

Disaster Risk of Women: A Case of Landslide in Hill Tracts of Rangamati District

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Abstract

Bangladesh is a highly populated country located in South Asia. It is recognized as a disaster prone country. The country has suffered many natural disasters at different times. At present landslide has become a newly added natural hazard in Bangladesh, especially in the south-eastern part of the country. Global record indicates that Nepal, India, Japan, China and USA observe the incident of landslide regularly. There are about 12% of hilly regions in the total area of Bangladesh. The hill tracts regions are more prone to hill collapse than any other area of our country. The extended population lives at the foothills and on the risky slopes of the hills where the living environments are quite unsatisfactory. During the monsoon period there are incidents of landslide and human casualties. Hill cutting for illegal establishments and deforestation for land are the main reasons behind the landslides in hilly districts. In 2017, nearly 100 people were killed in the massive landslide in the hilly districts of Bangladesh. The government sent instantly the disaster affected people to various shelters, but women and infants endured more troubles due to landslide. Instant steps taken to tackle the disaster were not women friendly. This study mainly discusses the impacts of landslide on local women of the Rangamati district and the possible measures that can be taken to protect them. The study was conducted by Key Informant Interview, FGD and Case Study on the victims of the hill collapse in Rangapani village of Rangamati Sadar Upazila. Primary data from Rapid Rural Appraisal (RRA) and secondary data from different sources have been used. The study shows that an integrated approach is needed to reduce landslide disaster in the hilly districts of Bangladesh.

Keywords: Landslide, Deforestation, Impact, Women.

Introduction

Bangladesh is recognized as the world's fifth most disaster prone country (World Risk Report, 2012). Earthquakes, floods, cyclones, river bank

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soil materials can shear away from the slope and move down the hill (Singh et al., 2010).

The south-eastern part of Bangladesh (Chittagong, Bandarban and Rangamati Districts) is sensitive and climatically vulnerable. Low income and disadvantaged group of people are forced to live near or under the unsafe hill risking their lives. Since the 1990s, many informal settlements were developed on hills illegally in the hill tracts of Bangladesh (Khan 2008). Most of the hilly areas are at risk from natural disasters. According to the 2013 survey, more than 50 thousand people of Rangamati city are living in informal settlements on the hills (Dainik Sambad, 1 July, 2017). Women and adolescent girls of these hilly areas are the most vulnerable group. During landslide disaster, this vulnerability increases. Since women are half of the total population of this region, their risks in disastrous situation is not avoidable. Women of these hilly areas are not considered as equally important as men. They have less access to resources, they are victims of the gendered division of labor and they are primarily responsible for domestic duties. They also experience various types of violence physical, mental, emotional and domestic that increases during and after a disaster (Ali, 1999). A study conducted by London School of Economics shows that natural disaster and their subsequent impact, on average, kill more women than men (Neumayer and Plumper, 2007).

From 2007–2017, the Hill Tracts of Bangladesh suffered about 12 massive landslides (Islam et al. 2017). By the devastation of this disaster 127 people died in 2007, 12 in 2008, 17 in 2011, 94 in 2012 and 19 casualties occurred in 2015 in Bangladesh. On June 13, 2017, destructive landslides hit three hilly districts, killing 105 in Rangamati, 32 in Chittagong and 6 in Bandarban. Thousands were hurt and many remained missing. Most of the victims were poor Bangalee and indigenous people living on the hill slopes. Again this region is located in a high risk earthquake area, which could trigger more landslide event (Prothom Alo, 17 June, 2017).

Objectives

Considering the present situation of hilly areas of Rangamati, the objectives of the study are

1. to review the socio-economic condition of the women of the study area;
2. to analyze the reasons of landslide of the study area;
3. to find out the impact of landslide on women's life of the study area; and
4. to provide necessary recommendations to solve the landslide hazard.

Study Method and Sources of Data

The study was conducted by Rapid Rural Appraisal (RRA). Here both primary and secondary data was used. Ranglapani village of Rangamati Sador Upazila was selected for data collection. This area was worst damaged by landslide (2017). Key Informant Interview (KII), Focus Group Discussion (FGD) and two Case Studies on indigenous communities were conducted in this area. Primary data was collected from the District Commissioner of Rangamati, Karbari Prodhan (village chief) of Rangamati village of Rangamati Sador Upazila, the senior officers of local Ansar, representative volunteers, 8 females and 6 males of this damaged area through group discussions. Different research books, national dailies, relevant articles and internet websites were also used as secondary sources of data.

Study Findings

Socio-economic Condition of Rangamati District

Rangamati hill tract is different from other districts of Bangladesh. There are high-low, small-large mountains or hills alongside flat lands. Its total area is 61163.3 sq. km and it has been declared as a full-fledged district in 1983. At present there have been living both indigenous and Bengali population and their proportion is almost equal (Population Census, 2011). Bengali population generally lives on flat land whereas the indigenous communities live more in mountainous areas (Eusuf, 1997). The total population of this district is 6,20,214 of which male constitutes 3,25,823 and female are 2,94,391 (Population Census, 2011). So, ratio of male and female population is almost equal. In Rangamati region more than 80% women work outside (<http://www.dw.com/bn>). Women go to the land of high hill and help their husbands and sons to cultivate. After a hard day's work they come back to their home with vegetables and prepare food for the family. This is how the hilly women follow their livelihood as daily routine. It is noted that women get less facilities than men in every sector. Women are deprived in the society.

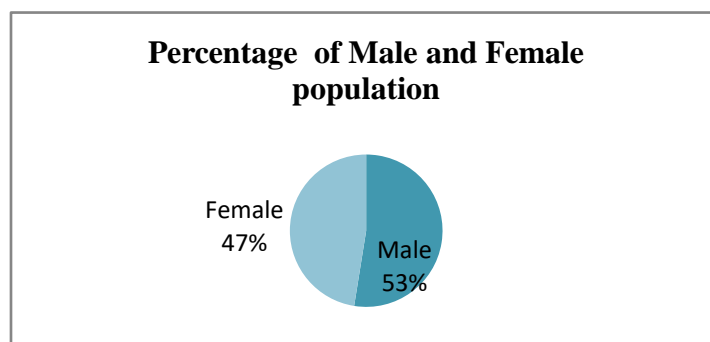


Figure 03: Male and Female percentage in Rangamati District (Population Census 2011)

Agriculture is the main source of income and according to the Population Census 2011; about 47.94 percent people of Rangamati district are dependent on this profession for their livelihood. The second position is commerce and their proportion is 14.38 percent. Other sources of income of the population of this district cover government and private job (11.93 percent), labor and building construction (6.68 percent) and others (16.69 percent).

Rangamati district has an average literacy rate of 43.6% (https://bn.wikipedia.org/wiki/Rangamati_district), but women are in the bottom position in the education sector. Poverty, unawareness, lack of educational goods facility, insecurity etc. are the main obstacles for female educations. Parents of this region give privileges to their male children than those of female ones. According to the report given by a NGO Forum on Hill Tracts district, only 11 Marma (indigenous community) students had completed Masters from Chittagong University since 1963 and among them only 2 students were female (Chakrabarti and Sarker, 2014).

Causes of Landslides

Talking to the Karbari Prodhan and others of Rangapani village of Rangamati district, the reasons for the landslides were known. They said that landslides are natural phenomenon. Sometimes man-made activities can be a contributing factor in causing landslides. So the factors causing landslides can be categorized into (i) natural factors and (ii) man-made factors. The natural factors include geology, slope gradient, excessive rainfall, earthquakes, land cover and soil composition. These are also known as the triggering factors, as many times they initiate the landslide hazard. Among the man made factors hill cutting, deforestation, improper land use and ill planned construction activities, modern irrigation practice are the important ones.

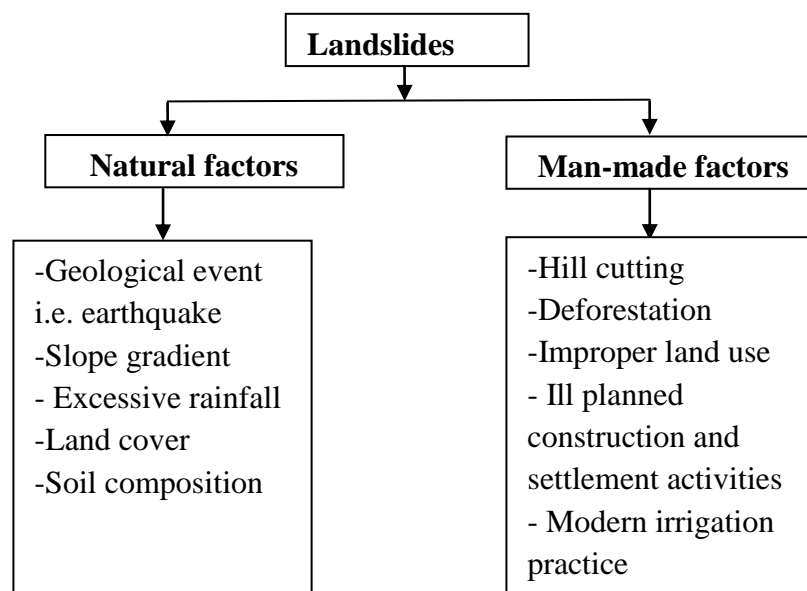


Figure 04: Causative factors of landslides

The respondents also said with regret that local people are steeping the hills day by day by hill cutting activities. Steep of hills are vulnerable for sliding land. Naturally, the hill angle should be 25-30 degrees (horizontally with flat land), whereas hills of Rangamati are cut at 70 degree or greater slope (Dainik Sambad, 15 June, 2017). During monsoon, these slopes lose their stability and loose muddy soil as their ability to rain water absorption cannot hold the extra weight added by rain water, results landslides. So we can say that heavy rainfall and soil cutting from hills are the main factors for landslide in Rangamati hilly regions.

Affected Areas of Rangamati and Damage Level

At least 20 separate landslides hit Rangamati district in 2017. This district had the highest number of casualties including 39 women and 22 children (The daily Star, 14 June, 2017). Damage level and magnitude of these landslides surpassed all previous occurrences in Rangamati. According to an estimate by the District administration, 1,231 houses were fully devastated and 9,537 houses partially damaged by these landslides. The overall impact scenarios of landslide 2017 in Rangamati are shown below in Table 1 and 2:

Table 1: Overall Impact scenario of landslide 2017

Area		No. of Death
District	Thana	
Rangamati	Sadar	58
	Kawkhali	23
	Kaptai	18
	Bilaichari	2
	Jurachari	4
Tolat number of death		105

Source: Report of 24 September, 2017, District Administration, Rangamati

Table 2: Number of death as a result of landslide of 2017

Area	No. of Death			
Rangamati	Female	Male	Children	Total
	39	44	22	105

Source: The daily Star, 14 June, 2017

Impact of Sudden Landslide on Women's Life

The majority of the women of the hilly areas of Rangamati are homebound and when the landslide struck they were busy with family livestock and had to make suitable provisions prior to going to the shelter.

Naturally women care for the children in the family. In many cases, it was noted that children could not evacuate quickly enough and mothers, while attempting to save their children, died during the landslide. In many cases women of the families are dependent on their husbands for taking any decision. When the landslide information from local authority came out, it was not available to them and in some cases they had little information. All of these factors contributed to them not evacuating the house and put them in more danger during this hazard.

Different information found from the affected women who had taken shelter centers after landslide. They said that nobody was prepared for this massive disaster. For that reason they could not take their essential goods with them but to hurry for the shelter centers. Approximately 2,500 people took shelter in the 19 makeshift shelters in Rangamati City. Two thirds of them were women and children. In those temporary shelters there was no sufficient arrangement of food, pure drinking water and sanitary facilities. Women and teenage girls who stayed at these shelter centers could not use the bathrooms facility because of the lack of privacy and lack of sanitation products. This caused them to suffer physically and mentally. Mothers could not find a private place to breast-feed their children and they could not take care of infants properly. The local interviewees described how women were also harassed while they tried to collect relief materials for their families. They also said that pregnant or lactating mothers did not often receive any relief related to their health care. Some pregnant women went through huge mental and physical pain and it was later found that many of them gave birth to disabled children. Again women had to fight more to get water at the shelter center. They also gave their managed food to their children and other family members. They remained half-fed or unfed. As a result, women of these affected areas were suffering from anemia, leucorrhoea and irregular menstruation. According to the report of Plan International Bangladesh, the schools remain closed at this time and child marriage increased (<http://planinternational.org/.Bangladesh>).

Case Study

Case Study 01

Reki Chakma, a married woman of 22 years old. She had a happy family with her husband and daughter (4). Her husband Pradip Chakma works in a local NGO. They had their house beside the road. They celebrated their daughter Prince Chakma's birthday on June 12, 2017. It rained whole night on that day. After seeing the bad condition due to heavy rain, they went to their sister's house for safe shelter on June 13. Her sister's house was not too secure. They chose it as a safe place because of pucca

building. They kept their daughter at her sister's house and went out to get all the necessary things. Suddenly her sister's house collapsed. Her daughter began screaming loudly inside the debris but they were unable to save their child. Immediately they called the local fire brigade personnel but they could not rescue their girl because of the bad weather. Their dream ended in that moment. Their life seemed absurd due to their only child's death.

Case Study 02

Pronita Chakma is housewife. She is 35 years old and has been married for 15 years. Her husband Jayananta Chakma serves in a local school. Their only daughter is Joyantika Chakma (13). They have been living in Rangapani village for almost 15 years. Their house was very near to the hill and it was made of tin and bamboo without having proper safety. She used to go to their hilly land to take care of their agriculture. Pronita Chakma never thought that she would face a terrible landslide. All the houses in her area were demolished due to a massive landslide on 13 June, 2017. They were taken to Monghar shelter center. After some days they came back to their affected residence. They were repairing their house themselves. They have not yet got any help or aid from anyone. They kept their essential materials outside their broken house. Many of her neighbors have gone elsewhere after the landslide for the sake of security and livelihood. They could see 1-2 men in this area at day time but no sound was heard at night. Pronita Chakma said with grief that they are not safe in this vulnerable area.

Conclusion

This study has exposed the major impacts of landslide on the hilly women. This hazard makes their life a difficult one and it increases vulnerability in the society. Geographically, Bangladesh is located in the danger zone and this country is more vulnerable to natural disasters every year. Proper physical measures can be taken by our government to prevent these vulnerable women from future landslide disasters.

Recommendations

It is almost impossible to fully recoup the damage caused by the landslide. But loss of life and property due to landslide can be minimized by proper preparedness and mitigation measures. The following steps can be taken to reduce the risk from the landslides and to save the women of the hilly regions:

1. All types of hill cutting should be stopped. Slope angle of the hill should be reduced.
2. Landslide prone areas should be demarcated and proper plans for future development activities should be accordingly followed.

3. All slums should be gradually removed and the inhabitants should be rehabilitated from hilltops, slopes and valleys.
4. Hilly areas should be stabilized by fast growing trees/plants.
5. The weather forecasting and warning systems should be improved so that people can know about the rainfall in the concerned area and beware of potential landslides.
6. Women should be given priorities in all planning related to disaster management. It should be ensured that they have equal access to development activities.
7. The number of shelter centers should be increased and well constructed. There should be separated facilities for women.
8. Female physicians should be appointed at the shelter centers so that women can able to describe their difficulties easily. The availability of medicines, vaccines and drugs especially for women and infants during and after landslide hazard should be ensured.
9. Special training program should be arranged to improve the skill of women after the disaster, especially for those who are poor and disadvantaged in the society.

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