



## CLIMATE CHANGE AND ENVIRONMENTAL SECURITY IN BANGLADESH: A GENDER PERSPECTIVE

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### | Abstract

Climate change is a major non-traditional security (NTS) issue that poses a massive threat to global environmental security. Climate change is still occurring, manifested in rising temperatures, increased river and coastal flooding and erosion, rising sea levels, increasing salinity, and more frequent, severe weather events. It is evident that men and women are affected differently by the environmental consequences of climate change. Women become more vulnerable to climate change impacts and environmental disasters. The paper aims to show the interrelationship between climate change, environmental security, and gender in Bangladesh. Moreover, the paper examines the impacts of climate change on environmental security from a gender perspective, exploring the condition of women during disasters and their vulnerabilities under a climate change scenario in Bangladesh. Secondary data have been used and analyzed to identify the overall condition of women in hazardous situations in Bangladesh. Available data reveal that a number of climate-induced hazards are already affecting many women, especially in the coastal zone, low-lying areas, and north-west part of the country. The paper finds that climate change has disproportionate impacts on women in Bangladesh, affecting their food security, water security, health security, economic livelihood, and internal migration. Finally, the paper provides policy recommendations dealing with the gender-discriminated climate change vulnerabilities experienced by Bangladesh.

### | Keywords

Climate change, Environmental Security, Gender Security, Bangladesh

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### Introduction

Climate change is now a global security issue that represents a massive threat to sustainable development, social justice, equity, and respect for human rights for both current and future generations (Aguilar, 2009). The impacts of climate change vary by region, generation, income group, occupation, and between women and men (Shanta, 2009). The effects of climate change are severe and are expected to be imbalanced for developing countries (Doung, 2010). Many of these countries are particularly vulnerable to the climatic

effects of poverty, conflict, gender and social inequality, environmental degradation, and food shortages. The effects of climate change vary widely between the sexes. The effects of climate change on men and women vary (Rahman, 2013), according to their different roles and responsibilities in communities and their access to natural and other resources (Wamukonya & Rukota, 2001). The IPCC report (2007) found that women are among the most vulnerable to the effects of climate change. Women do 70% of the world's work but are more vulnerable to climate change than men.

Climate change is one of the most crucial issues for Bangladesh's growing economy. It is characterized by high temperatures, heavy rains, high humidity, floods, storms, droughts, rising sea levels, rising storms, water flooding, river erosion, and salt infiltration in soil and water (Nishat, 2016). Due to the increasing trend towards disasters caused by climate change, Bangladesh is one of the most vulnerable countries in the world (Germanwatch, 2009). With the signing of the Climate Convention in 1992 and the Kyoto Protocol in 2005, the government made climate change a top priority. The government has taken a number of initiatives to adapt to the effects of climate change. However, climate change threatens the livelihoods of around 160 million people in the country (Neshat, 2016). In Bangladesh, women make up almost half of the total population (Sarker, 2007). They are more vulnerable to climate change than men because of poverty, social roles and responsibilities, and their marginal position in the social system (Islam, 2009). Women in this country bear the disproportionate burden of climate change (Tanny & Rahman, 2016). The present study is an attempt to show the effects of climate change on the basis of gender. It explains how climate change can affect different men and women and highlights key ways in which gender roles can improve the ability of men and women to adapt to the risks associated with climate change.

### **Objectives**

This article primarily examines the vulnerability of men and women to natural disasters due to climate change, concentrated on the southwestern coastal strip and the northern region of Bangladesh. The article begins by outlining some of the questions that arise from an interest in understanding the triple interaction of gender, livelihood, and climate change in the broader context of social change. Therefore, this article presents three questions that can expand the literature on gender and climate change.

- To assess the gender-specific experiences of women during disasters caused by climate change;
- To analyze the impacts of climate change on women's food security, water security, health security, economic livelihood, and internal migration;
- To analyze possible interventions and measures to address the issues relating to climate change and gender security during disasters.

### **Methods**

This analytical study is mainly based on a comprehensive review of the relevant literature available in various secondary sources, such as various research articles, working papers, government documents, newspapers, online publications, websites, and related books.

## Results and Discussion

Climate change is a reality in many countries today and is a very difficult and complex development challenge (Zaman and Islam, 2012). The effects and consequences of climate change are not gender-neutral and are likely to exacerbate existing gender inequalities (Gelsbrook, 2011). Men and women have different needs, priorities, and ways of mitigating the effects of climate change.

Goh (2012) argued that climate change affected women and men differently in the following impact areas: (i) agricultural production, (ii) food security, (iii) health, (iv) water and energy resources, (v) migration and conflict, and (vi) natural disasters. The United Nations (2008) specified a few gender characteristics of climate change: (i) women are affected by the effects of climate change due to their social roles, discrimination, and poverty; (ii) women are not sufficiently represented in decision-making processes, adaptation, and mitigation strategies on climate change; and (iii) women must be included in these processes and strategies because of their rights, vulnerability, and different perspectives and experiences. In Bangladesh, women are more vulnerable to the effects of climate change than men. Asaduzzaman (2015) observed that 140,000 people died from the flood-related effects of Cyclone Gorky in 1991. In this number, women were about 93% more than men (in a ratio of 1:14). During 2007's Cyclone Sid and subsequent floods in Bangladesh, the death rate among women was five times higher than that of men.

In addition, women rely heavily on local natural resources for their livelihoods because they are responsible for obtaining water, food, and energy for cooking and heating (Shanta, 2009). Water, sanitation, and health challenges put an extra burden on women and contribute to the dual burden of productive and reproductive work in the event of a disaster or disruption of livelihoods (Patt et al., 2007). Akand et al. (2016) summarized the risk and vulnerabilities of women in Bangladesh due to climate change:

- i. reducing women's food consumption and their suffering from malnutrition;
- ii. Salinity and long-term exposure to water cause skin disease and other illnesses.
- iii. hampering the health facilities of pregnant women due to damaged communication systems;
- iv. Increasing women's work load and stress due to the non-availability of food, water, and fuel during disasters;
- v. Suffering from tension during work outside, leaving their children at home;
- vi. (vi) Stress and vulnerability for women for safety and security due to the absence of male members during a disaster.

## Food Security

Climate change has a detrimental effect on food security, covering its four components of food production: availability, access, food utilization, and finally, food system stability. Climate change creates a scarcity of food supplies as production is damaged or destroyed. Food prices are rising, making it difficult to feed the poor, especially poor women who run households and lose their income when products crack or erode (Mandal, 2014). Hence, it is possible to suffer from chronic malnutrition. It is women who tend to play a greater role in natural resource management and ensuring nutrition at the household or family level in rural areas. Pictures of Bangladesh show that after the disasters, women had to buy vegetables at higher prices on the market. When women are unable to properly manage resources, the timely distribution of food and the purchase of relief items become victims of domestic violence (offensive language or physical

violence) by male relatives (Alamet et al., 2008). In less developed countries, women carry out the majority of agricultural production (Farnworth and Hutchings, 2009). Most often, women produce, process, manage, and sell food, while men are responsible for cash crops and larger livestock. For traders, women also experience problems. Moreover, in the case of trading, women face difficulties. Due to the breakdown of the communication system, women are forced to trade in their local areas and have to accept lower prices for their products offered by male buyers from other areas (Mundal, 2014). All these aspects act as hindrances to food security during or after disasters. So due to the gendered aspects, the available food items sometimes go beyond accessibility or utilization, which further contributes to instability.

### **Water Security**

Water is another source of health risk for women. Women regularly use water to care for children, the elderly, and the sick. Moreover, water is used to carry out many household tasks. Women and girls are at greater risk of exposure to water and infectious diseases during and after disasters (Dasgupta et al., 2010). Water-borne diseases might be expected to be more widespread among women, who are nutritionally disadvantaged. Women bear the burden of fetching water for their families and spend a lot of time transporting water from distant sources every day. Women also pay the highest price for poor sanitation, as water is rarely sufficient to meet household needs and is often contaminated.

Climate change alters the availability and access to safe and purified water. Climate change leads to an increasing frequency and intensity of floods and deteriorating water quality. Because of their different roles in water use and their vulnerability to disaster, this is likely to have serious implications for women and girls. Heavy rains and frequent floods, which can be expected from climate change, also add to the workload for women as they spend more time collecting water and cleaning and maintaining their homes after the floods.

In drought-prone areas affected by desertification, the water collection time is longer because women and children (mostly girls) have to travel longer distances to find water. Gender and climate change literature suggests that Bangladeshi women and girls generally take responsibility for collecting water for drinking, cooking, cleaning, hygiene, and small livestock, while men use water for irrigation, livestock, and industry (Fisher, 2006). Such gender-sensitive tasks as meeting household water needs put women at risk during a water crisis. After all, women and girls in Bangladesh are disproportionately affected by climate change.

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### **Health Security**

Poor health and low calorie deficits now make women vulnerable to weather disasters. Women are also getting less and less adequate health care than men. These conditions have made it difficult for women to adapt to disasters and other adverse climatic changes. For example, the 1991 hurricane in Bangladesh killed 138,000 people, many of them women and over 40 (Canon, T., 2002). Women suffer most from the prevalence of post-disaster illness, and mortality rates are much higher for women. Women's resistance to livelihoods was also weak because they were heavily dependent on family activities. If more people are affected by climate change, it means more work will be done for women who traditionally look after children, the sick, and the elderly. In some developing countries like Bangladesh, women also run a greater risk of falling ill than men since they have poorer health and less access to healthcare services. According to the literature, natural disasters kill more women than men during and after disasters in which women have low socio-economic status (Neumayer and Plumper, 2007). After the Asian Tsunami, women and children were 14 times more likely to die during a natural disaster than men (BRIDGE, 2008). This difference in mortality is associated with differences in social structures where girls are not taught the same skills as their brothers, such as swimming and climbing. Evidence from Bangladesh also shows that Bangladeshi women did not leave their homes during the floods due to cultural restrictions on women's movements and were unable to swim during the floods (Nellemann et al., 2011). This disparity in death rates also indicates women's greater vulnerability based on socialized gender roles rather than on their biological weaknesses.

### **Economic Livelihood and Internal Migration**

Bangladeshi women who manage their farms lose their income when their crops are destroyed. Cattle and goats are the most valuable assets for the poor in flood-prone areas. Collecting Livestock feeding during floods is a major challenge, especially for goats that need green grass, which is flooded regularly. It also makes it difficult for veterinarians to visit the town and for villagers to travel to buy medicine. Floods and sand deposits reduce soil productivity. Flood deficits lead to higher prices for inputs such as seeds, fertilizers, oils to run irrigation pumps, animal feeds, transportation costs, and veterinary costs.

Loss of production, lack of storage, and destruction of access roads can lead to low prices for assets (such as livestock) or products (such as milk) (IDS, 2008). Selling prices have fallen, and flood-induced inventory shortages have led to higher prices for essentials. In addition, floods and cyclones are reducing the work of women, especially in agricultural areas. As a result, net income is lost, savings are lost, and it becomes even more difficult for women to cope with disasters.

It is evident that due to flood and cyclone disasters, women and girls have limited access to shelters like flood and cyclone shelters during disasters. Therefore, women in Bangladesh migrate to distant places, especially in Dhaka City, to keep them alive.

### **Recommendations**

Women experience differential impacts in climate change situation. These impacts also Accelerate existing inequities in socially constructed gender roles, responsibilities and skewed power relations that tend to disadvantage women. Women will be needed to be at the center of Research, policy and action on climate change adaptation in Bangladesh. The following is some possible actions to reduce the effects of climate change on women in Bangladesh:

- i. Climate change mitigation and adaptation policies must address gender issues.*
- ii. Bringing female voices to the scene of climate change. Their participation in climate change decisions must be guaranteed.*
- iii. Include gender issues in climate change policies and actions from a "human rights" perspective.*
- iv. The role of women's groups and networks in climate change initiatives needs to be strengthened. (V) Develop standards and standards for climate change mitigation and adaptation, including the principles of gender equality and equality.*
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- vi. Build capacity at the global, regional and local levels to develop and implement gender-friendly policies, strategies and programs.*
- vii. Awareness programs on the impact of climate change on women's health will enhance the resilience of communities.*

### **Conclusion**

Women are more vulnerable to climate disasters than men through their socially constructed roles and responsibilities, and their relatively poorer and more economically vulnerable position, especially in the developing world like Bangladesh. Their livelihoods are threatened by climate change. In addition, they face social, economic and political barriers that limit their adaptability. The specific effects of climate change on women will have far-reaching implications for gender equality. Being the primary victim of climate change impacts, women can play a central role in adaptation and mitigation to climate change. Future research can emphasize on determining the appropriate coping strategies and adaptation priorities for women in Bangladesh.

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