Philippines Shelter Cluster
ShelterCluster.org
Coordinating Humanitarian Shelter

Emergency Shelter Assessment
Typhoon Bopha/Pablo
Fact Sheet #2: Preliminary Results

22 December 2012

This factsheet precedes the final report by providing a snapshot of the key results from the shelter assessment at the municipality level. The final report will provide a full set of maps and additional analysis based on fully cleaned data at the barangay level. The final report and associated products will be available 31 December 2012.

BACKGROUND

Typhoon Bopha (known in the Philippines as Pablo) made landfall on the island of Mindanao early on December 4th, bringing heavy rain and wind gusts of up to 210 km/h (130mph). The storm caused widespread power cuts, substantial infrastructure damage and flooding in areas at risk of landslides. Bopha comes a year after Tropical Storm Washi (known in the Philippines as Sendong) killed more than 1,500 people in southern Philippines.

As of December 16, DSWD estimated that nearly 200,000 families, or 840,000 individuals were affected by Typhoon Bopha. **Over 80% of this affected population is located in the provinces of Davao Oriental and Compostela Valley**. As a result of this, the municipalities of Boston, Cateel and Baganga in Davao Oriental province and New Bataan in Compostela Valley province as well as some parts of the southern Caraga region (XIII) are targeted as priority response areas due to the level of impact there.

The humanitarian community and Government of the Philippines has identified shelter damage from high winds and mudslides in the highland areas as a critical sectoral focus. **DSWD estimates that out of 46,831 totally damaged houses, 21,166 (45%) are from Davao Oriental, while 25,462 (54%) are located in Compostela Valley**. Similarly, almost 92% of all partially damaged houses are estimated to come from these two provinces.

METHODOLOGY

The overall objective of the assessment is **to contribute to an effective and timely humanitarian response in Compostela Valley and Davao Oriental provinces by informing the humanitarian community in line with key humanitarian milestones**.

The shelter assessment consists of four components: (1) collection and analysis of secondary data from agency and government sources; (2) key informant interviews with local government officials; (3) a household survey that serves as the backbone of the assessment; and, (4) GIS and mapping of all the aforementioned data collected, collated and analyzed.

The assessment team consisted of four teams of twelve enumerators – one team per target municipality.

Assessment target municipalities were chosen using purposive sampling based on initial reports of highest numbers of casualties and shelter damage. Within each target municipality, **the assessment team sampled from 95% of the barangays in the target municipalities and subsequently all puroks in sampled barangays**. Unfortunately, transportation and security constraints limited full coverage of all barangays.

As part of the sampling process, key informant interviews were conducted with local government officials, DSWD representatives and barangay captains. These individuals provided background information on the specific situation in assessment target areas and worked with the assessment team to identify the areas of each barangay with the most damage. Once identifying high impact areas of each barangay, the assessment team conducted household interviews in groups of two. Households were surveyed in intervals of five, to ensure wide coverage.

In total, **the assessment team surveyed 3,056 households**. All data was entered into a standard database by a team of data entry assistants and systematically cleaned. Analysis was conducted by the Assessment Coordinator and GIS Specialist in the form of GIS, mapping and standard binary and cross-tabulation techniques.

PRELIMINARY ASSESSMENT RESULTS

DEMOGRAPHICS & VULNERABILITIES

3,056 households were surveyed as part of this assessment with an average household size of nearly 6. The age profile of households included nearly 12% of children under five, indicating a young and potentially vulnerable affected child population.

Figure 1: Vulnerable Groups

In addition to children under five, *Figure 1* shows the breakdown of other vulnerable groups per municipality. In the coastal province of Davao Oriental, indigenous groups make-up a large portion of the affected population with around 50% of households in all three municipalities reporting at least one individual from an indigenous group as a part of the household.

SOCIO ECONOMIC PROFILE

The primary livelihoods of those individuals living in the affected areas covered by this assessment were crop agriculture and unskilled daily wage labor.

Figure 2: Livelihood Source & Damage Category

Municipality	Primary Source ..	1	2	3	4	5
Baganga	Crop agriculture		2.82%	4.24%	8.62%	35.59%
	Assistance from ..				0.14%	0.14%
	Fishing			0.14%	1.55%	6.64%
	Government sec..			0.14%	0.99%	1.27%
	Livestock/poultry..				0.14%	0.14%
	Private salaried j..		0.14%	0.14%		0.99%
	Remittances fro..		0.14%			0.28%
	Remittances fro..			0.14%		0.14%
	Skilled manual la..		0.14%	0.42%	1.69%	7.20%
	Small business o..		0.56%	0.71%	1.27%	2.97%
	Unskilled daily w..		0.56%	0.56%	0.99%	14.69%
	Other					2.97%
Boston	Crop agriculture		0.40%	1.07%	9.99%	56.46%
	Assistance from ..					0.13%
	Fishing				0.80%	4.39%
	Government sec..		0.13%	0.13%	0.80%	1.33%
	Livestock/poultry..				0.27%	0.27%
	Private salaried j..					0.67%
	Remittances fro..		0.13%			0.27%
	Skilled manual la..				0.40%	2.40%
	Small business o..			0.13%	0.93%	1.60%
	Unskilled daily w..			0.27%	2.00%	14.25%
	Other					0.27%
Cateel	Crop agriculture	0.11%	0.42%	2.43%	13.83%	46.36%
	Assistance from ..					0.32%
	Fishing				0.74%	2.43%
	Government sec..				0.42%	1.69%
	Livestock/poultry..				0.21%	0.74%
	Private salaried j..					0.53%
	Remittances fro..				0.11%	0.11%
	Remittances fro..					0.21%
	Skilled manual la..			0.11%	0.32%	5.07%
	Small business o..				0.84%	1.16%
	Unskilled daily w..		0.11%	0.53%	3.80%	10.56%
	Other			0.21%	0.11%	2.43%
New Bataan	Crop agriculture	0.19%	1.48%	5.75%	15.21%	31.35%
	Assistance from ..					0.19%
	Government sec..			0.37%	1.67%	1.30%
	Livestock/poultry..			0.19%	0.19%	
	Private salaried j..		0.19%	0.19%		1.11%
	Remittances fro..		0.19%		0.56%	0.37%
	Skilled manual la..		0.93%	1.30%	3.34%	4.64%
	Small business o..			0.37%	2.04%	2.23%
	Unskilled daily w..			0.56%	4.82%	13.54%
	Other		0.37%	0.56%	1.30%	2.41%

Figure 2 shows the distribution of livelihood source for each municipality across each shelter damage category (as outlined in *Table 1*). Unsurprisingly, crop agriculture is

the primary livelihood source for all Category 5 damage households, with unskilled daily wage labor coming in second at around 10-15% for all four municipalities. Furthermore, households responded that Typhoon Bopha severely impacted their livelihoods. *Figures 3* and *4* show the difference between the perception of the extent to which each household's income met its needs pre-Bopha (*Figure 3*) and how that has been affected by the typhoon (*Figure 4*).

Figure 3: Needs Met Pre-Bopha

Extent to Which Income Met Needs Before Pablo
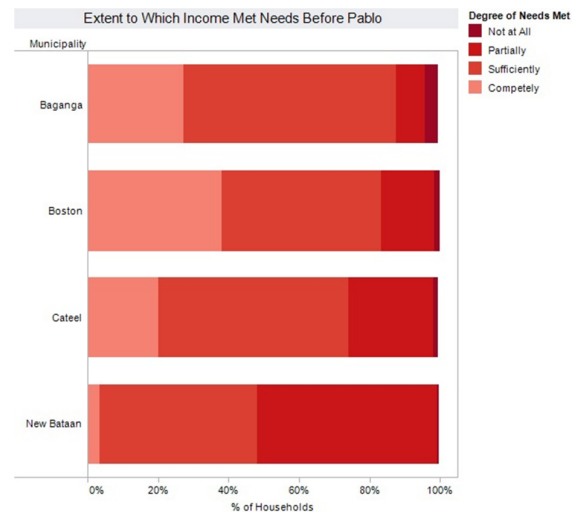
Over 75% of households felt that their income met their needs either completely or sufficiently before the storm. After the storm, 98% of households now feel that their income either does not meet their needs at all or only partially. In both scenarios New Bataan households seem to be the most vulnerable, as they felt both before and now that that their income did not meet their needs with more frequency than the municipalities in Davao Oriental province.

Figure 4: Needs Met Post-Bopha

Extent to Which Income Meets Needs Post Pablo
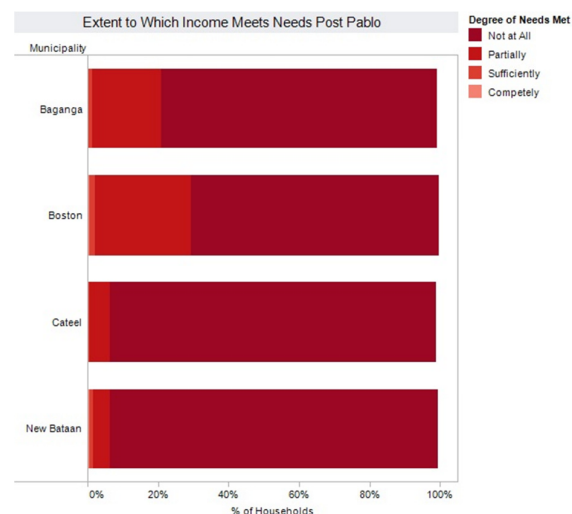
TECHNICAL ASSESSMENT

The assessment categorized shelter damage in 5 categories. *Table 1* shows the breakdown of each category and how shelters were rated.

Table 1: Shelter Damage Categories

Category	Description
1	Unaffected
2	Minimally affected (no rehabilitation required); habitable
3	Partially affected with minor structural damage (minor rehabilitation required); habitable
4	Significantly affected with structural damage (major rehabilitation required); inhabitable
5	Completely damaged (must be rebuilt); inhabitable

Supported by visual observation, the majority of households sustained Category 5 damage – 82% in Boston, 72% in Cateel, 73% in Baganaga and 58% in New Bataan. *Figure 5* shows the overall breakdown of shelter damage categorization.

Figure 5: Shelter Damage Categorization
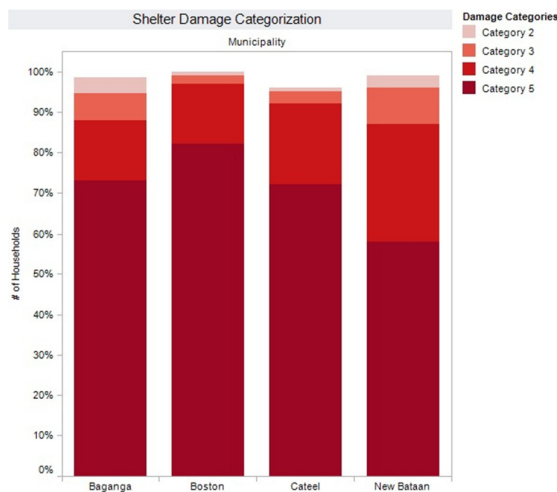
SHELTER SOLUTIONS POST-BOPHA

In all of the target locations, evacuation centers did not play a large role as a shelter solution for households post-Bopha. The majority of households remained on their land and were either living in their affected house or in a makeshift shelter on the property. Cateel, especially, had a large majority of households living in makeshift shelters on their own land, making temporary shelter assistance a priority. *Figure 7* shows the number of households per municipality according to their current shelter arrangement.

PARTICIPATING AGENCIES & INSTITUTIONS

IFRC, Impact Initiatives, Save the Children, Help Age, Philippine Normal University - Agusan del Sur Campus, San Francisco College, San Francisco Informatics College

Generalizing Results and Statistical Analysis

A non-random sampling method was used to identify households and communities that were included (see above for how communities were selected). Therefore, it is important to note that the results are not able to accurately be generalized across all affected communities. This was a strategic decision to better support the Shelter Cluster members that are currently planning or implementing in specific areas. Moreover, without a comprehensive beneficiary list available at the time of the rapid shelter assessment, it was not possible to randomly select survey respondents. Therefore, this assessment does not include a statistical analysis. Agencies are encouraged to verify all information.

Cateel, Davao Oriental, Philippines

Figure 6: Shelter Arrangement
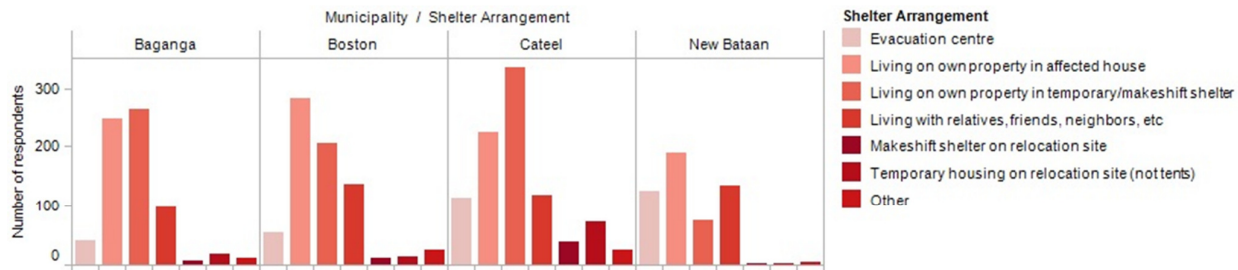
REACH & THE SHELTER CLUSTER

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 integrated into the Emergency Shelter Cluster coordination response to Typhoon Bopha. It serves as a preliminary snapshot of results to be followed-up with an assessment report and maps that will be shared with relevant government and humanitarian actors to inform a more targeted response.