

WOMEN'S VULNERABILITY DUE TO CLIMATE CHANGE IN THE COASTAL AREA OF BANGLADESH

Syed Monibul Hasan¹, Md.Be-Nozir Shah Shovon²

ABSTRACT

The study has been conducted to identify the women vulnerabilities, and explore the consequences of climate change on women in Kaikhali and Ramjannagar union under Shyamnagar upazila in Satkhira district. A detailed questionnaire survey has been carried out to achieve the key objectives of the study. A total of 142 household respondents, especially women have been selected by using simple random sampling. The study has found that the important roles and responsibilities of women in the family make them more vulnerable such as food collection and preparation (85.21% as first important responsibility); taking care of the children, elderly and sick (75.35% as second most important responsibility) during and after a disaster. The tendency to save their domestic materials and animals (92.25%), not taking decisions during emergency period (86.61%) and wearing traditional sari (89.43%) are the main barriers for the women to move to a secured place during disaster. Women is highly affected by different water borne diseases during disaster such as skin disease (76% in rank one), diarrhoea (60% in rank two). The study has found that the cyclone shelters in the study area are not women friendly. The destruction of houses and homestead (94.36%), crop production loss (92.25%), and livestock death (revealed by 81.69%) affect on women's economic livelihoods during cyclone and tidal surges. Adolescent girls are forced into early marriage (55.63%), their educational activities (89.43%) are disrupted; lactating mothers are severely affected with the lack of balanced nutrition (92.25%), and pregnant women don't get proper health care services (75.35%) in the aftermath of a disaster. The scarcity of safe drinking water (71.84% in rank one), and lack of proper shelters (41.55% in rank two) are the most important difficulties and complications for women during post disaster.

Introduction

Background of the Study

The southwest coastal region of Bangladesh is the most disaster-prone area in Bangladesh and is very vulnerable to the effects of the rise in sea level caused by climate change. It is estimated that the sea level in the region has been rising by 3-4 mm per year for last 30 years (Tanner, 2007). The horrible disasters, cyclones, tidal surges, floods, repeated water-logging, river erosion and land subsidence are common in this part of Bangladesh, shaping the lives and livelihood patterns of the people living in this part of the country. Climate change affects everyone, it is not gender neutral. Climate change magnifies existing inequalities, reinforcing the disparity between women and men in their vulnerability and capability to cope with climate change (UNDP, 2007). During natural disasters, often more women die than men because they are not warned, cannot swim or cannot leave the house alone (UNFCCC COP, 2005). Women and children are more vulnerable to cyclones for various reasons. Women's unwillingness to leave their homes, a mother's protective instinct (being prepared to die trying to save her children), and the saree (women's clothing) and long hair of Bangladeshi women (hindering movement while trying to swim in tidal waves) have all been cited as reasons (Haque and Blair, 1992).

In the south-west region of Bangladesh, water logging has emerged as an alarming concern with health consequences. Women are often the primary caregivers of the family, shouldering the burden of managing and cooking food, collecting drinking water, and taking care of family members and livestock. Because of these responsibilities, women cannot avoid being exposed to hazardous living conditions like water borne diseases, and malnutrition. Women are forced to stay close to the community and drink unhygienic water, as tube-wells frequently become polluted. Pregnant women have difficulty with mobility and marooned in slippery conditions and thus are often forced to stay indoors and untimely fall victim to unhygienic reproductive health conditions (Neelormi, 2009). Women also rear children and collect firewood, so they cope with enormous physical burdens on a daily basis (Oxfam, 2006).

Since water sources in the neighborhood are all affected by high salinity, women need to travel long distances, sometimes up to ten kilometers by boat or raft every day over rough terrain, in search of potable water. This

¹ Assistant Director, Program, Shushilan, Dhaka-1212, Bangladesh

² Monitoring Officer, TDH Italia in Bangladesh, Dhaka-1212, Bangladesh
-palash@asia.com;md.benozirshah@gmail.com

consumes an enormous amount of their time (Fatema *et al.*, 2008). Young girls often sacrifice their academic activities in a bid to fetch no saline water. Even during their pregnancy women are forced to fetch water irrespective of the distance between the source and their dwellings. Women and girls suffer from various gynecological problems in the long run for taking over extra hurdle of work in their daily life and by using saline water during menstruation. Premature birth, abortion and still birth are reported alarmingly high in numbers in these areas (Sharmin and Islam, 2013).

For girls and women, poor nutritional status is associated with an increased prevalence of anemia, and increased rates of intrauterine growth retardation, low birth weight and prenatal mortality (FAO, 2002). In addition, young mothers are often unable to successfully complete their pregnancies under famine conditions. This phenomenon is more critical when the mothers are pregnant with male infants because the male fetus requires more nutritional intake (Gebriel and Sevenhuysen, 1988). Women who are weakened by shortages of key elements of nutrition can suffer fatigue and loss of appetite, and consequently have lower

This aimed at assessing the vulnerability of the women due to climate change in Kaikhali and Ramzannagar union under Shyamnagar upazila of Satkhira district, attempts to identify the major women vulnerabilities due to natural disasters and to explore the consequences of climate change on women.

Justification of the Study

The biophysical and socio-economic condition in the south west coastal zone of Bangladesh is highly vulnerable to salinity intrusion, sea level rise, erosion, cyclone and tidal surges, water logging, which will be aggravated further under warmer climate particularly due to sea level rise. During extreme events such as, cyclone and tidal surges and other climate-related disasters, women are often the most affected. Women living in poverty generally have less access to local natural resources for their livelihoods. They represent the majority of the poor, the most malnourished, and the least educated, and face additional risks, due in large part to gender inequities that result in women bearing the disproportional brunt of disaster impacts.

Objectives of the Study with Specific Aims

The overarching goal of the research is to build an information source on specific aspects of vulnerability of women which would expose the scenario of vulnerability of women under natural disasters. Towards meeting the goal, the following appears to be the specific objectives of the study.

- To identify the women vulnerabilities due to natural disaster in the study area.
- To explore the consequences of climate change on women in the study area.

Scope of the Study

The study has been described in relation to women vulnerability in south west coastal zone of Bangladesh. Women experience acute and differential impacts given the accelerated pace of disaster vulnerability. These impacts exacerbate existing inequities in socially constructed roles, responsibilities, perceptions and skewed power relations that tend to disadvantage women.

Limitation of the Study

The primary obstacle for this study has been limited budget and time. The study has been done with very limited budget and in very short time. There have been some other obstacles as well. Collecting data from various offices was very tough.

Methodology

Study area of this study are-Kaikhali and Ranzannagar unions of Shyamnagar upazila is geographically a disaster prone area where two massive disasters (SIDR and AILA) have left serious mark on entire environment and human life. The women are more severely affected by those two devastating cyclones and they have been in all sorts of troubles since then. It is feasible to select this area for investigating the overall condition of women security (food security, shelter security, health security, social security etc) as this area is highly prone to natural disaster. Two types of data is considered-1. Primary Data: Field-level questionnaire survey. 2. Secondary Data: Different printed and electronic materials. The Primary data are those which are collected afresh and for the first time, and thus happen to be original in character (Kotheri, 2009). In order to collect the primary information the following sequential order was to be followed:

The initial step of collecting of primary data is questionnaire preparation. It is very important in any social survey. The draft questionnaire was prepared on the basis of the data got by the reconnaissance survey on safe water supply, health and sanitation issues. The questionnaire was made as if it fulfilled the objectives of

the study. Random sampling technique has been applied as sampling procedure. Primary data has collected mainly through questionnaire survey at November 2013. Different types of information have been collected from the local people. Some data has been collected through the self observation.

The Secondary data on hand are those which have already been collected by someone else and which have already been passed through the statistical process (Kothary, 2009). Secondary data is collected from the various sources. They are as follows: Bangladesh Bureau of Statistics, Khulna; Bangladesh Meteorological Department, Dhaka; Internet/ journal articles/web articles; Different related books; Published/Unpublished research report; Upazila Parishad; Union Parishad; Non-Government Organizations etc.

There are 35 villages (22 in Kaikhali and 13 in Ramzannagar) in this study area and from those villages, 142 women of different ages, conditions (married- unmarried, pregnant, adolescent etc) have been randomly selected as the sample of this study. They have their opinions on various issues regarding women security. Sometimes there have been similarities and dissimilarities regarding same issue which are accordingly presented in the result discussion chapter. Duration of the study was From October 1, 2013 to December 31, 2013 (Three Months).

Field Findings and Analysis

Barriers for Women to Maneuver to Secured Place during Disaster

During disasters such as cyclone and tidal surges, women in general face some greater trouble while swimming or moving in the presence of wind and water, making it difficult for them to maneuver. The study has found the following troubles. Figure 4.4 shows 92.25% of respondents have revealed that the women tendency to save their domestic materials and animals,

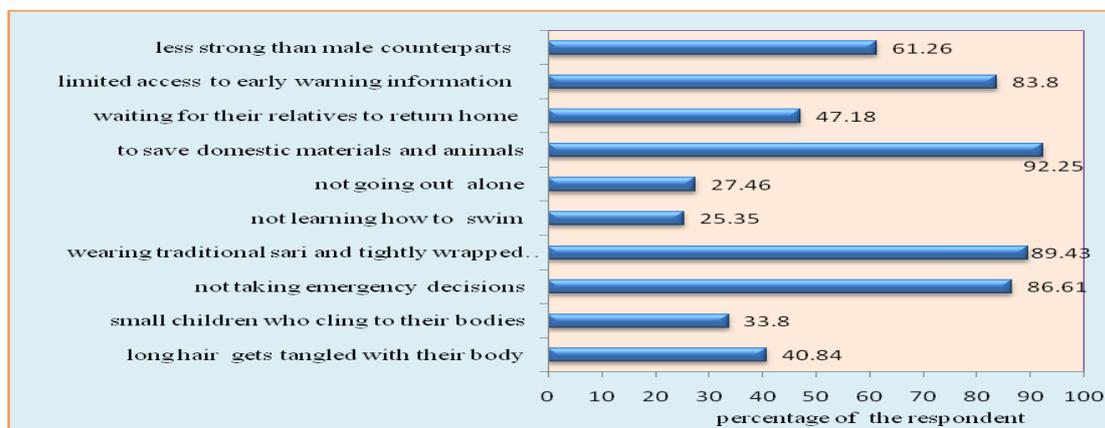


Figure 1. Barriers for women to maneuver during disaster

Impact on Women's Physical Security and Dignity

Women in the study areas still experience various types of violence such as physical, sexual, and mental that increases women vulnerability during and after a disaster.

Harassment in Relief Queues

Figure 4.7 represents the different harassment on women and adolescent girls while collecting relief during or after a disaster.

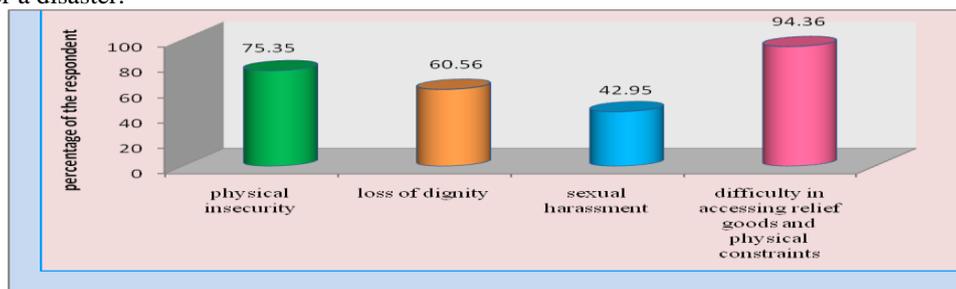


Figure 2: Harassment on women during collecting relief goods

Insecurity of Women in Cyclone Shelter

Cyclone shelter is the most important factor to secure lives during disaster. Although there are some cyclone shelters in the study areas, but that is not adequate compared to the demands of the community. The condition of cyclone shelters in the study areas is not found to be women-friendly, as reported by coastal cyclone vulnerable women. Women often do not go to the cyclone shelters due to an insecure environment there and hence, they prefer to stay back in residing spaces during a cyclone. The study has found that there are some troubles in the cyclone shelter and those troubles discourage women to go there.

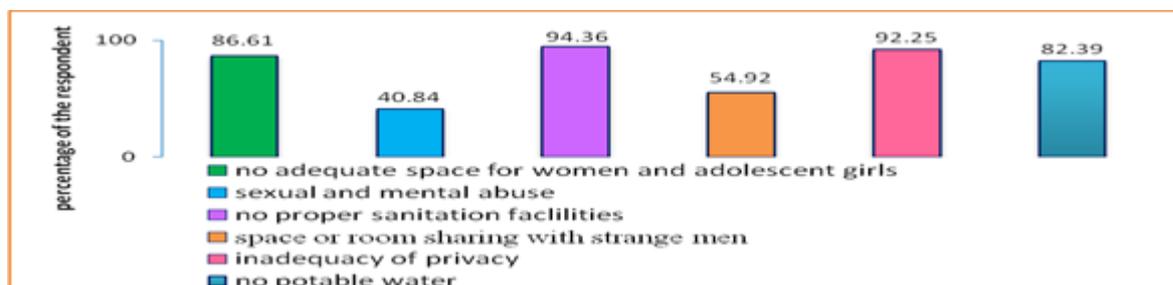


Figure 3: Causes that discourage women to go to the cyclone shelters

Women's Economic Contribution in the Aftermath of Disaster

Cyclone and tidal surges damage livestock, poultry, and fisheries. During and after weather disasters, the lack of fodder for livestock and poultry results in reduction of milk and meat production. Women play an important role in a wide range of income-generating activities in the aftermath of disaster, but their contribution to the national economy is largely uncounted for.

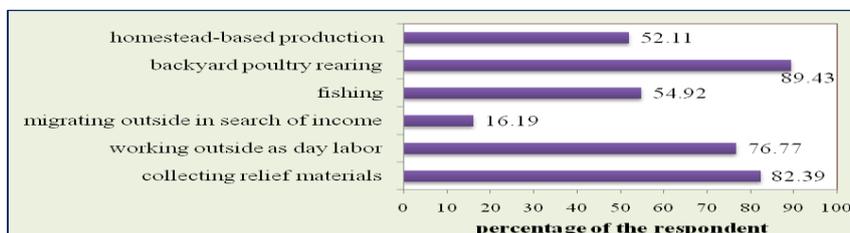


Figure 4: Women's economic contribution in the aftermath of disaster

Consequences of Environmental Vulnerabilities on Women Security

Adolescent girls, pregnant women, lactating mothers, the disabled and the aged make up particularly vulnerable groups in the aftermath of natural disaster through the different way. In the course of determining the impact of both natural and conflict-induced disasters on these social groups, it is imperative to note that their vulnerability to disasters can be created by certain social and economic processes. Underdeveloped infants increases. 83.80% respondents have revealed that inadequate access to food by pregnant women will severely compromise both the health of the woman and the fetus. 88.73% respondents have revealed that in case of pregnancy, women face even greater disadvantages regarding these self-rescue attempts due to their limited mobility, and are dependent on the support of husbands and other family members. 39.43% respondents have revealed that during and after disaster, family disruption occurs and support mechanisms are disappearing; 82.39% respondents have revealed that pregnant women cannot stroll in marooned condition; they are forced to stay back inside the residence and untimely fall victim to unhygienic reproductive health conditions.

Overall findings of the study are summarized below:

The study reveals that the respondents are staying for 11 to 20 years (44.37%), 21 to 30 years (26.05%) in the study area. So they have a good understanding of knowledge about differential vulnerability of women due to natural disasters. The study reveals that women have been affected by different climatic disasters in the study area, but the effect level is not same, almost all the respondents have considered that cyclone and tidal surges are the most influential disaster. Those women, who are more caring for their family (94.36%); poor; (86.61%), lactating and pregnet (97.57%), are more vulnerable in the study area. The tendency to save their domestic materials and animals (92.25%), not taking emergency decisions (86.61%), wearing traditional sari (89.43%) etc. are the greater trouble to maneuver to secured place during disaster. Women's roles and

responsibilities in the family make them more vulnerable to environmental changes such as food collection and preparation (85.21% as first important responsibility); taking care of the children, elderly and sick (75.35% as second most important responsibility); fetching water (40.85% as third most important responsibility), collecting cooking fuel, and cleaning of domestic waste materials etc. The community people, especially women is highly affected by water borne diseases during disaster such as skin disease (76% in rank one), diarrhoea (60% in rank two), dysentery (76% in rank three), cholera, and fever etc. About 94.36% respondents have revealed that they often face physical insecurity while collecting relief during or after a disaster. The study has found that there are some troubles in the existing cyclone shelter and those troubles discourage women to go there such as no proper sanitation facilities (94.36%); no adequate privacy (92.25%), no potable water, no adequate space, space sharing with unknown men, sexual and mental abuse etc. The women economic livelihoods is demolished by the destruction of houses and homestead based production (94.36%), crop production loss (92.25%), and livestock death (81.69%), no access the market to buy or sell food such as milk, eggs, vegetables or other products due to the damages in infrastructure and communication system, reducing employment opportunities, especially for women working in agricultural fields etc. during cyclone and tidal surges. Adolescent girls are forced into early marriage (55.63%), their educational activities (89.43%) is disrupted during and after a disaster; and pregnant and lactating mothers are severely affected by lack of balanced nutrition (92.25%), and their health security and privacy is violated (93.66%) in the aftermath of a disaster. The women face the different difficulty and complication in the context of life by scarcity of safe drinking water (71.84% as first most important difficulty), lack of proper shelter (41.55% as second most important difficulty), lack of proper sanitary facilities, outbreak of diseases, limited access to food, and limited access to medical assistance during post disaster in the study area.

Conclusions

The harmful effects of climate changes can be felt in the short-term through natural hazards, such as cyclone and tidal surges, floods and water logging, salinity and in the long-term, through more gradual degradation of the environment. The adverse effects of these events are already felt in the study area, including in relation to agriculture and food security; biodiversity and ecosystems; water resources; human health; human settlements and social protection, and communications etc. In that situation, the community people, especially women are more vulnerable in different ways in the study area.

References

- Action Aid International, 2005. *Participatory Vulnerability Analysis: A step-by-step Guide for Field Staff*. Web address: http://www.actionaid.org.uk/doc_lib/108_1_participatory_vulnerability_analysis_guide.pdf
- Aguiar, L. 2004. Climate Change and Disaster Mitigation- Gender Makes the Difference. Available on-line: Web address: <<http://www.iucn.org/congress/women/Climate.pdf>>
- Ariyabandu, M.M. and Wickramasinghe, M. 2003. *Gender Dimensions in Disaster Management: A Guide for South Asia*, Colombo: ITDG (Intermediate Technology Development Group) South Asia Publications. Available from: ITDG South Asia, 5 Lionel Edirisinghe Mawatha, Kirulapone, Colombo 5, Sri Lanka. Pp. 45.
- Baten, M. A. and Khan, N. A. 2010. Gender issue in climate change discourse: theory versus reality. Unnayan Onneshan: The Innovators. Dhanmondi, Dhaka, Bangladesh.
- BBS, 2011. Population and Housing Census. Community Report, Khulna Zila. Statistics and Informatics Division Ministry of Planning, Dhaka. Web address: (http://www.bbs.gov.bd/dataindex/stat_bangladesh.pdf).
- Bern, C.; Sniezek, J. and Mathbar, G. M. 1993. Risk factors for mortality in the Bangladesh Cyclone of 1991. Bulletin of the World Health Organization, 71: 73-78.
- Bradshaw, S. 2004. Socio-economic Impacts of Natural Disasters: a gender analysis. United Nations Economic Commission for Latin America (ECLA). Serie Manuales 32.
- Cannon, T. 2002. Gender and climate hazards in Bangladesh. Gender and Development, 10: 45-50.
- Dankelman, I. 2008. Gender and Climate Change: local security in an era of global environmental change. Draft. Radboud University, Nijmegen.
- FAO, 2000. Gender and Nutrition. On-line document, Retrieved on December 24, 2012. Web (URL) address: http://www.fao.org/sd/2001/PE0703a_en.htm.
- FAO, 2002. The state of food insecurity in the world: Food insecurity – when people must live with hunger and fear of starvation Rome, Food and Agriculture Organization.
- Farhana, S. 2011. Suitability of Pond Sand Filters As Safe Drinking Water Solution in Storm Surge Prone

Areas of Bangladesh: A Case Study Of Post-Aila Situation In Shyamnagar, Satkhira District, Khulna.

IUCN, 2007. Gender and Climate Change: women as agents of change. Climate change briefing paper.

Islam, A. 2010. Women's Views on News. Natural disasters impact women worse than men. Retrieved on December 15, 2012. Web address: <http://www.womensviewsonnews.org/wvon/2010/natural-disasters-impact-women-worse-than-men/>

IUCN, 2009. How Natural Disasters Affect Women. Web address:

<http://www.iucn.org/knowledge/news/events/isdr/?3373/How-natural-disasters-affect-women>