that a major portion of the work of NGOs consists of post-disaster activities, in providing relief and aid, and a bottom-up approach is given prominence (Younus 2017). Most importantly, to evaluate and monitor the progress of the initiatives, capacity strengthening usually starts from the operational flexibility at the national/urban level to cope up with the bureaucratic structures.

Role of Teachers in Creating Awareness regarding Menstruation and Menstrual Waste Management

- Teachers can help students manage menstruation with dignity by creating a welcoming environment in the classroom for girls and women. Sex education in schools said young people in identifying their sexual orientation, avoid unplanned pregnancies, sexual assault, and STDs, as well as learn about physiological changes to the body and maintain personal cleanliness. Teachers' views toward girls who are menstruating in schools are typically not supportive and upbeat. Different societal views on sex education have an influence on the teachings taught in schools and colleges. Restrictions imposed by societal, religious, and cultural norms frequently hinder sex education.
- Our educational system helps children grow and develop by enabling them to adapt to the changes and difficulties they encounter on a daily basis. However, treating menstruation and menstrual hygiene management as a personal concern that should only be handled at home, frequently avoids these topics. Menstruation is a taboo topic in girls' lives that is further impacted by the attitude of the teachers, the atmosphere in the classroom, and the physical facilities. Many females continue to skip school during this period as a result. The lack of sex education in the curriculum has a severe effect on students' lives. They obtain potentially incomplete information about puberty, sex, menstruation, and other bodily changes from books, friends, and the internet. Due to a lack of knowledge and social interaction, teasing and taunting with hurtful nicknames are common in

schools. This makes it difficult for a girl student to survive in this environment, so they remain absent from school.

- Male and female instructors in many schools are not prepared to talk to pupils about menstruation and menstrual hygiene management. Additionally, there aren't many schools with female teachers. In order to avoid an open debate in class or to avoid answering students' inquiries, teachers frequently exclude such subjects from textbooks. Due to the language barrier, teachers also hesitate to bring up such subjects in class. Since English is typically not a required subject in schools, teachers must conduct discussions in the native tongue, and employing vernacular vocabulary in front of children is humiliating. Due to the hostile environment in schools, it was also discovered that some girls are reluctant to stand up to respond to teacher questions out of concern for leakage or odour, as well as to write on the blackboard out of concern for any menstrual accidents and blood stains on clothes that might be observed by others. Upon reaching puberty, parents in some circumstances reportedly forbid their daughters from attending school out of concern about sexism perpetrated by males and male teachers.

STRENGTHS AND LIMITATIONS OF THIS RESEARCH

Strength

- Strengths of this study include the international focus and comparison, with highly motivated and experienced researchers of the Community of Practice (CoP) on Climate Change and SRHR from renowned organizations and educational backgrounds.
- Some information conversation was conducted through online spaces for incorporating the use of different social media channels to have vast information regarding the topic.

Limitation

- The research theme is quite a new area and recent research or evidence-based initiatives are limited for literature review.
- The concept is not yet practised and very little work has been done in this area. Moreover, the non-availability of published data on climate and SRHR is also a massive limitation of this study.

RECOMMENDATION

1. Advocacy campaign: Emphasize innovation and findings sustainable and practical solutions to feminine hygiene challenges. Open dialogue is the first step in changing the way women deal with menstruation and can create awareness around the need to make a switch.
2. Protect girls' education: Education is crucial in building the knowledge, skills and behaviours girls need to adapt to climate change, which supports girls to be responsible for the environment and active in leading on these issues.
3. Support girls' leadership: Ensuring leading capacity for women and girls in climate policy and decision-making process to ensure investment and action tackles the specific impacts on girls' rights.
4. Provide equal economic opportunities: To assure a carbon-free and sustainable environment by engaging girls and women in leading roles, so they will have equal opportunities and won't have to face stereotypes around certain jobs not being suitable for women.
5. Meaningful male engagement: Male engagement must be ensured in the schools and institutes for sharing knowledge on MHM/SRHR so that they support girls/women by providing a safe environment and privacy in the climate affected areas mostly.
6. Easy and safe services: A committee of the designated areas including both males and females should be made to collect funds so that girls and women manage their menstruation, pregnancy and MR period with ease and safety.
7. Open discussions: Discussions on puberty, sex education, menstruation, and so forth should be organized by schools in every class to make students aware as well as through outreach campaigns. This will solve their unsolved queries by providing them with the correct knowledge, promoting social interaction, and also developing a trusting relationship with fellow friends, peers, parents and teachers. Periodic gender-based reviews of disaster preparedness and response policies should be conducted.
8. Religious leaders' engagement: To include local residents and religious authorities in creating initiatives. Only a small percentage of respondents (including a religious leader) supported using contraception for health reasons. To combat the opposition to contraceptives, it's critical to identify strategies like contraception that will help mothers' and kids' health.
9. Awareness-raising activities: Raise awareness among elder Rohingya women about SRH issues and engage them as agents for positive change. As decisions about reproductive choice are often guided by the experiences and advice of female elders in the community, information shared by female elders may be valued more than that of a medical professional. Engaging this population may also open an avenue to work with mothers-in-law who play a crucial role in girl's and women's decisions regarding contraceptive use.
10. Data collection: Collecting data about actual knowledge of available SRH Services including MR service, SRH for unmarried population, LGBTQ+ friendly SRH services etc. in Governmental hospitals and health complex among climate vulnerable area's populations, especially among girls and women and other groups. Find out their most pressing SRH needs during climatic disasters such as floods, cyclones, droughts etc, how the knowledge gap is affecting them and what they need. Then, circulate the necessary SRH

services' availability through various national wide awareness campaigns at the union levels to populations who regularly face climate disasters.

11. Develop area-specific (drought, flood-prone areas, saltwater intrusion-prone areas etc.) preventative action steps: Area-specific preventive measures from climate disasters are needed to be taken by consulting the local population. Develop content in print, audio, animation, video etc., and share with the local population with the help of local youth which allows more people to be knowledgeable and aware of action steps that need to be taken during disasters and they can proactively plan ahead about rehabilitation.
12. Promoting the use of contraceptives: requires close collaboration with men, husbands, and boys. The Rohingya are a predominantly male-dominated group, and women are expected to defer to their husbands' decisions on childbirth and fertility. It is important to look at effective husband-promotion strategies.
13. Health education tools: This should be responsive to low literacy levels among the community and use strategies to provide information about STIs, HIV, and alternative methods of contraception.
14. Develop Mobile outreach: Mobile outreach may be a viable and effective option for reaching out to adolescents. Engaging with outreach workers and service promoters can be a promising combination in these efforts.
15. Invest in safe spaces: Investments in safe spaces are needed to increase girls' social interaction and sense of safety in camps. The safe space model can be used to increase social interaction and networking and mobility among adolescents and young girls. This welfare of girls and their families would also potentially improve.
16. Menstrual well-being: Autonomy to manage menstrual well-being through reusable menstrual products such as reusable sanitary napkins, reusable tampon, menstrual cups, menstrual disks etc. This reduces the inherent anxiety and also the environment is less polluted by plastic, as well as can help uplift girls and women who fall into period poverty.
17. Climate change adaptation efforts: Climate Change and adaptation efforts improve health systems, girls' education, and women's economic empowerment can indirectly provide benefits to SRHR.
18. Government initiatives: The government must make sure that the programs and policies on SRH rights and climate change are integrated and support one another. Implementing the policies and programs that have previously been developed by properly allocating human and financial resources is necessary.
19. Knowledge product development and evidence-based initiatives: The development of knowledge and evidence in the domain of the particular connections between SRHR and climate change must be ensured through research communities. To investigate the connections between climate change and women's rights, sensitive qualitative research is also required.
20. Behavioral change initiatives: To support behavioral change initiatives and raise awareness of SRHR concerns related to climate change, media interventions are required. Digital and social media may showcase the accomplishments of women and teenage community leaders in responding to climate change and the crucial roles they play during catastrophes using new media such as digital storytelling.

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