

# Barguna Ward Level Shelter Assessment

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One of the main challenges faced by the Shelter Coordination Group (SCG) members is the lack of clear and authoritative data on the extent and characteristics of damage to housing from Cyclone Sidr. The main source of information currently available, the summary produced by the Ministry of Food and Disaster Management (MoFDM), was compiled in the first few weeks after Cyclone Sidr. Given the size of the area affected and the difficulty of access to certain areas, there was some difficulty creating a clear picture of housing damage.

The SCG launched an assessment to look at the needs of the affected population in terms of Early Recovery Programming. That assessment was conducted during the month of December, 2007 led to a number of conclusions, notably that:

- The communities perceived that 66% of families with fully damaged houses and 83% of families with partially damaged houses could self-recover from the damage of the Cyclone;
- Damage levels were significantly higher and recovery rates lower for families living outside the embankments;
- The vast majority of structures in communities were of the Pacca-type with little, if any utilization of disaster-resistant building techniques such as stabilized plinths, wall bracing, double-pin jointing.

Other assessments have been conducted by both international and national agencies that covered limited areas, often relying on anecdotal evidence or responses from small samples of the population. The Barguna Ward Level Shelter Assessment (BWLSA) was conducted in all five Upa-Zilas of Barguna District. The methodology was founded on using a network of local data collectors to cover one ward from each Upa-Zila of Barguna District. Wards were selected to represent the spectrum of housing damage, some being from coastal areas and others from inland areas. By covering entire wards, comparisons to the MoFDM data is possible as the Union Parichyat offices collected damage information to that level. Additionally, by using commonly accepted boundaries within a community, it was possible to avoid selection bias that could occur when data collectors select the areas they want to assess.

This assessment report presents the findings in two main sections. Firstly a focus on the report's data, listing the exact responses that surveyed households gave to the assessment's questions (see Annex 1 for the data collection form and Annex 2 for an exhaustive list of the data collected). Secondly the report attempts to put the findings in the context of the wider disaster and other survey and assessments conducted to draw conclusions to inform the humanitarian response to Cyclone Sidr.

## Findings of the Assessment

### *Demographic Information*

The assessment covers the lowest level of government recognized divisions between communities, the ward. A comparison is possible between the demographic information collected during the assessment and the government's census of 2001. The comparison was designed partially to test the assertion of several local authorities that the census of 2001 dramatically undercounted the coastal and island (Char) population. The results of the census show that the definition of the borders between wards is not yet commonly understood between local authorities and the general population. The assessment came up with both much larger and much smaller populations than were recorded during the last census, this is more likely due to issues related to the definitions of ward boundaries than any migration or miscounting. A pattern does emerge of undercounting in regions with large numbers of households living outside the embankment. Given the difficulty of finding commonly agreed upon definitions of wards it is hard to conclusively settle the issue of undercounting in Barguna's coastal communities.

The average family size observed in the surveyed communities was **4.39**, as compared to the **5.11** estimated in the 2001 census. This difference may be linked to the strict adherence in the BWLSA to the definition of a family as a group of related individuals eating out of one pot or the family size may have changed since 2001.

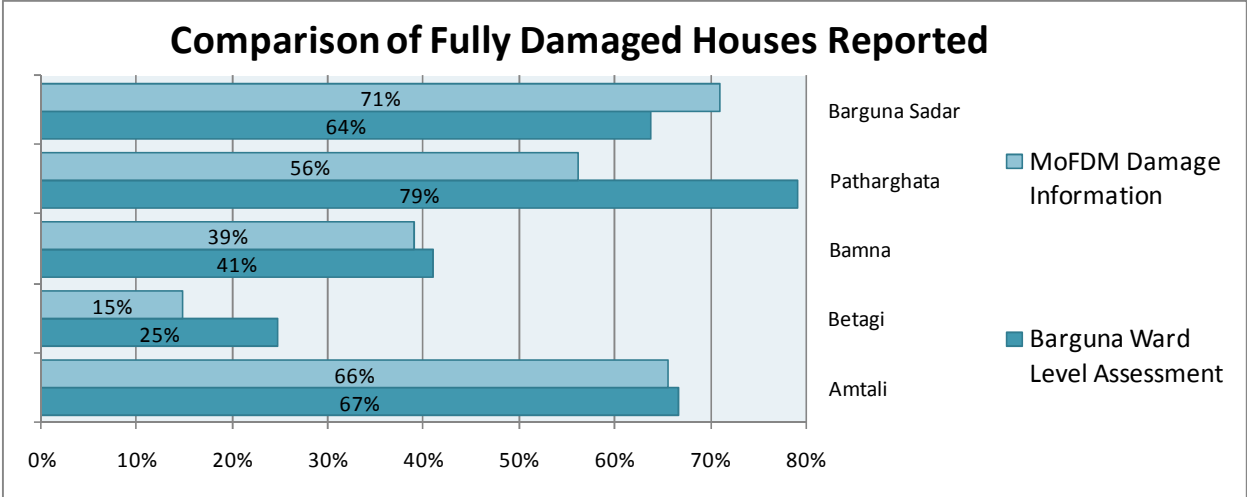
### *Host Families After Cyclone Sidr*

Anecdotal evidence has been collected by SCG members that many families may be taking shelter with relatives or neighbors from the same communities as a form of emergency shelter. The BWLSA attempted to understand this situation by looking at the number of separate families, meaning groups of people pooling their resources to cook, living under the same roof since the Cyclone. The results are that an average of **7.6% of households** were practicing this form of emergency shelter during the period of the assessment. While such arrangements were also reported before the Cyclone, they were at significantly lower levels.

### *Damage Assessed in Communities Versus Damage Reported to MoFDM*

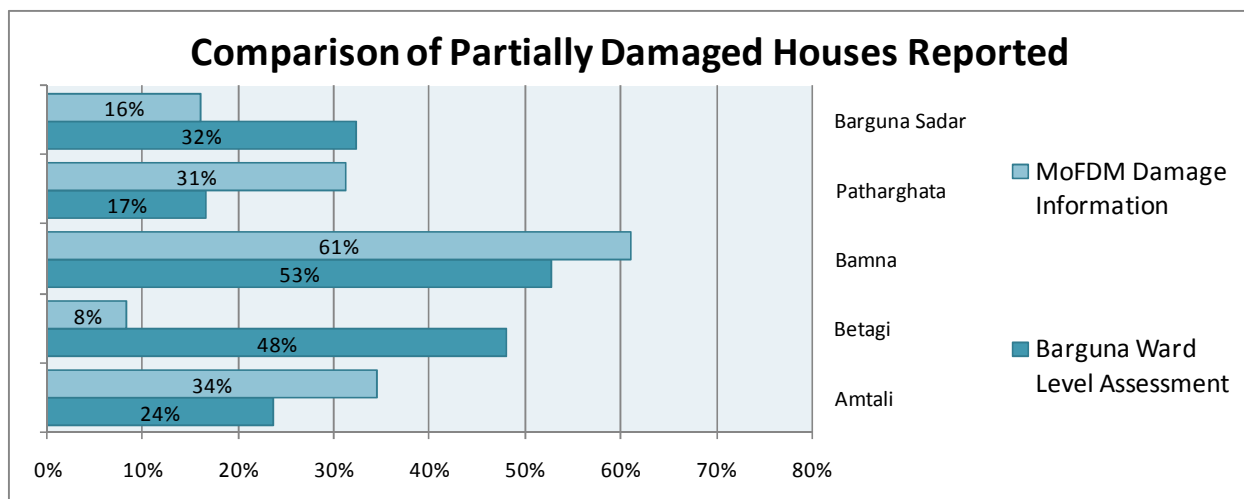
It is impossible for any one assessment to replicate the size and coverage of the Ministry of Food and Disaster Management's survey of damage conducted directly in the aftermath of the Cyclone, it was useful for the survey to compare its own damage assessments to those conducted by the MoFDM to be able to determine the accuracy of the government's own survey. The results by and large confirm the picture that the government has presented of housing damage, at least for Barguna. The detailed results can be found below:

Difference in Estimates of Fully Damaged Houses by Upa-Zila (Between MoFDM Data and Assessment Data)					
	Amtali	Betagi	Bamna	Patharghata	Barguna Sadar
Barguna Ward Level Assessment	67%	25%	41%	79%	64%
MoFDM Damage Information	66%	15%	39%	56%	71%



As can be seen above, in four of the five assessed wards the assessment determined that a larger number of houses were fully damaged. Only in the ward surveyed in Barguna Sadar was the MoFDM data slightly worse than the damage assessed in the BWLSA. The definition of “Fully Damaged” used by the government was described by local authorities in the affected areas simply as “flat,” while the assessment considered any structure that had damage which impeded its livability and left less than 20m<sup>2</sup> of dry safe shelter for its inhabitants as “fully damaged.” The results confirm the generally agreed assertion that large numbers of households are in need of shelter in the wake of Cyclone Sidr.

Difference in Estimates of Partially Damaged Houses by Upa-Zila (Between MoFDM Data and Assessment Data)					
	Amtali	Betagi	Bamna	Patharghata	Barguna Sadar
Barguna Ward Level Assessment	24%	48%	53%	17%	32%
MoFDM Damage Information	34%	8%	61%	31%	16%

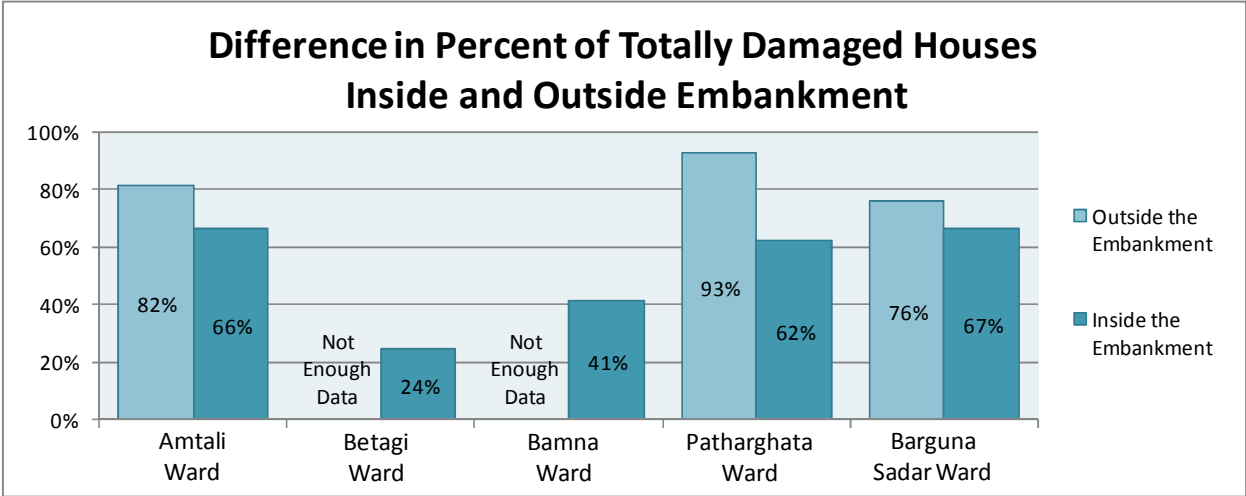


The picture for partially damaged houses is more complex however, which in part may result from a large amount of confusion among local authorities and the affected population on the definition of partially damaged houses. The assessment used the definition of any house that had more than superficial damage, but still have 20m<sup>2</sup> of dry and safe living space. Additionally, variations among wards from the number of houses recorded as “fully damaged” could have had an effect as well.

#### *Damage Assessed Inside and Outside the Embankment*

There has been a generally agreed upon consensus among agencies responding to the Cyclone that the damage outside the protective embankments set up by the government has been far more extensive than inside the embankment. The data collected by the BWLSA confirms this assumption in the three districts that had a statistically significant number of houses outside the embankment.

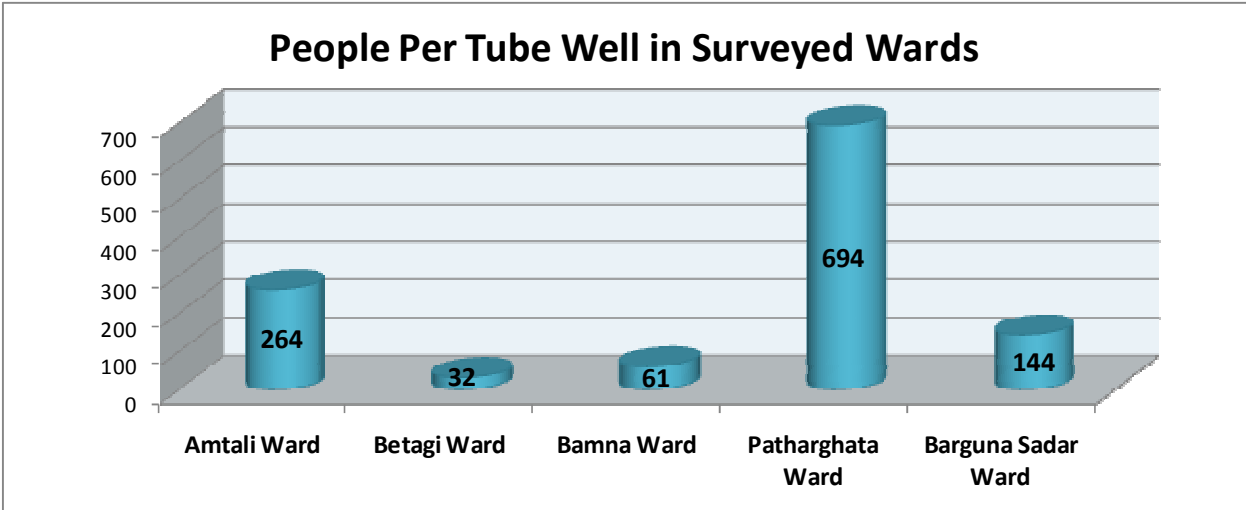
Difference in Estimates of Fully Damaged Houses Inside and Outside the Embankments					
	Amtali Ward	Betagi Ward	Bamna Ward	Patharghata Ward	Barguna Sadar Ward
Inside the Embankment	66%	24%	41%	62%	67%
Outside the Embankment	82%	N/A	N/A	93%	76%



*Damage to Tube Wells Caused by the Cyclone*

The BWLSA also touched on issues related to the access to clean drinking water, assessing the presence and damage caused to tube wells. It should be noted that the spot-check of assessment results conducted by the SCG team from Dhaka revealed that some public tube wells were missed, indicating that the results may not reflect the full spread of tube wells in affected communities.

People Per Tube Well in Surveyed Wards				
Amtali Ward	Betagi Ward	Bamna Ward	Patharghata Ward	Barguna Sadar Ward
264	32	61	694	144

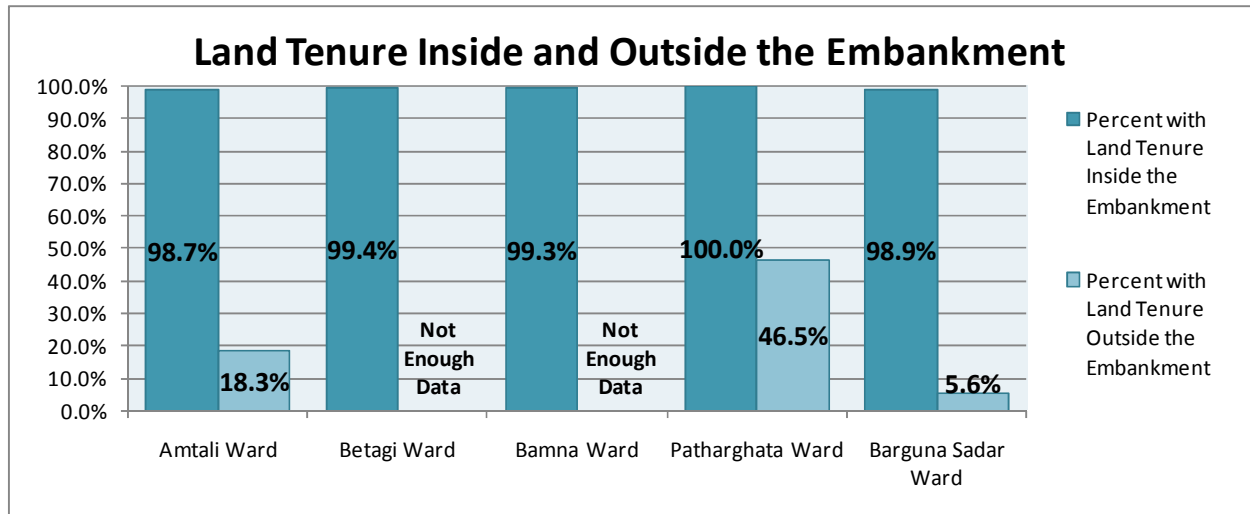


In addition, the BWLSA found that **17.5% of tube wells** in communities were not working due to mechanical issues related to physical damage caused by the storm. The assessment did not find any tube wells not working due to contamination from salt water.

### Land Tenure Situation in Affected Communities

The land tenure situation in the assessed communities is quite contrasting between households living inside the embankments and those living outside. Overall, **76.6% of surveyed households** responded that they had a document to prove their legal right to live on the land their house was on (lease, land certificate, etc), however the graph below demonstrates the clear division between households inside and outside the embankment:

Percent of Households with Land Tenure Inside and Outside the Embankment					
	Amtali Ward	Betagi Ward	Bamna Ward	Patharghata Ward	Barguna Sadar Ward
Percent with Land Tenure Inside the Embankment	98.7%	99.4%	99.3%	100.0%	98.9%
Percent with Land Tenure Outside the Embankment	18.3%	N/A	N/A	46.5%	5.6%

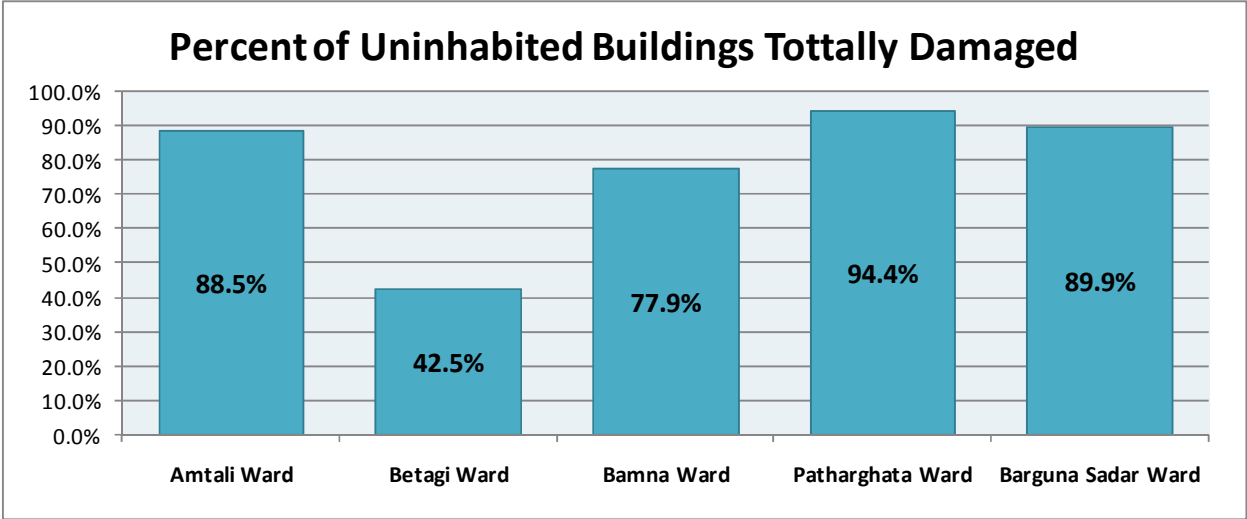


Inside the embankment, the issue of land tenure is almost non-existent, but the issue affects a large majority of households living outside the embankment.

### Damage to Uninhabited Buildings

Although the SCG is primarily interested in damage to houses, the issue of uninhabited buildings (kitchens, meetings rooms, animal sheds, sewing shops, etc) has an important effect on hygiene standards and livelihoods. The damage to uninhabited buildings in the surveyed areas was even worse than the extensive damage observed to houses. This damage is most likely linked to the poor construction quality and standards often employed in building such structures. This damage will be an important issue to be addressed in early recovery programming:

Percent of Uninhabited Buildings Totally Damaged				
Amtali Ward	Betagi Ward	Bamna Ward	Patharghata Ward	Barguna Sadar Ward
88.5%	42.5%	77.9%	94.4%	89.9%



***Spot-Check of All Results from the Dhaka SCG Team***

In order to ensure that the BWLSA was an accurate reflection of the situation in Cyclone Sidr affected areas, the Dhaka SCG team went to Barguna in the middle of the assessment to spot-check results in one ward. The result of the assessment (a full report can be found in Annex 3) confirmed the accuracy of the findings presented above, but cast enough doubt on the self-recovery estimates that they have been excluded from the present report. It appears that taking assessment teams from the same affected areas, the social pressure to under-report recovery was enough to render those results useless to our analysis. It is one of the points being included in the information management lessons learned for this disaster.

## Conclusions Relevant to the Humanitarian Response

In looking at the findings of this report, we can come to a number of conclusions useful to the overall humanitarian response being implemented by the coalition of agencies represented in the SCG.

1. **The Overall Picture of Housing Damage Presented by MoFDM is Accurate** – While there have been indications of this before, this is the first in depth, house-to-house look at the government housing damage and the comparison of assessment data. It shows slightly more damage to housing than the government has reported. This conclusion adds to the concerns presented in the SCG's Shelter Coverage document of large gaps in the shelter response.
2. **Housing Needs Should be Addressed Differently Inside and Outside the Embankment** – The characteristics of damage inside the embankment and outside are significantly different, in terms of the scope of the damage, the land tenure situation of affected households and their vulnerability to subsequent natural disasters. As a result different shelter programming needs to be envisioned for families living outside the embankments with resettlement an option that should be explored in a participative and transparent manner.
3. **Host-Family Issues Should be Addressed in Early Recovery Programming** – With a significant number of families coping with the Cyclone by taking refuge with neighbors or relatives, the impact on the livelihoods of host families should be addressed in Early Recovery Programming.
4. **Remaining Tube-Well Damage is Not Extensive** – Whether as a result of the Cyclone's limited impact on tube-wells or a result of a strong emergency response in the water and sanitation sector, the remaining damage to tube-wells is minimal. As a result, water and sanitation interventions might be able to focus on other issues.
5. **The Damage to Animal Sheds and Other Uninhabited Buildings Linked to Livelihoods is An Important Issue** – Given the extensive damage to this type of structure, the impact on livelihoods should not be ignored in the humanitarian response. Early Recovery programming linked to livestock purchase or livelihood asset replacement needs to take this factor into account.

Finally, while the BWLSA has not answered all of the questions related to the needs in Shelter in Cyclone Sidr affected areas, it has significantly clarified the picture of the Cyclone's impact on housing and the requirements of the resulting humanitarian response. The SCG sincerely hopes that subsequent assessments from all the agencies involved in the humanitarian response will continue to develop and clarify this emerging picture.