Phase 3 Shelter, WASH and Early Recovery Detailed Assessment

Bangladesh – Tropical Storm Mahasen

Shelter Cluster Factsheet

10 June 2013

THE PHASE III DETAILED ASSESSMENT IS A JOINT INITIATIVE OF THE GOVERNMENT OF BANGLADESH AND THE SHELTER, WASH, AND EARLY RECOVERY CLUSTERS, WITH SUPPORT FROM THE REACH INITIATIVE

INTRODUCTION

Cyclone Mahasen made landfall on May 16, 2013 in the Barisol division of southern Bangladesh. The Government of Bangladesh initiated the evacuation of more than 1 million people living in the storm's path to storm shelters. After landfall, the cyclone quickly weakened and was downgraded to a tropical storm before dissipating over northern Bangladesh[1].

The Government of Bangladesh reported 17 casualties as a result of the cyclone with 463,303 people affected. The Government also reported 23,539 totally destroyed and 109,687 partially damaged shelters[2].

Based on the initial reports of the government and humanitarian agencies on the ground, it was determined that the districts of Barguna, Bhola and Patuakhali were the most affected by the storm.

METHODOLOGY

The sampling methodology included two sampling methods: (1) purposive sampling of most affected districts, upazilas and unions, and (2) random sampling among households within each ward.

Based on the findings of the JNA Phase 1 and affected numbers from the Disaster Management Information Center (DMIC), the top 3 most affected Districts, the top 4 most affected Upazilas within each of those Districts and the top 3 most affected Unions within each of those Upazilas were selected. Within each Union, an average of 9 Wards was assessed and the households within each Ward were randomly selected. Random selection of households within each Ward was accomplished in the field following the following steps:

1. acquiring the total number of households per Ward (both affected and non-affected) from the Union Chairman
2. dividing the total number of households in the Ward by the number of households sampled per Ward (usually 14), effectively providing the interval at which the enumerator must sample the households (i.e. the number of houses to skip)
3. beginning at a central point in the Ward (e.g. school, central water point, mosque)
4. dropping a pencil on the ground to define the direction in which the enumerator will walk
5. skipping the number of houses defined by the interval until reaching the target number of households (usually 14)

Table 1: Sampled Locations

District	Upazila	Union	No. HHs[3]	Sample Size
Barguna	Barguna Sadar	Naltona	4828	125
		M. Baliatali	7093	125
		Dhalua	6082	125
	Betagi	Betagi	3787	125
		Bibichini	3991	125
		Sarishamuri	3582	125
	Patharghata	Patharghata	7242	125
		Kanthaltali	5137	125
		Kalmegha	6939	125
	Amtoli	Nishanbaria	3226	125
		Sonakata	2921	125
		Barabagi	4321	125
Bhola	Bhola Sadar	Rajapur	8910	125
		Kachia	3131	125
		Dhania	6456	125
	Char Fasson	Char Kukri Mukr	1727	125
		Mujib Nagar	1993	125
		Char Madras	7045	125
	Lalmohan	Lord Hardinze	5577	125
		Dhali Gaurnagar	8692	125
		Paschim Char Umed	7711	125
	Manpura	Hazirhat	5535	125
		Manpura	4479	125
		Uttar Sakuchia	3795	125
Patuakali	Patuakhali	Boro Bighai	4473	125
		Chhoto Bighai	4220	125
		Itbaria	4492	125
	Galachipa	Char Kajal	5376	125
		Char Biswas	4188	125
		Galachipa Sadar	4259	125
	Kala Para	Nilganj	7282	125
		Mitiganj	2844	125
		Lalua	5313	125
	Rangabali	Boro Bisdia	5669	125
		Rangabali Sadar	6830	125
		Chalitabunia	1646	125

Table 1 shows the sampled locations and their corresponding sample sizes. The target sample size for each target administrative level was: (1) District: 1500; (2) Upazila: 375; (3) Union: 125; (4) Ward: 14

[1] UNOCHA Flash update for Cyclone Mahasen, OCHA Regional Office for Asia and the Pacific, 17 May 2013 <http://reliefweb.int/report/bangladesh/un-ocha-flash-update-7-cyclone-mahasen-bangladesh-and-myanmar>

[2] DMIC Sitrep, 20/5/2013

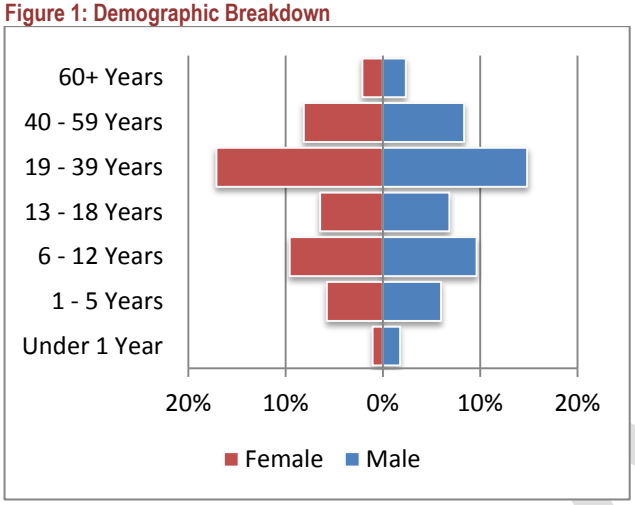
[3] Bangladesh 2011 Census

Assessment Results

Demographic Characteristics

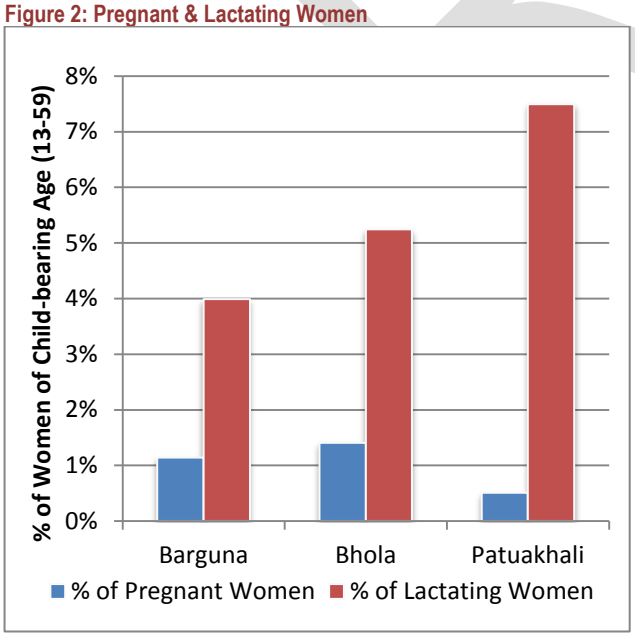
A total number of 4,615 households were assessed for this assessment. The proportion of male to female household members was nearly 50%. The largest age cohort was 19-39 years old, with slightly more females within this cohort than males. **Figure 1** illustrates the demographic breakdown of assessed households.

Figure 1: Demographic Breakdown



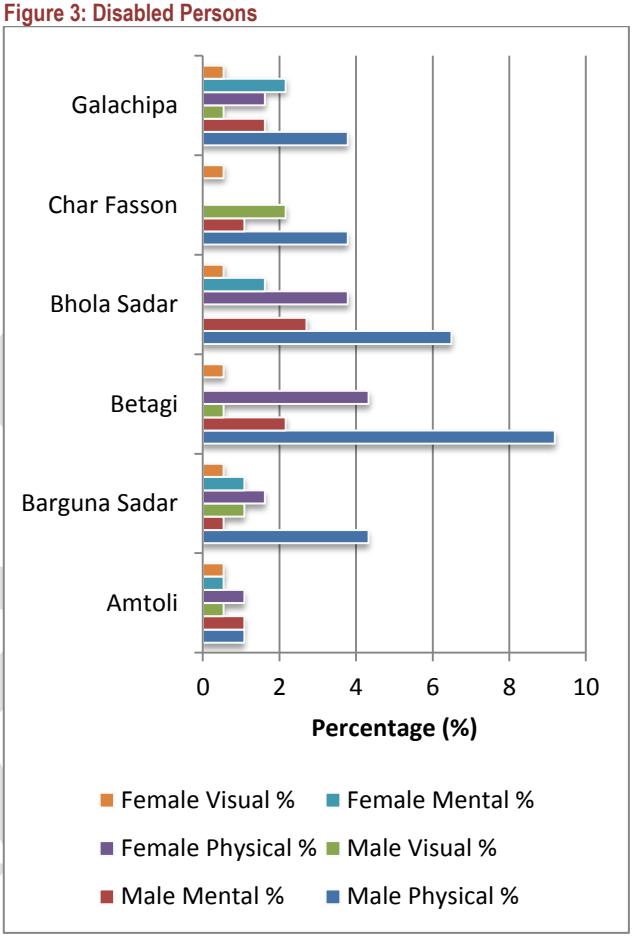
The largest minority group across all assessed areas was Hindu, with the largest concentrations in the Upazilas of Barguna District (Betagi, Manpura and Patharghata). Numbers for all other minority groups were minimal.

Figure 2: Pregnant & Lactating Women



Among all women of child-bearing age (13-59), households in Patuakhali reported having the most numbers of lactating women at nearly 8% of all women of child-bearing age. Unsurprisingly, households in Pautakhali also reported having the least number of pregnant women among the assessed Districts, at 0.5%. **Figure 3** shows the percentages of pregnant and lactating women within each district. There are nearly equal numbers of pregnant women in Barguna and Bhola, with slightly more lactating women in Bhola.

Figure 3: Disabled Persons



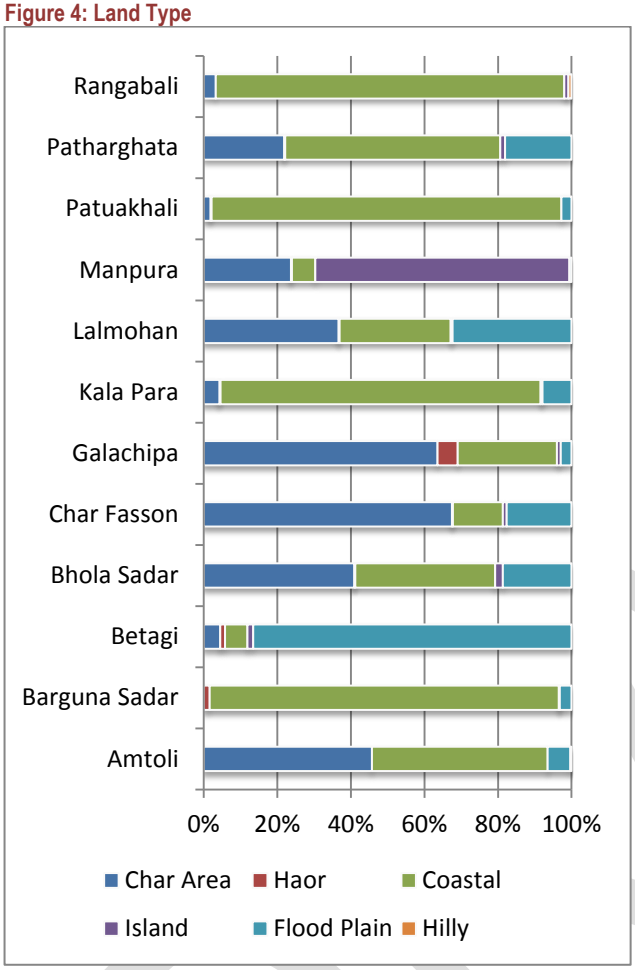
Across all Upazilas, the incidence of disability was much more common among men than women, with 66% of all reported disabilities being among men. As can be seen in **Figure 4**, Bhola Sadar and Betagi have high incidences of male physical disability at 6.5% and 9%, respectively. This was also the most common disability type reported across all Upazilas. Women with physical disabilities also had higher than average reported numbers in Bhola Sadar and Betagi Upazilas.

Socio-Economic Context

96% of assessed households live in rural areas. This can be generalized to all affected Upazilas and Districts (i.e. the most affected households live in rural areas). A very large number of households have lived in their current location for more than 15 years (77%) with another 15%

having lived in their current location for 5-15 years. This has a direct influence on the types and establishment of livelihoods as well as the types of shelters constructed. The assumption would be that shelters and livelihoods would be better established and more able to withstand repeated storms. The next section will cover these issues.

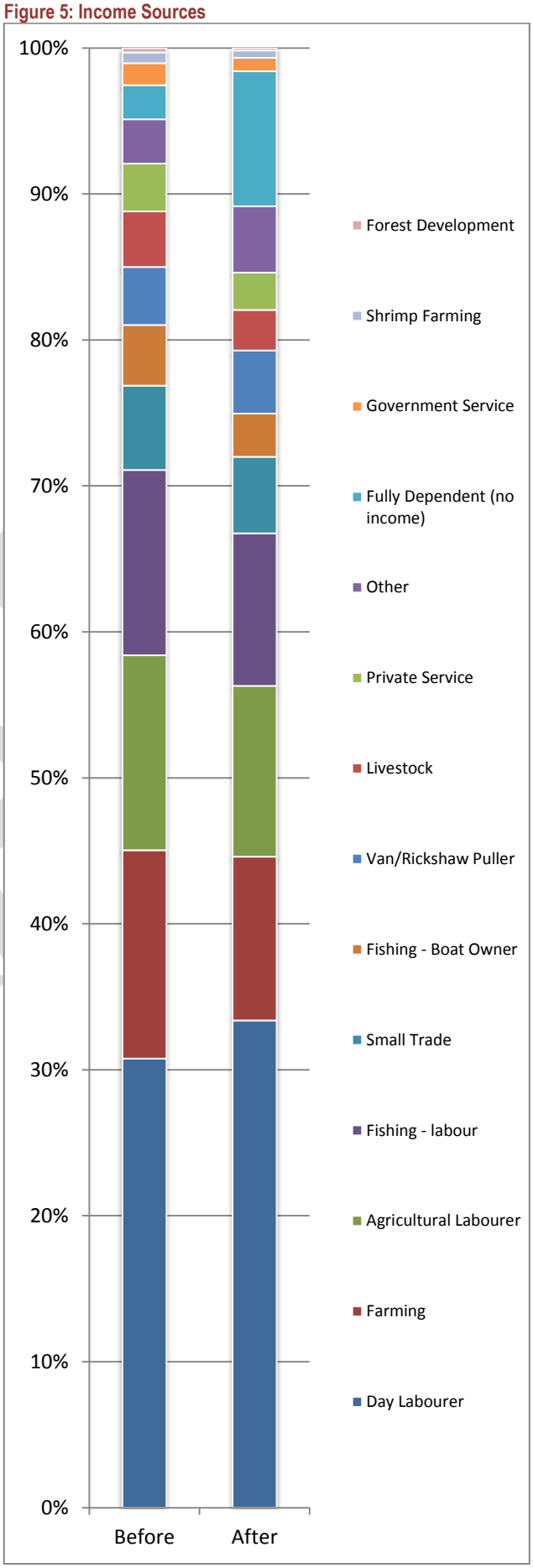
Figure 4: Land Type



The majority of households live in *Char* (islands of silt within rivers) and coastal areas – 75%. These areas are cyclone and flood-prone and often among some of the poorest households in the region. Figure 5 illustrates that the only notable outliers among this trend are Manpura and Betagi Upazilas. Manpura is an island, thus is categorized as an island land type, while Betagi sits on a wide flood plain. Part of Galachipa also sits in a *Haor* (a bowl or saucer shaped shallow depression).

Very little change occurred in the assessed areas after the cyclone compared to before. The proportion of income sources remained largely the same, with the exception of the category "no income," which increased 257% compared with before the storm. The most common income source remained day laborer, followed by farming, agricultural labor and fishing.

Figure 5: Income Sources



KEY FIGURES

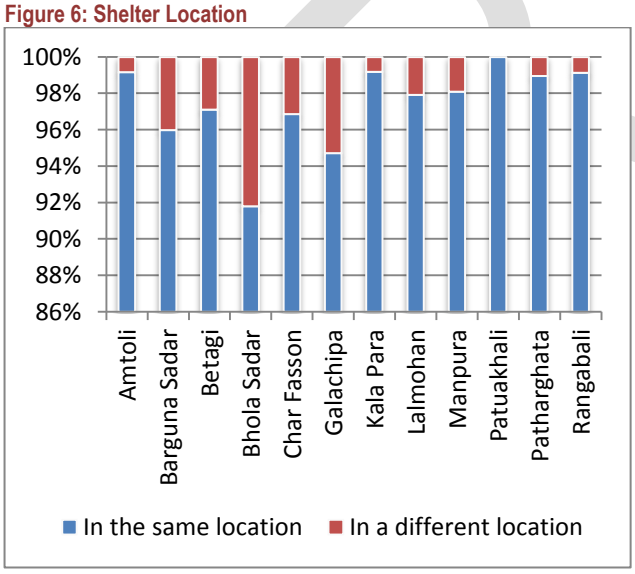
Constraints in Findings

Due to the sampling methods employed in this assessment, findings do not confidently distinguish between housing damage that was directly related to Mahasen impacts and substandard housing that is a chronic factor in the affected area. As a result, absolute values for damage levels and locations are indeterminate. Assessment data can, however, be used to express trends that can inform operational response planning by describing typical damage sustained by housing, what building elements tended to fail, the vulnerabilities that may be present, and what locations may be particularly affected.

Settlement Typology

Overall, 97% of households are currently living in the same location they were living before Cyclone Mahasen, having returned from storm shelters in the days that followed. One notable variation in this trend is Bhola Sadar Upazila in which 8% of households reported living in a different location, compared to the average of 3%. All households in Patuakhali Upazila reported living in the same location.

Figure 6: Shelter Location



The majority of those households living in the same location as before are living in their damaged house (77%). The only outlier to this trend is Kala Para Upazila in which 17% of households reported living in a makeshift shelter on their land. As for those households not living in the same location as before the storm, 70% report living with families, friends and neighbors.

A full 94% of households across all Upazilas reported living in a traditional mud house before the storm. Given that the majority of households have returned to their previous homes, the majority of houses inhabited by affected households are mud houses. The most common types of materials that these houses are made of include: (1) a CGI roof, (2) CGI sheets or timber planks for walls, (3) timber or a small number of bamboo for the frame, (4) earth floor and (5) a clay plinth foundation.

Shelter Damage, Vulnerabitlity & Self Recovery

Figure 7 shows fully and partially damaged shelters according to the Government D Form. Barguna shows the highest percentage of damaged housing (31.8%) compared to Bhola which shows least (6.5%). Poverty rates, households living on *char* or flood plain areas and those living on less than 10 decimals of land are considered vunerability indicators and should be considerd as part of beneficiary selection criteria. Figure 7 shows that Barguna may represent higher vulnerability against those criteria.

Figure 7: Overview of Shelter Damage, Vulnerability and Self Recovery

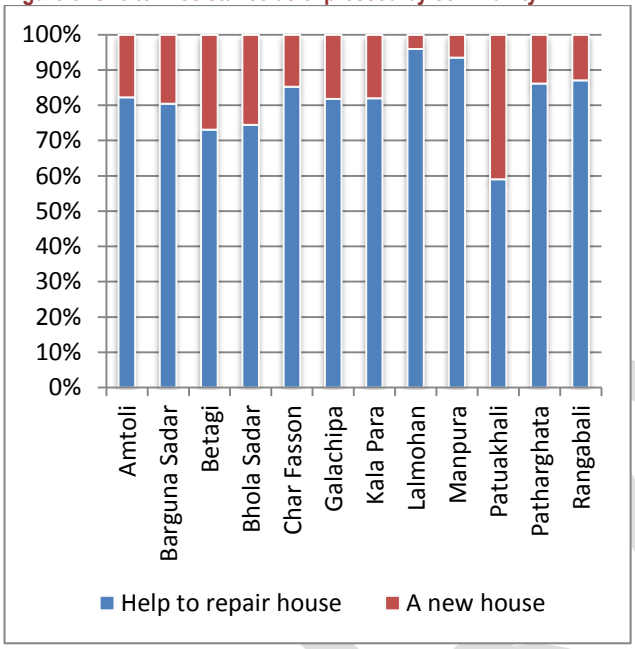
District	Pop.	Damage		Vulnerability				Self-Recovery
	# of HH	Fully	Partially	% HH with fully or partially	Poverty Rate	% HH living on Char or Flood	% HH with < 10 Decimals of land	% HH who have begun to
Bhola	372,723	4,957	19,389	6.5 %	41.66 %	15%	36%	41%
Patuakhali	346,462	10,597	28,665	11.3 %	34.54 %	8%	10%	31%
Barguna	215,842	6,856	61,812	31.8 %	51.13 %	20%	33%	22%
Totals	**935,027**	**22,410**	**109,866**	**14.1 %**	**42.33 %**	**15%**	**25%**	**31%**

An average of 31% of households have begun to repair their homes.

Shelter Assistance as Expressed by the Community

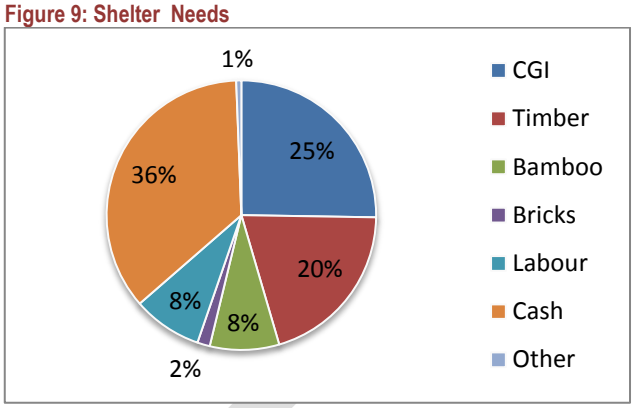
81% of households responded that they needed help to repair their house. Households in Betagi, Bhola Sadar and Patuakhali Sadar Upazilas, however, responded with higher frequency than households in other assessed Upazilas. 20%, 27% and 41% of households in these three Upazilas, repsectively, responded that they would need assistance with a new house. **Figure 8** illustrates this.

Figure 8: Shelter Assistance as expressed by community



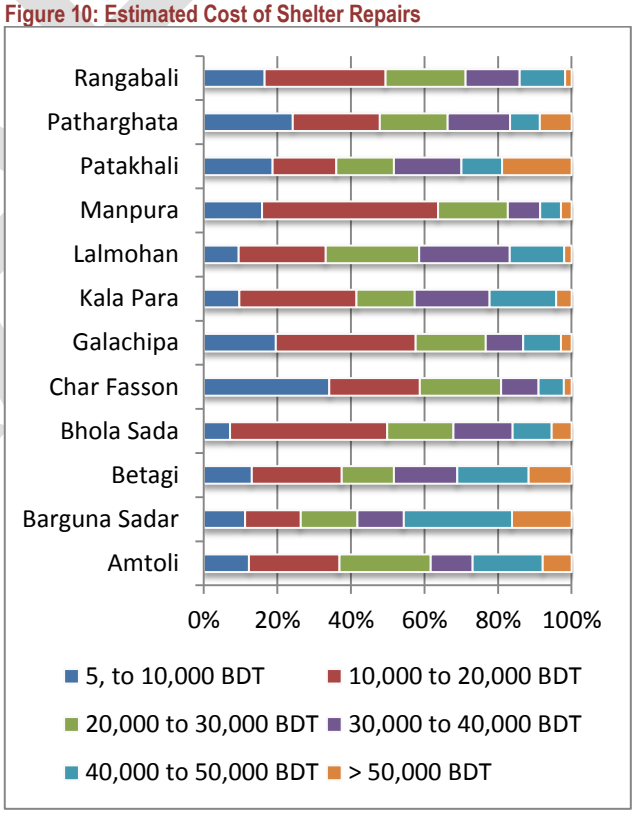
The greatest shelter need among assessed households was cash (36%) to help rebuild their house. This was followed by timber and CGI sheets at 20% and 25%, respectively. **Figure 9** shows the overall results for shelter needs. In terms of materials need, CGI and Timber show more dominent figure and in terms of modality cash and labor support are expressed by community. This corresponds to the 1st priority shelter needs reported by households, with 60% reporting materials and tools as the first priorty need and 66% reporting that materials and tools are the main limiting factor to them being able to repair their home.

Figure 9: Shelter Needs



Estimated repair costs varied widely across Upazilas. **Figure 10** shows the relative costs of repair by percentage of households repsonding per cost range. Overall, 29% of households responded that the repair costs would fall between 10,000-20,000 BDT, followed by 19% for 20,000-30,000 BDT, 16% for 5,000-10,000 BDT and 14% for 40,000-50,000 BDT.

Figure 10: Estimated Cost of Shelter Repairs



49% of households responded that they could provide labor, while 42% responded that they could provide salvage materials.

Housing, Land and Property (HLP)

Private ownership is the most common tenure type among assessed households, at 87%. Bhola Sadar, Lamohan and Manpura report higher than average numbers of squatter households at 27%, 18% and 13%, respectively. In relation to the majority of households reporting private ownership, 84% of households claim that they still hold legal papers to their shelter.

A relatively small number of households in Barguna and Patuakhali (16% and 10%, respectively) report feeling threatened by eviction. 41% of households in Bhola District, however, report a threat of eviction. The deifnition of eviction for this assessment, however, was ambiguous and could have been comfused with the term “evacuation”. With that said, the statistically significant difference among hosuehold repsonses in Bhola is worth exploring.

Agencies and Organizations participating in the Phase III Shelter, WASH, Early Recovery Detailed Assessment:

ACF, ASHRAY Foundation, BDRCS, British Red Cross, Caritas, CCDB, Christian Aid, Hope'87 Bangladesh, IFRC, Impact Initiatives, Islamic Relief, Jago Nari, Muslim Aid, Oxfam, Plan International Saint Bangladesh, SAP Bangladesh, Save the Children, Shushilan, TdH-Netherlands, UNICEF,UNDP, VOSD

This fact sheet provides a synopsis of the key issues and summary of the data that has been collected. It is not intended or able to provide detailed programmatic information in its current form. This is designed to make the fact sheet useful for a broader audience.

In addition, the database is available to interested parties, with confidential information removed where necessary. Further analysis can be conducted, if needed.

Background

REACH partners with the shelter cluster as part of a global agreement to facilitate the deployment of assessment teams following humanitarian emergencies with the objective of contributing to a more informed, relevant, and timely response by actors involved in the shelter sector. REACH tools include reports and fact sheets such as this one, as well as mapping data and the use of remote sensing to track developments in an emergency.

This fact sheet is the first product in a series of products as a result of the Shelter, WASH and Early Recovery Joint Needs Assessment, Phase 3 following Cyclone Mahasen in Bangladesh. Separate factsheets are developed for each sector. A fully integrated report will follow.

Generalizability

This assessment used a purposive sampling method to target most affected Districts, Upazilas and Unions. Households were then randomly sampled from within each Ward with a representative sample at the Upazila level. This allows for a statistically relevant analysis of affected households across all affected Upazilas, as 87% of the affected population lies within the assessed areas. The following generalizations can be made: (1) across the three assessed Districts; (2) across the twelve assessed Upazilas; (3) across all affected Districts; (4) across all affected Upazilas

Results are indicative at the Union level for those Unions that were assessed.

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Humanitarian Aid and Civil Protection

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