

## Knowledge and awareness on disaster preparedness among the people residing in natural disaster prone-area

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### Abstract

*As a natural disaster prone country Bangladesh needs greater awareness and preparedness among the mass people to brace such disasters. This study was a cross sectional study using purposively sampling conducted in 26 villages of different upazilla under Bagerhat, Pirojpur and Satkhira district respectively. Data collections were done by face to face interview. The data were analyzed by using SPSS. In this study total respondents were 201 between 25-64 years old, the mean ( $\pm$ SD) age was 42.30 ( $\pm$ 10.98). Among the respondents 162(80.6%) were male and 39 (19.4%) were female, 23.9% respondents was illiterate and others were literate. The people (96.0%) who have knowledge on natural disaster preparedness wants to go safe place, cyclone shelter with their dependant, pet animal, valuable goods, dry food, medicine for life saving, torch and drinking water. It was found that most of the respondents (57.2%) knew about natural disaster from electronic and printing media, 29.4% respondents knew about natural disaster from NGO worker, volunteer and rest 13.4% respondent knew about natural disaster from local people, people of union level and government officials. knowledge sharing and awareness raising activities amongst local communities, disseminating good practice through community-led events, through mass media awareness-raising; thus people did not suffer by major diseases and disabilities.*

**Key Words:** Disaster, preparedness, Knowledge, Awareness.

### Introduction

Bangladesh has made significant progress in human development in recent years, the majority of its population still live in poverty. Frequency and impact of natural hazards are among the key factors accountable for wide disparities in the incidence of poverty at household and geographical level. Poverty makes many people vulnerable to disasters, while many remain in poverty because of the adverse impacts of disasters. Bangladesh faces

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different types of disaster– floods, cyclones, earthquakes, tornadoes, river bank erosion, water logging, drought, salinity, storms and landslides as major hazards to which the people and their livelihoods are vulnerable in Bangladesh. The list also includes other hazard trends such as industrial pollution, fire, epidemics, and food contaminated disasters as well as political violence. These disasters hit the country's agro ecological areas: flood plains, small hilly regions and urban centers. (Khurshid Alam, 2007)

Disaster preparedness (DP) plans are presented as they were until February 2007. Various national and international commitments, such as the Hyogo Framework for Disaster Preparedness for Natural Hazards– Current Status in Bangladesh Action (HFA) and the author's own extensive research on people's vulnerability to natural disasters were the basis of the commentaries on gaps in the plans and their implementation. In preparing the report, key people in Bangladesh were interviewed. (Khurshid Alam, 2007)

## Literature Review

Bangladesh is prone to frequent natural hazards in various degrees and forms - in particular flood, cyclone, hurricane, tornado, tidal surge, even drought, famine, heat wave, cold wave, epidemic, etc., almost every year. These disasters in the last couple of years have resulted in substantial damages to lives and properties of the country. Although it has affected the long term social and economic development of the country, disasters are left to the relief teams to offer emergency aid whenever disaster strikes. Only recently both the government and the non-government organizations are taking active role in formulating a comprehensive preparedness program to address the pre and post disaster needs. Still there is a big gap those who are in the grass roots level they are not being the part of this preparedness program they are the local government and community volunteers. (Shahidul Haque, 2011)

Bangladesh faces many types of disaster – from geophysical and hydro meteorological to industrial to food-related crises. The Comprehensive Disaster Management Program (CDMP) lists floods, cyclones, earthquakes, tornadoes, river bank erosion, water logging, drought, salinity, storms, landslides, and tsunami as major hazards to which the people and their livelihoods are vulnerable in Bangladesh. The list also includes other hazard trends such as industrial pollution, fire, epidemics, and food related disasters as well as political violence. These disasters hit the countries ecological areas: flood plains, small hilly regions, and urban centers.

The World Bank's Global Risk Analysis (World Bank 2005) placed Bangladesh in a list of 60 countries which face two or more hazards per year. It states that 32.9% of the total populations are exposed to four types of hazard. The UNDP disaster vulnerability

**Population** – 143.8 million in 2002 (UNDP Human Development Report 2004a)

**Gross domestic product (GDP)** – U.S.\$351 per capita in 2002 (UNDP Human Development Report 2004a)

**Poverty** – 49.6% of the population living on less than \$1 per day (Government of Bangladesh/UNDP 2005)

**Disaster related events** from 1970-98 – Total events - 171, which killed a total of 516, 239 people and affected 428m (UNDP– Disaster in Least Developed Countries– data sheet)

**Annual frequency of disaster:** 6.11 since 1970; 8.07 since 1985 (Khurshed Alam, June 2007)

### Methodology

This study is a cross sectional study conducted at 2 villages of Bagerhat sadar upazila and 5 villages in Mongla upazila under Bagerhat district, 4 villages of Pirojpur sadar upazila under Pirojpur district and 5 villages of Satkhira sadar upazila, 5 villages of Kaligonj upazila, 5 villages of Shyamnagar upazila under Satkhira district.

Data were collected through face to face interview of the respondents by using a semi-structured questionnaire. Study Population was selected purposively. At first a community meeting was held at the village level with the participation of all level of community people and do rank of the community people based on their socio-economic condition, then the participants selected from the village members.

One structured interview schedule was used as data collection tool. A pretest was done to collect the data. After completion the pretest the final interview was done. 8 data collectors and 1 data supervisors and researchers were involved in data collection. The data collectors and supervisors were trained up before the data collection.

### Findings

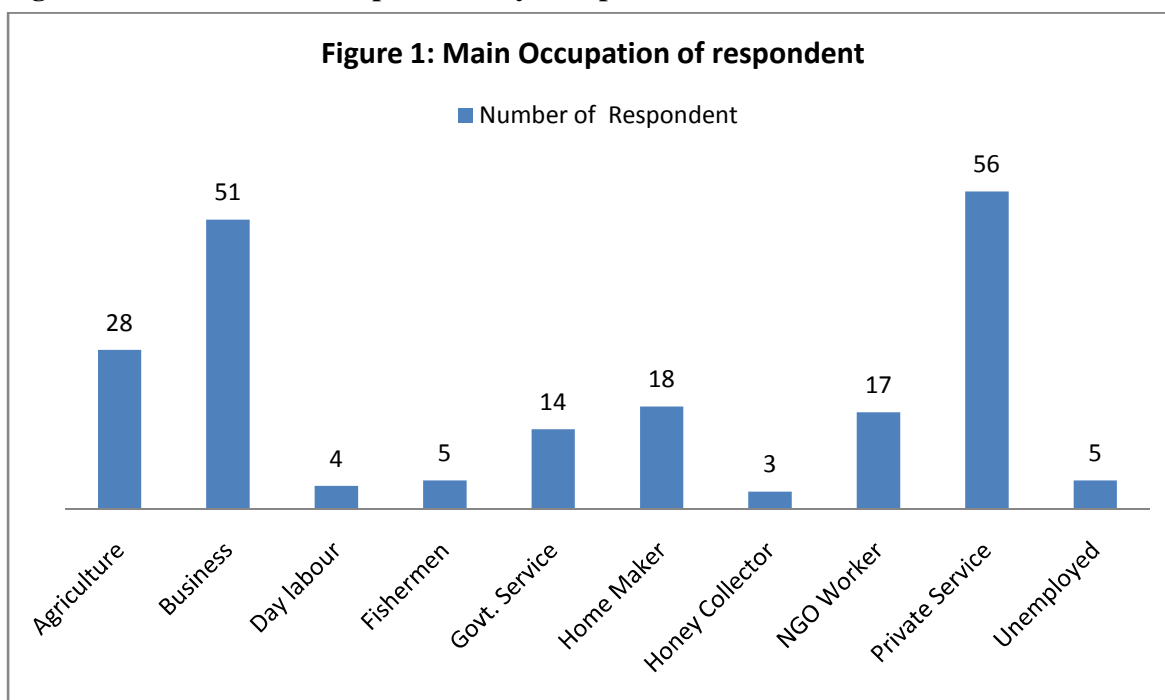
In this study total respondent was 201. Out of them; the respondents 49 (24.4%) of the survey were between 25-34 years old, the respondents 65 (32.3%) of the survey were between 35-44 years old, the respondents 48 (23.9%) of the survey were between 45-54 years old and the respondents 39 (19.0%) of the survey were between 55-64 years old. The maximum age was 64 and minimum age was 25, the mean ( $\pm$ SD) age was 42.30 ( $\pm$ 10.98), median was 40, mode was 40 and standard deviation is 10.98 year.

**Table1: Distribution of the respondents by socioeconomic condition (n=201)**

Variables	Frequency(n)	Percentage
<b>Age (In years)</b>		
25-34	49	24.4
35-44	65	32.3
45-54	48	23.9
55-64	39	19.0
<b>Mean age 42.30 SD<math>\pm</math>10.98</b>		

<b>Variables</b>	<b>Frequency(n)</b>	<b>Percentage</b>
<b>Sex</b>		
<b>Male</b>	<b>162</b>	<b>80.6</b>
<b>Female</b>	<b>39</b>	<b>19.4</b>
<b>Educational level</b>		
<b>Cannot read or write</b>	<b>48</b>	<b>23.9</b>
<b>Primary</b>	<b>66</b>	<b>32.9</b>
<b>SSC</b>	<b>37</b>	<b>18.4</b>
<b>HSC</b>	<b>27</b>	<b>13.4</b>
<b>Graduate</b>	<b>23</b>	<b>11.4</b>
<b>Religion</b>		
<b>Muslim</b>	<b>175</b>	<b>87.1</b>
<b>Hindu</b>	<b>23</b>	<b>11.4</b>
<b>Christian</b>	<b>3</b>	<b>1.5</b>

**Figure 1: Distribution of respondents by occupation (n=201)**



Maximum respondent's main source of income were non agriculture based 38.6% and 26.9% were agriculture based, agriculture labor was 2.0%, business were 25.3%, service were 43.3% and unemployed were 2.5%.

**Table2: Distribution of respondents by the knowledge**

<b>Knowledge</b>	<b>Number</b>	<b>Percentage</b>
Yes	193	96.0
No	8	4.0
<b>Total</b>	<b>201</b>	<b>100</b>

It was found that most of the respondents (57.2%) knew about natural disaster from electronic and printing media (Television, Radio, Newspaper, mike announcement and telephone), 29.4% respondents knew about natural disaster from NGO worker, volunteer, mike announcement and rest 13.4% respondent knew about natural disaster from local people, people of union level and government officials.

**Table 3: Distribution of respondents by source of information**

<b>Source</b>	<b>Number</b>	<b>Percentage</b>
Local people and micking	27	13.4
NGO worker and volunteer	59	29.4
Electronic and printing media	115	57.2
<b>Total</b>	<b>201</b>	<b>100</b>

The Majority of respondent (67.2%) did not aware to reduce their properties in the natural disaster preparedness and only 32.8% of respondents were aware in that case.

**Table 4: Distribution of respondents by practice of awareness**

<b>Practice as awareness</b>	<b>Number</b>	<b>Percentage</b>
Yes	66	32.8
No	135	67.2
<b>Total</b>	<b>201</b>	<b>100</b>

Younger of respondents was more knowledgeable about natural disaster preparedness than older respondents and the following table shows that 35-39 aged level was 17.6%. Nowadays younger people want to know livelihood and risk factors for their life through electronic and printing media and academic curriculums.

**Table 5: Distribution of respondents by knowledge level at each group**

Age Level	Frequency	Percentage
25-34	48	23.9
35-44	66	32.8
45-54	46	22.9
55-64	41	20.4
<b>Total</b>	<b>201</b>	<b>100</b>

### Discussion & Conclusion

Bangladesh has made great strides forward in the field of disaster management. As typical in a disaster-prone country, members of vulnerable communities, driven by the urge for survival, make their own preparations to face and cope with ensuing disasters. Floods and cyclones are considered the main natural hazards, floods being annual phenomena. While scope for preparedness against cyclones was limited in the absence of cyclone shelters, flood-prone communities had enough to do, and their activities always fell short due to resource limitations and non-involvement of the government in the preparedness phase. The government would appear on the scene afterwards for post-disaster relief and rehabilitation. With inadequate preparedness, the damage would be great, so recovery would be complicated and costly also. Pursuant to the disaster preparedness of the study (FAP-11) with UNDP assistance, the Ministry of Relief was thoroughly revamped and flood preparedness incorporated into the national development agenda. The result was encouraging and, with a comparatively small investment in preparedness, damage was reduced considerably. This was also corroborated by the pilot projects of the action research study of the World Meteorological Office and Global Water Programme (WMO-GWP). The UNDP supported MoFDM's CDMP programme will help to realize the vision, mission, and objectives of the GoB and Ministry and to make a difference. This time we expect that a true paradigm shift will be realized at all levels.

Effective implementation of DRR policy and legal framework (national to local) in Bangladesh help to achieve the capacity of cope of natural disaster. Targeted communities and institutions have increased capacity to assess and mitigate disaster risk in Bangladesh. By effective implementation of DRR policy increased preparedness for effective emergency response in targeted communities and institutions in Bangladesh and increased knowledge sharing enables a greater impact in risk reduction and strengthens a culture of safety in Bangladesh.

Bangladesh Open University is the most potential university, which has strong respect to exploit all its resources like, the Regional Resource Centers, Local Centers, Study Centers, Media center and School to carry out numerous core programs and certificate or training program to teach the mass people of Bangladesh. Moreover, all the schools of BOU, such as the School of Agriculture and Rural Development, the School of Science and Technology, Open School, School of Social Sciences, Humanities and Languages, have high potentiality

to become the leading educational school to offer knowledge and create awareness about the disaster management strategies in Bangladesh. This will not only minimize the loss of life and property, but also prevent from further destruction and damage. The whole world is aware and anxious about the gradual destruction of nature which ultimately enhanced the frequency of disaster occurrence. Bangladesh cannot keep herself aloof from these global problems anymore. Proper knowledge about the disaster in the context of our own country is needed urgently, as this is the only gateway from the huge loss of life and property, and the damage of the total infrastructure of the country.

The people of disaster prone area has advanced natural disaster preparedness and management through effective implementation of DRR policy and legal framework in Bangladesh as well as electronic and printing media in the past three decades for survival in the major or minor disaster every year. By the DRR policy increased preparedness for continuous emergency response in targeted communities and institutions in Bangladesh and increased knowledge sharing enable a greater impact in risk reduction and strengthen a culture of safety in Bangladesh.

Most of the people in the disaster-prone area has faced several disasters like cyclone, flood and tornado in their life time and have mixed experiences for morbidity and mortality during and after natural disasters. During the disasters people have received different types of relief from the government of Bangladesh and foreign donation through the national and international NGOs such as ASA, BRAC, CARE, Oxfam, DAM, etc. The people of disaster-prone area have enhanced their natural disaster preparedness and management through electronic and printing media in the past three decades for survival in the major or minor disaster every year. Mainly younger people were knowledgeable about natural disaster through electronic and printing media, however; they were less active to practice as the knowledge, thus focused real trends of education system in Bangladesh and lacking of practical knowledge or training. Overall increasing the income level, transport system and literacy level people are developing by their knowledge and awareness. Finally, social bondage of rural areas all over Bangladesh can help people survive and reduce the mortality and morbidity in disaster prone areas.

### **Recommendation**

- By the fruitful training on disaster preparedness and management mass people receive awareness. Various training can be conducted in the courtyard meeting in local level.
- Activate and coordinate all level stake holders, minimize the gaps for better coordination to reduce risk and hazard, increasing recovery of damages and holistic relief distribution in disaster affected area.
- Upazila Disaster Management committee under the ministry of disaster management and relief in the disaster prone areas can build up village task force to reduce vulnerability and risk of disaster.

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