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Role and effectiveness of humanitarian agencies in providing post-disaster housing – learning from the Typhoon Haiyan experience

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Abstract
This paper describes the housing provision activities of humanitarian agencies after Typhoon Haiyan, which hit the central Philippines on 8th November 2013, and discusses the role and effectiveness of the activities of humanitarian agencies and local governments. The discussion is based on direct observation through 1) the implementation of the core shelter program by UN-Habitat, 2) assisting the coordination work of the "interim Shelter Cluster" and 3) individual interviews with international agencies active during the recovery and reconstruction phase more than one year after the typhoon, conducted in the province of Capiz. Process of beneficiary selection, shelter design & implementation as well as policy on land ownership and criteria for beneficiary selection were investigated.
The findings indicate similarity in the process of shelter implementation which seemed effective and sensitive to the local culture. Two types of approach, "community-driven" and "production-based" were discussed and their characteristics were analysed.
Although Shelter Cluster's activities proved valuable to many agencies during the early phase of reconstruction through providing guidelines and technical assistances, the author argues that existing collective resources accumulated over decades of experience can be utilized better if an effective collaboration system among the stakeholders would be established.

Keywords: humanitarian assistance, post-disaster housing, Typhoon Haiyan

Abstract Reference Number: 36

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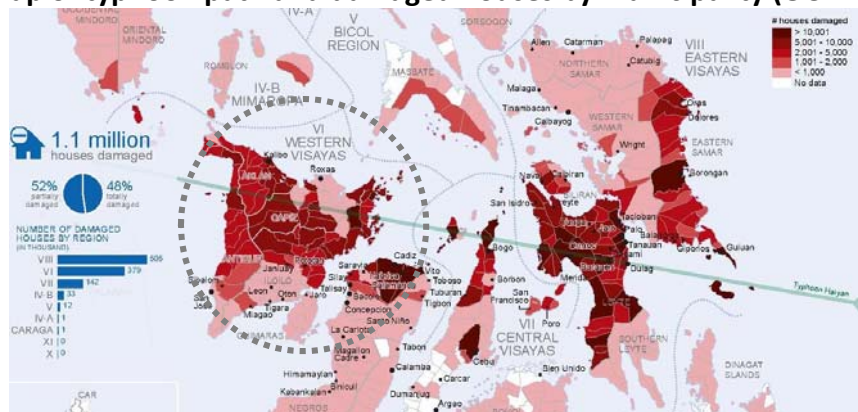
Introduction

Typhoon Haiyan made landfall in the central Philippines on 8 November 2013, devastated a number of coastal towns by strong winds and tsunami-like storm surges, destroyed nearly 1.1 million houses and displaced 4.1 million people. There was a massive emergency operation in response to the Presidential Proclamation issued on 11 November 2013 declaring a state of national calamity and announcing that international assistance would be accepted. Although the national government should be responsible for disaster response and reconstruction, it is inevitable that many disaster-prone, developing countries still rely on external support, therefore it is important to examine these activities carefully and verify their effectiveness. Discussion in this paper is based on direct observation by the author through 1) the implementation of core shelter construction with UN-Habitat, 2) assisting the coordination work of the "interim Shelter Cluster" and 3) individual interviews conducted with representatives from 13 national and international agencies implementing shelter programs in region VI one year after the typhoon.

1. Facts and findings about shelter implementation in region VI

In the second hardest hit area of region VI (Western Visayas) (**Figure 1**), there were approximately 20 agencies who provided five types of shelter assistance: 1) Temporary Shelter, 2) Transitional Shelter and 3) Semi-permanent houses were provided as "non-permanent" shelter; and 4) Core Houses and 5) Permanent Houses were provided as "permanent" shelter. **Table 1** displays the various shelter types provided in region VI, with an average unit size of 21m^2 and cost per unit ranging from 25,000 to 200,000 PHP (550 to 4,428 USD). The size is based on the minimum standard set by the (UN) Sphere Project of a covered area of 3.5 m^2 per person, multiplied by 5, the average family size in the Philippines, to become 17.5 m^2 (The Sphere Project). The average cost for "non-permanent" shelter was 68,000 PHP (1,505 USD) while that of "permanent" shelter was 110,600 PHP (2,450 USD).

The Shelter Cluster created a guideline describing the definition for each type of shelter (Shelter Cluster 2014) however the construction method or materials are not specified and seems to be left up to the interpretation of each agency. The findings from the interviews indicate that each agency developed and utilized its own approach that seems effective and sensitive to the local culture.

Figure 1. Map of typhoon path and damaged houses by municipality (OCHA, 20131118)

Source :http://reliefweb.int/map/philippines/philippines-damaged-houses-18-nov-2013-1800-utc8

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Table.1 Shelter implementation by various agencies in region VI (2014-2015)
(Agency code: shelter type/floor area/cost (Philippines Peso)/total # planned)

INT-1c:Temporary/18m²/36K/400	**INT-4:Transitional**/20m²/NA/520	**INT-9c:Transitional**/19m²/118K/141
FOR-1:Transitional /20m²/95K / 150	**FOR-4:Semi-perm**/18m² / 50K/1,750	**INT-6c:Semi-perm**/18m²/135K/540
NAT-5:Core/40m²/60-80K/1,028	**NAT-5:Core**/24m²/80-100K/1,322	**NAT-1c:Core**/20m²/130-150K/280
FOR-3:Core / 20m² / 65.5K/400	**INT-7:Core** / 20m² / 165K/123	**INT-8c:Permanent**/20m²/115K/141

(Agency code: **INT**: International NGOs/IOs/UN, **FOR**: Foreign NGOs, **NAT**: National NGOs, **c**: Christian)

1.1 Process of beneficiary selection

One of the most critical questions during the beneficiary selection is whether the potential beneficiary owns the land or not. Typically the most vulnerable people are those without land ownership yet it is often the condition for receiving permanent shelter assistance. All agencies that were interviewed require land ownership as beneficiary criteria however most agencies accepted an alternative solution which is to have a written agreement made between the owner and the beneficiary to assure the use of land for certain period of time.

1.2 Process of shelter design

Shelter design influences the project budget and is one of the most visible outputs of the project. Some agencies hired a local architect to come up with a design in less than one week while others spent as long as three months developing a design, trying to strike a balance between cost and effect, and not outdo the work of the government. Comparing shelter drawings and photographs collected from agencies as shown in **Table 1** indicates that designs are not radically different from one another and they can be classified into two general types; light-construction with raised floor or half or full-concrete construction on-grade. The similarity of the designs is perhaps due to material availability, cost and structural constraints, acceptability by both cultural and environmental climate, in addition to the design guidelines provided by the Shelter Cluster. Roof structural design is the most critical part of the typhoon resilient shelter and this has to be examined carefully to ensure that sufficient countermeasures were taken.

1.3 Process of implementation: Community-driven approach vs. Production-based approach

A unique method called the "community-driven approach" was used by UN-Habitat to implement shelters for typhoon survivors, placing great importance on "capacity building" of the people by promoting active involvement of the beneficiaries not as individuals but as a community. The *household partners*, as they were called, are required to form working committees; finance, construction, procurement and monitoring to handle all aspects of shelter implementation. Although it is a time and energy consuming approach and is hard to make it efficient, one can see how people gained confidence through the process and became empowered.

On the contrary, a highly systematic approach was used by two foreign-based NGOs, prefabricating parts of houses off-site as much as possible and purchasing materials in bulk in order to accelerate the work while controlling the quality and creating constant jobs. This was designed based on previous successful experiences in other countries. **Figure 2** describes the relationship between the two above-mentioned contrasting approaches. The community-driven approach is time-consuming with a low productivity level while production-based approach takes less time with high productivity. Although cost and time are important factors in the disaster recovery process, there are other unquantifiable qualities such as strengthening of the community ties that are as important part of building resiliency which can be obtained through the community-driven approach as described in the **Table 2** indicating pros and cons of two types of approach. The optimal solution may be midway between the two.
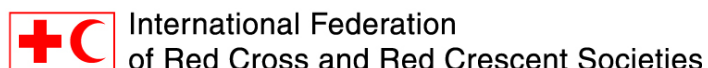
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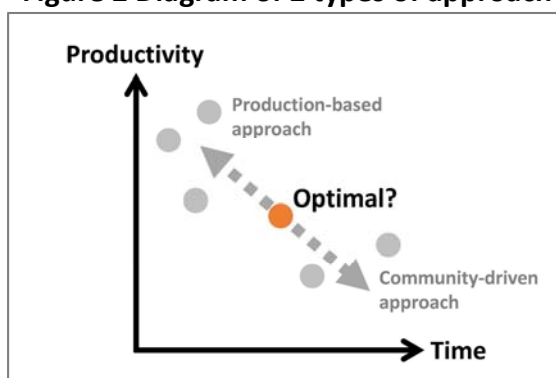of Red Cross and Red Crescent Societies

Figure 2 Diagram of 2 types of approach

Table 2 Pros & Cons for two types of approach for shelter implementation

	Community-driven approach	Production-based approach
	➢ community as beneficiary ➢ on-site construction, managed by the committee formed by the community ➢ from insider's view	➢ individual as a beneficiary ➢ systematic operation using off-site prefabrication as much as possible ➢ from outsider's view
Pros	▪ Building capacity ▪ Strong sense of ownership ▪ Collective responsibility	▪ Systematic, fast and efficient ▪ Easier to control quality ▪ Creating constant jobs
Cons	▪ Time consuming ▪ Dependent on personal ability ▪ Difficult to control	▪ Limited capacity building ▪ Less sense of ownership ▪ Little community involvement

2. Emerging issues

2.1 Temporary Housing as Humanitarian Assistance vs. Permanent Housing as Development

An inherent, complex issue in regard to post-disaster housing is the gap between humanitarian and development assistance. Both temporary and permanent houses were provided after the typhoon and the line between the two is not clear as to when the provision of temporary shelter ends and permanent shelter begins. It is inevitable that some organizations will provide temporary housing while others provide permanent housing during the same period of time. But the consequence is that the quality, cost and the delivery time (QCD) of the shelters vary depending on which agency provided the service and this has caused some issues among the beneficiaries.

It seems that the government is concerned about permanent housing but not temporary housing because it is supposed to be used only temporarily while waiting to be replaced by permanent housing. However an issue is that many of these temporary houses actually end up becoming permanent due to lack of financial capability to build a new house. It is important to advocate "Building Back Better", to promote permanent housing solutions rather than temporary ones and in order to do so, a strategy for a smooth transition from emergency phase led by a humanitarian actor (Shelter Cluster/IFRC) to the reconstruction phase succeeded by a development actor (UN-Habitat) is needed, while involving governmental actors in each step.

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2.2 Shelter in Urban context

Of the various housing designs, the core shelter form has various advantages, but the successful implementation depends on the site. After visiting projects by other agencies and comparing them with that of UN-Habitat, it was confirmed that the core shelter works better in rural settings where there is enough land around the house to allow for building extension, which is the original idea of building a core shelter. However unfortunately there were many core shelters built in tight property lots in urban areas where there is no more room to grow. Follow up visits are needed to verify the consequence of the core shelters built in urban contexts.

3. Conclusion: Missing stakeholder--Government's role in providing housing after disaster

The study revealed that the methods of shelter implementation by various agencies in region VI were similar, following the guideline provided by the Shelter Cluster. However it seemed that each agency conducted its operation independently without much collaboration despite similarity in their outputs. The study also discussed pros and cons for two effective methods; community-driven and production-based approach and suggested an importance of having an optimal solution.

In order to take a step further for a more effective post-disaster shelter implementation, government involvement is required to be better prepared and two actions are recommended: 1) to study the shelter implementation processes of various agencies and survey actual shelters provided to check the quality and structural integrity; and 2) to select and prepare a few optimal solutions (shelter designs) endorsed by Shelter Cluster and UN to be used by agencies that join the operation in order to achieve faster implementation with quality control. A holistic approach is needed to reach a common goal of providing enough shelters to those in need, rather than focusing on the individual goals set by each actor.

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Author's Biography

Tomoko Matsushita was born in 1976 in Nagoya, Japan. She is a registered Architect in Japan and a member of Japanese NGO Humanitarian Medial Assistance (HuMA). She has worked with humanitarian agencies in a number of countries after disaster since 2004. She received B.A. in Architecture from the University of Washington and Master's degree in Civil Engineering at the University of Tokyo. She is currently writing her PhD on post-disaster housing while working as a researcher for a project to develop a comprehensive disaster resilience system and create collaboration platform in Myanmar, in collaboration with Yangon Technical University.