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Community Perception on Adverse Effects of Natural Hazards on Livelihood and Enhancing Livelihood Resiliency: A Case Study at Patharghata Upazila, Barguna

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Abstract

Due to the geographical location, coastal regions of Bangladesh suffer from frequent natural hazards as a consequence of rapid change in climate. Patharghata Upazila under Barguna District is one of the most vulnerable coastal area in Bangladesh. Living with natural hazards is an everyday issue for the people of Patharghata because changing season brings different kinds of unpredictable hazards on livelihood. The study reveals the community perception of natural hazards and its adverse effect on livelihood. The natural hazards such as flood, cyclone, storm surge, salinity intrusion, excessive fog, temperature changing, river bank erosion, heavy rainfall, late rainy season, waterlogging impacting the livelihood of Patharghata community. To conduct this research both primary (Household Questionnaire Survey, Focus Group Discussion, Key Informants Interview) and secondary (Books, Newspapers, Journals, Online articles, Website and NGOs achieves) data were collected to fulfil the objectives. From the survey it observed that salinity frequency and intensity is the most effecting hazards but damage is much higher for cyclonic impact in the study area. The study results demonstrate that the natural hazards affected the livelihood including losses and damages of crops cultivation, loss of boats and nets, scarcity of pure drinking water, loss of economy, increase of poverty, damage in crop cultivation, fisheries, livestock, vegetable gardens and also creates a state of unemployment among the people though some of them are enhancing their livelihood resiliency through implementing indigenous practices. The study also identifies that the community people are getting limited facilities for the forecasting and early warning mainly through the NGO's, announcement by radio, miking and television for their daily livelihood. In the research area some initiatives have taken by the government and NGO's to reduce the losses on livelihood but some of those are not properly monitored. The research recommends that the role of local government, non-government organizations, civil society organizations and communities to reduce the adverse effects of different hazards on livelihood should be addressed and enhanced accordingly through proper initiatives for enhancing livelihood resiliency.

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1. Introduction

1.1 General introduction and rationale of the study

Bangladesh is one of the most disaster-prone countries in the world [1]. The coastal morphology of Bangladesh influences the impact of natural hazards on the area. In southern area, natural hazards increase the vulnerability of the coastal dwellers and slow down the process of social and economic development [2]. Living with physical hazards is an everyday issue for the people of Bangladesh because different seasons bring different kinds of hazards [1]. In general, livelihood is the manner of someone's living. A livelihood is defined by Carney (1998: 2) as comprising the capabilities, assets (including both material and social resources) and activities required for a means of living [3]. Occurrences of disasters have been increasing worldwide over time which damages resources and livelihood significantly [4]. Disasters such as floods, river bank erosion, cyclone, tornado, cold waves, storm surge, water logging, salinity intrusion etc. are gradually intensifying by climate change and composing risks for the coastal people in Bangladesh [5].

Bangladesh is currently ranked as one of the world's most disaster-prone countries, with 97.1% of its total area and 97.7% of the total population at risk of multiple hazards, including cyclones [6]. Salinity is a major problem which is expected to exacerbate by climate change and sea level rise, especially in the south-west region of the country [7]. Water logging has been disrupting livelihoods of about one million people in Bangladesh during past two decades. South-west Bangladesh is prone to water logging due to the vulnerable geographical setting and climate change [8]. Loss of livelihoods due to submergence of land often forces male to go far away for weeks in search of alternative livelihoods. Patharghata Upazila is a coastal area that is vulnerable to different natural hazards. Every year people of the area are experiencing several hazards such as flood, cyclone, storm surge, salinity, river bank erosion etc. These are caused a huge disruption in human life, damage to settlement and infrastructure, create economic problem, human displacement, changing the pattern of livelihood in this area. As a result live and livelihood, economy, house hold and infrastructure, human health's are in threats to risk for natural hazards in the area. From the literature review it is said that many researchers have worked on specific natural hazards in different area of Bangladesh but in the context of Patharghata a few and negligible research work has done to explore the different natural hazards, their adverse effects on livelihood and adaptation to those adverse effects and disasters on livelihood. So the study will concentrate the natural hazards of Patharghata, the adverse effects of natural hazards on livelihood and indigenous initiatives have taken for enhancing the livelihood resiliency of the area.

1.2 Objectives of the Study

- i. To identify the present scenario of natural hazards of the study area.
- ii. To find out the adverse effects of natural hazards on livelihood and indigenous practices for enhancing livelihood resiliency.

2. Methodology

2.1 Study Site Selection

The coastal area particularly Patharghata Upazila in Barguna district is selected. Being a part of coastal region, Patharghata Upazila is very much vulnerable to natural disasters which experienced the devastating impact of cyclone SIDR and AILA and MOHASEN in 2007, 2009 and 2013 respectively. The people of the area is most vulnerable to natural hazards due to dense population with ultra-poor resident area and frequent occur of different climatic disasters. The Upazila occupies an area of 387.36 sq.km including 37.2 sq.km forest areas. It is located between 21°58' and 22°14' north latitudes and between 89°53' and 90°05' east longitudes. The Upazila consists of 1 paurashava, 9 Wards, 9 mahallas, 7 unions, 42 populated mauzas and 66 villages [9].

The total population of the Upazila is 163927 of which 80544 are males and 83383 are females. Under Patharghata Upazila the study area includes mainly three villages i.e. Padma, Tengra and Harinbaria of Patharghata union which area is 29.00sq.km and total village is 12. The total population of Patharghata union is both sex 28127, male 14060 and female 14067 [9].

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