SHELTER PROJECTS

2015-2016

CASE STUDIES OF HUMANITARIAN SHELTER AND SETTLEMENT RESPONSES

Global Shelter Cluster
ShelterCluster.org
Coordinating Humanitarian Shelter

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FOREWORD

The year 2015 marked the 10th anniversary of the Global Shelter Cluster, the inter-agency coordination mechanism for shelter response. During these ten years, coordination has improved in consistency, shelter responses have grown in scale, and there are more people with experience in shelter programming, but people continue to lose their dwellings and be displaced due to conflict and natural disasters. Global humanitarian shelter needs continue to greatly exceed the capacity and resources to respond.

In recognition of the need for better shelter programming at scale, often with limited resources, ***Shelter Projects 2015-2016*** **has been developed as a core product of the Global Shelter Cluster,** to help us learn from the past so that we may better respond in the future. It has been developed through a truly collaborative effort of a working group composed of international shelter experts from several humanitarian organizations and institutions.

This is the sixth edition in the series of publications that started in 2008. It contains 31 new shelter case studies and 12 overviews of responses, contributing to a repository of over 200 project examples and response overviews, from programmes of over 50 agencies in around 70 countries overall. As in past editions, the case studies in this book vary greatly in scale, cost, duration and project design. Although they are not statistically representative of all shelter projects, this growing body of knowledge represents a source of learning, includes many years of experience of nearly 400 field practitioners who have contributed, and reflects the highly contextual nature of individual shelter and settlements responses.

The objective of this publication is to share experiences of humanitarian shelter and settlement responses, paying close attention to the strengths, weaknesses and potential lessons that can be extracted from each. We hope that this edition will represent a source of inspiration and reflection, and that it will contribute to having to "reinvent the wheel" a little less.

Previous case studies have been used for several purposes by a diverse audience working in humanitarian shelter and settlements. In reviewing past editions, the primary uses of *Shelter Projects* were found to be:

- As a reference or set of examples to inform shelter programming or strategy development;
- For advocacy purposes, using precedents in discussions with governments and local stakeholders in affected countries;
- For workshops and training of national staff of several organizations, as well as cluster coordination and technical teams;
- For research purposes, both by academics and students.

Beyond the case studies themselves, **the process and inclusion used to develop them are important.** Engaging those who implemented projects to draft case studies encourages not only self-reflection and learning, but also helps to ensure that practical and operational challenges are included in the case studies. **Engaging agencies and many people in their production and review** ensures broader inclusion and investment in their learnings.

By examining the shelter-related needs of populations affected by natural disasters and conflict, compared to the total people reached with shelter and non-food items (NFI) interventions and the funding received by the sector in the past two years, it is clear that **there is a gap between the scale of needs and the funding and capacity of the humanitarian community** to respond to such needs. Although shelter actors universally recognize that affected people remain the first responders (and should be supported to address their own shelter needs), lack of resources clearly hinders agencies from supporting people to help themselves.

The introduction of this edition of *Shelter Projects* contains a discussion of the major natural disasters, conflict-induced and complex crises in 2015 and 2016. Although natural disasters continue to affect millions of people worldwide, **responses to conflict are assuming a much larger scale,** both in terms of displaced individuals and shelter needs for the affected populations, primarily due to the protracted nature of several ongoing crises. These include, but are not limited to, the Syrian crisis, Iraq, Yemen, South Sudan, Lake Chad and Ukraine. The Shelter Sector recognizes the need to be better prepared to respond to such crises, which in some cases have significant, regional, impacts.

The website (www.shelterprojects.org) has been updated with the new case studies and overviews in this edition, and provides an easy way of searching through the large repository of examples and opinions collected since the first edition.

Whether you are reading *Shelter Projects* as a reference to work on a particular response, to inform better programming, are studying it for research or are merely looking at the pictures, we hope that you find it as informative as we have done in compiling it. However you read it, reflect on how the projects described within it represent an enormous amount of work by many hundreds of humanitarian workers, often working in challenging situations and with crisis-affected people, who find themselves in unexpected circumstances and often in extreme hardship.

The Global Shelter Cluster
Shelter Projects Working Group,
April 2017.

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Photo credits appear over each figure or in the captions.

We would also like to thank those who contributed to previous editions of Shelter Projects; those who made suggestions for case studies that were not included in this edition and the many hundreds of people who have implemented the projects that are contained in this book, but who have not been individually credited.

Our thoughts go to all the humanitarian workers and volunteers who have lost their lives while on duty in the countries covered by this edition and worldwide, and to their families.

This book has been written in recognition of the inestimable amount of work done by crisis affected people themselves, who have been the main shelter responders despite the adversity that they have suffered.

For comments, feedback or questions, please visit the website or contact info@shelterprojects.org.

CONTENTS

INTRODUCTION


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ABOUT THE BOOK

This book contains case studies of the field implementation of humanitarian shelter projects, written by shelter practitioners with specific interests and experience of each of them. As many larger crises have occurred on a regional or international scale in 2015 and 2016, there is also a number of overviews, contextualizing the group of case studies for each of those regional crises. In some cases, overviews give the background and present the national shelter response for a given crisis, within one country. These operational case studies and overviews are all included in **Section A.**

In **Section B,** there are three "opinion" pieces on shelter and settlements-related issues, written by individuals with experience in the sector and a specific interest in the subject.

The case studies in this book deal with projects implemented by many different organizations, a full list of which can be found in the acknowledgements section. Some were implemented by governments or a number of agencies under a cluster. In order to allow strengths and weaknesses of projects to be openly shared, **the case studies are not directly attributed to individual organizations.** As a result of the projects being implemented in diverse and often challenging conditions, they illustrate both good and bad practices. From every case study there are lessons that can be learned, and aspects that may be repeated or avoided. These are highlighted at the end of each case study. The objective of this publication has always been to encourage the learning process and to advocate for following good practices.

WARNING - PROJECTS ARE CONTEXT DRIVEN

Any shelter project should take into consideration the local context and the needs of the affected population, which will differ in each case. Projects should not be directly replicated without proper consideration of the specific context, or there will inevitably be programmatic weaknesses and failures.

CASE STUDY SELECTION

The case studies were selected using the following criteria:

- **The project must have been a) wholly completed, or b) solid conclusions could be gained** from its implementation by late 2016. Some of the projects in this edition, being in response to protracted crises or during a post-disaster recovery process, are ongoing and/or fall into category (b).
- Given the scale of emergency shelter needs every year, **case studies must have had large-scale impacts.** Discontinued trials, pilot projects or design concepts were not included.
- **The majority of the project must be implemented within the first two years** following a natural disaster. For conflict-induced crises, chronic emergencies and return processes, longer time scales are considered.
- **Accurate project information is available** from staff or individuals involved in the implementation of the project.
- **The case studies should illustrate a diversity of approaches** to meet shelter and settlements needs. Providing shelter is more than simply designing architecturally impressive structures, and looks beyond the construction of individual houses. In this edition, two case studies deal with the set-up and coordination activities of national and subnational Shelter Clusters.

For this edition, after a pre-selection based on the above criteria, case studies were drafted by contributors on an improved data collection form, which allowed to expand on several points, increase the focus on the context and challenges encountered, and attach supporting documents that were used as evidence. Further, **each case study was peer-reviewed** by members of the Shelter Projects Working Group. The review enabled an additional level of critical analysis of the strengths and weaknesses of each project, as well as pointed out what learnings to highlight and what aspects to expand on, ultimately increasing the quality of each case study.

GLOBAL DISPLACEMENT

As of the end of 2015, 65.3 million people were forcibly displaced from their homes[1], with 21.3 million being refugees, 40.8 million internally displaced and 3.2 million asylum seekers. Figure 1 shows that in 2015 the number of people displaced was the highest since over two decades, mainly due to the nature of several protracted crises, particularly those in the Middle East. More than 75% of the total displacement was within 10 countries, as shown in Figure 2.

Over the course of the same year, there were 19.2 million new displacements by natural disasters[2], less than the average of 25.2 million in the previous decade, but almost twice as much as the number of people displaced by conflict and violence in the same year (8.6 million new displacements).

Over half of the refugees under UNHCR's mandate in 2015 came from three countries, the Syrian Arab Republic (4.9 million), Afghanistan (2.7 million) and Somalia (1.1 million)[1].

CONFLICTS IN 2015 AND 2016

Yemen, the Whole of Syria and Iraq accounted for more than half of the new displacements in 2015 caused by conflict and violence, followed by Ukraine, Nigeria and the Democratic Republic of the Congo (DR Congo). Given changing access and needs in 2015 and 2016, the conflicts in Yemen and Nigeria have required the most significant scaling-up effort of humanitarian activities.

PROTRACTED AND REGIONAL CRISES

Colombia, DR Congo, Iraq, Sudan and South Sudan accounted for almost 40% of population displacement at the end of 2015, and all have had major displaced populations for over 10 years[3]. Many protracted crises have been at a regional scale. The main examples include the Syrian refugee crisis in the Middle East (see A.29); the South Sudan crisis (see A.23 to A.26); and the Lake Chad crisis (see A.18) in sub-Saharan Africa[4].

In 2015 and 2016, the protracted crises in the Middle East had a major impact on the influx of refugees into the European area, with arrivals through the "Balkan Route" reaching peaks of 200,000 monthly in Greece in October 2015[5]. Overview A.41 paints the picture of the migration flows towards Europe for those two years and focuses on the shelter response along the Eastern European route. Case study A.42 gives an example of temporary reception facilities set up in Germany at the height of the crisis, to cope with the number of arrivals.

[1] United Nations High Commissioner for Refugees - UNHCR (2016), "Global Trends. Forced displacement in 2015", http://bit.ly/2aN0Lsz.
[2] Internal Displacement Monitoring Centre - IDMC (2016) "Global Report on Internal Displacement", http://bit.ly/1WrJ9Wb.
[3] IDMC (2016).
[4] See the report "Lake Chad Unseen Crisis", Oxfam 2016, http://bit.ly/2nssylX.
[5] International Organization for Migration, 2016 (migration.iom.int/Europe). Data collated from national governments, IOM and UNHCR.

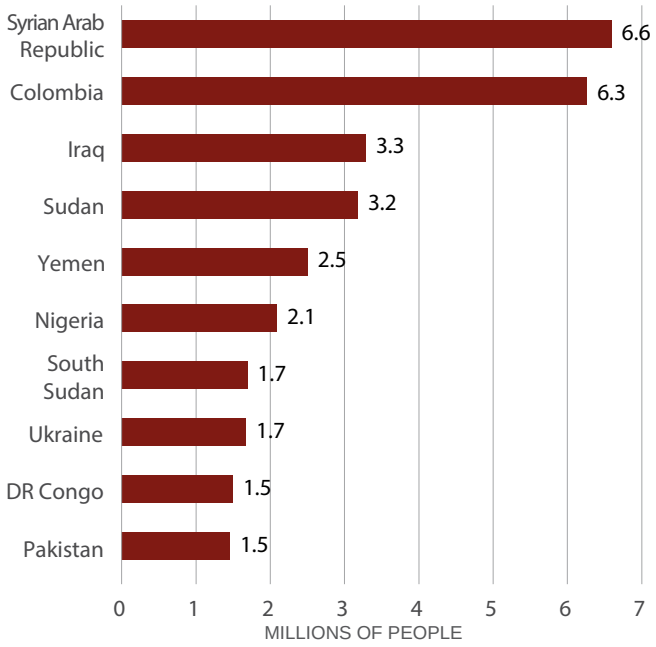


Figure 2. Number of people internally displaced by conflict and violence at the end of 2015 (source: IDMC).

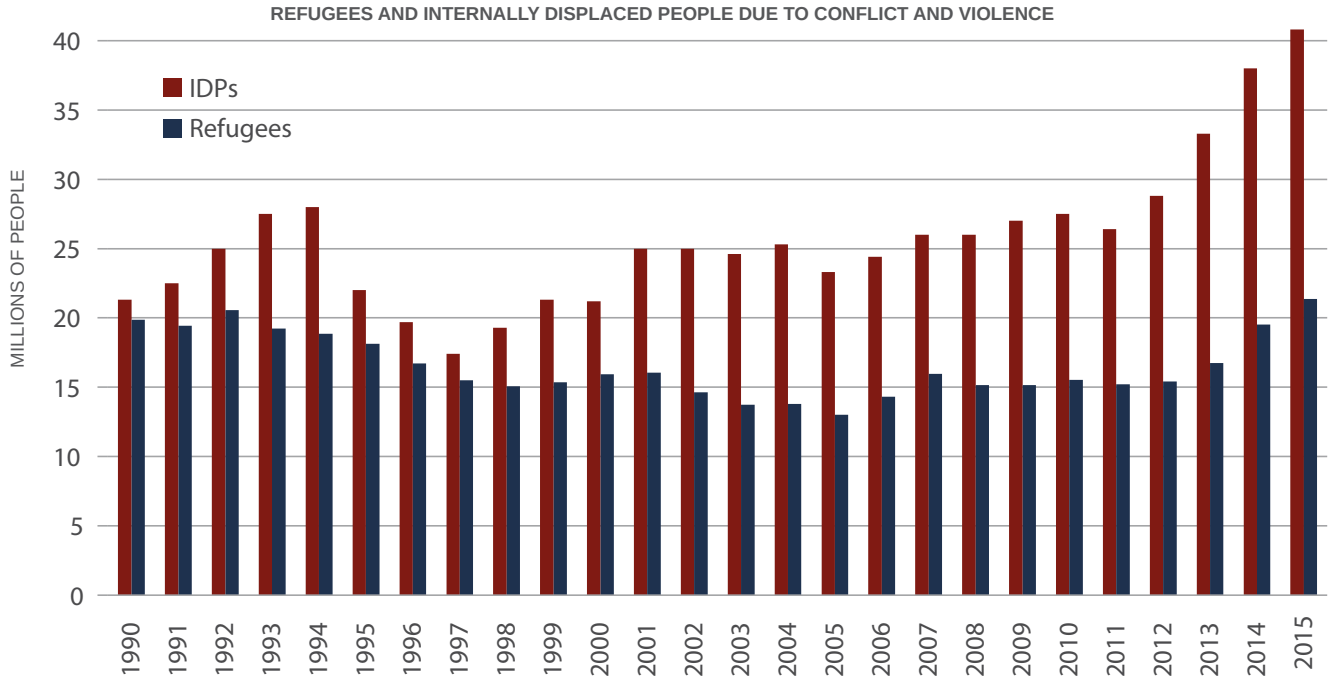


Figure 1. Refugees and IDPs displaced by conflict and violence, 1990 to 2015 (sources: UNHCR, UNRWA for refugee figures; IDMC and USRC for IDP figures).

NATURAL DISASTERS IN 2015 AND 2016

In 2015, there were 371 reported natural disasters (the highest value in the previous five years), affecting over 108 million people (more than 2013 but less than 2014)[6]. However, the numbers of people affected is not the same as those with shelter needs.

In terms of displacement, India, China and Nepal accounted for the highest numbers of internally displaced people caused by natural disasters during 2015 (3.7 million, 3.6 million and 2.6 million respectively), mainly due to two floods and storms, three typhoons and a flood, and two earthquakes respectively. These were followed by the displacement caused by multiple typhoons in the Philippines (2.2 million displaced) and the impacts of Cyclone Komen in Myanmar (1.6 million displaced)[7].

As it has been shown with the Nepal earthquakes in 2015, the high numbers of people affected in the largest disasters in the world continue to represent a source of concern (see A.3-A.7). Figure 3 shows clearly that Asian countries are consistently the worst affected by natural disasters.

Tropical storms in the Pacific are the subject of several reports in this book (see A.14 and A.15), due to their large impacts relative to the total population size, with coastal communities being disproportionately affected. Other natural disasters covered in this edition include the floods in Malawi (ranking seventh in 2015 in terms of affected population after flooding – see A.19-A.21) and the Ecuador earthquake (ranking first in terms of affected population after an earthquake for the year 2016 – see A.39-A.40)[8].

Statistically, floods were the most common type of reported natural disaster in 2015 (154) and 2016 (145). However, droughts affected a much larger population (over 400 million people in 2015 and 2016) than floods (over 46 million people in 2015 and 2016). Storms and earthquakes affected fewer people worldwide but, as the case studies show, the nature of damage to shelter and housing was different and required differing responses.

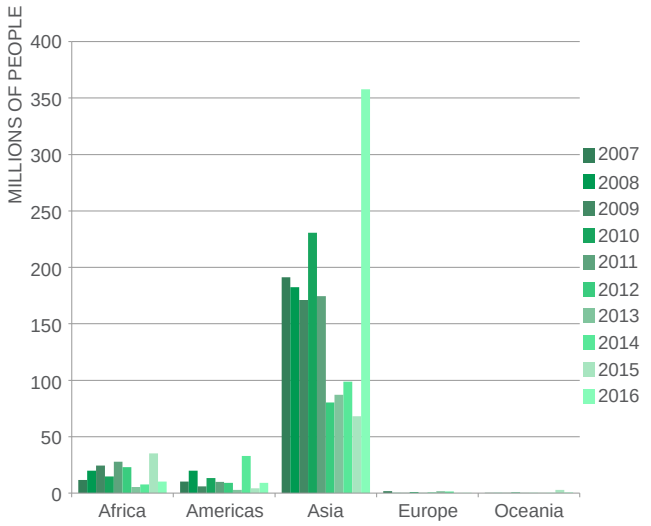


Figure 3. Total people affected by natural disasters, in millions, from 2007 to 2016 (source: CRED). Asian countries are disproportionately more affected.

[6] International Federation of the Red Cross - IFRC (2016), "World Disasters Report 2016", http://bit.ly/2e3XOUy.
[7] IDMC (2016).
[8] Centre for Research on the Epidemiology of Disasters – CRED, http://www.emdat.be/ [accessed March 2017].

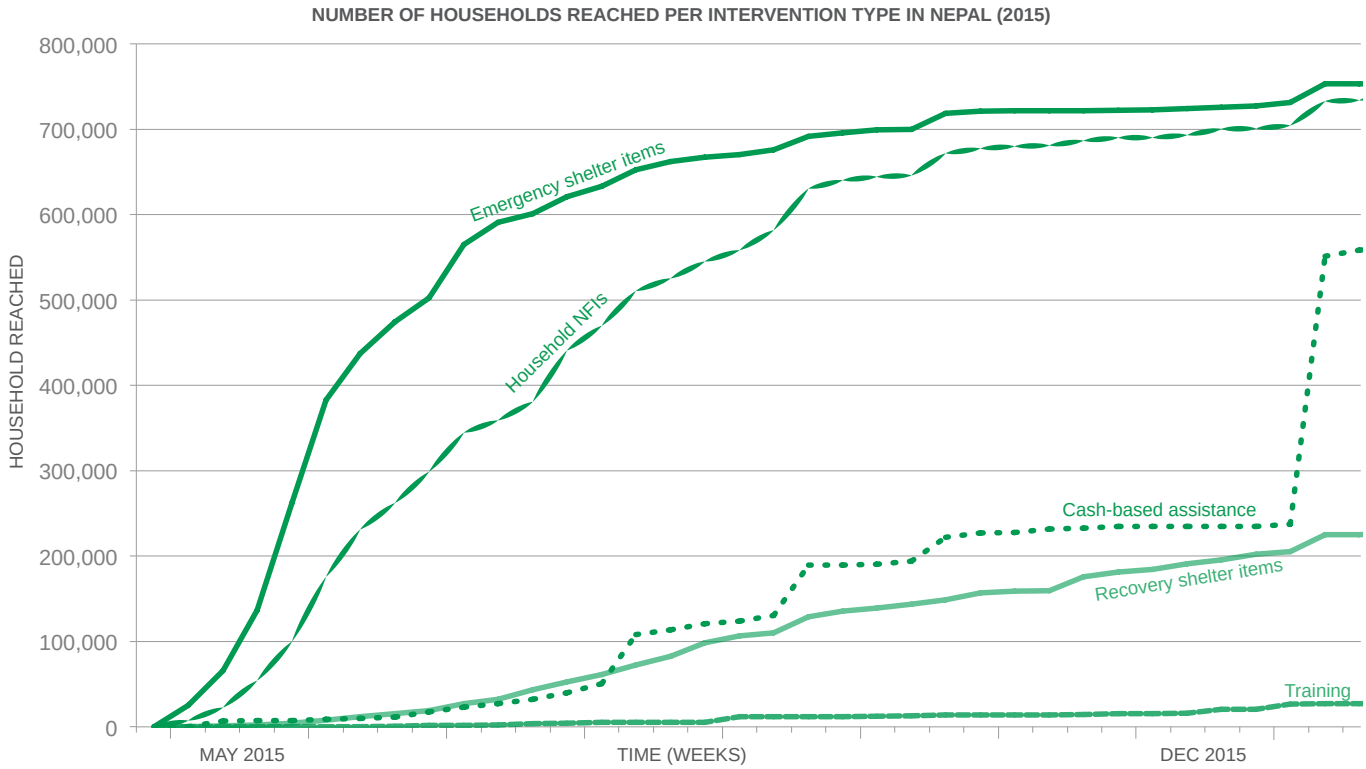


Figure 4. This chart shows the cumulative number of households reached with the main modalities of assistance in response to the Nepal earthquakes (Source: Shelter Cluster Nepal). It can be observed how emergency shelter items and NFIs were distributed in significantly larger scale and sooner in the response, while recovery shelter items, training and cash took longer to be implemented, and with lower totals. Notably, cash-based assistance had a peak approximately eight months after the disaster.

MAJOR SHELTER RESPONSES IN 2015-2016

In 2015, the Global Shelter Cluster reported that 18.1 million people had been reached with shelter-NFI assistance, with a total of USD 509 million received by the sector worldwide[9]. The major shelter-NFI responses from the humanitarian community in 2015 were Nepal (see A.3-A.7), the Whole of Syria (see A.29-A.32) and Iraq (see A.33-A.36).

In 2016, 13.1 million people were supported, with a total of USD 478 million received for the shelter-NFI sector, and the major responses continued to be Iraq and the Whole of Syria, followed by South Sudan (see A.23-A.25), Yemen (see A.37) and Nigeria (see A.18), all conflict-affected countries.

Figures 4 to 6 show the shelter / NFI assistance provided over time between different responses[10]. From these analyses we can observe the following:

- Responses to rapid onset natural disasters tend to happen in a span of a few months, with a much steeper curve, and tend to decrease significantly and nearly run out after less than six months (see Fig 5).
- In protracted emergencies, the response increases over time, and the total is reached incrementally, with variations that can happen due to specific crises (see Fig 6).
- In natural disasters responses, there are clearer phases of assistance, and a greater variety of modalities, than it is the case for conflict crises (see Fig 4 and Fig 6).

[9] Visit www.sheltercluster.org. These figures do not include refugee responses.
[10] For the comparison (Fig 5), we used the monthly cumulative data for four different responses in 2015 and 2016. We used cumulative percentages, instead of absolute values, in order to make different datasets comparable, both due to the fact that the responses have different scales and the definition of the modalities of assistance vary between different countries. For Iraq, emergency shelter was defined as: provision of tents and emergency shelter kits / sealing-off kits (distribution of plastic sheeting or seasonal shelter items, either separately or as part of NFI kits, is not included). For the Whole of Syria: provision of tents, emergency shelter kits or individual emergency shelter items (including cash/voucher for these items), rehabilitation of emergency spaces (in-kind, cash/voucher or physical repair). For Nepal and Ecuador emergency shelter figures are obtained using only distributions of tarpaulins and tents.

In response to the Nepal earthquakes in 2015, humanitarian organizations adopted a variety of response modalities, including distribution of CGI sheeting to repair damaged structures, particularly to prepare for the harsh winter season..

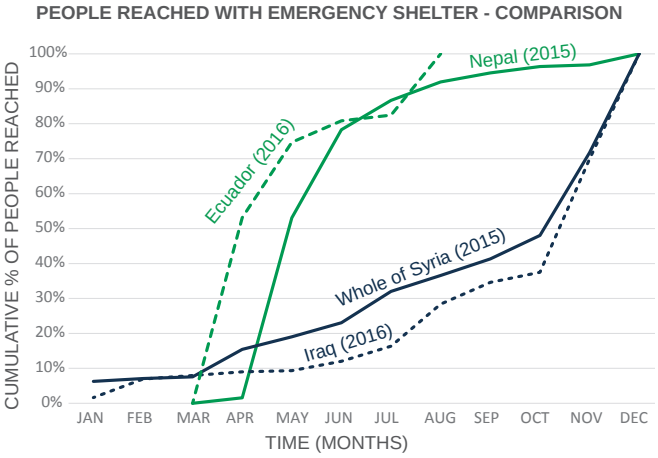


Figure 5. Comparison of emergency shelter cumulative assistance (percentage of the total) for four shelter responses in 2015 and 2016 (as per data reported to the Shelter Clusters in country). The start for natural disasters are set on the month before the crisis on the year of the disaster.

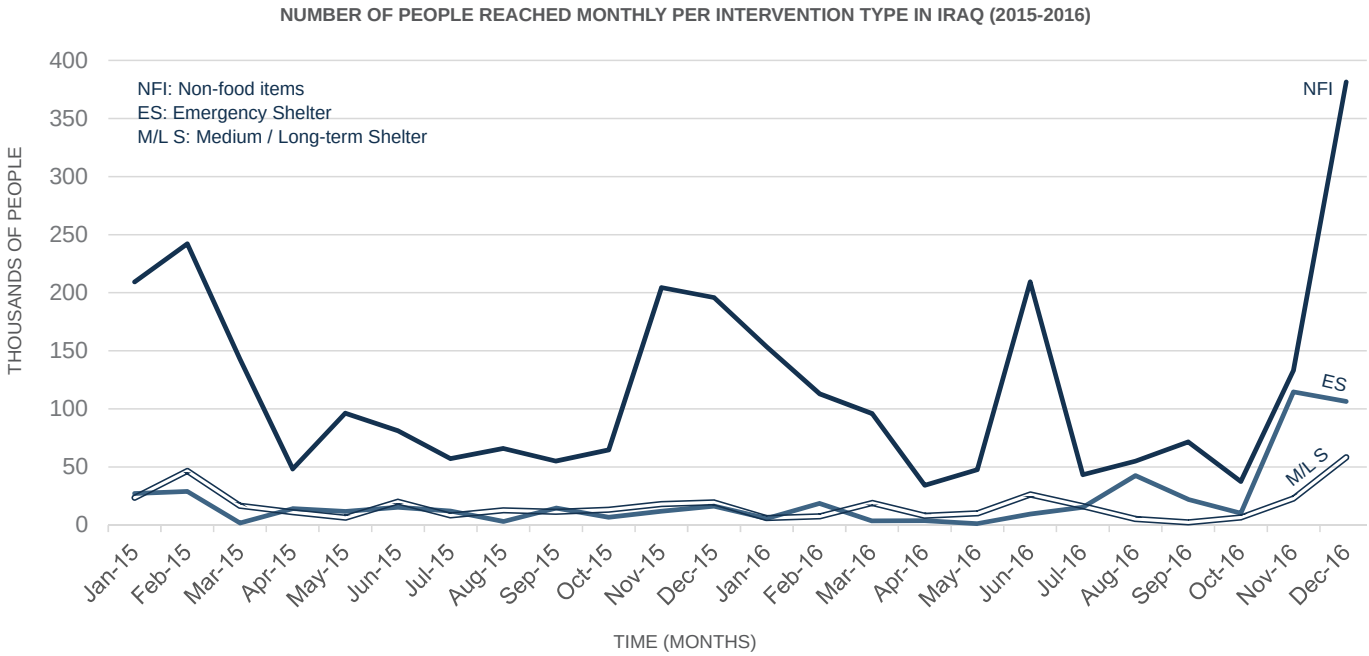


Figure 6. This chart shows the number of people assisted monthly in Iraq, in 2015 and 2016, with the three main modalities of assistance, as defined in the country (Source: Global Shelter Cluster). The chart highlights the different scale of the three modalities and some peaks in assistance, due to specific crises: between October 2015 and February 2016 (due to the Battle of Ramadi), in mid 2016 (due to the Battle of Fallujah) and towards the end of 2016 (due to the Mosul crisis).

Trainings of carpenters were organized on safer construction techniques in Nepal, after the two earthquakes in 2015.

People went to their damaged houses soon after the earthquake that struck Nepal, to salvage materials and look for personal belongings.

RECURRING THEMES

This edition sees several themes emerging from the cases studies, including the shift towards non-material forms of assistance (see A.14 and A.15; A.21, A.40), the importance of land and property issues (see A.22, A.38 and A.39), the increasing role of cash-based interventions (see A.2, A.7, A.17 and A.31) and a focus on protracted crises (including the Whole of Syria, South Sudan and Ukraine, amongst others). It also includes a significant amount of case studies where shelter is only one component of multisectoral approaches (see A.31, A.13, A.22 and A.12). We summarize some recurring issues below.

SHELTER AS A PROCESS

Shelter is "more than just a roof", it is not just the structure that protects from the elements, but is the series of activities that a household undertakes to save and construct, adapt and expand a dwelling, as well as the range of continuing actions and livelihoods that people do in and around their home. All of the case studies spend many more words on the process used rather than on the technical details or specific designs, and key learnings generally come from these processes and the wider impacts of the projects.

DIVERSITY IN RESPONSES

Shelter programme design varies across countries and types of crisis, with phase of response, or amongst different organizations within the same response. For instance, in this edition there are five case studies from the Philippines (A.9-A.13). Projects varied in duration, cost and scale, ranging from distribution of shelter kits (emergency or recovery) or vouchers for repairs, to construction of transitional shelters or houses, and multiphase, multisectoral, settlement approaches. If we look at protracted emergencies, such as the Syrian crisis with its regional effects (see A.29-A.32 and A.35) and the Iraq conflict (A.33, A.34 and A.36), a wide range of responses also took place. Projects in this region (from both this and past editions) ranged from cash and vouchers for housing repair, to collective centres upgrade, shelter construction or upgrade in camps and camp-like settings. Housing construction was extremely limited, yet some programmes supported rental and hosting arrangements. Some projects provided cash-based assistance, and/or included training components, though less than in post-disaster responses, such as in the Philippines.

PEOPLE AS FIRST RESPONDERS

One of the most common conclusions from the case studies is that affected people are the first responders after a disaster, and most projects identify how to support them in finding temporary shelter solutions, or in their self-recovery. There is a difference for what this means for those in protracted displacement, compared to those who are able to rebuild where they have access to land to do so. For example, in the Protection of Civilians sites in South Sudan, where internally displaced people seek refuge from armed conflict, "recovery" will not be possible until more durable options become available (see A.23, A.24 and A.25). Nonetheless, the populations there are not passive recipients of aid.

Often, in case studies described as successful, projects seek to support affected people to meet their own shelter needs. However, there are challenges that can affect the ability of projects to effectively support people to help themselves and limit community engagement. These include limited funding, limited time frames, the urgency of life-threatening situations, the flexibility of donors and issues in relinquishing control, based on concerns over structural safety. Examples of supporting people in making their own decisions are projects that combine cash- or voucher-based modalities with awareness raising and training, as well as technical assistance, to ensure that standards are reached and safety is considered. For instance, projects such as A.11 and A.12 in response to Haiyan, as well as A.5 and A.6 after the Nepal earthquakes, all included delivery of materials or kits, coupled with technical assistance or training, to support affected people in their recovery as early as possible. Projects A.7 and A.13 used cash or vouchers as the main modality of assistance, accompanied by other programme components.

TARGETING OF ASSISTANCE

A consistent issue across case studies is the targeting or selection of project beneficiaries. In general, project write-ups place less emphasis on the process for selecting areas of intervention than on detailed beneficiary selection within a site. Although the selection of project locations is often done by people who may not be present when projects are finally written up, they are also often selected under time pressure and with limited information. Case studies where national coordination is highlighted show the importance of assessments and coordination in trying to ensure area coverage and that location-level gaps are met. Within projects, the choice of who to target within a location can be a time-consuming process, but is critical to effective programming, with often limited resources. For example, A.10, A.12, A.22 and A.30 show how an effective selection process requires multiple steps and significant time and resources.

SCALE VERSUS IMPACT

Disasters and displacements vary significantly in scale, and as a result so do responses. In many cases, there is simply not sufficient funding or capacity for organizations to provide the support that is needed. Case studies illustrate how shelter agencies often have to make difficult choices between providing higher-impact assistance to a limited number of families, or less support to a larger number. See opinion piece B.3 for a discussion of this issue, drawing from the projects in this edition.

DEFINING SUCCESS

In this edition, we have asked contributors to define the main factors than influenced the success of the project described in the case study. From a total of 31 case studies, nearly 40 different reasons for success were reported by contributors, with two thirds of them cited more than once. By looking at the responses, the most cited factors were "beneficiary satisfaction" (cited in 29% of cases), "community participation" (19%), "timeliness" and "effective coordination" (both at 16%). These were followed by "scale" (16%, with one case reporting the limited – rather than large – scale as the reason for success), "locally relevant" and "precedent setting" (both at 13%).

Notably, certain factors for success are reported only in projects in response to natural disasters (such as "locally relevant" and "use of local resources"), while others only in those in complex or conflict environments (e.g. "precedent setting", "efficiency" and "expandable / upgradable solutions").

NOTE ON TERMINOLOGY

There has been a lot of academic and practical debate surrounding terminology used in the shelter sector. Additional confusions have been added by language translation. In particular, issues have been significant in the different definitions used for different phases of assistance. For example, the terms "emergency shelter", "transitional shelter", "T-shelter", "temporary shelter", "semi-permanent shelter", and "incremental shelter" have all been used in responses to define both the types of shelters and the processes used.

In this book we use the terms used in-country for each response, and these may vary from country to country. In some cases, flexibility in terminology has helped projects to take place sooner.

INTERPRET AND CONTRIBUTE

In reading this book, or browsing different case studies, it is hoped that readers will be able to draw their own lessons and identify useful techniques and approaches.

Readers are encouraged to share this publication widely, and contribute their own project case studies for future editions. In this way, the humanitarian community can compile good and bad practices, and hopefully implement increasingly effective shelter projects in the future.

Contribute at:
www.shelterprojects.org

Contact:
info@shelterprojects.org

This graphic shows the rate of responses to the question "How did you define success in your shelter project?". The larger the word size, the higher the number of contributors who reported the given factor as a reason for success, or a way to measure success. Colours refer to the type of crisis that the projects were responding to.

© Muse Mohammed

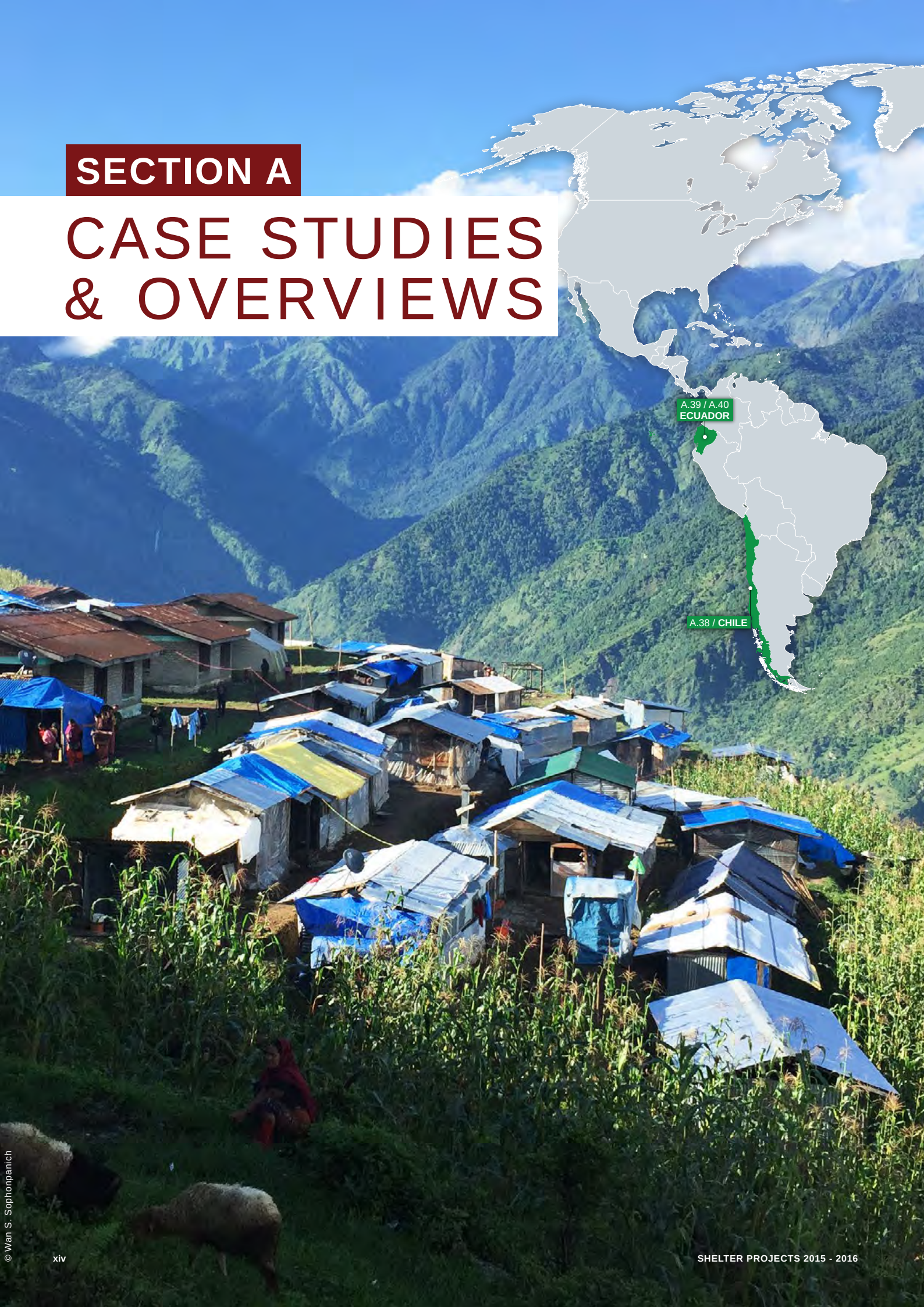
View of the rows of communal shelters in the Protection of Civilians (PoC) site in Bentiu, South Sudan. These displacement sites have been growing around UNMISS bases since the start of the crisis in late 2013, and offer protection to the populations seeking refuge from the ongoing conflict affecting the country.

CASE STUDY	SUPPORT METHODS											
	Distribution											
	Household items	Construction materials	Tools/Fixings	Other Distribution	Cash / Vouchers	Loans	Advocacy / Legal	Site Planning	Infrastructure	Training	Structural assessment	Guidelines / mass communications
A.2 / Myanmar / 2014-2016 / Conflict	X	X	X					X	X	X		X
A.5 / Nepal / 2015 / Earthquake	X	X	X							X		
A.6 / Nepal / 2015 / Earthquake		X								X		
A.7 / Nepal / 2015-2016 / Earthquake	X			X	X							
A.9 / Philippines / 2013-2017 / Typhoon Haiyan		X	X	X	X		X			X	X	X
A.10 / Philippines / 2014-2015 / Typhoon Haiyan		X								X		
A.11 / Philippines / 2013-2015 / Typhoon Haiyan	X	X	X		X					X		X
A.12 / Philippines / 2013-2015 / Typhoon Haiyan	X	X	X						X	X		
A.13 / Philippines / 2013-2015 / Typhoon Haiyan	X		X		X		X	X	X	X	X	X
A.16 / Benin / 2010-2011 / Floods	X	X			X							
A.17 / DR Congo / 2008-2016 / NFI voucher fairs	X				X							
A.18 / Nigeria / 2015-2016 / Conflict	X							X	X			
A.20 / Malawi / 2015 / Floods	X		X									
A.21 / Malawi / 2015-2016 / Floods		X	X					X		X		X
A.22 / Somalia / 2011-2013 / Drought and Conflict		X					X		X	X		X
A.24 / South Sudan / 2014-2016 / Conflict/Complex	X	X						X				X
A.25 / South Sudan / 2014-2016 / Conflict/Complex									X			
A.26 / Ethiopia / 2014-2016 / South Sudan crisis	X	X						X	X	X		
A.27 / Un. Rep. of Tanzania / 2016-2017 / Burundi crisis		X	X					X		X		
A.28 / Gaza / 2014-2016 / Conflict		X	X		X				X	X	X	X
A.30 / Syrian Arab Republic / 2015-2016 / Conflict	X	X								X	X	
A.31 / Lebanon / 2015-2016 / Syrian crisis	X	X			X		X			X		X
A.32 / Lebanon / 2015-2016 / Syrian crisis			X									
A.34 / Iraq / 2015-2016 / Conflict		X	X							X		X
A.35 / Iraq / 2014-2015 / Syrian crisis		X										
A.36 / Iraq / 2015-2016 / Conflict								X	X	X		X
A.38 / Chile / 2014-2016 / Fire					X		X					
A.40 / Ecuador / 2016 / Earthquake	X	X	X							X		
A.42 / Germany / 2015-2016 / Refugee crisis	X			X				X	X			

CASE STUDY	SHELTER TYPE								SETTLEMENT OPTION									
	Emergency shelter	Transitional shelter	Host family support	Rental support	Core housing	Housing repair / retro-fitting	Other - individual housing	Other - prefab unit	Non displaced / returns	Dispersed self-settled	Short term land / house / flat	Unplanned camps	Collective centres	Hosting	Planned and managed camps	Planned relocation sites	Resettlements	Urban neighbourhoods
A.2	X	X					X		X	X	X			X	X	X		X
A.5	X	X							X	X								
A.6		X							X									
A.7						X			X									
A.9			X			X			X					X				
A.10					X				X									
A.11	X	X							X									
A.12	X	X							X								X	
A.13		X			X	X				X							X	X
A.16	X		X							X		X		X				
A.17																		
A.18	X														X			
A.20	X								X							X		
A.21					X	X			X								X	
A.22		X							X								X	X
A.24	X									X		X	X		X	X		
A.25	X														X			
A.26		X														X		
A.27		X													X			
A.28		X							X									
A.30			X			X								X				
A.31						X					X							X
A.32	X											X						X
A.34	X		X			X			X				X					X
A.35	X	X													X			
A.36								X							X			
A.38	X						X		X								X	X
A.40	X								X									
A.42	X										X		X		X			

SECTION A

CASE STUDIES & OVERVIEWS



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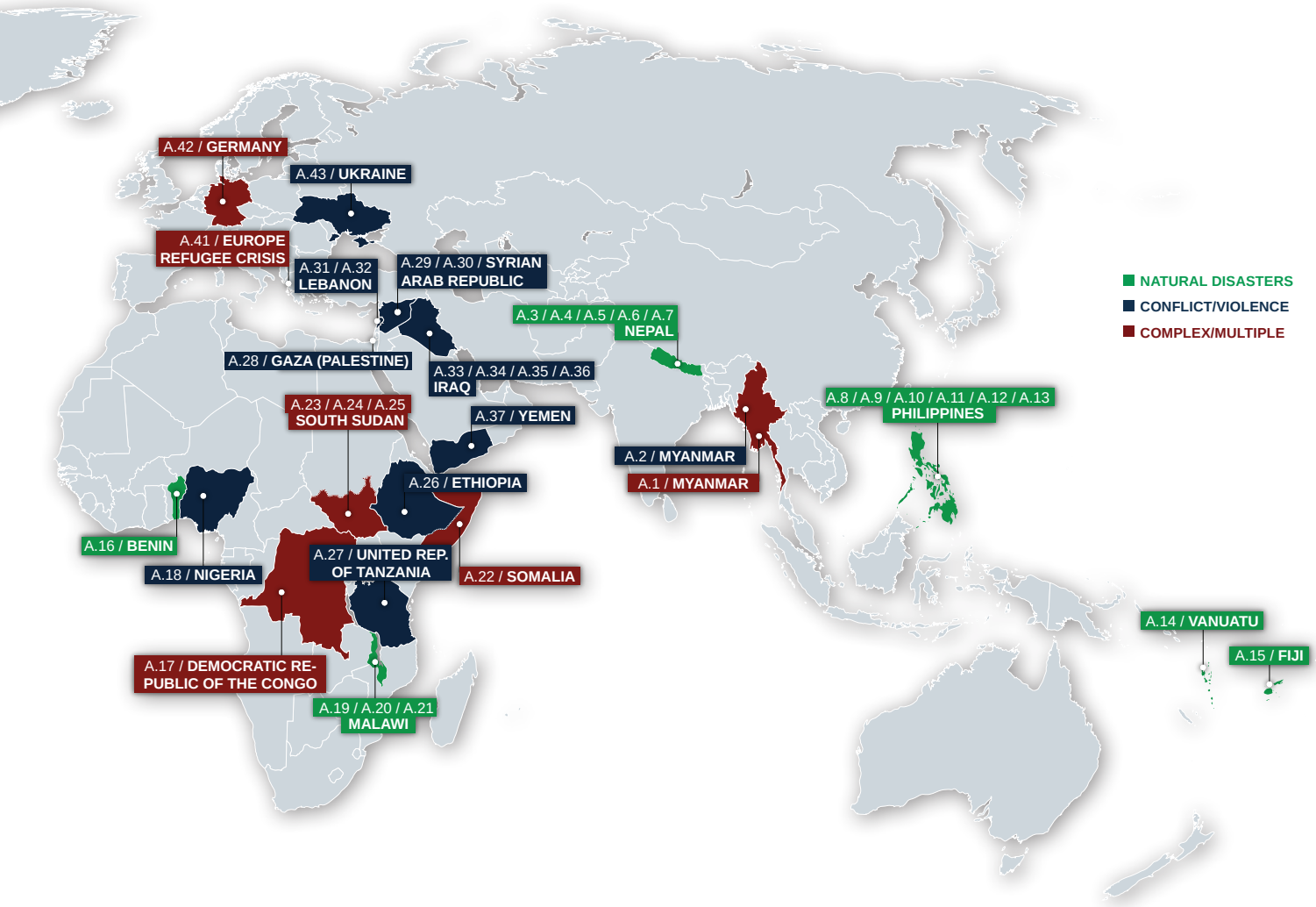


CONTENTS

This section contains overviews and case studies of projects in response to both conflicts and natural disasters, or multiple/complex crises.

See Annex C.1 and visit www.shelterprojects.org for a full list of case studies / overviews from this book and previous editions.

CASE STUDY

MYANMAR 2013-2016 / COORDINATION

KEYWORDS: Coordination, Technical assistance, Advocacy, Training

CRISIS	**Myanmar, multiple crises:** • **Internal conflict in Kachin/Northern Shan states** (2011-ongoing) • **Inter-communal violence in Rakhine state** (Jun and Oct 2012) • **Cyclone Komen floods** (Aug-Dec 2015)
TOTAL PEOPLE AFFECTED	**Rakhine: 145,000** displaced **Kachin/Northern Shan: 100,000** displaced **2015 floods: 1.7 million** displaced **150,000** people with moderately or severely damaged houses (Myanmar Humanitarian Response Plan, 2016).
PROJECT LOCATIONS	**Myanmar country-wide, national and subnational level.**
PROJECT OUTPUTS	**Shelter/NFI/CCCM coordination provided at national and subnational level** (2013-2016).
OUTCOME INDICATORS	**100%** of IDPs living in temporary shelters complying with internationally recognized standards. **100%** of IDP camps with appropriate infrastructure supporting effective camp management.

PROJECT SUMMARY

The Shelter/NFI/CCCM Cluster in Myanmar has provided – and continues to support – coordination of shelter and CCCM agencies at national and subnational level through a decentralized approach, since January 2013. The national level provided overall direction, Information Management support and liaised with national authorities, donors and the Humanitarian Country Team, as well as with the Global Shelter and CCCM Clusters; two subnational clusters were established for operational response. The overall goals were to provide emergency shelter and to seek durable solutions for populations affected by violence and disasters. This case study focuses on the coordination structures and how they evolved over time.

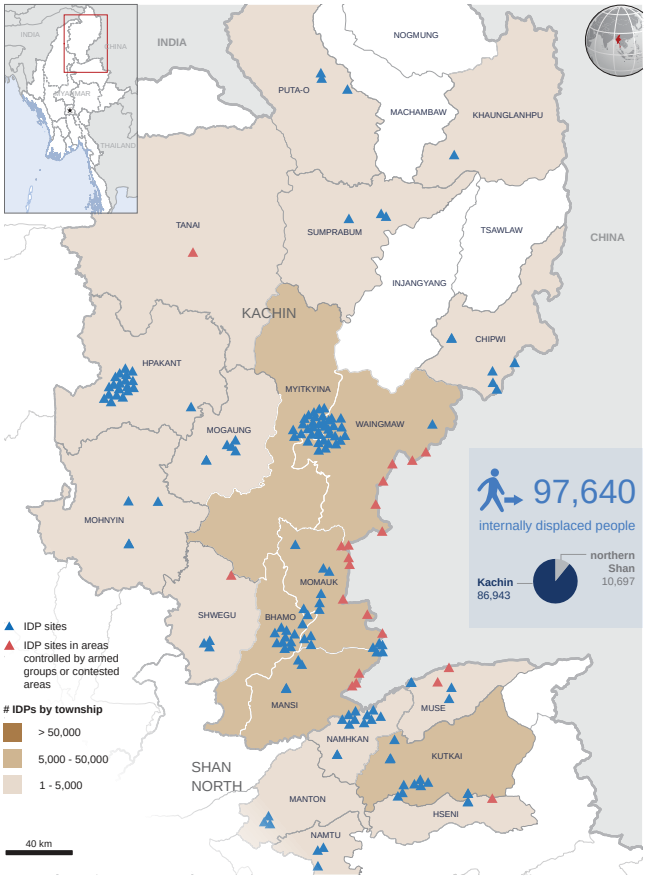
1. Jan 2013: **National Shelter/NFI/CCCM Cluster established.**
2. Apr 2013: **Rakhine State Government and Cluster Lead Agency agree on shelter design and standards** (eight-unit long-houses).
3. Dec 2013: **Completion of 2,843 eight-unit longhouses in Rakhine State** (see A.16 in *Shelter Projects 2013-2014*).
4. Aug 2015: **Deployment of Flood Response Coordination Team.**
5. Dec 2015: **Departure of Flood Response Coordination Team and handover to national Cluster.**

STRENGTHS

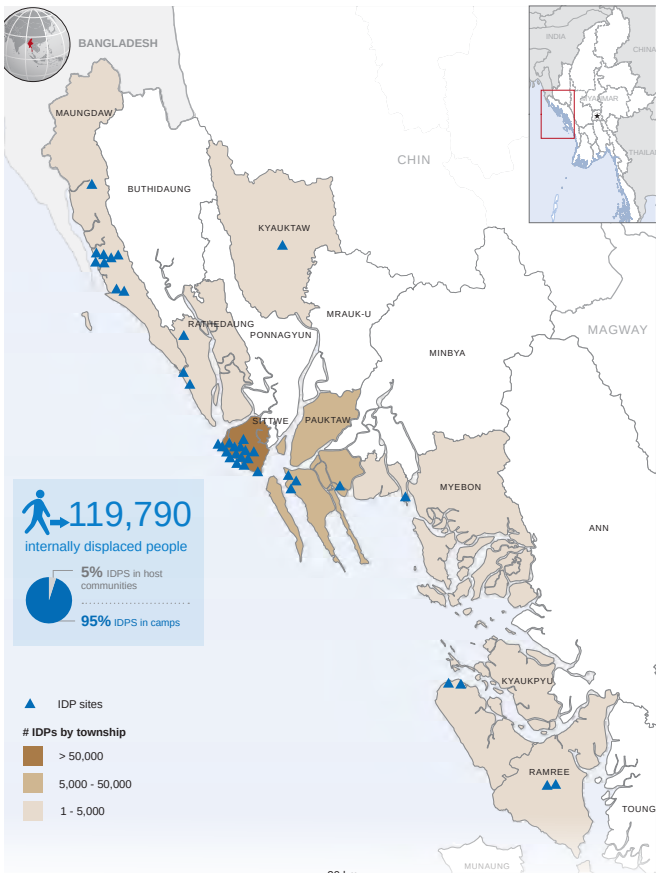
+ Adequate dedicated capacity since cluster activation.
+ 48-hour deployment of the Coordinator and continuity for 4 years.
+ Inclusive coordination mechanism for all partners.
+ Regular engagement with other clusters and sectors, at all levels.
+ Sustained advocacy contributed to high government involvement.
+ The merged Shelter/NFI/CCCM subnational Cluster facilitated operational partners agreement on common designs and guidance.

WEAKNESSES

- Over 200,000 individuals continued to be in a protracted displacement situation.
- Delayed Cluster activation In Kachin/Northern Shan.
- Compromised design solutions did not reach minimum standards.
- The protracted crisis has not allowed constructive discussion on possible exit strategy or handover.
- Lack of durable solutions led to a constant and costly cycle of repair and maintenance.



Nearly 100,000 people were internally displaced due to violence, across many IDP sites in Kachin and Northern Shan States (UN OCHA, Aug 2016).



In Rhakine State, internally displaced persons were living in many IDP sites coordinated by the Shelter/NFI/CCCM Cluster (UN OCHA, Jul 2016).

CONTEXT

Despite the internationally welcomed transition to democracy in 2011, after decades of isolation, Myanmar remains one of the poorest countries in South-East Asia. The relatively low level of development and wide-spread poverty is often further hampered by heavy monsoon rains and frequent natural disasters (such as typhoons Nargis in 2008[1] and Giri in 2010). Myanmar's population make-up includes multiple ethnic groups which have long opposed the government's policy of centralization.

SITUATION IN KACHIN/NORTHERN SHAN

Fighting between the Myanmar governmental army and the Kachin Independence Army (KIA) broke out in June 2011, after a 17 year cease-fire, which led to the displacement of an estimated 100,000 people, as of August 2013[2]. In 2016, approximately 50% of IDP camps were located in non-government controlled areas, with limited access to services and international humanitarian assistance.

SITUATION IN RAKHINE STATE

For more information on Rakhine State, see case study A.2.

Inter-communal violence between the Buddhist population and Rohingya Muslims in 2012 resulted in massive destruction of homes and displacement across the state. The main IDP caseload fled urban areas and settled into rural camps around Sittwe, with heavy restrictions on freedom of movement and limited access to services outside the camps.

NATIONAL SHELTER CLUSTER

Before the Cluster was activated, the lead agency had been coordinating the shelter and CCCM response in Kachin (since 2011) and in Rakhine (since 2012). Support was requested from the global level Clusters for response coordination, resource mobilization and scale up. In January 2013, the Shelter/NFI/CCCM Cluster was formally activated to respond to large-scale displacement in predominantly camp and camp-like settings across Rakhine and Kachin/Northern Shan states. While merged clusters are not preferred in IDP situations, in the case of Myanmar, Shelter and Camp Coordination partners overlapped to an extent that justified bringing the two sectors together. Local organizations also expressed preference for one common forum.

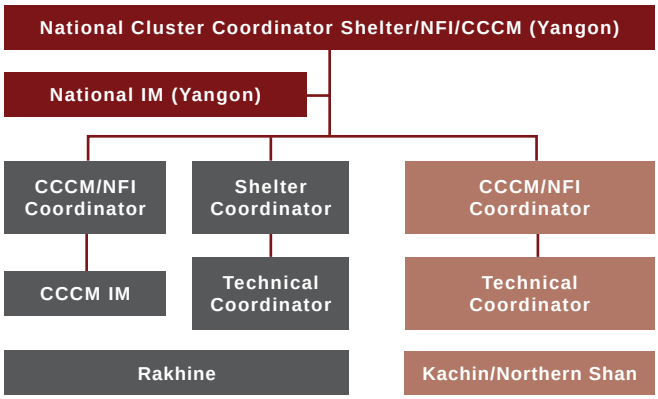
The Global Shelter Cluster (GSC) deployed an experienced, dedicated, national Coordinator within 48 hours of Cluster activation, to head the newly formed national Cluster team in Yangon. The Cluster aimed to ensure adequate temporary accommodation (according to agreed international standards and government requirements) using eight-unit shelters known as "long-houses"[3].

SUBNATIONAL COORDINATION STRUCTURE

The coordination team had to address two displacement contexts, in two different geographical locations, which called for a decentralized subnational coordination approach. A merged Shelter/NFI/CCCM subnational Cluster was established in Kachin/Northern Shan states to coordinate the response across the 167 camps. Due to the highly volatile situation and the larger caseload in Rakhine, the subnational

[1] See case studies A.19-A.20 in *Shelter Projects 2010* for projects in response to Typhoon Nargis.
[2] Kachin & Northern Shan Shelter Cluster Strategic Framework, Sep 2013.
[3] This is described in case study A.16 in *Shelter Projects 2013-2014*.

Cluster in Sittwe town was set up differently – separate Shelter and CCCM/NFI Clusters – both under the coordination of the national Cluster Coordinator in Yangon.



Myanmar Shelter/NFI/CCCM Cluster Organigram, 2013-2015.

RESPONSE IN KACHIN/NORTHERN SHAN

The initial response was carried out by the local community and faith-based organizations through the construction of **temporary five-unit shelters in camp-like settings,** evolving mainly around church compounds. While having distinct advantages (knowledge of the local context, access to non-governmental areas, extensive networks and positive relation with state and local authorities), the initial response suffered from the organizations' lack of technical and sectoral expertise, as well as limited donor confidence and support. Temporary shelters provided in the early stages of the emergency varied significantly across the 167 camps in terms of covered living area, quality of construction materials used, occupancy criteria and surrounding infrastructure.

By March 2013, there were 85,000 registered IDPs and an additional 35,000 individuals in need of humanitarian assistance. The international community engaged late and access to non-government controlled areas was limited. This caused a lack of basic data to support identification of gaps and inform shelter and camp management response. The Shelter/NFI/CCCM Cluster in Kachin **piloted and supported a substantial camp profiling exercise** in March 2013, to gather baseline disaggregated data on IDPs. As of September 2016, five rounds of camp profiling have been coordinated by the Cluster and carried out by partners on the ground[4].

The main challenge for the Cluster subnational team was to establish a formal coordination mechanism and help improving the response, **18 months after its start.** The Cluster benefited from a dedicated subnational Coordinator and a shelter technical expert supported by the Cluster lead agency.

The main objective in 2013 was to provide **temporary shelters to meet the needs of an additional 10,000 IDPs**. This was achieved through consultations with beneficiaries and local shelter actors on culturally appropriate shelter designs and harmonization, and provision of guidance on Build Back Safer techniques. In July 2013, a technical working group (TWiG) **agreed on a five-unit shelter design,** which has been implemented by all partners since. In July 2016, the TWiG adapted the design to take into account feedback from beneficiaries and partners, availability of local materials, minimum standards and other cultural considerations. Additionally, the Cluster lead agency **conducted 12 trainings** for approximately 300 Camp Managers, Camp Focal Points and Government actors, across 84 camps[5].

Additionally, **repairs had to be conducted on the shelters built in 2011**. This was done through an owner-driven approach (supported by the Cluster), bringing existing shelters up to Sphere standards, to avoid overcrowding and improve privacy and protection. Temporary shelters have a life span of 2-3 years and require shelter actors in the area to engage in a constant and costly cycle of maintenance and repair, until durable solutions become feasible.

RESPONSE IN RAKHINE

Immediately after the violence, emergency tents were provided, while the Cluster lead agency provided tarpaulins, rope and tents at the end of 2012. Additionally, after the second wave of violence in October 2012, the government completed 525 temporary shelters and "long-houses" for approximately 29,000 IDPs, across 10 townships. Some of the camps were established in 2012-2013, others were clusters of long-houses built within (or in close proximity to) the IDPs' villages of origin.

In April 2013, the Cluster lead agency joined a high-level delegation to Rakhine, to clarify the maximum capacity of the international community and persuade the Rakhine State Government (RSG) to contribute to the shelter response. The initial design used by the RSG envisaged the construction of 10-unit long-houses, providing a living space of only $2m^2$ per person. **The Cluster advocated for the shelters to meet the Sphere indicator** of $3.5m^2$ per person and managed to reduce the number of families per shelter from ten to eight. However, with an average of 5.5 family members, IDPs ended up occupying a space of $2.9m^2$ per person. On the basis of this agreement with the RSG, Cluster partners achieved 51% coverage of identified temporary shelter needs in June 2013 and 99% by December[6].

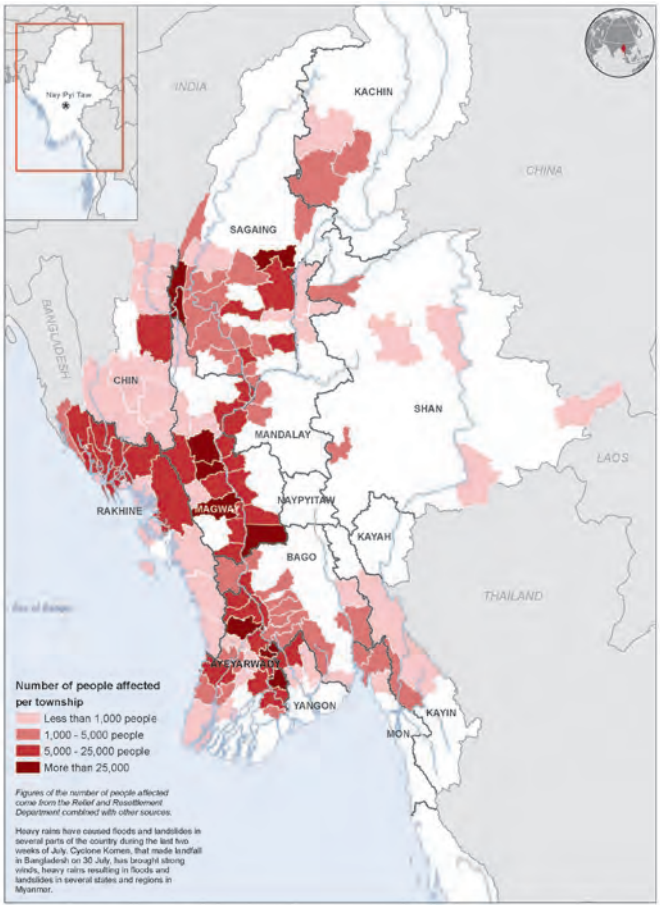
Temporary shelters were built in IDP sites for people fleeing violence.

During 2013 and 2014, a TWiG co-chaired by the Department for Rural Development (DRD) **agreed on minimum technical standards and designs for temporary and permanent shelter,** and further developed an effective shelter and maintenance programme. The established co-chairing arrangement

[4] Analysis of Camp Profiling Round 5 Kachin & Northern Shan, http://bit.ly/2jK46LR

[5] Kachin Response Plan Myanmar March-December 2013, http://bit.ly/2j8MjNK.
[6] Rakhine State Shelter Cluster Strategic Framework, http://bit.ly/2iQlZKh.

allowed Cluster partners to **develop strong professional relationships with the RSG** and improved the previously poor level of coordination between government departments and international organizations. Additionally, constructive government engagement trickled down to the local level.

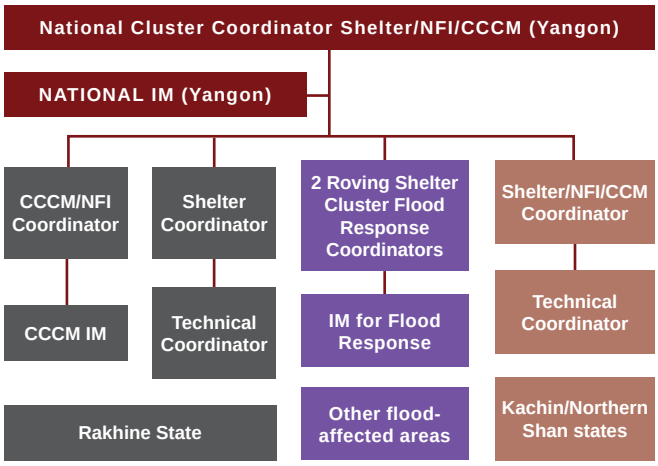


Several areas were affected by the floods in 2015 (UN OCHA, 10 Aug 2015).

In 2014, the Shelter Cluster, both in Rakhine and at national level, renewed its advocacy efforts with the RSG to take the lead in addressing the protracted IDP situation through durable solutions. It also offered technical support on design and construction. In 2015, the RSG supported individual housing solutions through cash grants for 25,000 individuals[7]. **Attaining durable solutions and advocacy with the government remained key objectives** in the 2016-2017 strategy. Since 2013, both subnational Clusters have continuously engaged in preparedness activities, tracking of emergency stocks and local response capacity. Both have also advocated for early recovery and coordinated with relevant clusters and sectors (most notably Protection – to ensure protection mainstreaming – and WASH – to ensure sufficient links between shelter interventions and WASH infrastructure).

SITUATION AFTER THE 2015 FLOODS

In July and August 2015, heavy monsoon rains, combined with the effect of Cyclone Komen on the region, affected nine million people across 12 of the country's 14 states, causing heavy loss of homes, livelihoods, crops and food stocks. Floods and landslides killed 117 people and temporarily displaces 1.7 million. The Government reported that the highest numbers of affected people were in Ayeyarwady, Sagaing and Magway regions, while Rakhine suffered the highest number of destroyed homes. The Humanitarian Country Team agreed that the response to these floods would be coordinated by the existing Clusters, rather than creating new ones.



Myanmar Shelter/NFI/CCCM Cluster Organigram, Aug-Dec 2015.

FLOOD RESPONSE 2015

Given the extensive reach and impact of the natural disaster, the GSC co-lead agency for natural disasters deployed a coordination team to support the subnational level. The two GSC co-leads agreed that the newly deployed team would coordinate the response outside Rakhine, Kachin and Shan states. **The flood shelter coordination team (FSCT)** – consisting of two dedicated Coordinators and one information manager – **was set up to operate under the strategic guidance of the national Cluster.** The FSCT organized shelter partner meetings at the same location and date of the regular national Cluster meeting, allowing agencies to attend both meetings.

The FSCT used and triangulated government data to coordinate the shelter response in seven regions, developed a reporting mechanisms and a dedicated webpage[8]. It operated from Yangon, with field trips to affected locations, to assess housing damage, households' needs and existing gaps in the response. By September 2015, Cluster partners provided emergency shelter to 9,525 households in all regions (outside Rakhine, Kachin and Stan states) through a combination of shelter repair kits, tarpaulins and tents[9].

WIDER IMPACTS OF THE CLUSTER IN MYANMAR

The clear mandate and geographical separation of responsibilities between the two Cluster lead agencies, as well as the close collaboration with the national Cluster team, ensured that the coordination of this response was successful. **An agreement between the two global co-leads** existed before the floods, and was further solidified and practically tested through the 2015 collaboration. This allows the timely deployment of coordination teams and development of Standard Operating Procedures (SOPs) and technical guidelines.

[7] See case study A.2.

[8] www.sheltercluster.org/response/myanmar-floods-2015.

[9] Myanmar Central Area Flood Response Situation Report #4, http://bit.ly/2jKy7ew.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

People in an IDP site, coordinated and managed by merged Shelter/CCCM Clusters (Tat Kone Baptist Church IDP camp in Kachin State, Nov 2013).

The Cluster coordinated the construction of temporary shelters for people fleeing inter-communal violence in Rakhine State (Ohn Taw Gyi IDP camp, May 2013).

STRENGTHS

+ Adequate dedicated capacity since Cluster activation, and benefits from using the **lead agency existing capacities.**

+ 48-hour deployment of the Shelter/NFI/CCCM Coordinator (and continuity since then). This provided **predictability, extensive knowledge** on the context and the response, as well as **strong personal and professional relations** with the wider international community, local partners, authorities and donors.

+ Inclusive coordination mechanism for all partners to engage, consult and disseminate best practices. 21 Cluster partners have been regularly attending meetings.

+ Regular engagement with other clusters and sectors, at all levels (especially Protection, WASH and Early Recovery), as well as donors and relevant stakeholders.

+ Sustained advocacy from the Cluster lead agency and partners contributed to high government involvement in Rakhine State. Many shelters built by the government used Cluster-agreed technical standards and designs.

+ The merged Shelter/NFI/CCCM Cluster in Kachin/Northern Shan managed to **bring local operational partners together**, agree on a common shelter design and technical guidance, and create **links with Protection and WASH**.

WEAKNESSES

- More than 200,000 individuals across Rakhine, Kachin and Northern Shan states **continue to live in situations of protracted displacement**. As of 2016, the Cluster continued its advocacy for durable solutions.

- In Kachin/Northern Shan, **the Cluster was activated 18 months after** the conflict-related displacement. Delayed activation of clusters may lead local organizations to provide a **sectorial response without the necessary technical guidance and coordination**.

- The compromised solution reached on the final design and size of the long-houses implemented by the government **fell short of the international standard** of 3.5m^2 per person.

- The Cluster has been active for four years, while needs have remained almost the same since 2013, which has **not allowed for constructive discussion on possible exit strategies or handover**. Clusters are, by definition, time-bound and needs-based coordination mechanisms. Handover of coordination responsibilities, or deactivation where needs cease to exist, should be discussed early on[10].

- Lack of durable solutions four years into the Cluster response, led to a **constant and costly cycle of repair and maintenance**. This was due to the decision of the Cluster in 2013 to explicitly focus on the provision of temporary shelters, with a life-span of two years, to avoid contributing to permanent encampment of the affected populations.

[10] IASC Reference Module for Cluster Coordination, http://bit.ly/2oseRYT.

LEARNINGS

- **Early deployment** of Cluster coordination team, **adequate staffing** of key Cluster roles (Coordinator, Information Manager and Technical Support) **and access to the Cluster lead agency's** existing institutional and human resources are essential for setting up a functioning national Cluster.
- **Coordination mechanisms should be as close to operational partners and beneficiaries as possible**, to allow for adequate data collection, gap analysis, community engagement and operational response, as well as to encourage ownership, adequate exit strategies and sustainability.
- **Pre-existing arrangements and close cooperation between Cluster lead agencies at the global level** can ensure that coordination mechanisms are not duplicated, information is shared openly and that teams operate within a clear mandate and towards the same strategic objective.
- **Coordination teams arriving late** in the response **should engage partners cautiously and prove the added value** of coordination (including humanitarian standards, Build Back Safer approaches, and technical guidelines).

CASE STUDY

MYANMAR 2014-2016 / CONFLICT

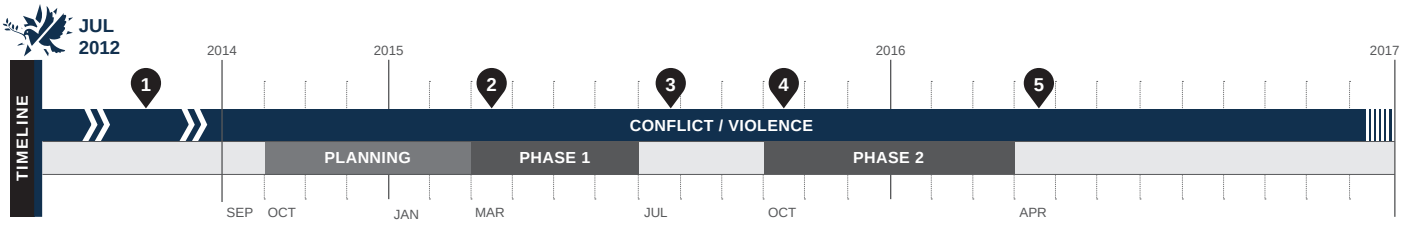
KEYWORDS: Individual housing, Cash assistance, Advocacy, Community participation, Protection

CRISIS	**Inter-communal violence, Rakhine, 2012.**
TOTAL PEOPLE AFFECTED	**145,000** displaced due to 2012 violence (119,560 as of Nov 2016).
PROJECT LOCATIONS	**Rakhine State, Myanmar** (Townships of Mrauk-U, Kyauktaw and Minbya, Rathedaung and Pauktaw).
BENEFICIARIES	**25,000 individuals** (approx.).
PROJECT OUTPUTS	**4,737 beneficiary-led houses.**
SHELTER SIZE[1]	**Min. 16.7 m²** (4.6m x 3.7m basic design).
SHELTER DENSITY	**Min. 3.4 m²/person** (average 5 members per family).
PROJECT COST PER SHELTER	**USD 1,000** (Labour cost = USD 160; Materials, Logistics, Transport, etc. = USD 840).
OCCUPANCY RATE	**100%** (estimated).

PROJECT SUMMARY

This was a beneficiary-led, cash-based, project that allowed families displaced due to inter-communal violence to vacate their temporary shelter and rebuild their houses. The project enabled the construction of 4,737 houses for a marginalized group in a highly volatile environment, where some stakeholders were keen to use a contractor-driven approach. In fact, the more discreet owner-driven methodology, used in this project, proved highly effective.

[1] Note: families were free to increase the size or modify the house design according to their needs.



1. Jan 2013: **Activation of Shelter Cluster.**
2. Mar 2015: **Rakhine Government begins owner-driven housing construction with own funding** (Phase 1).
3. Jul 2015: **Handover of Phase 1 completed**.
4. Oct 2015: **Rakhine Government, with funding support from Shelter Cluster partners, continued with further individual housing construction** (Phase 2).
5. Apr 2016: **Handover of Phase 2 completed**.

STRENGTHS

+ Use of existing local markets.
+ Considerable donor interest and support.
+ Critical leadership of the government.
+ Active participation of community leaders and concerned families.
+ Continuity of cluster agency and coordinators over time.
+ Affordable and quick implementation.

WEAKNESSES

- Some IDPs could not return to their place of origin.
- Landowners were not properly compensated.
- Lack of adequate and timely WASH components in Phase 1.

During attacks, villages were burnt (Rathedaung Township, Rakhine State).

In response to the displacement due to the violence, makeshift emergency shelters were set up (Sin Thet Maw, Pauktaw Township).

IDPs used old shelter materials to support the initial settlement back in their place of origin, before rebuilding their houses.

Construction materials were supplied by the government to rebuild the houses of IDPs affected by the violence (Thi Kyar IDP Camp, Mrauk-U Township).

SITUATION BEFORE THE CONFLICT

Rakhine State is the least developed state in Myanmar, characterized by high population density and malnutrition rates, low-income levels, poverty and weak infrastructure. Conditions are worsened by two cyclone seasons, with associated flash flooding and landslides, during the rainy season. There is a long-standing history of discrimination of the Muslim population in Rakhine State, with the two main ethnic groups in conflict with each other: the Rakhine (Buddhist) and those who call themselves "Rohingya" (Muslims), who lack any citizenship and hence are stateless.

SITUATION AFTER THE START OF THE CONFLICT

Inter-community violence in parts of Rakhine State commenced in early June 2012, and flared once more in October 2012, resulting in the deaths of 167 people and injuries to 223 people. 10,100 buildings, including homes, churches and public buildings were damaged or destroyed and approximately 145,000 people were displaced (95% Muslim; 5% Rakhine). This generated two distinct IDP caseloads: those displaced from urban areas and those from rural areas[2].

In 2015, approximately 25,000 people in rural locations were able to vacate their temporary shelter, assisted through this project. 60% reconstructed in their place of origin and 40% in new locations. This resulted in the number of camps (or camp-like settings) decreasing from 67 to 36. However, at the time of writing, almost 120,000 IDPs still resided in camps.

NATIONAL SHELTER STRATEGY

The goal of the Shelter/NFI/CCCM Cluster in Myanmar was to provide people affected by violence and conflict with safe, dignified and appropriate living conditions, as well as access to essential services, while seeking durable solutions[3]. In early 2015, after 18 months without being able to move beyond temporary solutions, the Cluster (strongly supported by the international community) advocated heavily with the Government of Myanmar, especially the Rakhine State Government (RSG). The aim was to convince the RSG to enact three possible options that supported individual housing solutions, as opposed to camps:

1) Repair and maintenance of existing temporary shelters (eight room long houses) in the IDP camps;

2) Upgrading of existing temporary shelters in the IDP camps;

3) Individual housing solutions for IDP families to return to or near their place of origin or voluntary relocation to new site. This solution was selected and houses implemented in five townships.

LOCATIONS AND BENEFICIARIES

The Shelter/CCCM Cluster and Protection Sector strongly advocated for the RSG to allow crisis-affected people to return to their place of origin or relocate to new sites. This project specifically targeted those who could return or voluntarily relocate. Through numerous field visits and meetings, consultation and research were conducted with communities and authorities, to ensure a deep and wide understanding of the situation. The government selected suitable locations for the project with help from the Cluster lead agency, based primarily on safety and security and well-being of the beneficiaries.

PROJECT IMPLEMENTATION

The concept and planning process started in the last quarter of 2014 and, once the project reached a momentum, advocacy and technical support to the government were scaled up. **This beneficiary-led housing project was implemented by the RSG** through the General Administration Department (GAD) of each concerned District or Township, village, community leaders (construction committee) and the IDP families themselves. The GAD authorities gave beneficiaries an initial cash lump sum through the community leaders. This ranged from 30% to 50% of a total of USD 1,000, depending on the township, and was intended to purchase construction materials. Skilled workers from the construction committee then helped families construct their houses. When houses were 60% to 80% complete, the GAD authorities gave the remaining amount for the final completion of construction.

This beneficiary-led approach differed significantly from other contractor-built houses that were implemented by the RSG and humanitarian agencies in Rakhine State. The scheme was for the stateless and extremely marginalized Muslims in Rakhine State. Any effort to support them was hugely challenging, not least being permitted to rebuild their houses, so this novel low-key approach proved highly appropriate. One of the striking outputs was the speed that houses were constructed at. Over 3,000 houses were built in a six-month period, i.e. an average of 16 houses per day, seven days a week. Had contractors been used, particularly in many of these remote rural locations, outputs in terms of cost, speed and quality would not have been comparable.

[2] For more information on the Shelter Cluster's mass temporary shelter response in 2013 see case study A.16 in *Shelter Projects 2013-2014*.
[3] More information can be found on the website, www.shelternficccmmyanmar.org.

The relocation/return programme supported people to rebuild durable houses, through a beneficiary-led approach (township of Mrauk-U).

Contractor-driven approaches were tried and later rejected by IDPs and the Shelter Cluster (Nidin IDP Camp, Kyauk taw Township).

COORDINATION

The fact that the same agency led the Shelter/CCCM Cluster and the Protection Sector helped to deliver a consistency of messaging and clarity of the aims and objectives to the RSG. Throughout the process, the lead agency sought to consult and update regularly all relevant actors – including potential beneficiaries and all relevant quarters of the international community (at national or subnational level).

DRR AND PROTECTION

In the same year, Myanmar also suffered unseasonal levels of rain, cyclones and landslides. Documents used in the flood response were also beneficial to this programme[4]. Throughout the project, the Cluster promoted the eight key messages to build back safer, which were translated into Myanmar language and distributed in hard copy[5].

Protection actors often visited project locations and discussed with the communities and local authorities, to gain a very intimate knowledge of each situation. The initial idea of using an owner-driven construction approach actually came from these discussions with the displaced communities, where they could voice how they wished to address their housing needs.

[4] See case study A.1 and the webpage of the 2015 floods response: http://bit.ly/2kWavnU.
[5] See the Shelter Standards and Guidelines library of the Cluster: http://bit.ly/2kZ3zWa.

MAIN CHALLENGES

In addition to implementation challenges, the working environment posed a significant risk. There were security issues, such as attacks on UN and INGO premises and residences in March 2014, which resulted in a mass evacuation from Rakhine State for a number of weeks, plus a highly tense situation between communities. This required a very conflict-sensitive approach. One of the key reactions by the Shelter Cluster was to revert to the original suggestion that beneficiaries would receive a material package rather than cash, to reduce protection concerns. It was feared that the cash assistance to Muslims could be used to pay traffickers to leave Rakhine State through illegal and highly dangerous means[6]. Despite this, the RSG continued favouring cash as a modality, since it allowed Rakhine traders to benefit from Muslims using the cash, which allowed a mutually beneficial economic exchange. This paved the way for a wider acceptance of cash assistance, which risk-adverse actors, including the clusters, were initially less willing to try.

MATERIALS

The cash grants were used to purchase the shelter materials, which included timber posts, concrete blocks, wooden planks, bamboos, iron sheets, nails and labour charges (skilled and unskilled). Most of the materials were sourced by the construction committee from local suppliers who were accredited by the Township GAD. This was vital for the displaced to access the required materials, given their limited freedom of movement, as opposed to a contractor-based approach, where contractors would supply all the materials and labour requirements, and would then be paid through progress billing.

WIDER IMPACTS OF THE PROJECT

For the first time since the 2012 violence, some real progress towards durable shelter solutions was made, while until that point the situation for these displaced families had been totally static. Where the global average for internal displacement stands at around 17 years, thanks to this project **20% of the total IDP population in Myanmar ended their displacement within three years,** either by returning home or finding a new, safer, location to live. The number of camps and camp-like settings also reduced significantly.

More widely, this showed that despite the enormously challenging context, **progress was possible to find solutions for a highly marginalized population.**

[6] See, for instance, the Rakhine boat crisis of 2015, http://on.cfr.org/1HfDFni.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ The project relied on existing local markets for all materials needed, which supported local economies and **allowed the programme to remain low-key**, which was beneficial due to the sensitivity of the context. This was made possible by the local government, who ensured that displaced Muslims had access to purchase materials.

+ The Cluster maintained considerable donor interest and support for this initiative, and was coherent in preventing inappropriate construction in risk areas, after the initial caseload was assisted. While there were some delays, due in part to the rainy season and the transition to being funded by the international community, lack of funds did not inhibit implementation.

+ Critical participation and cooperation of the government at state, district, township and village level with the Shelter Cluster, beneficiaries and crucially potential spoilers of the initiative, which included other ethnic groups who might have resented the assistance to Muslims. The involvement and leadership of the government was crucial, mainly due to their authority, leadership and knowledge of the local situation.

+ Active participation of the community leaders and concerned families in taking responsibility for constructing their own houses, resulting in often swift and high-quality construction, often with far better results than contractor-built houses.

+ Continuity of same lead agency and cluster coordinators for over three years meant highly effective and focused relationships between national and subnational levels.

+ Affordable and quick implementation. The typical individual owner-driven house could be completed in three to four weeks, costing between a half and a third than contractor-built houses in the same time frame.

WEAKNESSES

- Some IDPs could not return to their place of origin and had to be settled in new locations, due to security and safety concerns.

- Landowners for relocation sites were not properly compensated by the government, which in turn may lead to resentment. The RSG has enormous authority and power to enact policies, regardless of the limited funding.

- Lack of adequate and timely water and sanitation components. The RSG-funded programme did not include WASH facilities, in a state where hygiene and sanitation levels were extremely low. Toilets were subsequently provided, and were included in the internationally funded element of the programme.

PROPOSED FAMILY SHELTER MATERIALS PACKAGE FOR IDPS[7]

Materials	Unit	Quantity
Timber posts: 4”x4”, 14ft and 10ft length	pcs	3+6
Girder: 5”x2”, 17ft length	pcs	4
Floor deck beam: 4”x2”, 16ft length	pcs	4
Floor joist: 3”x2”, 17ft length	pcs	16
Floor plank: 6”x1”, 30ft length	pcs	30
Tie Beam and Post Plate: 4”x2”, 16ft and 17ft length	pcs	2+2
Rafter: 4”x2”, 22ft length	set	5
Purlin: 3”x2”, 23ft length	pcs	10
Roof Stud: 3”x2”, 8.5ft length	pcs	16
Eave Board : 6”x1”	rft	90
Roof truss, 3”x2”	set	5
Ridge piece: 5”x2”, 17ft length	pcs	1
Wooden Stairs: Stringer (6”x2”, 4ft), Tread (5”x2”, 3ft)	pcs	2+6
Roofing: 30G C.G.I Sheets, 7’x2’-2”	pcs	51
Ridge Covering: 30G GI plain Sheets, 3’x23’	rft	23
Walling: Single Coarse Bamboo Mat	sqft	536
Walling: Beading, 3”x0.5”	rft	280
Door frames and window frames	pcs	2+6
Mild Steel twisted plates for crossing points of rafters and purlins, of rafters and post plates	pcs	40
Roof nails	kg	6.5
Assorted size common wire nails	kg	19.6
Bolt-nut (5/8”, 5” length) and Tower bolt	pcs	18+20
Handles, Hinges and Hooks	pcs	18+32+20
Ready-made Concrete Footing (1.5’x1.5’x2’) with Mild Steel Plate (2’x0.25”x2”)	pcs	9
Brick pad for stairs landing in front and back	brick	80
Sand	cft	0.2
Stone	cft	0.35
Cement	bag	3

[7] Although this was a cash-based project, the Cluster recommended these materials for a 16’x15’ individual house.

LEARNINGS

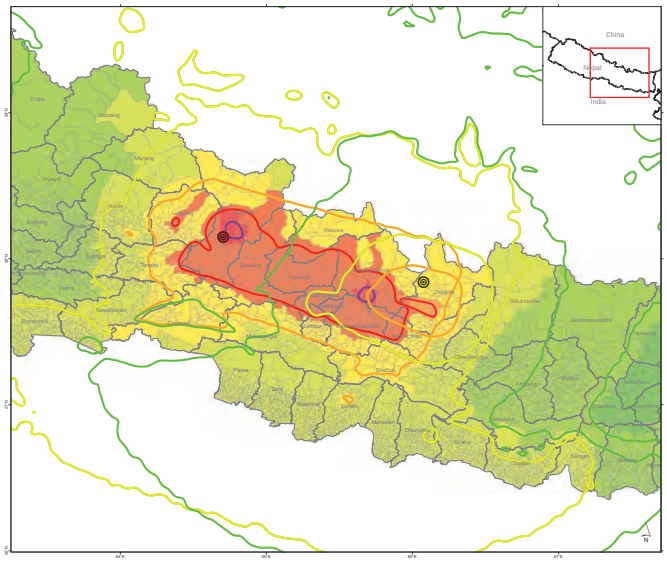
- **The risks associated with the intervention were understood** and progress was made in this regard. In fact, a backlash against the Muslim communities receiving assistance was feared. 1) It could spark further destruction of newly built houses; and 2) the funds could be used for Muslims to pay traffickers and leave the state by boat, instead of building houses.
- **Need for active and continuous advocacy for peaceful co-existence** between the different and potentially conflictual communities.
- **Tools and approaches used in other responses can be adopted** to the benefit of other programmes (see the Build Back Safer messaging taken from the flood response in 2015).
- **Proactive coordination with all the various concerned government departments was critical** to ensure that the project was properly organized and functioned as planned.

OVERVIEW

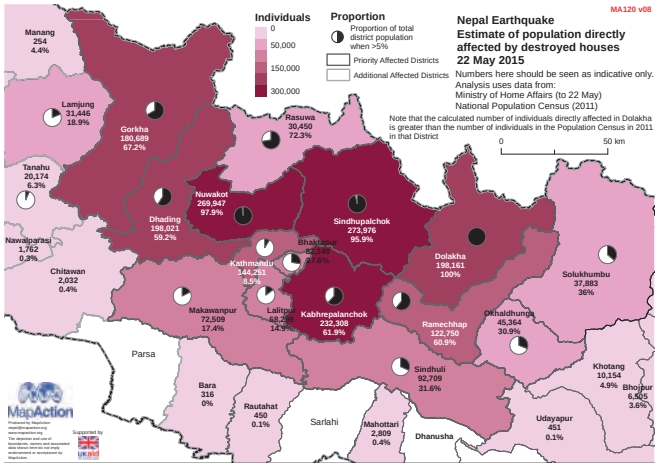
NEPAL 2015 / EARTHQUAKE

CRISIS	**Nepal earthquakes, 25 April and 12 May 2015**
TOTAL HOUSES DAMAGED	**604,930** fully damaged **288,856** destroyed (Source: National Disaster Report 2015, Ministry of Home Affairs).
TOTAL PEOPLE AFFECTED	**886,456** households affected **649,815** households displaced
HOUSEHOLDS SUPPORTED	Emergency phase: **700,000** Self-recovery phase: **600,000** Winterization: **244,158**
RESPONSE OUTPUTS (households)	**736,743** tarpaulins **402,070** blankets **484,765** Cash For Shelters **214,392** CGI Sheets Bundles

People inspect their homes, affected by the earthquake, to salvage materials and look for personal belongings.



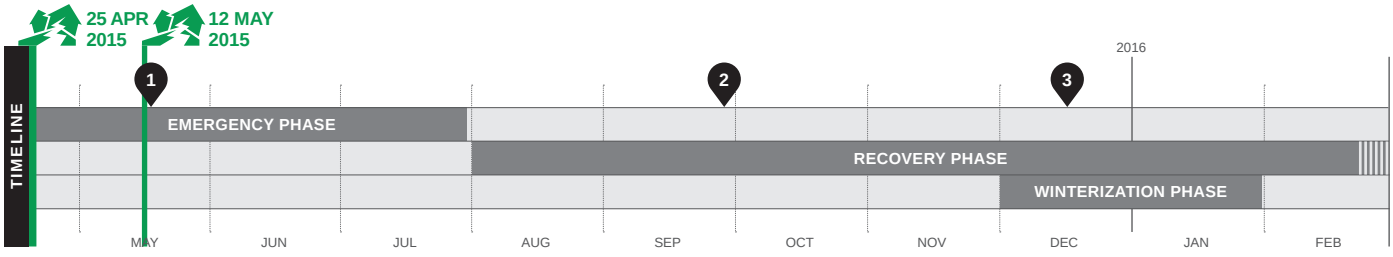
Location and intensity of the two major earthquakes (Source: Mapaction).



Estimate of population directly affected by destroyed houses - 22 May 2015 (Source: Mapaction). Damage varied greatly by location.

SUMMARY OF THE RESPONSE

Two major earthquakes struck Nepal in April and May 2015, affecting around 6 million people. The government called for humanitarian assistance and the international community supported the response in the 14 most-affected districts, through three main phases: emergency relief, supporting self-recovery, and winterization. After the initial phase, characterized mainly by in-kind distributions, cash-based assistance became the preferred modality for this response.



1 Mid-May 2015: **Cluster coordination set up at national level.**

2 Late Sep 2015: **Blockade imposed by the Government of India.**

3 Dec 2015: **Shelter Cluster handover.**

The first step in the response is to assess the damage, and then clear the rubble to allow recovery efforts to start.

SITUATION BEFORE THE DISASTER

Nepal is significantly **at risk to natural disasters**, in particular climate change, earthquakes and flooding[1]. Around 25.2% of its population live below the poverty line[2]. **High poverty levels**, especially in rural areas, have led to significant migration of young men to cities and overseas (44% households have at least one absentee). This has also led to concerns about social and economic vulnerability of women left behind in the remote, hilly and mountain regions of rural Nepal that were most affected by the 2015 earthquakes.

Politically, the country was struggling to meet demands raised by different interest groups in a **peace process after a decade-long armed conflict**. Political transition and attainment of peace has overshadowed economic development and humanitarian issues. Rapid and unplanned urbanization, migration of youth, frequent street demonstrations and strikes, and lack of law and order have added to the humanitarian challenges. The residual effects of the conflict were still to be solved with rapid change in political, social and economic situation of the country, and affected both the earthquake response and recovery operations.

In a country that has experienced humanitarian responses to both natural disaster and conflict, the Government of Nepal has **invested significantly in institutional preparedness and coordination**. At the sectoral level, this meant that shelter agencies had a clear government partner and that there was overall government direction and ownership of the response, especially through the Department of Urban Development and Building Construction.

Prior to the 2015 earthquake, Nepal had worked to **improve housing regulations, settlement and land rights**, as well as promoting safer land usage and building practices through the introduction of land and building acts, codes and professional bodies. Despite this, **the vast majority of houses in rural Nepal were non-engineered and self-built**.

[1] Nepal country profile, http://bit.ly/2kvjzAl.
[2] UNDP's human development index.

SITUATION AFTER THE DISASTER

On 25 April 2015, a 7.8 magnitude earthquake struck Nepal, with its epicentre 81km north-west of the capital Kathmandu. This was followed on 12 May by a 7.3 magnitude earthquake that struck the district of Dolakha, leading to further loss of life and building damage, and increasing the humanitarian needs. A total of 8,857 people died, around 6 million people were directly affected.

Given the enormity of the destruction caused by the earthquakes and the threat of the coming Himalayan winter, a **major national and international response was mobilized,** including the activation of the cluster system. More than 300 organizations registered with the Shelter Cluster and the Nepal Government and private sector organizations. These reacted quickly and at scale, focusing on needs in the 14 priority districts for which the government had requested international assistance, **targeting 712,725 houses** (or 80% of the total damage to housing stock)[3].

The large-scale destruction of housing resulted from the **seismic vulnerability of the predominant housing typology,** which consisted of unreinforced masonry, either low strength stone or brick masonry with mud mortar, without seismic-resilient features. Other common building types, such as cement-mortared masonry and reinforced-concrete frame buildings, were somewhat better off but still suffered significantly, due to deficiencies in material, design, detailing and craftsmanship. The traditional housing typologies were built, upgraded and expanded by the households themselves, with limited knowledge of seismic-safe techniques and standards.

Female members were generally doing the majority of the unskilled tasks involving carrying the water, collecting construction materials, mixing the mortar, digging the soil for the foundations or other housing components, while men or qualified builders actually managed the construction process. According to the government's Post Disaster Needs Assessment,

[3] For more on the Cluster set-up and coordination structure, see case study A.4.

Many people were forced to relocate temporarily due to the destruction caused by the earthquakes. In some cases, entire villages had to build temporary structures near their destroyed or damaged homes.

about 26% of the damaged houses belonged to female-headed households, 41% to Dalits (belonging to the lowest caste) and indigenous communities, and 23% to senior citizens. **These groups were found to be disproportionately affected** by the earthquakes and were identified as the most vulnerable, due to their low socio-economic status and limited capacity to contribute as workforce to the reconstruction process. Also, by being the larger grouping with limited ownership of land and housing, single women, Dalits and indigenous communities were indicated as more likely to face difficulties in accessing and benefiting from housing reconstruction programmes.

In particular, **female-headed households** were found more likely to report feeling unprepared for the forthcoming monsoon season, and less likely to have begun repair or reconstruction of their shelters, although they were often financially better off as they received remittances. In Nepal, the world's second biggest remittance economy, women and elderly are often left alone to look after the children, livestock or crops, while adult men migrate to India or the Middle East to work in construction.

Additionally, **subsistence-based households in rural areas were particularly affected,** as the disaster happened only a few weeks prior to the start of the rice paddy fields planting season.

SHELTER RESPONSE

A. EMERGENCY AND RELIEF SHELTERING

The initial phase aimed to respond to the immediate shelter needs of the population with damaged or destroyed houses, located in the affected locations, in each of the following categories: Hard to Reach, Rural, and Peri-Urban/Urban. Emergency sheltering was seen as a first step to progressively contribute to self-recovery and more durable solutions (appropriate to the needs and context) through the provision of key in-kind shelter items, NFIs and/or cash-transfer programmes. Information, Education and Communication material, training and follow-up technical assistance were integral components of this phase and were essential to ensure effective and safe use of shelter materials[4].

An emphasis in this response was the **use of cash payments**. While relief agencies and private sector responders often initially focussed on in-kind distribution, **the government response involved an initial disbursement of unconditional cash**. This was later taken-up more and more by relief agencies, especially as supplementary winterization assistance. Cash was also used as a substitute for in-kind items when the political dispute between Nepal and India resulted in border closures and agencies were unable to obtain fuel for distributions, or to import relief items from India. **Cash allowed affected families to choose** how best they could start the process of recovery, by buying items they needed most. While some families used these funds to pay medical bills or to write off debts, around 80% of the unconditional emergency cash grants made at the beginning of the response were used to purchase shelter-related items.

In the emergency phase, an estimated 700,000 families received emergency assistance, consisting of **cash and/or tarpaulins and non-food items** – more than 90% of the households in need of assistance in the 14 priority districts.

B. SELF-RECOVERY

The overarching objective of this phase was for agencies to **identify response options that supported self-recovery,** to reduce disruption and ensure smooth transition for affected populations to rebuild[5]. The process for selecting response options had to consider recipient choice and the unique set of contextual circumstances and conditions. The products and assistance provided for temporary shelter needed to support

[4] See case study A.5 as an example of the emergency relief phase of the response.
[5] See case study A.6 as an example of projects that supported affected people's self-recovery.

People salvaged personal belongings from destroyed houses.

Houses were repaired also using the materials provided by humanitarian organizations, such as CGI sheets and timber.

a smooth transition to safe permanent reconstruction. Ideally, assistance should be reusable, re-saleable and transferable, upgradable or extendable. Specific interventions included CGI-sheets and toolkits (or their cash equivalents) and training, such as masonry training and community training around key Build-Back-Safer messages. **In the self-recovery phase, approximately 600,000 families received corrugated iron sheets or the cash** equivalent – again, more than 90% of the households that had been reported as fully damaged.

C. WINTERIZATION

Analysis of the population density above 2,000m, combined with damage data, inducted that there was a "population of concern" of about 200,000 households living above the snow-line in temporary shelter. Consequently, a winterization package – and cash equivalent – was developed, focusing on personal insulation and ensuring a "one warm room" approach, by providing an insulated floor, wind-proofing wall and water-proofing roof[6]. **Approximately 244,158 households living in temporary shelter above 1,500m received winterization assistance**.

CHALLENGES TO THE RESPONSE

Political unrest in southern Nepal broke out in September 2015, following the parliament's decision to pass a new constitution (foreshadowing wide administrative changes and affecting Indian political influence in Kathmandu). This seriously impeded the humanitarian effort. **A resulting blockade** starting in late September 2015 and lasting six months led to a **critical shortage of fuel and relief supplies**, with queues at gas stations reportedly up to 5km long. In addition, the Nepal Parliament's failure to ratify a bill introducing the National Reconstruction Authority meant that **there was no overall agency charged with managing earthquake recovery** programmes. Delays in key policy decisions – especially around housing subsidies – further hindered the response.

There were **significant logistical challenges in reaching remote and mountainous areas,** where access to markets is limited. In these areas, organizations supplied relief items in-kind, like tarpaulins, roofing materials, blankets, clothes and kitchen utensils. However, many switched to emergency cash distributions during the fuel crisis.

In certain high altitude districts like Gorkha, the response was particularly strong. These districts obtained greater attention owing to levels of damage, the numbers of NGOs working there, as well as extraneous reasons, such as the connections with the British Army Gorkha Regiment. However, lower altitude districts and those stuck by the second earthquake received less assistance. Concerns were raised that **the unevenness of the early humanitarian response** set the course for quicker recovery in some districts than in others.

As in all humanitarian responses, statistics are not always solid and while they can paint broad trends, they may be misleading if taken literally. Relatively high overall statistical percentages of households who received assistance masked the fact that **some districts received more assistance than others, while needs in some areas were actually higher** than the numbers initially estimated. Agencies on the ground continued to report humanitarian needs and gaps, even in the districts that had received the highest amounts of aid.

FUTURE DIRECTIONS

While the overall humanitarian response to the Nepal earthquakes of 2015 was an effective one, with very high coverage, there are a number of lessons to be drawn.

Firstly, cash-based assistance became a preferred modality later in the response[7] – especially after the border closures – and it became virtually impossible to import or transport relief items in-kind. While cash was better than nothing, it still came with **significant limitations for those living in remote rural areas,** and there was little overall cash coordination or market analysis done by any of the clusters.

Secondly, Nepal has a vibrant private sector. A mapping exercise conducted by the Shelter Cluster showed that – from a handful of organizations surveyed – the private sector had distributed an additional 20% of shelter-related assistance than that already tracked from more traditional humanitarian agencies. **There is a clear need for the humanitarian sector to engage more closely with the private sector** in Nepal.

Thirdly, pre-existing coordination structures and relationships, developed during the preparedness phase, **were crucial in ensuring good links between humanitarian agencies and the government,** and it will be important to further invest in these connections for the future.

The case studies that follow focus on the coordination structure adopted in this response (A.4) and by showing some of the response modalities adopted by humanitarian organizations in the emergency and transitional phases (A.5 to A.7).

[6] For an example of winterization project, see case study A.7.

[7] See diagram on page viii, in the introduction.

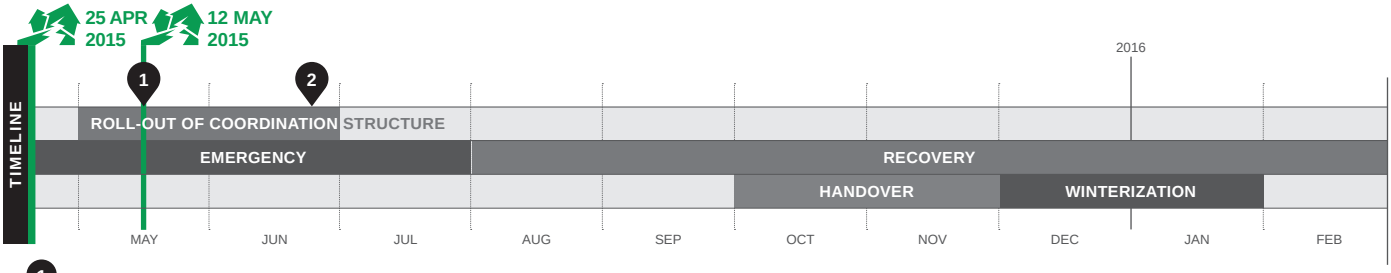
CASE STUDY NEPAL 2015 / EARTHQUAKE / COORDINATION

KEYWORDS: Coordination, Emergency shelter, Housing repair, Cash assistance, NFI distribution, Winterization

CRISIS	**Nepal Earthquakes, 25 April 2015 and 12 May 2015**
TOTAL HOUSES DAMAGED	**604,930** fully damaged **288,856** partially damaged (National Disaster Report 2015).
TOTAL PEOPLE AFFECTED	**886,456** affected families **649,815** displaced Families
PROJECT LOCATIONS	**14 most affected districts:** Bhaktapur, Dolakha, Dhading, Gorkha, Kabhrepalanchok, Kathmandu, Lalitpur, Nuwakot, Rasuwa, Makawanpur, Sindhuli, Sindhupalchok, Okhaldhunga, Ramechhap.
PROJECT OUTPUTS	**Coordination provided at national and subnational level** (14 districts).

PROJECT SUMMARY

The Nepal Shelter Cluster Coordination Team organized a system of district-level coordination focal points from operational, cluster partner agencies. These focal points were able to liaise with local authorities, private sector, and implementing partners on issues unique to that geographic area, while communicating and influencing strategic information deriving from policies developed at the national level.



1 Mid-May 2015: **Cluster coordination set up at national level.**

2 Late Jun 2015: **Subnational coordination set up and operating, with 14 district focal points in place.**


© Joseph Ashmore

The earthquakes caused massive destruction of public buildings and housing.

STRENGTHS

+ Rapid deployment of coordination team (48hr).
+ Meaningful participation of local civil society and crisis-affected people.
+ Localized coordination, close to implementing actors and responsive to local needs.
+ Major impact on the response.

WEAKNESSES

- Patchy subnational coordination and uneven distribution of response agencies across districts.
- Subnational coordination could have been established quicker.
- Coordination gaps and high turnover of both cluster and government staff.
- Lack of familiarity about cluster roles and responsibilities amongst some coordinators.
- Challenges in finding partnerships for local organizations to access resources and funding (especially in urban areas).
- Delay in the response in some districts, due to the government-led blanket approach.
- Proliferation of Technical Working Groups, which were sometimes slow to produce outputs and lasted longer than necessary.

In many cases, due to remote locations (hard to reach and at high altitudes), winterization kits were dispatched by air. However, helicopters were expensive and had limited carrying capacities, adding to the challenges faced by organizations in timely assisting affected populations.

THE ROLE OF THE SHELTER CLUSTER IN NEPAL

See overview A.3 for more on the situation pre and post the 2015 earthquakes, and the shelter response.

The Shelter Cluster is a global coordination platform endorsed by the UN General Assembly that works with governments to manage shelter and housing response following disasters. It had existed before in Nepal, having been convened following the 2008 Koshi Floods in the South of Nepal. Key relationships with the government as well as preparedness activities for managing humanitarian response at the national level had been developed since then.

In response to a request for international assistance by the Government of Nepal, the Shelter Cluster was convened in the immediate aftermath of the first earthquake, in April 2015. Its three core roles were: 1) identification of appropriate technical guidance for emergency and early recovery response in the shelter/housing sector; 2) identification of humanitarian needs, gaps and priority communities or areas for assistance; 3) strategy development to guide and inform an effective response. Over 300 organizations worked together to support the timely and effective delivery of humanitarian shelter assistance, including NGOs, INGOs, Civil Society Organizations, UN Agencies, Government Departments, Private Sector, Donors and Diplomatic Missions.

In the context of a political transition, which preoccupied national government decision-making, the challenging geographical conditions across the Himalayas and the growing importance of engaging local actors, the Shelter Cluster adopted an extensive subnational coordination system, at the district level. This case study focuses on what this meant in practice and some of the successes and challenges of localizing coordination in a major natural disaster.

NATIONAL SHELTER STRATEGY

Following the two earthquakes, the government identified 14 priority districts for response, where 80% of the national damage occurred. For this reason, Cluster partners were encouraged to target shelter efforts within these priority districts, which were coordinated via four hubs.

Given the timing of the earthquakes shortly before the start of the monsoon season, the Cluster advocated for the prioritization of response in hard-to-reach areas, which would likely be cut off due to roads and trails conditions, as well as the increased risk of landslides.

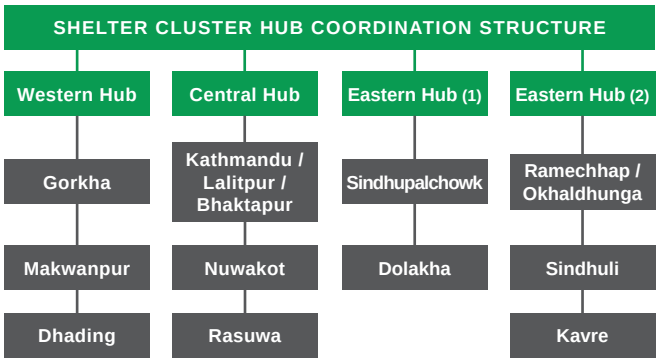
COORDINATION STRUCTURE

The aim of the Nepal Shelter Cluster was to **decentralize the coordination role to the local level,** to ensure that coordination services were more responsive to local needs and local emergency / recovery challenges could be quickly identified and raised at national level. A combination of national NGOs and international agencies took on district coordination roles, with one agency leading each district. These agencies were, in turn, supported by four full-time Hub Coordinators, from a range of international partners with experience in coordinating natural disasters, who oversaw three districts each. This ensured that there was consistent coordination support – focusing on technical standards, needs and gaps, and response prioritization – that immediately addressed local needs. The decentralized coordination system also ensured closer relationships with the implementing arms of the local government, which had a significant role in the response.

District level coordination was also extremely important, owing to multiple layers of government agencies involved in managing the response (the Department of Urban Development and Building Construction, Ministry of Urban Development and the Ministry of Home Affairs were highly influential).

The localization of coordination developed out of emerging practice and lessons learned from past responses (especially the Haiti earthquake, Pakistan floods, South Sudan conflict, and the Philippines Typhoon Haiyan response[1]). In part, the roles of District and Hub Coordinators also arose from the needs to **provide effective coordination across a very wide and geographically challenging area** in the Himalayas.

[1] See A.4 in SP2010, A.22 in SP2010, A.23 in this edition and A.23 in SP2013-2014 respectively.

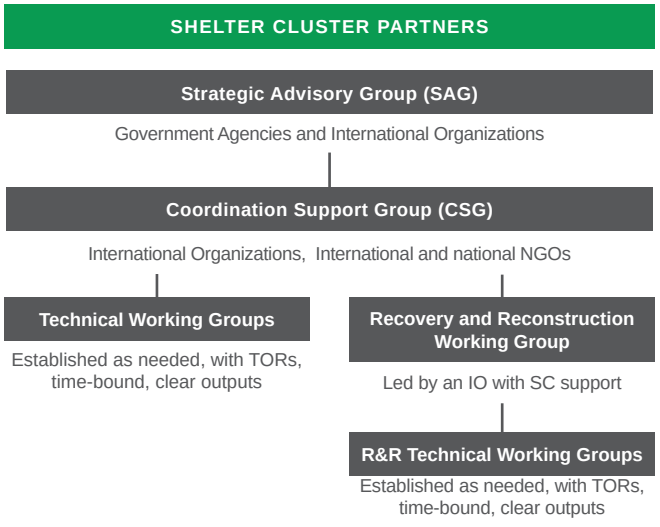


The Shelter Cluster in Nepal had four hubs to coordinate the activities in the 14 affected districts.

A criticism of past responses has been that coordination can be excessively focused at the national level, where politics, relationships and concerns can be a long way from specific local needs[2]. In line with a key change in development and humanitarian thinking, the Cluster sought to **reinforce and promote the role of local actors and civil society organizations** (CSOs) in the management of the shelter response, by allocating key districts coordination roles to them. NGOs and CSOs were formal members, or actively involved in, the Cluster's decision-making structure at district, hub and national level.

At the national level, the government requested a split between the Coordination Support Group (CSG) and the Strategic Advisory Group (SAG). The former had previously met and included representatives from government, donors, UN agencies, NGOs and INGOs. This was intended to be a representative sample of the Shelter Cluster, to provide strategic direction and oversight of the response. In practice, government partners preferred the SAG to consist of the senior Nepali-speaking representatives from key agencies, with whom they had a longer-term relationship. **The decision to have a separate CSG more focused on operations** occurred six weeks into the response, after multiple earlier meetings of the bigger group, and was intended to make discussions and decision-making more streamlined. Meetings of the CSG were conducted in English (although continued to involve NGOs and CSOs) and recommendations were passed up to the SAG for endorsement.

[2] For challenges of this kind, see overview A.39, about the Ecuador 2016 earthquake response.



National Coordination Architecture, showing the membership of decision-making groups.

INVOLVEMENT OF AFFECTED PEOPLE

Response coordinators were closer to crisis-affected populations and each district took on the complexion of the local response community. As most organizations in some districts were local, or "local international", meetings were held in Nepali, encouraging the ownership and participation of local actors. Additionally, in predominantly urban districts in the Kathmandu Valley, IDP representative groups and CSOs were key players in district-level clusters. Urban IDP representative groups also participated in the Cluster's coordination work as formal district coordinators and through membership in the SAG. Crisis-affected people consequently played a direct coordination role at both the local and national levels.

MAJOR COORDINATION ASPECTS

The Cluster at both national and district level focused mainly on the following[3]:

- Development of standard, cluster-wide, packages for emergency response and recovery (both in-kind and their cash equivalents);
- Advocacy around winter preparedness, including mapping and identification of priority intervention areas, and a winterization package;
- Analysis of gender and protection issues relating to shelter in Nepal, including the development of beneficiary selection criteria, to target the most vulnerable individuals and households. While this was officially endorsed at national level, local governments at district level often preferred blanket approaches to distribution. A major role of hub and district coordinators was to reach an agreement with local governments around the implementation of the response strategy, without compromising humanitarian values;
- Fundraising and advocacy through the UN Appeals process, as well as directly with donors and diplomatic missions;
- Inter-sectoral coordination supporting links between shelter, WASH, livelihoods, protection, as well as the cash working group. Logistics was an immensely important component, as a political crisis between Nepal and India resulted in border closures and ongoing fuel shortages. Finding the best use of common logistics assets became increasingly important as the response progressed.
- Establishment, support and funding of the Housing Recovery and Reconstruction Platform (HRRP), to take on the longer-term recovery coordination role.

EXIT AND HANDOVER

Discussions started early on about the appropriate duration of the Shelter Cluster in Nepal. By June 2015, it was agreed by cluster partners, government, SAG and CSG that a separate body would be established to take on coordination and technical guidance needs, focusing on longer-term recovery. In order to support this process, a Recovery Working Group was established (under the Cluster), co-led by the two agencies that would take on the role of longer-term recovery coordination, once the Cluster phased out. The Shelter Cluster was replaced by the HRRP and resources were made available to the two co-lead agencies. The Cluster itself wound down on 31 December 2015, after nine months leading the response, and continued in a much reduced form, focusing on preparedness activities.

[3] More information and several documents are available on the Nepal 2015 Earthquake page of the Shelter Cluster website: http://bit.ly/1GuSykV

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS OF THIS APPROACH

The Nepal Cluster provided a **model for the localization of coordination and set a precedent for participatory and collaborative leadership** among cluster members. When it worked well, **district and hub-level coordinators supported each other and provided an immediate forum** to address needs and gaps, support local government, and provide technical advice to agencies and beneficiary groups in the field. Additionally, more than 20 different organizations took on a formal coordination roles at the local level, meaning that the **strength of the cluster was reinforced through participation and ownership at all levels**. Strong local coordination services also meant that the national level cluster was in a more powerful position to address needs and advocate at a policy-level through **constant information flow and feedback.** While the national level was more responsive to the politics of managing a humanitarian response, **coordination at hub and district levels was able to address specific needs** of implementing partners and work closely with local government and local civil society groups.

This experience **reinforced the importance of coordination**, especially for large emergencies. While many agencies based themselves out of higher-profile districts, others were responsive to Cluster calls to **spread the response more evenly** and donors underpinned the Cluster strategy. This sought to target areas that were under-served and adopted a "winter race" approach of targeting higher altitudes and remote locations that would be vulnerable and inaccessible during the coming winter. Additionally, the Cluster developed **common technical standards** to ensure measurable impact and consistent implementation across the many agencies delivering humanitarian assistance.

The Cluster was able to ensure **key partners** – the government, the Humanitarian Coordinator and major donors – **were provided with a reliable overview of the situation and challenges** and were able to provide resources, influence, policy direction and high-level advocacy, based on this information.

CHALLENGES ENCOUNTERED

The main challenges were around **consistency and availability of coordination staff at the local level**. While there were many devoted and talented coordinators, during the overall lifespan of the cluster there were gaps when positions went unfilled, especially in the first months. Further, district focal points were working mainly on their own organizations programmes, meaning that the **coordination role sometimes took a distant second place in work priorities**. Finally, many coordinators who volunteered were **new to the cluster and so greater support and familiarization was required** from the national cluster.

Initially, coordination was most effective where there were also inter-sectoral platforms, with offices to support such coordination efforts. However, these were only established in two locations and ended by late September 2015.

Ensuring an evenly spread coordination structure **did not necessarily ensure an evenly spread response**. Relief agencies flocked to high-damage, high-profile districts (especially Gorkha and Sindhupalchowk, which had been badly hit during the April earthquake). For much of the response, the media continued to refer to the event as the "Gorkha earthquake". Once settled, relatively few agencies moved operations, despite ongoing advocacy from the cluster that these two districts had been well-served, while significant gaps remained elsewhere. **Almost no agencies worked in the highly urbanised Kathmandu Valley**, despite the finding of the Post Disaster Needs Assessment that 25% of damage was in urban areas. Finally, **while an international emergency was declared for 14 districts, 23 districts were affected in total**.

The Cluster addressed some of the challenges by holding frequent "retreats" where all members of the coordination team were brought together to share experiences, challenges, resources and to train local coordinators. The appointment of full-time, devoted, hub coordinators (each with 3 or 4 districts to support) meant that there was additional support for overworked district coordinators and guidance for those who were new. Donors were encouraged to fund agencies for coordination roles, and embraced the idea in key districts.

LEARNINGS

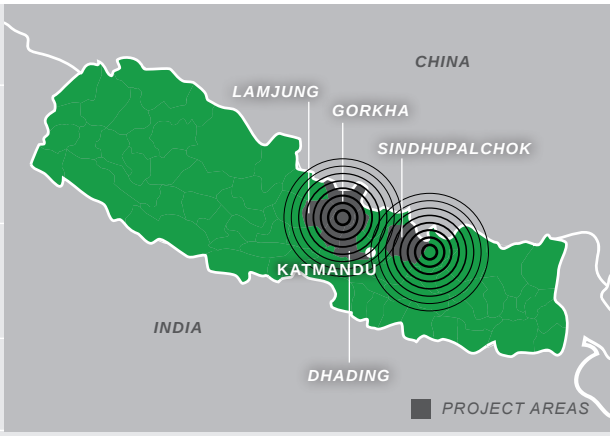
- Reinforced the importance and effectiveness of **inclusive, collaborative cluster leadership** in which agencies have clear opportunities to engage meaningfully in decision-making. **The cluster functions through the legitimacy and influence of establishing consensus**, so when agencies were able to participate and take on significant coordination roles, this became easier. Participation also helped with the identification and adherence to appropriate technical packages of assistance, the development of a common strategy, government endorsement, and donor support.
- The need to **provide support and training on the job for agencies and individuals** new to the role.
- **Engagement of donors is crucial** at both the strategic level, as well as in developing cluster coordination structures. Donor involvement in decision-making meant support for localization and additional resources to make this happen.
- Importance of **increased engagement with local government**. Local coordination ensured a more effective response.
- A major innovation and opportunity was the **participation of crisis-affected people and local civil society organizations** in the coordination role itself. This was primarily an urban phenomenon (Kathmandu Valley). As the response focused on supporting rural recovery, there were **insufficient resources to build on urban participation beyond the immediate emergency period**. Providing a greater platform for participation in this case did not necessarily result in greater access to resources. **Mutually beneficial partnerships with better-resourced organizations should be a priority** for local civil society in future responses.
- At the subnational level, the full cluster set-up was difficult, but partner agencies filled the gap wherever possible and, in some districts, coordinators rotated. As a preparedness effort, it is useful to **identify agencies operating in major districts with a longer-term presence as cluster focal points.** This can be advocated through the government lead agency.

CASE STUDY

NEPAL 2015 / EARTHQUAKE

KEYWORDS: Emergency shelter, Transitional shelter, NFI distribution, Training, Gender mainstreaming, GBV risk mitigation, Disaster Risk Reduction, Community participation

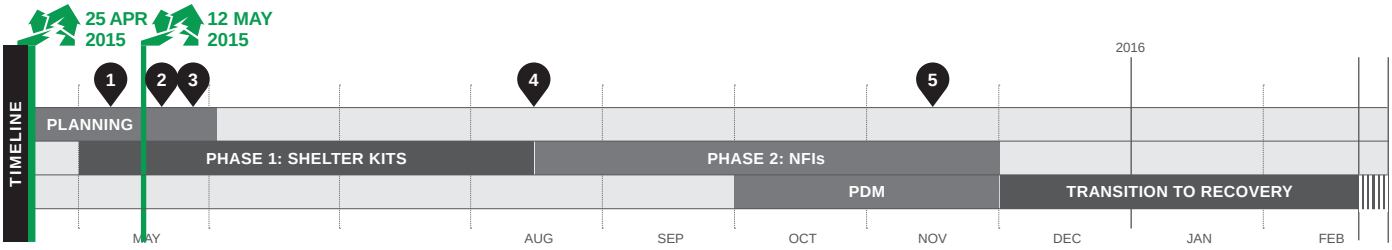
CRISIS	**Nepal Earthquakes, 25 April 2015 and 12 May 2015**
TOTAL HOUSES DAMAGED	**604,930** fully damaged **288,856** partially damaged (National Disaster Report 2015).
TOTAL PEOPLE AFFECTED	**886,456** affected families **649,815** displaced Families.
PROJECT LOCATIONS	**Sindhupalchok, Dhading, Gorkha, Lamjung districts.**



BENEFICIARIES	**20,000** households (100,000 people).
PROJECT OUTPUTS	**Shelter, WASH and Livelihoods support to 20,000 households.**
SHELTER SIZE	**Min. 20m² of covered area** by using the two bundles of 9' CGI sheets as roofing.
SHELTER DENSITY	**Min 3.5m²**.
MATERIALS COST	**USD 150** per household (including labour, in line with Shelter Cluster recommendations).
PROJECT COST	**USD 200**

PROJECT SUMMARY

The project provided emergency shelter supplies to help earthquake-affected households establish temporary shelters, and/or make urgent repairs to their house, with high-quality and durable materials, before the beginning of the monsoon season. The coordination of shelter and WASH relief distributions, and the integration of a gender sensitive approach to the emergency response, enabled a comprehensive and context sensitive delivery of essential household NFIs, integrated to address challenges for women and girls.



1. 8 May 2015: **Rapid Gender Analysis report issued.**
2. 16 May - 3 Jun 2015: **Inter-agency shelter and settlements vulnerability assessment.**
3. 22 May - 10 Jun 2015: **Post Disaster Needs Assessment led by the National Planning Commission.**
4. Aug 2015: **Emergency shelter kit distributions completed.**
5. Nov 2015: **NFI distributions and Post Distribution Monitoring completed.**

STRENGTHS

+ Rapid Gender Analysis, carried out at the onset of the emergency.
+ Local partners effectively mobilized the community and sensitized on GBV mitigation.
+ The shelter package provided choice to the beneficiaries.
+ Linkage between shelter, WASH and gender.
+ Priority lines and transport support at distribution points.
+ Complaints mechanism and community-based approach.

WEAKNESSES

- Delays in the logistics pipelines meant that some areas were reached too late.
- Staffing shortages, due to poor monitoring process combined with extreme weather conditions.
- Low shelter- and disaster-response capacity of local partners.
- Poor coordination with local authorities led to exclusion of vulnerable people who were not recognized as households.

Many constructions affected by the earthquake were masonry buildings. The project provided materials to make urgent repairs to damaged homes, or build temporary shelters.

SITUATION AFTER THE DISASTER

See overview A.3 for more background information.

RAPID GENDER ANALYSIS

A Rapid Gender Analysis was carried out, in the aftermath of the earthquake, to provide an overview of the gender relations in Nepal before the event and how the crisis had affected those dynamics. The background secondary information was integrated with primary data, which was gathered by the field assessment team through key informant interviews and separate focus group discussions. These were led by male and female staff, and helped develop initial recommendations for gender-sensitive responses for all sectors. The team conducted the assessment in communities that were residing in some of the areas where the local partner was established prior to the earthquake, in order to better compare pre- and post-disaster information on gender roles and cultural norms. **The feedback received** by the different community groups **led to significant improvements in terms of safety and appropriateness of project designs,** as well as including protection and gender mainstreaming for the implementation of distribution activities and post distribution monitoring.

Gender considerations:

Due to the extensive labour migration, there was a high percentage of female-headed households in the affected region (25.7%). Additionally, the practice of isolating menstruating or post-partum women for 5-6 days per month is still common in the far- and mid-Western regions of Nepal. This was an additional psychological stress for women and girls, having to also face the impact of the earthquake and the lack of adequate hygiene and sanitary items.

Almost half of the population gets married between the ages of 14-19 and girls leave home to live with in-laws after marriage. In some areas, marriage occurs as early as age 10. Considering the practice of early marriage, shelter programmes had to be aware of the number of child-headed households in the affected communities.

Widows often face exclusion and persecution, as they are blamed for their husband's deaths, ostracized and seen as a burden on their family – particularly in rural areas. With the high death toll caused by the earthquake, their vulnerability had increased.

MAIN PROJECT COMPONENTS

- **Capacity-building,** through training local partner staff on shelter, emergency distributions, gender and gender-based violence (GBV) awareness and referral;
- **Shelter and household NFI distributions,** based on a government-led blanket approach for the first distribution, but prioritizing the most vulnerable groups and then providing them **additional support in the second phase of distributions** (households with a completely destroyed house, female-headed and elderly-headed households, people living with disabilities, socially and economically poor families);
- **Key messaging and community awareness raising** to promote more resilient shelter, GBV risk mitigation and prevention, and protection (including Housing, Land and Property rights).

The rapid gender analysis, conducted at the outset of the emergency, highlighted gender-related norms and inequalities that were considered during project design.

TARGET AREAS AND BENEFICIARY SELECTION

The project targeted four of the most affected districts prioritized by the government. The organization signed agreements with the government to be able to respond to the emergency, and with the District Disaster Response Committee upon agreement of target groups and locations. Through meeting with the appointed disaster coordination officials, the shelter and local partner staff collaborated with the local authorities to obtain the existing beneficiaries lists and prioritize the most affected areas and, among those, the most vulnerable groups and individuals. These lists were then verified through community mobilizers.

PROJECT IMPLEMENTATION

The project was implemented by shelter technical teams and the local partner's technical team and social mobilizers, supported by one logistics officer, one distribution officer and a GBV and protection officer.

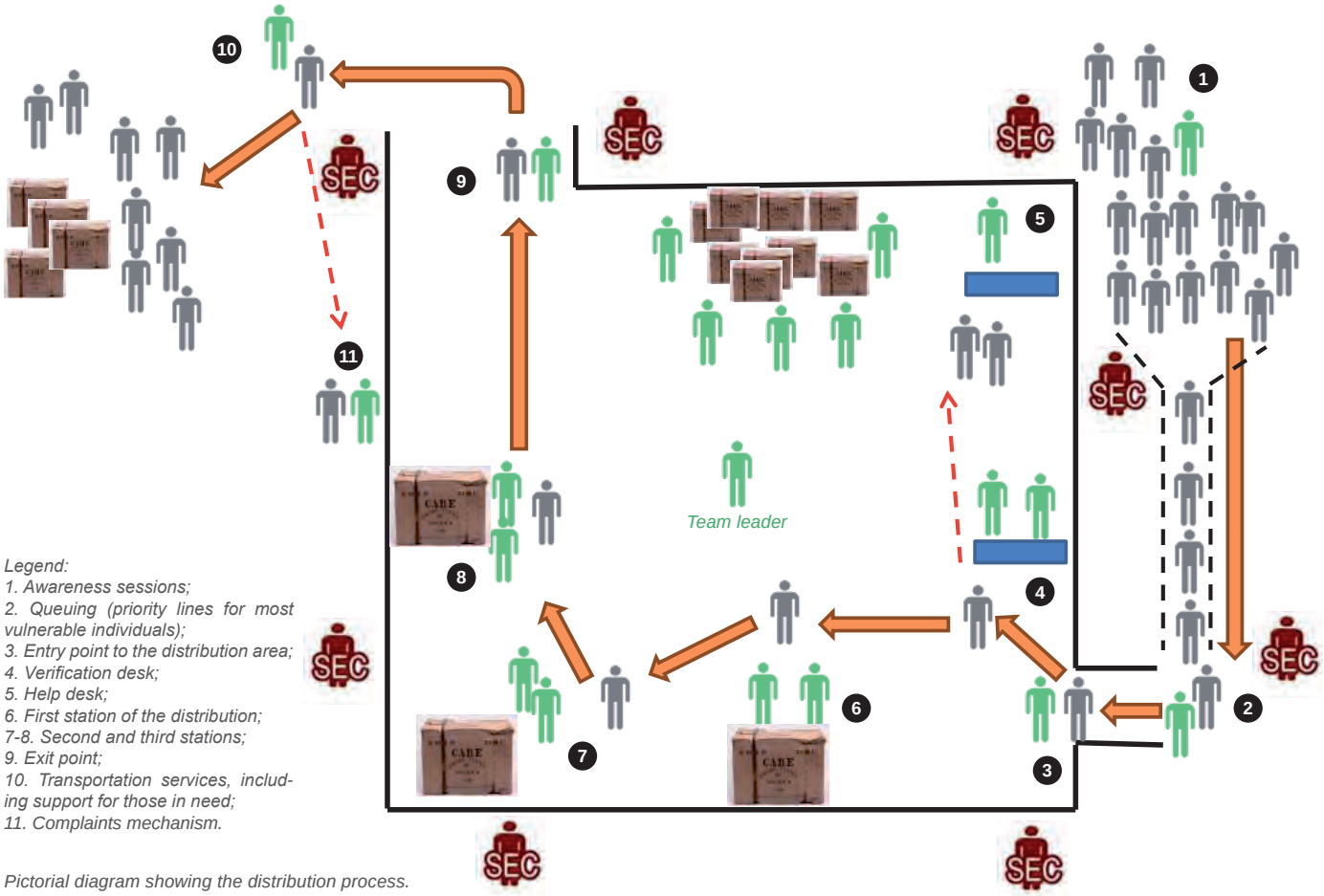
In order to ensure safety and security, accessibility and appropriateness of distribution activities, the field teams coordinated with district authorities, village leaders and community volunteers, to establish the following at each distribution point:

- **Access for vehicles,** for transportation of goods (close to large roads, but not on the road, so as not to interfere with traffic or pedestrians);
- **Site enclosure,** with different designated areas, so as to facilitate crowd control and create space for arriving beneficiaries;
- **Access to basic facilities** (water and sanitation facilities, covered area, first aid, etc.);
- **Proximity to the village** to reduce the travel time for the beneficiaries;
- **Distance from unsafe locations** for women and girls (e.g. hidden and narrow forest paths).

Female staff members in particular mentioned that female-headed households would have little time left after their domestic chores and child care to reach the distribution points, and other groups would not be able to wait for a long time in line. **A priority line was therefore set up** for the elderly, pregnant and lactating women and people with disabilities, to reduce waiting times and avoid any potential tensions or violence while waiting.

People with limited mobility or capacity to carry weights were provided with **extra support to carry the items home** from the distribution point. This was done either by providing wheel barrows to be shared among groups of households, by employing paid porters, or through help from village volunteers.

Distribution sites were set up in such a way to **maximize crowd control**, for example by organizing distributions at different time intervals, to avoid long waiting times; or by controlling the flow of people through different steps of the process.



Legend:
1. Awareness sessions;
2. Queuing (priority lines for most vulnerable individuals);
3. Entry point to the distribution area;
4. Verification desk;
5. Help desk;
6. First station of the distribution;
7-8. Second and third stations;
9. Exit point;
10. Transportation services, including support for those in need;
11. Complaints mechanism.

Pictorial diagram showing the distribution process.

After the rapid gender analysis, the project consulted the communities, engaged women in construction activities, and aimed to meet specific gender needs in both distributions and construction (here, on a building site in Barpak).

COMMUNITY ENGAGEMENT

Affected people were engaged throughout the programme. The information gathered from rapid needs assessments and the "gender in brief" report[1] enabled the inclusion of the most culturally appropriate items in the relief kits (NFIs and dignity kits in particular). **The community leaders were consulted** to verify the lists of beneficiaries received for each village from the government authorities, and any cases of beneficiaries being left out were identified and addressed (e.g. split households, extended households, numerous families, etc.). **This included a number of single women or female-headed households,** who were not recognized as separate from the former husband's family and were therefore cut out from the assistance.

Pre-distribution sessions were held, to register beneficiaries and provide orientation on the materials to be distributed and their appropriate use, as well as to assess security and accessibility issues for the distribution site and its surroundings. Due to the large-scale landslides occurring as a consequence of the heavy monsoon rains, major transport routes were affected, making it often impossible to reach the affected villages. In those cases, the beneficiary households were consulted in focus group discussions, directly through the volunteers working with the local partner organization and living in the villages. The results were then relayed back to the sub-office.

Complaints mechanisms were put in place, including a hotline, complaints boxes, and an assistance desk, during and after distributions, to allow beneficiaries to voice their concerns individually and confidentially. **Post-distribution monitoring** was also carried out, through door-to-door surveys and gender-segregated group discussions.

MAIN CHALLENGES

The geography of the affected areas and the imminent rainy season posed a complex challenge to the project. Due to the remoteness of most of the affected areas and the unpredictability of weather conditions, the emergency team focused on identifying the most suitable locations and times for the distributions, according to beneficiaries' availability, in relation to livelihood practices and especially for women and girls; assessing transportation needs and accessibility routes; and whether it was relevant to set up a forward warehouse (in the higher areas) or storage in the affected villages.

National and local agreements on the contents and targeting of shelter emergency distributions also caused problems. For example, lower-quality CGI sheets were easier for people to transport, as they could be rolled, although it meant that they would not meet the standards set by the Shelter Cluster at national level. **Transport challenges** were especially relevant to women and girls, who were often sent to the distribution points to collect the relief items, which were heavy and cumbersome. The size of separate distribution packages were thus organized to be easier to transport, and female staff (trained in gender in emergencies) were present at all distributions.

The Nepali communities and local authorities were concerned that all distributions should be blanket coverage – in contradiction to the approach of many INGOs to support the most vulnerable. Humanitarian agencies agreed that first distributions would follow an equitable approach, while secondary distributions would focus on alleviating the risks for the most vulnerable, through a more targeted and equality-driven approach. Despite this blanket approach **however, existing social norms concerning women, caste, and age based inequalities still made certain groups invisible or excluded** from the recovery and reconstruction activities. There was evidence that single women (unmarried, separated or widowed) were not recognized by the village committees as eligible to receive the Earthquake Victim Card, and therefore were excluded from relief cash grants and items distributions. This created tensions between extended households and, to some extent, exposed women to GBV from male members of the extended family. The organization mediated with the district authorities for the integration of the women who had been overlooked, so that they could receive the relief items.

WIDER IMPACTS OF THE PROJECT

The organization developed a **construction training component and awareness raising sessions** for both women and men, in an effort to promote gender equality and women's empowerment. This was integrated into the longer-term recovery strategy, so as to enable the largest number of female-headed households to be involved in building and construction supervision activities, during the owner-driven reconstruction process initiated by the government.

[1] Available at http://bit.ly/2iftT0c.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ The Rapid Gender Analysis – carried out at the onset of the emergency – helped understanding gender relations and traditional practices that make women and girls subjects of discrimination. This was used to take account **of gender sensitive considerations and include a GBV mitigation strategy** in relief distributions.

+ The local NGO partners effectively **mobilized information volunteers in each village,** for better community mobilization and **GBV mitigation, prevention and sensitization**, as well as providing support in implementation and monitoring of relief distributions in remote locations. Gender and GBV trainings were delivered to the organization's technical staff, the local partner staff and the community volunteers.

+ The standard shelter package provided a choice for households to rebuild according to their needs and capacities, and did not impose a single shelter design or option. Most of the households combined salvaged and new materials to build larger or multiple shelters.

+ WASH and shelter distributions were coordinated, enabling more efficient monitoring and community mobilization activities for the local partner. **The linkage between shelter, WASH and gender interventions** enabled the distribution of combined emergency kits, comprising both shelter-related NFIs and hygiene/dignity kits, including items particularly needed by women and girls.

+ The most vulnerable groups had a priority line and a "safe passage" at distributions, and those with limited mobility, or feeling more vulnerable for carrying valuable items, were assisted to do so.

+ The complaints mechanisms (suggestion boxes and a complaints mobile number to receive calls and texts) and the **community-based approach** helped address inequalities in the assistance, by allowing beneficiaries to individually voice concerns and provide feedback directly to field teams.

WEAKNESSES

- The switch from tarpaulin to CGI distributions caused **delays in the logistics pipelines**, due to limited local supplies and increased taxes on importation. As a result, **some areas were reached too late** to meet the immediate shelter needs. This led to a large number of households to build their emergency shelter with salvaged materials, and then use the additional shelter materials for secondary purposes (e.g. cattle sheds, food/grain storages).

- The construction monitoring process was not as robust as it could have been, due to the remoteness of the assisted areas, contributing to shelter staffing shortage at any given time, as staff was so dispersed. Due to the monsoon season and subsequent landslides and road blockages, **technical staff were unable to visit project areas** as often as planned, to assess whether shelter materials were used properly.

- The local partners had a very good knowledge of the communities, the culture and the needs of the population, but most of them **had low capacity in terms of shelter programming** and little or no experience of major disaster responses. Shelter training and capacity-building at the beginning of the project would have been beneficial.

- Poor coordination with village leaders and district authorities to identify gaps and duplication in the provision of assistance. Despite best efforts, **some vulnerable people were excluded** from distributions.

Materials in the Shelter kit	Qty	Cost (USD)
Corrugated Galvanized Iron (CGI) sheets, bundle of 9 sheets	2	118
Shelter toolkit 1 x Handsaw, for timber, 550mm, wooden handle 0.5kg roofing nails, galvanized with rubber washer, umbrella type 1 x Shovel, round point with Y handle 1 x Hoe, with long handle, large type 1 x Machete, wooden handle 1 x Shears, straight, for metal sheet, semi-hard, 250mm	1	24
Shelter fixing kit 1 pair of gloves, 1x 25m aluminium wire 0,5 kg timber nails, 75mm 0,5 kg timber nails, 40mm 1x Tie Wire, galvanized, diam. 1.5mm, 25m, roll 1 x Rope, polypropylene, black, 12mm diam., twisted, bundle 30m	1	8
Materials in the NFI kit		
Kitchen set	1	38
Mattress (synthetic chatai) size 4x6 feet	2	4
Woollen Blanket, woven, 65% wool, 1.5x2.25m, 2kg	5	8

LEARNINGS

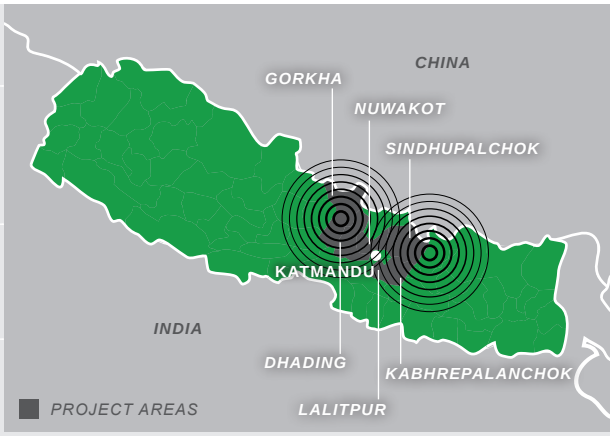
- **The Rapid Gender Analysis could have been more regularly updated** and supplemented with information from field assessments, focus group discussions and key informant interviews, to better capture the rapidly changing context.
- **A stronger collaboration with the local authorities on beneficiary cross check and prioritization** of vulnerable groups would have ensured a more efficient registration and distribution process for the most vulnerable cases, in particular **to avoid minority groups (certain castes, single women and the elderly) being side lined**. This was taken into account and addressed during the following recovery and reconstruction process.
- Information on the **specific shelter needs and preferences of women and girls,** in terms of safety and privacy, should have been incorporated into the recommendations of the rapid gender analysis. This would have better informed the emergency shelter distributions and key messaging, including tips on safe space arrangements (e.g. partitioning, lighting) for acceptable privacy, safety and security of all household members.
- **Community consultations during needs assessment are key to receive primary information on the specific needs** of the affected households, and make sure that all groups (including marginalized individuals, women and girls) have the possibility to raise their concerns and preferences over the design of shelters.

CASE STUDY

NEPAL 2015 / EARTHQUAKE

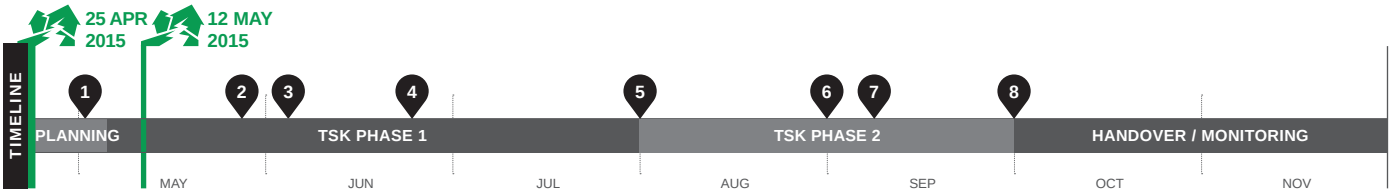
KEYWORDS: Transitional shelter, Distribution, Community participation, Coordination, Training, Disaster Risk Reduction

CRISIS	**Nepal Earthquakes, 25 April 2015 and 12 May 2015**
TOTAL HOUSES DAMAGED	**604,930** fully damaged **288,856** partially damaged (National Disaster Report 2015).
TOTAL PEOPLE AFFECTED	**886,456** affected families **649,815** displaced families
PROJECT LOCATIONS	**Sindhupalchok, Gorkha, Dhading, Lalitpur, Nuwakot, Kabhrepalanchok districts.**
BENEFICIARIES	**5,065** households, including 350 people with disabilities, 1,000 single female-headed households and 100 single elderly individuals.
PROJECT OUTPUTS	**5,065 Transitional Shelter Kits** distributed.
SHELTER SIZE	**16.7m²** (according to sample design).
SHELTER DENSITY	**3.4m² per person** (based on average household size of 4.88, from 2011 census).
MATERIALS COST	**Approx. USD 200** per household (NPR 21,484), including labour, and transport.
PROJECT COST	**USD 250** per household (estimated).
OUTCOME INDICATOR	93% of households used the kits to build temporary shelters within the first month of distribution.



PROJECT SUMMARY

The project targeted more than 5,000 families – whose houses had been damaged or destroyed – with the distribution of transitional shelter kits to make basic repairs, or build a temporary shelter. Training was provided to demonstrate the design of a suitable shelter that could be constructed with the supplied materials. In so doing, the project aimed at facilitating the early start of people's self-recovery.



1. 2 May 2015: **Rapid assessment completed.**
2. 26 - 31 May 2015: **First distribution of Transitional Shelter Kits for 228 families in Kavrepalanchok district.**
3. 1 - 8 Jun 2015: **Transitional Shelter Kit distribution in Kavrepalanchok district completed (606 families).**
4. 15 - 30 Jun 2015: **Distribution of Transitional Shelter Kits to 617 families in Sindhupalchowk district**
5. 31 Jul 2015: **Procurement of 3,000 additional kits completed.**
6. 31 Aug 2015: **Distribution of Transitional Shelter Kits to 2,207 families in Lalitpur and Dhading districts completed.**
7. 1-15 Sep 2015: **Distribution of Transitional Shelter Kits to 1,407 families in Gorkha, Sindhupalchowk, and Nuwakot districts completed.**
8. 30 Sep 2015: **Transitional Shelter Kit intervention completed and final monitoring and reporting started.**

STRENGTHS

+ High community participation.
+ Rapid project implementation and at scale.
+ The coordination with local government and like-minded organizations leveraged resources.
+ Production and distribution of instruction manuals on various options for temporary shelters.

WEAKNESSES

- The earthquake directly affected the organizations' local staff.
- Lack of clearly defined internal procurement procedures.
- Medium-term disaster response staff shortages.
- The assistance provided focused too heavily on a set design.

SITUATION AFTER THE DISASTER

See overview A.3 for more information on the background and the national shelter response.

After the earthquake, many families were sleeping in open areas without adequate cover, suffering cold night-time conditions and rain. The monsoon season (mid-June to early September) further exacerbated the existing shelter situation for thousands of families whose homes were damaged or destroyed. The monsoon arrived a few weeks after the second earthquake and people had to rely on emergency shelters, built with salvaged materials, plastics and tarpaulins, to withstand the heavy rains. Apart from shelter, people also needed a place to store their materials, crops, agricultural products and cattle. The need for early recovery solutions – that could protect families and assets – was high.

ASSESSMENTS AND PRE-DISTRIBUTION PLANNING

The organization deployed its experienced disaster response personnel to Nepal within 48 hours of the disaster, to support the Nepal office in resuming office functions, as well as initiating disaster response activities. **Rapid assessments were conducted** in collaboration with the Shelter Cluster and governmental agencies (at national and local levels), to determine the appropriate shelter interventions and identify areas most in need of support.

For the distribution of the Transitional Shelter Kits, the project targeted six of Nepal's most severely affected districts. The beneficiary selection process focused on **both a blanket approach for entire communities** devastated by the earthquake (85% households affected), **as well as targeting of specific vulnerabilities,** using the following criteria: disability, single female-headed families, those who suffered casualties during the earthquake and low-income families. Kits were also distributed through the Nepal Blind Association and the National Handicapped Association, in various earthquake affected districts.

Beneficiary selection was completed in consultation with local government officials, and lists were verified by community leaders and local partners on the ground. Staff conducted field visits, direct observations and interviews to avoid duplication.

Simultaneously, the organization did internal planning and preparations for budgeting, procurement, warehousing, transportation, other logistics preparedness and detailed distribution planning. **In the early stages of the response, regional and global experts were brought in** to guide the technical specifications of the kit. Several similarities emerged with the response to the Pakistan earthquake in 2005, prompting to adopt a similar shelter design. The Pakistani response was similar in context, with the mountainous area, supply chain challenges, and frigid winter temperatures. The design was adjusted to incorporate locally available materials.

DISTRIBUTION PHASE

The organization mobilized five staff (one international and four nationals) and eight trained volunteers, to distribute the kits, as well as to provide orientation and training to the community, on how to use these items to prepare temporary shelters using a Build Back Safer approach, **suggesting to use a recommended semi-circular design or the beneficiary's own preferred one.** Based on need, other staff was chosen to support functions such as procurement, warehousing, transportation, communications and post-distribution monitoring.

Some people used the materials provided to build temporary shelters according to the organization's design.

Volunteers from local communities were actively involved in beneficiary registration, distribution and transportation of the materials at the household level, assisting families who could not transport the materials. **The project was implemented with local partners,** enabling a higher number of vulnerable families to be served, in a shorter period.

EXISTING PARTNERSHIPS AND COMMUNITY PARTICIPATION

The relationships developed in almost two decades operating in the country were a fundamental strength in mobilizing resources after the disaster. For example, **pre-established women's groups** supported distributions, whilst engineering students (engaged before the disaster) became key informants to develop culturally appropriate shelter solutions.

Community participation was encouraged throughout the project cycle, with beneficiaries being active in identification, selection and verification processes, communication channels related to distribution information, crowd management during distributions, trainings on shelter set-up, transport of the kits from distribution sites, as well as post-distribution monitoring and feedback. More than 1,000 community volunteers were mobilized, significantly supporting an increase in social ties and motivation for self-recovery.

POST-DISTRIBUTION MONITORING

An independent team (seven trained M&E staff and volunteers) **was deployed to conduct Post-Distribution Monitoring** (PDM), to determine how the distributed shelter materials were used, their relevance and effectiveness. Within weeks of the first distributions, the PDM team carried out field visits to eight different distribution areas and interviewed more than 329 households using a mobile app.

The results showed that **93% of households used the materials for constructing temporary shelters, within the first month of the distribution**. Among them, **63% followed their own design**, normally including the use of salvaged materials, whilst 30% used the design suggested by the organization. For non-displaced populations, transitional shelters provided a basic starter home, to be upgraded, expanded to permanent shelters or replaced, over time and as resources allowed. Finally, only 7% did not construct any shelters within a few weeks, as they had other key priorities, including food, livelihoods and agriculture, as the project started during the harvesting season (June-July). In addition, some female-headed households were waiting for additional help from their relatives and local volunteers, in order to construct the shelter.

Although a set design was provided by the organization, many people adopted their own designs, using the materials provided with the kits, along with salvaged materials, to meet their own specific needs.

The PDM team also set up a **beneficiary communication and feedback mechanism**, and the organization established a **quality-assurance monitoring system**, to support real-time adjustments of the materials being procured. This process was managed by senior disaster-response staff and logistics personnel, through random inspections. An additional level of oversight was obtained through field visits and community meetings, which were facilitated by senior staff. The organization likewise supported the **monitoring of all local partners** involved in the distribution.

MATERIALS SUPPLY AND LOGISTICS

All materials were procured nationally, following competitive bidding processes. The first lots of items were delivered within the stipulated timeframe, allowing the distribution to start within the fourth week after the disaster. **This local procurement was efficient, contributed to the local economy and kept the costs low**, while adhering to quality criteria as per Cluster specifications. However, the procurement of the second lot of CGI sheets took longer than expected, as the demand increased drastically two months after the disaster. Considering the distribution plan, **the logistics and procurement staff decided to temporarily warehouse all the kits at central locations** in Kathmandu, then dispatch them to distributions points in targeted districts, following recommendations by the distribution team. The staging and distribution points were decided in consultation with representatives of affected communities and local authorities, who carried out **logistical surveys of targeted distribution points**. However, there were not enough suppliers that could provide the required specifications and stocks. **Consultations were carried out** with likeminded organizations and experienced team members from the regional office, regarding market surveys and different procurement processes.

TECHNICAL ASSISTANCE AND DRR

The organization provided two main types of technical support. Firstly, by **disseminating Disaster Risk Reduction and Build Back Safer key messages** during pre-distribution orientations. Secondly, by providing **direct technical construction support**. Local engineers were trained on how to construct the temporary shelter units according to the design, and took on a training role during the installation of the kits. This methodology included building a demonstration unit prior to distribution. The beneficiaries were also informed about the different design options that could be utilized, and a low-literacy instructional guide was distributed during the demonstration.

The communities were also encouraged to listen to government's radio and other public service announcements, that broadcasted the 10 key messages developed by the Shelter Cluster.

MAIN CHALLENGES ENCOUNTERED

GEOGRAPHIC AND WEATHER CHALLENGES

During the monsoon season, several landslides occurred due to the cracks made by the earthquakes. Further, floods in the seasonal and perennial rivers, due to the heavy rains, made roads impassable. In view of this, the organization mobilized highly trained and committed staff to the distribution sites and extra precautionary measures were taken for safety and logistics within each local context. The teams stayed in the remote villages for the duration of the distributions.

LACK OF INFRASTRUCTURE

In certain distribution sites, damaged electricity and mobile networks created challenges in communication. As such, the team had to carry additional equipment and communication tools, including power banks for charging mobile phones. The organization also coordinated with local authorities and partners, to ensure emergency communications.

During implementation, there were protests and strikes due to disagreements on the newly issued constitution. This hampered distribution planning, as in certain areas there were road blockages. The organization had to proactively coordinate with all stakeholders, including government and communities, to overcome this challenge.

CONTINUOUS AFTERSHOCKS

Strong aftershocks were felt for a long period, even during the distributions. In view of this, all volunteers and staff were oriented on safety and personal preparedness measures.

WIDER IMPACTS OF THE PROJECT

Apart from providing an immediate repair, the temporary shelters also became a **stepping-stone for families to transition to permanent housing solutions**. The types of housing construction that were hardest hit by the earthquakes – those constructed out of mud, stone and timber – were also those where salvaged materials could be used, in conjunction with the Transitional Shelter Kits, to rebuild.

Additionally, the design adopted in this response, adjusted from the experience in Pakistan, proved to be extremely effective in Nepal. **Through coordination, this solution eventually inspired a standard supported by the Cluster** and adopted by numerous other organizations.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

Temporary shelters, built with the materials provided, bridged the gap during reconstruction of more permanent houses (here, in Kavrepalanchok district).

STRENGTHS

+ High community participation. More than 1,000 community volunteers were mobilized for the distribution of the kits. Partner organizations, local youth clubs, social mobilizers and community leaders partook in the distributions.

+ Project implemented rapidly and at scale, particularly for the first batch of kits, which were distributed in less than three months after the first earthquake.

+ Coordination with local government and like-minded organizations leveraged resources, avoiding duplications and strengthening networks, therefore creating opportunities for longer-term recovery efforts.

+ Produced and distributed 5,000 instruction manuals on various options for temporary shelters to affected communities. Furthermore, families were provided with technical assistance for temporary shelters, through orientations on various construction techniques and safe reuse of materials.

Materials	Units	Quantity
CGI sheets 0.35mm thick, 12ft long	pcs	10
Steel reinforcing rod (re-bar) 12mm diameter, 24ft long	pcs	4
Steel pipe, 15mm diameter, 20ft long	pcs	8
Galvanized iron wire, 16 gauge	kg	1.5
Roofing nails, Umbrella type	kg	1.5
Nails, large (75mm) and medium (40mm), galvanized	kg	1.5
Tin Snips	pcs	1
Pliers	pcs	1

The level of community participation in the project was very high.

WEAKNESSES

- The earthquake directly affected the organizations' local staff, who could not resume functions quickly. Customized disaster response trainings (specifically on shelter interventions in emergencies) should have been provided to key staff and volunteers involved in shelter response activities.

- Lack of clearly defined, internal, procurement procedures caused a delay in the start-up phase of the project. Internally, different organizational stakeholders had varying degrees of understanding of what processes needed to be in place, prior to procuring relief materials. This breakdown in communication resulted in materials being procured too slowly, as non-emergency processes were being utilized.

- Shortage in medium-term disaster response staff. The organization had an experienced disaster-response team in the region, which deployed immediately after the earthquake to set up a response framework and mobilize the national team. However, **longer-term field positions took months to be filled**. This was due to slow HR processes and waiting for longer-term funding to be secured. This delay caused initially deployed staff to become burned out, and delayed the scale-up of programming.

- The assistance provided focused too heavily on a set design. After about two months, people had recovered to a certain level with whatever resources were available, and they were capable to build contextually better shelters than the semi-circular ones promoted by the organization. Regardless, the same kit continued to be distributed and the same design recommended, rather than broader advice and support to build safe structures of different kinds. This would have been more appropriate, given that M&E findings showed that the majority of the families built the shelters with their own designs.

LEARNINGS

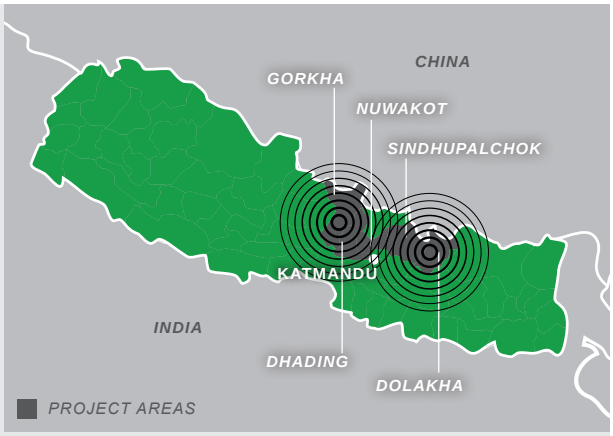
- **Programmes should be designed according to social, cultural, religious, infrastructural and geographical factors of the affected areas.** The shelter design and materials distributed in the emergency phase should enable the affected population to construct durable shelters, using other local/salvaged materials.
- **The situation changes very quickly during the disaster response period,** hence the team needs to be **flexible and proactive**, making necessary adjustments to the programme accordingly. Flexibility can be integrated by improving damage and needs assessments, incorporating secondary information and joint shelter assessment reports.
- **Feedback mechanisms reported an interest in cash-for-work activities,** as a way to increase community participation and ownership.
- **Blanket targeting of most-affected areas was easier in certain communities,** though more prioritization exercises were needed in partially affected areas.
- **It is very important to manage communities' expectations, so as not to create aid dependency,** but rather building on each community's own strengths and resources. In some instances, the communities demanded more materials than they required. Community-led, transparent, beneficiary selection, verification and control mechanisms can manage this.

CASE STUDY

NEPAL 2015-2016 / EARTHQUAKE

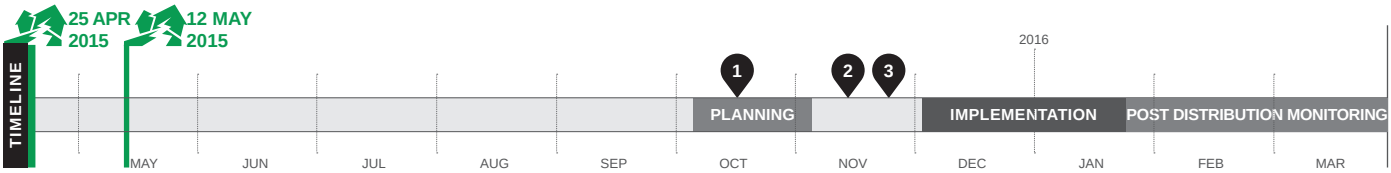
KEYWORDS: Winterization, Cash/Vouchers, NFI distribution, Shelter upgrades, Protection

CRISIS	**Nepal Earthquakes, 25 April 2015 and 12 May 2015**
TOTAL HOUSES DAMAGED	**604,930** fully damaged. **288,856** partially damaged.
TOTAL PEOPLE AFFECTED	**886,456** affected families. **649,815** displaced families.
PROJECT LOCATIONS	**Sindhupalchok, Gorkha, Dhading, Nuwakot and Dolakha districts.**
BENEFICIARIES	**15,480** households. Females 51%; Children 45% - Adults 35% - Elderly 20%.
PROJECT OUTPUTS (households)	**7,801 vouchers for winterization** **2,510 cash grants for shelter enhancements** **5,169 winterization kits**
MATERIALS COST	**USD 126** (for e-vouchers and cash grants). **USD 130** (for winterization kits).
PROJECT COST	**USD 160** per household (including staffing costs, air lifting and road transportation).



PROJECT SUMMARY

The project provided winterization support in high and remote areas to 15,480 vulnerable and marginalized households in five of the worst affected districts, through the delivery of e-vouchers for winter and shelter enhancement, cash grants for shelter enhancement and winterization kits (clothing and shelter materials).



1 Oct 2015: **Market assessments carried out in seven affected areas.**

2 Nov 2015: **Focus group discussions with children and women. Community meeting and consultations with local government to identify key needs.**

3 26 Nov 2015: **End of state of emergency.**

STRENGTHS

+ Effectiveness of the e-voucher modality, accountability, and learning.
+ Cash grants and e-vouchers enabled families to prioritize their winterization needs.
+ Effective targeting of the most marginalized communities.
+ Community participation ensured 90% of items were as requested by beneficiaries.
+ Promotion of local economy and support to recovery.
+ Coordination with local authorities and use of pre-existing systems.

WEAKNESSES

- Issues in controlling prices in local markets.
- Lack of proper communication on the modality led to hesitation amongst local traders.
- Poor accessibility of distribution points.
- Lack of transportation support for some beneficiaries.
- Delays in the winterization kits response.
- Non-replicability of the e-voucher system developed.
- Online monitoring system had issues due to poor connectivity.

CONTEXT

See overview A.3 for more information on the country background and overall shelter response.

Geographic and climatic conditions in Nepal vary greatly, and temperatures can reach -10°C in high mountainous regions, with heavy snowfall from December to February. Remote communities in these areas are several walking days from district capitals, and are accessible only by porters or via air transport.

In general, communities living in high altitude regions are well prepared for harsh winters and use a number of coping mechanisms to withstand the cold temperatures. These include insulating their homes (e.g. thick wall construction, insulating their roofs using locally sourced materials), space heating (e.g. coal burning stoves, electric and gas heaters) and wearing warm clothing (traditional woven Yak and Wool clothing).

In terms of housing supply, owner-built is the predominant mode, which makes quality control critical. Furthermore, a significant proportion of this stock is inadequate to withstand extreme weather conditions.

SITUATION AFTER THE EARTHQUAKE

Following the powerful aftershocks, large-scale landslides occurred in multiple locations, three months after the initial earthquake, and many families were still living in temporary shelters or in their damaged homes. These temporary solutions were not sufficient to protect against the severe monsoon rains, nor did they provide adequate protection from the approaching winter months. Dalits and other minority groups were particularly affected in comparison with other communities.

LOCATIONS AND BENEFICIARY SELECTION

The five selected districts were some of the worst affected by the earthquakes, with almost all homes having been destroyed. A preliminary assessment for the selection of Village Development Committees (VDC)[1] and beneficiaries for winterization support was conducted in coordination with relevant government authorities and the Shelter Cluster. The communities for winterization and shelter enhancement support were selected based on the altitude (above 1,500m) and other vulnerability criteria (women, children, elderly households, persons with disabilities, number of children, status of the house, marginalized groups and income). Continuous coordination with VDC officials, local stakeholders and partner NGOs was crucial during this data collection process. Pre-selected beneficiaries were then verified with the vulnerability criteria and a scoring tool. The final lists were approved by the local government and committees involved.

Due to accessibility challenges, the initial implementation method was modified to a dual approach of cash/e-vouchers and distribution of kits.

MARKET ASSESSMENTS AND CONSULTATIONS

Market assessments were conducted in the nearest markets to working VDCs by the logistics team, programme team and casual labour that was trained to support the activity. The parameters for the assessment were the following:

- **Accessibility**: walking distance from the nearest functioning market (3 days walk was considered inaccessible) and the altitude of the affected community (more than 3,000m above sea level was deemed inaccessible).
- **Capacity**: market ability to supply and meet the demand.
- **Willingness** of the suppliers and beneficiaries to engage in the process.
- **Quality of materials**: assessed by Shelter Cluster technical team, with the support from the organization and the affected people as well. Government guidelines and organizational quality check benchmarks were used.

A meeting was called for all interested merchants and the process, provision, rule and regulation of the e-voucher system was explained, allowing all interested merchants to fill in a form. Further on, **community sessions were held** in order to identify the most pressing item needs for redeeming the e-vouchers. **A survey of the market and prices was carried out** and the selected merchants were verified in their capacity of stocking and restocking, and in their legal registration with the chamber of commerce.

After this process, five out of the seven markets were included in the process and framework agreements were established with 28 merchants in Gorkha and 50 in Sindhupalchok.

[1] VDCs are the lower administrative parts of the Ministry of Federal Affairs and Local Development.

Many areas were accessible only by several days of walking.

SELECTION OF DELIVERY MODALITIES

The key factors influencing the selection of modalities were **geographical location, availability of materials in markets and recognition that affected communities have pre-existing knowledge and strategies** to withstand cold winter temperatures. If markets were functioning, the use of cash grants and e-vouchers were deemed more appropriate than in-kind assistance, as they contributed to strengthen existing supply chains and therefore stimulate recovery. Cash grants and vouchers also gave beneficiaries the flexibility to choose according to their own diverse needs and priorities what best supported their household[2]. Cash grants were used in communities with access to banking facilities and where it was less likely that this modality would be misused. On the other hand, when communities were in hard-to-reach areas (above 3,000m), or markets were not functioning or accessible, the distribution of a winterization kit was used instead.

E-VOUCHER SYSTEM

The e-voucher system was implemented using a simple smart phone application, partnering with the service provider Hello Paisa for technical support and the Civil Bank for transactions.

As part of the framework agreements with traders, specifications were set and agreed (as per national and international standards). Traders were then provided with a list of potential items that beneficiaries were likely to purchase, enabling them to stock accordingly.

A PIN card with ten secret digits was provided to beneficiaries who showed their identity card and Earthquake Victim Card number. Beneficiaries were provided with training and information on the markets where they would be able to redeem the vouchers. The selected merchants were also trained on the use of the App and how to upload their purchases through a simple mobile network. **As this was a new system in Nepal, beneficiaries and merchants were supported during the process by staff members**, who were present in the markets daily and accessible through a telephone hotline.

The e-voucher system allowed the beneficiaries to choose from a list of 36 pre-agreed items divided in three categories:

- **House and personal insulation materials**: CGI sheets, ridge sheet, tarpaulins, insulating p-foam, mattress, mat, woollen or fleece blankets, etc.
- **Winter clothes**: sweater, jacket, woollen caps, socks, shoes, underwear, and children and women's clothes.
- **Kitchen utensils**: vacuum flask, cooker, heating stoves, cooking stoves, etc.

[2] See opinion piece B.2 in *Shelter Projects 2011-2012*, on cash-based assistance in shelter programmes.

The winterization kits were distributed in high-altitude communities, where lack of markets and/or poor accessibility made the use of cash not viable.

CASH GRANTS

An operations booklet was produced in conjunction with beneficiaries and distributed with the cash grants, outlining clear do's and don'ts regarding the use of the grant. Post distribution monitoring indicated that 96% of the households who received cash grants spent it on shelter enhancement.

IN-KIND WINTERIZATION KITS

Comprehensive consultations were carried out with children, women, the wider community and local authorities to establish needs and items required. Once the information was compiled across the different communities, in collaboration with the Shelter Cluster and the government, a standardized kit was agreed upon, meeting Sphere standards and IFRC guidelines. Kits were then compiled and distributed by vehicle, on foot or by helicopter. The items included a combination of thermal clothing, blankets and heating items.

PROJECT MONITORING

The organization established three types of monitoring:

- **On the spot, real time**: monitoring committees were formed consisting of community representatives, technical staff from the organization and representatives of the local authority. Their main role was to monitor transaction-related activities, solve issues and complaints and to check the quality and price of materials.
- **Online system**: all the transactions were monitored online through a portal which was specifically designed by the local service provider. The system monitored the number of transactions, quantity of materials and other procurement parameters. Whenever an item was purchased, an SMS was sent to the portal, and these were then compared with manual records, allowing for greater transparency and the ability to analyse purchasing patterns. Once a transaction was verified, a payment authorization was made 36 hours later. This ensured quality of materials at competitive prices. Those suppliers who failed to adhere to these standards were suspended from the framework agreements for a period of time.
- **Post Distribution Monitoring**: PDM was conducted one month after distribution, in coordination with local administration, Federation of Nepalese Chamber of Commerce and Industries and representatives of the suppliers.

Variations in the use of e-vouchers between districts were identified. For example, 72% of the targeted beneficiaries in the district of Gorkha prioritized construction materials, whereas 58% of those in Sindhupalchok prioritized personal insulation items/clothes. This indicated that the e-voucher system allowed better targeting of needs.

COMMUNITY PARTICIPATION

During the winterization programme, communities were encouraged to participate in the planning of activities through briefing meetings that explained the programme and mapping exercise, group discussions and participatory prioritization exercises that were used to identify community and household priorities for winter and shelter enhancement items. Over 90% of the items identified by the community were included in the winterization kits, were used for the markets assessments and formed part of the items on the voucher programme.

COORDINATION

Coordination at the national and district level was important for beneficiary selection and avoiding duplication. The values of the e-vouchers, cash grants and winterization kit were jointly calculated to meet minimum requirements and agreed with the Shelter Cluster, Nepalese Government and VDCs.

MAIN CHALLENGES

A key challenge was due to the **impact of fuel shortages**. In September 2015, the Government of India imposed a blockade that lasted until February 2016, leading to substantial shortages of fuel, construction materials and other essential supplies across Nepal. The subsequent fuel crisis caused delays in the distribution and affected the households who received e-vouchers, as few local suppliers had the ability to restock items.

Inflation also affected the procurement of winterization kits and the cost of the items that could be redeemed with the vouchers. However, allowing beneficiaries to choose and bargain for the their selected items helped mitigate this challenge.

Initially, the majority of beneficiaries who received e-vouchers were **unable to purchase items at competitive rates**, despite agreements with traders. To overcome this issue jointly, a monitoring committee was formed consisting of representatives from the Federation of Nepalese Chamber of Commerce and Industries, local administration, a community representative and the organization's technical staff.

In terms of **accessibility challenges**, the organization coordinated with government authorities to access fuel supplies for the humanitarian response and received support from the Logistic Cluster for the transportation of kits. Helicopters were used to distribute kits to particularly hard-to-reach communities before the winter started, as well as assisting the communities served with e-vouchers to transport redeemed materials from the suppliers. This was not needed for those who received cash grants, as their communities had functioning markets.

WIDER IMPACTS OF THE PROJECT

- The project reached about 19% of the vulnerable families in need of winterization support nationally. **After this intervention, the government also distributed cash** amounts of USD 100 to the remaining families.
- The distribution of e-vouchers and cash grants (equivalent to USD 1.7 million) was injected directly into local markets, **supporting the local economy**. This cash flow helped local suppliers to rebuild and expand their business and ultimately supported recovery of the worst hit areas.
- **The e-voucher system is now established as a modality for future support**. It was the first time this system was used in the area, so the Organization trained both beneficiaries and traders, providing a level of preparedness in case of future emergencies.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Effectiveness. Using the e-voucher modality allowed for effective and efficient data collection and analysis, hence for greater accountability, transparency and learning. The ability to capture purchase patterns, prices and suppliers' details enabled the organization to have a better understanding of beneficiaries' priorities and the local context.

+ Empowerment. Cash grants and e-vouchers enabled families to prioritize their winterization needs.

+ Targeting marginalized communities. Effective vulnerability targeting ensured 80% of beneficiaries reached were from Dalits and other marginalized communities, including 550 households with persons with disabilities.

+ Participation. Consulting vulnerable community members for improved programme design and delivery: effective community participation ensured 90% of winterization items distributed were as requested by beneficiaries (excluding compulsory children's clothing).

+ Supporting recovery. Promotion of local economy, by injecting USD 1.7 million into the local market. This cash flow helped local suppliers to expand their business and ultimately supported recovery and reconstruction phase.

+ Cooperation with local authorities to ensure full support for the project modalities

+ Utilizing pre-existing mechanisms and systems, such as Earthquake Victim Cards issued by the government as a source of verification for beneficiaries' eligibility.

Winterization kit components	Quantity
Gloves, size small	2
Thermal coat (suit and trousers), child: 1 small + 1 medium	2
Wool cap, 2 child + 1 adult	3
Scarf for children	2
Thermal socks, 2 small child + 2 medium child	4
Leggings, 1 small child + 1 medium child + 1 adult	3
Solar sweater, free size for adult	2
Scarf, for adults	1
Thermal socks (pair), for adults	4
Fleece blanket (high quality)	2
Woolen blanket (army)	2
Fleece jacket	1
Thermos for warm beverages (1 litre)	1
Logoed carrying bag	1

In remote regions, winterization kits were provided to the most vulnerable households. As there were no other means of transportation, the kits were airlifted and dispatched.

WEAKNESSES

- Issues in market monitoring. Initially, most beneficiaries were unable to redeem the e-vouchers at competitive rates. Good coordination with relevant stakeholders later solved this.

- Poor dissemination of information on the modality. Local traders were initially hesitant to participate in the e-voucher programming as the modality was new. This could have been mitigated with better dissemination of information about cash-transfer programming and processes, e.g. through local media.

- Accessibility of distribution points. Post-Distribution Monitoring indicated that beneficiaries had to walk for approx. 2.5 hours to reach the distribution point. Walking distances could have been reduced if distribution points were at different VDCs/wards (or at a central location chosen with the communities). This could have been achieved through better community engagement at planning and implementation stages.

- Support for transportation. 52% of households reported that they did not receive any support for transport of materials. Transport support for beneficiaries was considered, but due to the costs only about half of the total beneficiaries were prioritized for this assistance.

- Delays in the response. As part of the PDM feedback, beneficiaries suggested they would have benefited more from the winterization kit if it had been distributed approx. 45 days earlier.

- Non-replicability. The phone application developed and used was not open source and therefore could not be utilized by others. However, the app developer has since partnered with other organizations to develop an e-voucher app to deliver humanitarian assistance in Nepal.

- Online monitoring mechanism. Poor internet connections at times made it difficult to monitor transactions.

LEARNINGS

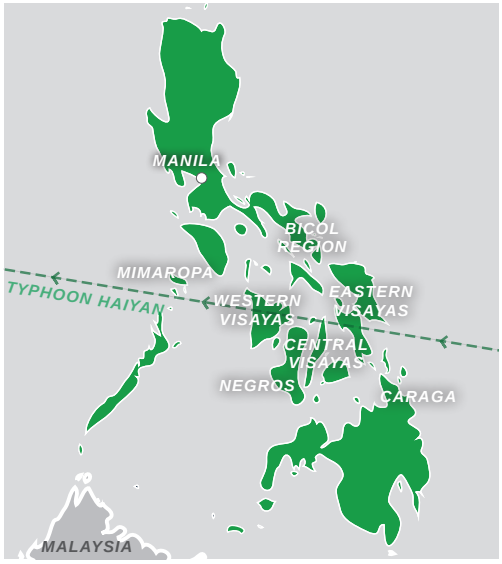
- **Beneficiaries choice.** Beneficiaries are active responders after a disaster and are best placed to decide what their household needs are. Therefore, cash-based assistance should be considered over in-kind were appropriate.
- **Efficiency and support to recovery of cash vs in-kind**. Cash grants and vouchers can be faster to distribute (especially at scale) and more cost-efficient (eliminating logistical and import costs) than in-kind. In addition, this modality can stimulate local markets, helping the recovery of trade and local economy, therefore benefitting more than the direct recipients.
- **Conditional cash**. Conditional cash allows for quality and technical restrictions to be placed, for effective shelter and NFI outcomes. However robust monitoring tools are needed to ensure that the value for money and the quality in construction and shelter-NFI outputs are achieved.
- **Distribution committees.** The formation of distribution committees is a vital method for effective mobilization, security and solving distribution-related issues at community level.

OVERVIEW

PHILIPPINES 2013 / TYPHOON HAIYAN

CRISIS	**Typhoon Haiyan (Yolanda), 8 November 2013.**
TOTAL HOUSES DAMAGED[1]	**1,012,790 houses (518,878 partially damaged and 493,912 totally destroyed).**
TOTAL PEOPLE AFFECTED[2]	**3,424,593 households** (16,078,181 persons).
RESPONSE OUTPUTS[3] National Housing Authority (NHA)	**29,661** houses as of October 2016 (206,488 planned).
Department of Social Welfare and Development (DSWD)	**966,341** cash transfers and material vouchers distributed.
Humanitarian organizations	**551,993** households assisted with emergency shelter. **497,479** NFI packages distributed. **344,853** households assisted with incremental solutions.

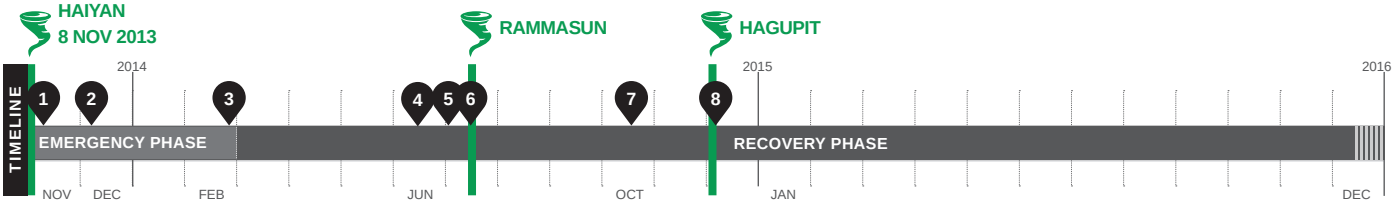
[1] Philippines Shelter Cluster, late 2014, Analysis of Shelter Recovery, http://bit.ly/2kZgHvA.
[2] National Disaster Risk Reduction and Management Council (NDRRMC), Update 17 April 2014, http://bit.ly/1B6MMl1.
[3] Sources for these figures are the documents used as references throughout this overview.



Map highlighting the path of typhoon Haiyan and the most affected regions, including: Eastern Visayas: Biliran, Leyte, Southern Leyte, Samar, Northern Samar, Eastern Samar. Central Visayas: Cebu, Bohol. Negros: Negros Occidental, Negros Oriental. Western Visayas: Aklan, Capiz, Iloilo, Antique, Guimaras. Mimaropa: Palawan, Occidental Mindoro, Oriental Mindoro, Romblon. Bicol Region: Masbate, Sorsogon. Caraga: Dinagar Islands, Surigao del Norte, Camiguin.

SUMMARY OF THE RESPONSE

Super Typhoon Haiyan (Yolanda) made landfall on 8 November 2013 and was one of the largest typhoons ever recorded. While the main government response consisted of subsidies for housing reconstruction or repair, humanitarian agencies used a range of approaches which included cash- or voucher-based interventions, but also training and construction of transitional, core or permanent shelters. Particular issues in this response included the lack of support for secure tenure, the lifespan of transitional shelter solutions and the poor quality control, particularly in regards to coco-lumber.

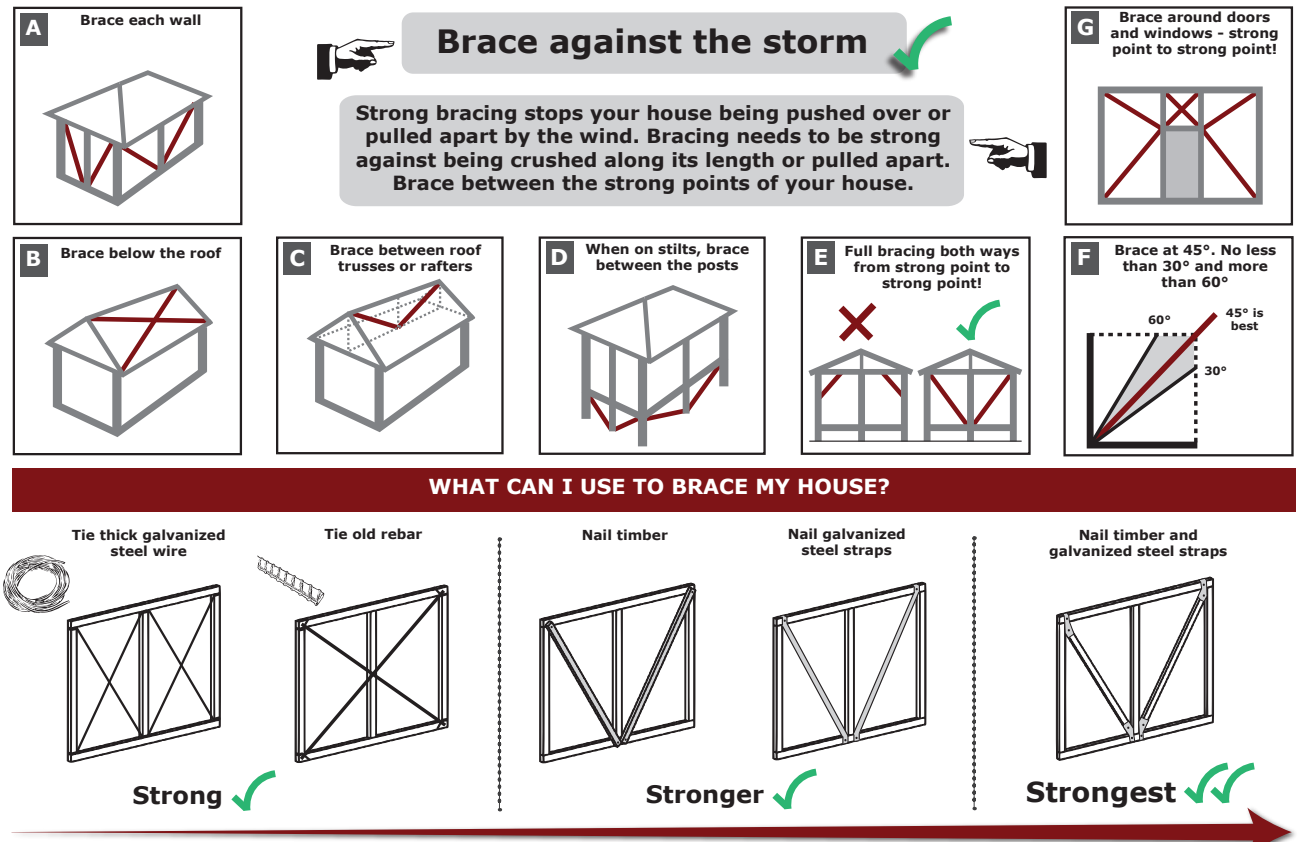


1. 11 Nov 2013: **State of Calamity is declared by the Government of the Philippines. Shelter Cluster is activated.**
2. 6 Dec 2013: **Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR) is established.**
3. Feb 2014: **Emergency shelter assistance reaches 500,000 households.**
4. Jun 2014: **Recovery Shelter Guidelines are distributed by the Shelter Cluster.**
5. 4 Jul 2014: **The government declares the humanitarian phase over and coordination is officially transferred to OPARR clusters.**
6. 15 Jul 2014: **Typhoon Rammasun (Glenda) hits the Eastern Visayas.**
7. Oct 2014: **Shelter Cluster is de-activated with nearly 350,000 households receiving incremental shelter assistance from humanitarian organizations.**
8. 3 Dec 2014: **Typhoon Hagupit (Ruby) hits the Visayas.**

For projects in response to Typhoon Haiyan, see:

In Shelter Projects 2013-2014:
A.24, on shelter kits and WASH.
A.25, on cash and vouchers for materials, plus training.

In this edition:
A.9, a multiphase shelter and WASH programme.
A.10, on core shelters with latrines.
A.11, on a large scale programme on recovery shelter kits with reused coco-lumber.
A.12, on emergency and recovery shelter kits within a larger community-driven programme.
A.13, on a multisectoral, community-led resilience programme using shelter as an entry point.



Poster of one of the 8 Key Messages developed for the Haiyan response (Source: Philippines Shelter Cluster and DSWD).

INTRODUCTION

Overview A.23 in *Shelter Projects 2013-2014* should be referred to for information on pre-disaster conditions, the effects of the typhoon, and emergency and early recovery shelter interventions. This edition of *Shelter Projects* includes projects undertaken in response to Typhoon Haiyan, though the majority were completed or were due to be completed shortly, and describe recovery or multiphase shelter interventions.

RECOVERY INTERVENTIONS

In consultation with shelter partners, the Shelter Cluster began work in early 2014 to categorize shelter interventions being implemented by organizations and provide guidance on best practices. The subsequent Recovery Shelter Guidelines[4] were widely distributed by the Cluster beginning in June 2014 and included guidance on supporting households using a range of shelter approaches, from temporary to permanent solutions. There was a particular focus on the inclusion of build back safer outreach and training.

Many humanitarian agencies focused on the following:

- **Repair and retrofit** for damaged but not destroyed houses or retrofit for houses built post-disaster but that did not incorporate build back safer measures.
- **Permanent houses** that include at least one bedroom, one living space, and dedicated WASH and cooking areas.
- **Core shelters** that provide households with the core of their future house; one safe room or the frame of a permanent house.
- **Temporary or transitional shelter**.
- **Training** of carpenters and other skilled construction workers.
- **Build Back Safer awareness** workshops.
- Provision of **technical assistance.**

[4] Philippines Shelter Cluster (PSC), 06 Nov 2014, http://bit.ly/2lAG9ux.

The 8 build back safer key messages[5], a comprehensive set of shelter technical guidelines, was used extensively throughout the recovery phase. This Disaster Risk Reduction Information Education and Communication (IEC) material represented one of the most important outputs for other responses (including in Nepal and Ecuador[6]), and has so far been reused in a number of other responses in the Philippines and the broader Asia-Pacific region[7].

[5] PSC, 8 Build Back Safer Key Messages, http://bit.ly/2lANU3F.
[6] See A.3 and A.39, overviews of the Nepal and Ecuador earthquakes responses respectively.
[7] See A.14 and A.15, overviews of the responses to Cyclone Pam in Vanuatu and Cyclone Winston in Fiji.

Many people rapidly started to build shelters after Typhoon Haiyan (here in Tacloban, December 2013).

Multiple programme options were encouraged in response to Typhoon Haiyan, one of them being the construction of transitional or core shelters.

CLUSTER TARGETS AND RESPONSE

From the onset of the response, the Cluster strategy was to provide 1) emergency shelter assistance, 2) support for shelter self-recovery, 3) transitional/core shelters, and 4) support to families living in collective centres.

In its strategic framework for transition[8], the Cluster committed to provide:

- "Immediate life-saving **emergency shelter** in the form of tarpaulins/plastic sheets (and fixings) and tents with supporting NFI solutions" to 300,000 households; and
- "Support for household **self-recovery** through incremental housing solutions using consultative, participatory processes" to 500,000 households.

The target for emergency shelter was met – even exceeded – within the first 100 days of the response, with an estimated 500,000 households receiving emergency shelter assistance and 470,000 households receiving NFI packages. As of August 2014, cluster partners expected to support 344,853 households with repair/retrofit and new construction shelter assistance[9], reaching only 70% of the initial target of incremental housing solutions. While there is limited data on the final number of households assisted by humanitarian organizations after the deactivation of the Cluster at the end of 2014, documentation from organizations suggest that final projections were met within the first three years of recovery.

GOVERNMENT RESPONSE

Government assistance under the "Emergency Shelter Assistance" (ESA) programme consisted of PHP 30,000 (or approx. USD 600) for totally damaged houses and PHP 10,000 (or approx. USD 200) for partially damaged houses. As of August 2016, disbursement to 966,341 households had been undertaken[10] and was still ongoing. Although disbursement of the government funds did not start until late 2014[11], more than a year after Typhoon Haiyan made landfall, this was still earlier than many recovery shelter programmes commenced and there were reports of beneficiaries withdrawing from agency programmes so that they remained eligible for the ESA funds.

[8] PSC, 03 March 2014, Strategic Operational Framework for Transition Post-Yolanda, http://bit.ly/2l6JFfy.
[9] PSC, late 2014, Analysis of Shelter Recovery.
[10] DSWD, 04 Nov 2016, Where did the Emergency Shelter Assistance (ESA) funds for "Yolanda" survivors go?, http://bit.ly/2lAPS3T.
[11] DSWD, 24 November 2014, Guidelines for the Implementation of the Emergency Shelter Assistance (ESA) Project [...], Memorandum Circular 24.

In some projects, materials were treated to improve the durability of the shelters.

SITUATION IN 2016

The National Housing Authority (NHA) and Social Housing Finance Corporation (SHFC) continued to undertake significant resettlement construction projects in the regions affected by Haiyan. NHA alone had plans to construct 205,128 houses on relocation sites, however as of November 2016 only 29,661 of these were completed[12]. Construction was slowed down due to regulatory issues, longer-than-expected planning, and difficulty acquiring land. Further, the lack of access to services, such as electricity and water, hindered households' transition to newly completed housing units.

The Philippines continues to suffer significant typhoon damage, although no typhoons have occurred which have caused damage to the scale of Typhoon Haiyan in recent years. Since the Haiyan response, the government of the Philippines has been wary to call for international assistance, fearing that there would be a large influx of international agencies. This has hampered responses to small typhoons since then. At the close of 2016, there was a low likelihood of international assistance being called for, even in significant disasters, and this will severely hamper agencies' ability to respond to disasters. Nevertheless, there were signs that the government has streamlined its ability to more rapidly deliver Emergency Shelter Assistance cash support.

[12] National Economic and Development Authority, 2016, "Yolanda Updates October 2016", http://bit.ly/2knL7pm.

LESSONS LEARNED FROM THE HAIYAN RESPONSE

SUPPORTING SELF-RECOVERY

In comparison to other disasters, **recovery following Haiyan progressed rapidly** and many households started to take initial steps toward self-recovery within days. A number of organizations used **cash transfers, shelter repair kits, and technical training to address this rapid pace of recovery,** however many others remained focused on the delivery of products (e.g. transitional or core shelters). The use of cash for work and cash transfer schemes were particularly effective in supporting the rapid pace of reconstruction being pushed by households. These cash-based approaches injected funds into local economies that stimulated recovery, supporting early livelihood restoration. These programmatic efforts highlighted the ability of shelter partners to support the evolving response landscape, as their effectiveness relied on shifting from reactive response to anticipating needs.

HOUSING, LAND AND PROPERTY ISSUES

Despite these successes, there was largely a **missed opportunity for organizations to support Housing, Land, and Property (HLP) rights.** Extensive guidelines on HLP were developed by the Shelter Cluster during the first six months[13], but few organizations incorporated this guidance into programming. Most notable was the principle that shelter response should be free from discrimination and ensure rights of the most vulnerable. Many organizations required secure land tenure from households as a requisite for shelter assistance, resulting in the exclusion of marginalized and vulnerable populations within communities. **The role of HLP, in particular land security of informal settlers, should be more fully integrated into future shelter interventions** in the Philippines and other contexts where land has been identified as an ongoing challenge.

TRANSITIONAL SHELTERS' LIFESPAN

As with past disasters in the Philippines, temporary or transitional shelters were built by a number of agencies. However, **it is not believed that many of the households will progress to more permanent housing within the design life of these shelters** (typically less than five years). Although not officially reported, it is known that some "transitional" shelters in the Philippines have failed in subsequent typhoons and many were still in use a number of years after they were built. This has particularly been the case for transitional shelters which used coconut lumber for the main structural elements of the shelter, such as corner posts.

COCO-LUMBER AND QUALITY CONTROL

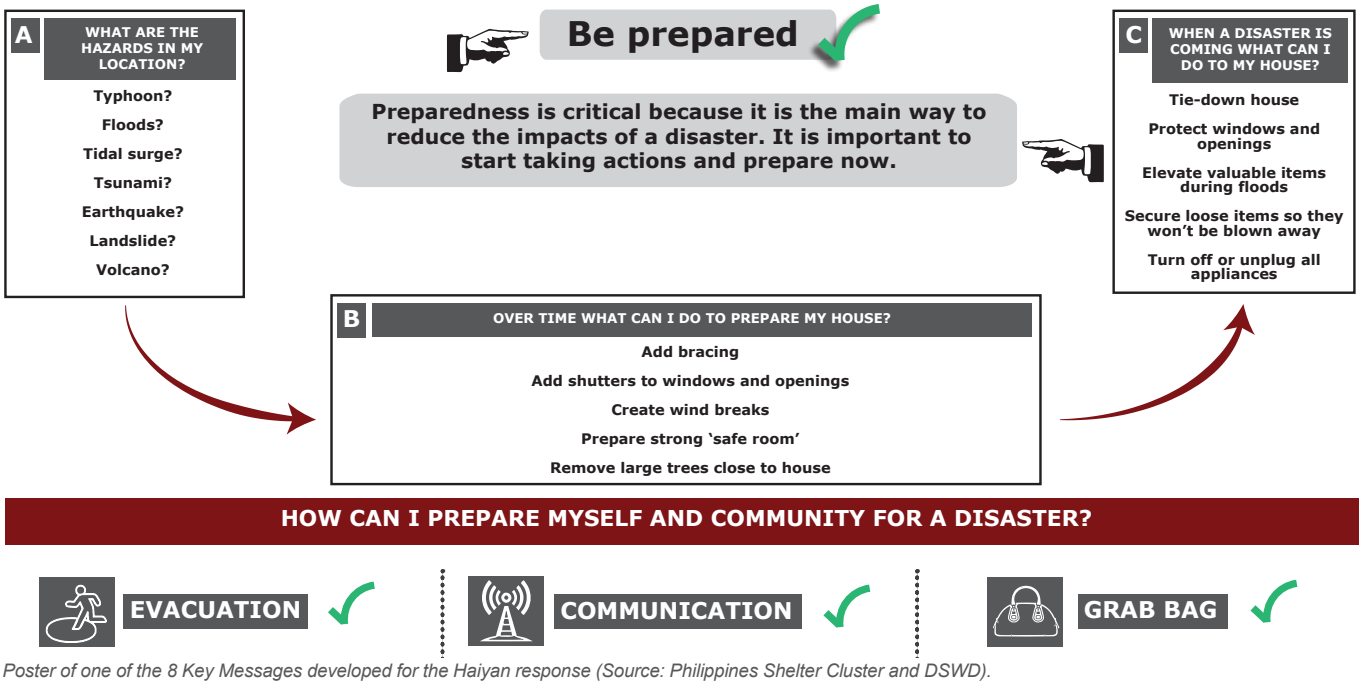
Most shelter programmes relied on coconut lumber as the predominant building material during recovery, drawing from the large number of trees downed in the typhoon. Many households noted that the quality of lumber produced and distributed during recovery was of mixed quality. Despite distribution of technical guidance on selecting appropriate cuts of coconut lumber by the Cluster, **robust quality control was difficult for many organizations.** Degradation of poor quality lumber was prevalent in shelters, occurring as soon as one year after construction. In future responses, technical guidance should seek to develop more robust measures for shelter partners to implement quality control measures.

INSTITUTIONAL PARTNERSHIPS AND COORDINATION

In addition to technical lessons, there were also gaps in institutional partnerships within the shelter sector. In December 2013, the President created the Office of the Presidential Assistant for Rehabilitation and Recovery (OPARR) to act as the "overall manager and coordinator of rehabilitation, recovery, and reconstruction efforts"[14]. Under this office, five clusters were established to manage recovery, including infrastructure, resettlement, social services, livelihood, and cluster support. Despite similar objectives, **the international clusters and the government office functioned largely in parallel, with limited collaboration.** A number of shelter partners noted that earlier, and more integrated, coordination with local governments was needed.

[13] PSC, March 2014, HLP Guidance Note on Relocation for Shelter Partners, http://bit.ly/2kC7FUr.

[14] National Economic and Development Authority. 01 August 2014, Yolanda Comprehensive Rehabilitation and Recovery Plan, http://bit.ly/1Rvzwia.



Poster of one of the 8 Key Messages developed for the Haiyan response (Source: Philippines Shelter Cluster and DSWD).

CASE STUDY

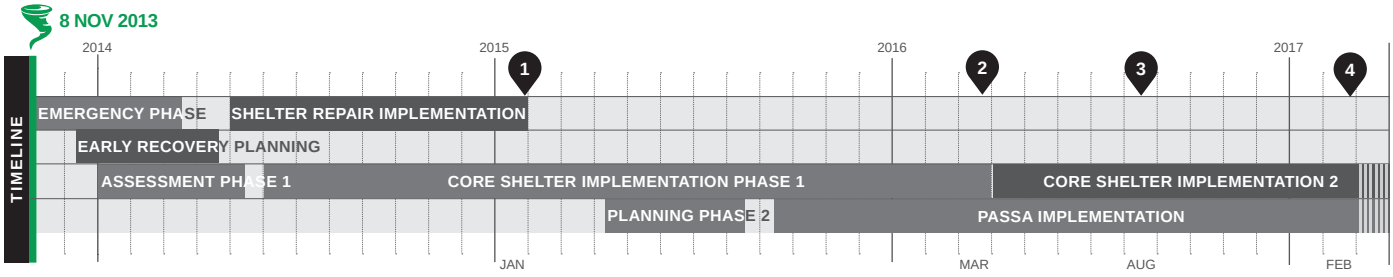
PHILIPPINES 2013-2017 / TYPHOON

KEYWORDS: Multiphase, Core shelters, Sanitation, Training, Community participation

CRISIS	**Typhoon Haiyan (Yolanda), 8 November 2013.**
TOTAL HOUSES DAMAGED	**518,878** partially damaged **493,912** totally destroyed
TOTAL PEOPLE AFFECTED	**3,424,593** households (16,078,181 persons).
PROJECT LOCATIONS	**Selected communities in Leyte island.**
BENEFICIARIES	**4,302** households (17,200 people).
PROJECT OUTPUTS As of Feb 2017	**2,007 Core Shelters** (target: 2,280). **2,019 Shelter Repair Assistance**. **2,280 Household Toilets** with septic tank (target: 3,030).
OTHER OUTPUTS	Over 200 local carpenters and masons trained, 26 communities (more than 3,000 households) reached with community workshops on safe shelter practices, over 10,500 coconut trees planted.
SHELTER SIZE	**22m²** (expanded from previous programmes, based on community consultations).
SHELTER DENSITY	**4.4-5.5m² per person** (the average family size in Leyte is 4.1, according to a government census).
MATERIALS COST	**USD 1,972-2,101** per core shelter with toilet (USD 1,207 for materials, USD 381-510 for toilet, USD 384 for labour). **USD 337** per household for Shelter Repair Assistance (USD 121 for materials, USD 256 cash grant).
PROJECT COST	**USD 2,240** per core shelter with toilet. // **USD 397** per household for Shelter Repair Assistance.
OCCUPANCY RATE	**99.4%** of shelters occupied at the time of post-construction monitoring.

PROJECT SUMMARY

This multiyear project included an emergency phase, followed by transitional and recovery phases. In the first phase, CGI sheets and cash grants were provided for shelter repair, and core shelters were constructed with latrines. In the second phase, a participatory approach was used to strengthen community resilience and safer construction practices, within an integrated programme, which provided opportunities for people to take ownership on cross-cutting issues.



1 Jan 2015: **2,019 Shelter Repairs with technical assistance and dissemination of Safe Shelter Awareness messages completed.**

2 Mar 2016: **Phase 1 target of 1,400 core shelters completed. 275 identified individual households assisted with relocation in host families.**

3 Aug 2016: **20 communities reached with PASSA and Shelter Phase 2 - community workshops on Safe Shelter Awareness.**

4 Feb 2017: **2,007 core shelters and 2,280 toilets completed in total. Project is still ongoing.**

STRENGTHS

+ Skills enhancement and engagement of local work-force.
+ Culturally appropriate design solution.
+ Cost effective design and implementation.
+ Community involvement in decision-making and construction.
+ Promotion of self-help approaches for long-term resilience.
+ Local procurement and prefabrication workshop set-up.

WEAKNESSES

- Long organizational procurement and logistical processes.
- High need of coco-lumber for the design, and use of untreated lumber.
- Lack of sufficient competent local staff.
- Lack of flexibility of the design.
- Septic tanks were only a partially safe sanitation solution.

SITUATION BEFORE THE TYPHOON

For an overview of the situation before and after the disaster, and the national shelter response, see overview A.23 in Shelter Projects 2013-2014 and overview A.8 in this edition.

The project targeted coastal areas comprising households who were dependent on farming and fishing. The settlements evolved in the last hundred years from informal groups of houses and farms that expanded as clusters and villages around paddy fields, plantations and along coastlines, replacing the tropical forest. The socio-economic status of the population was generally weak, with a large portion being either tenant farmers or daily workers with lower income, living in semi-permanent houses with limited access to basic facilities, often settling in no-build zones. Unsafe construction practices, using light materials and lack of technical knowledge on safer construction, made the community more vulnerable against typhoons.

SITUATION AFTER THE TYPHOON

More than 80% of buildings, houses and vegetation in the area were flattened by the typhoon. Immediately after the disaster, most inhabitants were temporarily displaced, but soon returned to their original dwelling sites and started constructing makeshift shelters. The key concern in terms of shelter was to overcome insecure construction practices that were dominant in the region, mainly due to lack of knowledge and the weak socio-economic status of the population.

BENEFICIARY SELECTION

The project area was selected based on regional and municipal level coordination between local governments and shelter actors. The priority was to reach severely affected communities with limited access to external assistance.

Based on commonly agreed selection criteria between cluster partners, the team collected an initial list from the Local Government Units. To avoid disparities, “recovery committees” were established at community level, to verify the information based on the selection criteria, followed by household visits and validation. The team needed to be aware of community dynamics and required technical capacity to evaluate structural damage and categorize its level. Thanks to an early recognition of these limitations and challenges, the assessment was interrupted to train the team first, before reforming the recovery committees.

IMPLEMENTATION PHASE 1

The project had three main objectives, strategically staged in two phases. The first phase focused on a) immediate Shelter Repair Assistance and b) Recovery support through Core Shelter reconstruction, while the second adopted a broader approach towards improving community resilience.

EMERGENCY: SHELTER REPAIR ASSISTANCE

Immediately after the disaster, the need to quickly repair partially damaged houses was very high. The Shelter Repair Assistance supported affected families with cash grants and distribution of CGI sheets. This phase was completed in four batches over nine months.

TRANSITION: CORE SHELTERS AND SANITATION

The Core Shelter construction was **executed in several batches to allow certain learning and development,** and minimize risks. Each Core Shelter included a household toilet. Since the project area was mostly on a high water table,

Core shelters and latrines were built to a set design, which was presented at community meetings to explain its features and receive feedback.

with water points randomly installed around the settlement and congested dwellings, **finding an appropriate sanitation solution was a sensitive topic;** the team studied various design options and adopted a two-chamber septic tank design, adjusting the elevation depending on specific site conditions and ground water level.

During the planning stage, the project team conducted **community consultation workshops** to configure a feasible strategy. There was a wide agreement amongst the affected population that an owner-driven approach would put more stress on vulnerable target groups, and would also cause implementation challenges with regards to market supply and quality assurance. It was decided that the beneficiaries would join the construction team and the organization would manage the material delivery, technical support and overall monitoring.

Secure land tenure, site safety and adequacy were the prerequisites for construction. Beneficiaries without land were supported for relocation to willing host families, or smaller group resettlements in communal plots identified by the local stakeholders.

Due to various delays and a slight overestimation of implementation capacity, **the construction extended long into the late recovery phase.** Therefore, a significant part of the shelters were built when most beneficiaries had already recovered. Thus, instead of being an entry-point for further improvements by the beneficiaries (as intended by the Core Shelter concept), the shelters often ended up substituting previous self-help efforts, though with a higher quality.

INVOLVEMENT OF AFFECTED PEOPLE AND CARPENTERS

In the beginning, the organization found it difficult to actively involve the affected people, as they were in a distressed state. However, as the project progressed, it managed to build strong cooperation with the community by means of participatory activities and focus group discussions.

For the Core Shelter construction, the project recruited local carpenters and provided on-the-job training. Since very few skilled carpenters and masons were available in the community, **the pilot phase focused on training and skills enhancement.** Each team consisted of two skilled carpenters and two unskilled workers, supported by one beneficiary or representative. A trained monitoring team conducted several interactive sessions at community level to impart knowledge on safer construction, identify problems and make improvements on the construction details and process. 35 carpenter teams and 25 mason teams were trained over a period of time, both on-the-job and through formal trainings by an official institute.

Core shelters were built in several batches by construction teams that included the beneficiaries. Material supply and monitoring were managed by the organization.

IMPLEMENTATION PHASE 2: RECOVERY

The second phase used the PASSA approach[1] in order to more actively involve communities and strengthen their knowledge, attitude and practices. Beneficiaries actively participated in focus group discussions and PASSA interactive sessions, which contributed to develop a sense of ownership, captured learnings and resulted in small improvements during the implementation. This phase emphasized disability inclusion, environmental regeneration, site risk mapping and mitigation, backyard gardens and facilitation of formal training for skilled carpenters and masons. Moreover, **post-construction monitoring and face-to-face sessions** with beneficiaries were conducted, followed by community walks to facilitate discussion around good and bad practices. **Community workshops** were also organized on various integrated topics such as roof tie downs, safe shelter extensions, construction of improved cooking stoves, wall upgrading and mitigation of fire risks.

COORDINATION

Considering the scale of the disaster and the difficulties faced by the government to coordinate with several agencies, **coordination at Shelter Cluster level played a very vital role** for this project, through the production of technical messaging and data, as well as for decision-making, identifying gaps in the assistance and optimizing organizational resources.

However, the coordination also had some weaknesses. On one hand, the **focus on reconstruction came relatively late,** as relief operations were a priority. After the deactivation of the Cluster, the partners still needed provincial and national level cooperation. On the other hand, **the lack of a clear government policy on the complementing shelter assistance** and selection criteria led to disparities at the local level. More than

[1] Participatory Approach to Safe Shelter Awareness, a participatory method of Disaster Risk Reduction related to shelter safety and facilitated by volunteers, which guides community groups through several activities: http://bit.ly/2lqQBUA. See also case study A.13 (Haiti) in *Shelter Projects 2011-2012*.

In the second phase, the project used a community-led approach to analyse different hazards and their impact on the communities (PASSA approach).

250 of the originally assessed beneficiaries opted out from this project to profit from the government's cash assistance. However, the project managed to expand to other communities.

SHELTER DESIGN AND DRR

The wooden core shelter design had been previously implemented by several partners after past disasters in the country, with 18m² covered space. During the initial consultation, the design received high cultural acceptance by the community. Subsequently, certain **improvements were made to increase the covered living space** to 22m² and to adjust the structural design for a higher wind speed as a "one size fits all" progressive core shelter. The design was developed using local materials, particularly coco-lumber.

The project was designed with **Disaster Risk Reduction as an integrated crosscutting theme.** The design concept of the elevated core shelter and toilet aimed at mitigating the risk of flooding, and its structural design was made to withstand 200km/h winds. During the first phase, both the Shelter Repair Assistance and Core Shelter interventions were accompanied by safe shelter awareness inputs, through knowledge-sharing sessions with the communities. However, the PASSA approach was only effectively adopted in the second phase.

PREFABRICATION WORKSHOP APPROACH

For the construction of the core shelters, certain components were prefabricated to ensure the quality of construction and to standardize the design. The workshop also provided support for evaluating various small improvisations in design and technical solutions. This set-up was new in the area, but was quickly adopted. As the construction progressed, the project downsized prefabrication and most construction was executed directly in the field, by skilled local carpenters. However, for quality purposes, the fabrication of key components like structural footing and wall panels continued to be done in the workshop.

LATRINE DESIGN

An innovative latrine design was introduced through this project, which if properly constructed improves the effluent quality significantly and thus helps reducing groundwater pollution. This is especially a problem in dense rural settlements that still rely on shallow hand-pumps as their primary source of drinking water. In fact, this goal was only partially achieved, due to limits in quality of labour, materials and monitoring of construction quality below ground.

MAINTENANCE AND TERMITE PROTECTION

"Care and maintenance" were discussed in various focus groups. The project included the use of a treatment (soligNum) in the lower exposed portion of the structure, to enhance termite protection and prevent decay; a concrete footing, to increase the distance of the wooden post from the soil; and a galvanized iron sheet above the concrete, to protect the edge of the wooden post.

MATERIALS

The design of the core shelter used **both natural and industrial materials available in the local market.** The natural materials included coco-lumber, bamboo, sand and gravel, which were sourced through licenced suppliers that operate under the Department of Environment and Natural Resources. The shelter also used woven bamboo to produce wall panels, which was sourced from the neighbouring island, where bamboo is planted in large scale.

Some of the core shelters included ramps to improve accessibility.

Coco-lumber was available in large quantities soon after the disaster, because plenty of trees were uprooted during the Typhoon[2]. Moreover, Leyte Island is identified as a hub for the supply of coco-lumber by the Philippine Coconut Authority. Although the use of coco-lumber was encouraged, due to limited local capacity less than 30% of the fallen trees were recovered for construction before rotting. Because of the high demand of coco-lumber in reconstruction, **prices rapidly increased** in the local market (up to 111% in two years), also due to the taxations imposed by the authorities on extraction and transport. As a result, the project experienced several supply challenges. This was mainly due to the lack of any obligation by the agencies to control the market price. The idea to support the local suppliers was discarded once it was clear that they could not compete with the external large suppliers, who ended up dominating the market.

To address the issue of environmental impact, **the project collaborated with the Coconut Authority to support mass coconut plantation** linked to livelihoods activities.

[2] See case study A.11 for an example of a large scale response utilizing the fallen coconut trees.

Aerial view of one of the areas where the project was implemented. The shelters with red roofs were built by the organization, while other structures were self-built.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

Safer building practices were promoted, such as strapping of roof structures, bracing and proper detailing of the foundations (raised and made of reinforced concrete).

STRENGTHS

+ Skills enhancement and engagement of local construction work force. This was a slow process that required very close monitoring and regular feedback sessions. Though very resource- and time-intensive, this paid off by the level of quality and standards reached, and the monitoring effort that were significantly reduced.

+ Culturally appropriate design solution, which was widely accepted and occupants reported they felt safer in it.

+ Cost effective design and implementation. Although the time frame was extended slightly, increasing the overhead costs, the savings generated by the cost-effective project execution managed to increase the targeted number of beneficiaries, without requesting any cost extension.

+ Involvement of community in decision-making and construction processes, which helped the organization to build a strong relation with the community at an early stage. During phase II, the project was highly participative and effective in increasing community knowledge on Shelter and Settlement Safety and thus building community resilience.

+ Promotion of self-help approaches for longer term community resilience. Focus group discussions identified issues around shelter and settlement by mapping key factors that lead to the risk of disaster. The discussions also encouraged community groups to develop action plans for mitigating those risks. This was allowed by the extended time frame of the project, which made possible follow-up visits and linkages with integrated sectors.

+ Local procurement released the burden from the project logistical chain and optimized resources.

+ The prefabrication workshop contributed to the quality of the construction and supported the carpenters and the workforce in the field to maintain standards and effectiveness.

WEAKNESSES

- Long organizational procurement and logistical processes caused delays.

- High need of coco-lumber for the design, as well as use of untreated coco-lumber for construction, **and lack of appropriate substitute procurement measures.** The wooden Core Shelter design was based on the assumption that a large quantity of trees were available, though large quantities of fallen logs got rotten and additional felling and supply of untreated lumber continued. The project could have generated livelihoods and liaised with the government to establish a coordinated management of coco-lumber for reconstruction.

- The programme faced a constant shortage of competent local personnel, and in particular of soft skills needed to perform effective communication. This was partially due to limited organizational support and internal HR policies that restricted hiring of staff with the skills required.

- The "one size fits all" solution came with certain limitations and inflexibility to adapt to the context and also to react to the changing market situation with alternative solutions. While the shelters offer a significantly higher safety against typical typhoons, its flexibility and overall perceived utility-value was somewhat limited by the elevated design and other related features common in the region. A concern was also that the woven-bamboo wall panels do not offer sufficient protection against water during heavy rains. These factors have resulted in some shelters being less used.

- Septic tanks were only a partially safe sanitation solution. Although the improved design was identified as the most suitable solution, emptying septic tanks and an environmentally friendly sludge disposal and management are often expensive services and require active commitment of local governments. After three to five years, the effluent quality will deteriorate quickly and pose a pollution risk to the groundwater. The coverage of desludging services was still very low and the high costs posed a constant challenge.

LEARNINGS

- **Heavy top-down decision-making for a construction project ends up with compromised corners.** Decision-making should be consultative and flexible to complement technical recommendations. The transfer of knowledge and learnings from one project to the next is crucial.
- **Collaborative rather than competitive approach.** At the onset of the project, the focus lay more on achieving the targets indicated in the project log-frame, and thus overlooked quality indicators. A sense of competition was developed across sectors and agencies, which was not necessarily healthy.
- **Interest and motivation are important factors to be considered while identifying the project team.** The project configured the need for capacity-building but did not succeed in engaging motivated and suitable project staff for specific tasks. As a result, at a certain point the project team felt over-burdened.
- **Timeliness in delivering assistance is critical in addressing the needs and ensuring effectiveness.** The shelter repair assistance could have been rolled out significantly faster and better if it had been already planned and prepared during the emergency phase. However, the actual market supply during the first months of the recovery might require a switch to more direct material provision rather than cash.

CASE STUDY

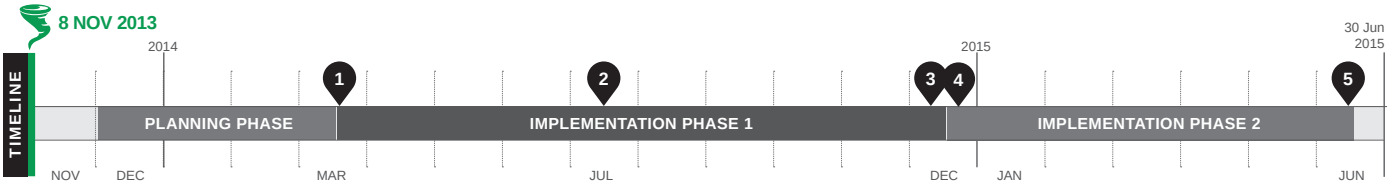
PHILIPPINES 2013-2015 / TYPHOON

KEYWORDS: Core housing, NFI distribution, Training, Disaster Risk Reduction, Community participation

CRISIS	**Typhoon Haiyan (Yolanda), 8 November 2013.**
TOTAL HOUSES DAMAGED	**518,878** partially damaged **493,912** totally destroyed 21,005 houses damaged and 26,515 destroyed in the project areas.
TOTAL PEOPLE AFFECTED	**3,424,593** households (16,078,181 persons).
PROJECT LOCATIONS	**10 municipalities in Samar.**
BENEFICIARIES	**22,310** individuals.
PROJECT OUTPUTS	**4,462 core shelters** built, with latrine. **1,071 carpenters** trained.
SHELTER SIZE	**18m²**
SHELTER DENSITY	**3.6m² per person** (average household size of 5).
MATERIALS COST	**USD 1,086** per shelter (+10% when trees had to be purchased). **USD 1,596** per shelter (with septic tank).
PROJECT COST	**USD 2,424** per shelter.

PROJECT SUMMARY

The organization built 4,462 “core shelters” to a standard design with accompanying sanitation in 18 months, using local labour and a highly systematized approach. The project also included a significant training component. The case study highlights detailed learnings related to construction management for an agency-led construction project, working with the community and local authorities.



1 Mar 2014: **Pilot construction of demo-houses.**

2 Jul 2014: **Extension of the project to the west side of the island.**

3 Dec 2014: **Completion of the 4,462 shelters.**

4 Dec 2014: **Launch of sanitation phase: construction of toilets starts.**

5 Jun 2015: **Completion of construction of all the latrines.**

STRENGTHS

+ Speed of the response.
+ Previous knowledge of the area and the communities.
+ Strong logistical capacity.
+ Cooperation with local partners.
+ High standard of quality of materials and solutions adopted.
+ Strong accountability to the affected communities.

WEAKNESSES

- MoUs with municipalities should have been signed earlier.
- Assessment and data collection teams needed more training.
- Poor post-implementation monitoring to assess long-term impacts.
- The sanitation component should have been included from the start.

CONTEXT

For an overview of the situation before and after the disaster, and the national shelter response, see overview A.23 in Shelter Projects 2013-2014 and overview A.8 in this edition.

The organization had established an office in Tacloban in 2008 and had focused on Samar with its partner organization, working with conflict-affected communities.

The region was one of the poorest in the country, largely dependent on agriculture and fisheries. Eastern Samar is ranked the third poorest province in the country, with fishermen and farmers being the poorest groups.

SITUATION AFTER THE TYPHOON

According to official figures, in the 10 municipalities targeted by the project, over 40,000 houses were damaged, of which more than half were totally destroyed. The most heavily affected houses were those of lower quality, with a damage pattern reflecting the poverty map in Samar. The typhoon damaged timber structures much more than concrete ones – with many communities being registered with 100% damage.

The organization established two field offices in Samar within one month of the typhoon.

In the aftermath of the typhoon, affected people built makeshift shelters.

THE ROLE OF COORDINATION

The organization was not a member of the Shelter Cluster, but did coordinate with other agencies working in the same locations. The organization also used and respected principles and technical standards that had been set by the government and the Cluster.

The agency assessed the different programme options proposed by the Cluster and decided to build core houses with a training component, as this was in line with its general approach to improve resilience of the typhoon affected people.

COMMUNITY ENGAGEMENT

At the outset of the project at each location, meetings were held with the authorities and a meeting was held with all the community members to **explain selection criteria and beneficiary roles and responsibilities**, to ensure that the processes were clear and those most in need were not left out. In the meeting, beneficiary declarations and land agreements were explained and collected.

During the inception community meetings, the **responsibilities of the barangay were explained** as part of the programme to avoid local politics impacting on the implementation.

A hotline was set up for beneficiaries to ask questions and a volunteer would take care of treating each case individually. This allowed great transparency with the beneficiaries as well as to better focus or adjust the programme when needed.

SELECTION OF BENEFICIARIES

Geographical selection was needs-driven, based on access and damage. Harder-to-reach areas were prioritized, as the organization had more logistical capacity than other agencies, those communities tended to have lower income levels and more houses using local materials, which showed higher levels of damage. The agency therefore chose to work in remote locations where many other organizations would not engage.

Household selection was conducted in the following steps – with all data being entered into a database, containing beneficiary and barangay data.

1. The list of totally damaged houses was collected from the local authorities (both barangay captains and municipal sources).
2. Each household was then verified by a house to house visit conducted by volunteers of the local partner.
3. Using agreed criteria, lists of eligible and non-eligible households were established, with pictures and data from the verification visit. Lists of cases to be reconfirmed due to absence of or incomplete data were also prepared, and a second verification exercise was conducted. In some cases, a structural review of the house by an engineer was conducted to determine if it was partially or totally damaged.
4. A community meeting was organized with all validated households to explain the reason for non-selection. In case of disagreement or doubt, cases were discussed and revisited when necessary. These meetings proved the most important stage of beneficiary validation.
5. Officials signed a final beneficiary list.
6. The final lists were shared with the municipality and MoUs were signed with the barangays to confirm commitments and mutual responsibilities.

The project had a strong focus on safer construction techniques.

In the most remote areas where access was difficult, but a decision to intervene was taken due the high vulnerability, combining assessment with beneficiary validation process saved time. For remote and low-populated barangays, a decision to assist all people was made, even if the number of beneficiaries was small.

Taking time with a rigorous yet time-consuming selection process, enabled smooth implementation and a very low rate of complaints later on.

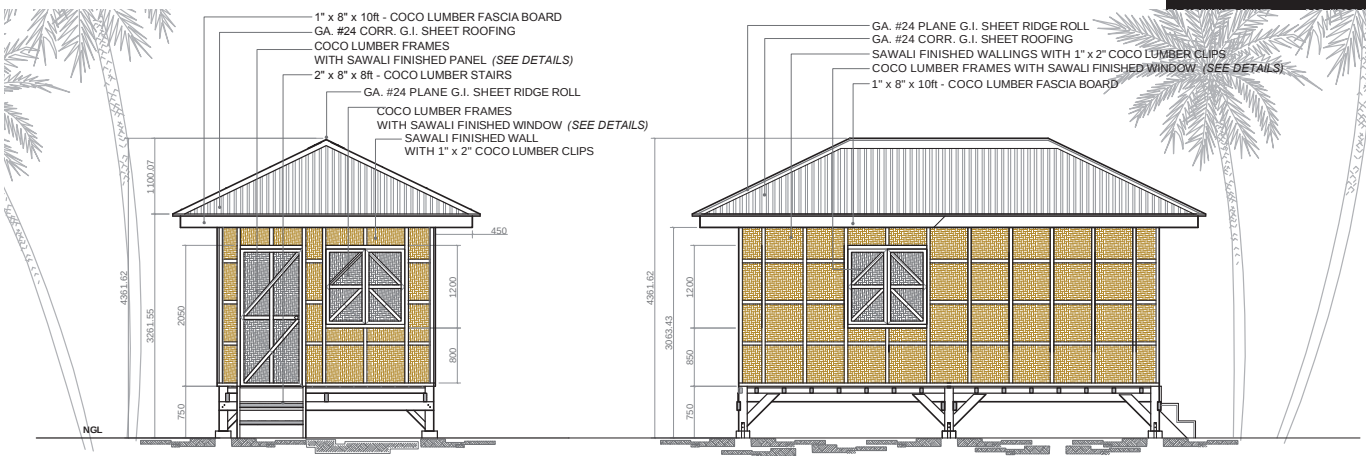
SHELTER DESIGN

The shelter model was based on the original model used in the response to Typhoon Bopha and consultations were made with local communities in urban and rural areas. Two samples were initially built next to the organization's offices, for training and display purposes. Afterwards, the first houses built in each barangay were used as models involving carpenters from the community. Upgrades were made to improve hurricane resistance, such as hurricane straps, an additional truss, alignment of windows, use of galvanized nails and better CGI sheets.

BENEFICIARY ORIENTATION

Orientations were conducted with selected communities and beneficiaries. It proved to be important for barangay officials to be present as they were responsible for resolving issues in the community related to land ownership. In most of the cases, landowners allowed beneficiaries to build a house on their land and to stay for at least five years for free or for a small renting fee. In other cases, the barangay captain intervened and found a relocation site.

The donation certificate stated that the beneficiary remains



The project built core shelters according to a set design and with a highly systematized approach.

the owner of the materials even after they have left the land. Agreements were in the local language, read out during the orientations and followed by a session for questions and answers.

CHAINSAW OPERATORS AND TIMBER QUALITY

Wood was requested from the beneficiaries as contribution. This worked for 82% of the cases. When this was not possible, it was mainly due to specific vulnerabilities (1%) or physical unavailability of trees, particularly in areas far from coconut plantations (17%).

Local labour was used as much as possible. Chainsaw operators from other regions might be involved only as a temporary solution in the early stage of the programme. After some negative experiences, purchase orders were given out to the same chainsaw operator only if the previous order had already been completed. Wherever possible, **the best chainsaw operators were retained** to train the new ones. In hindsight, project staff should have been better trained on technical quality control of timber.

Beneficiaries had the responsibility to sign for receipt of the timber and to replace anything missing.

It was found that **middle managers in the programme created more challenges than convenience.** Chainsaw operators and carpenters had a tendency to form groups in order to survive financially, yet working through a middle manager did not allow skilled labourers to be directly contracted and accountable for their work. The one who received the purchase order should have effectively done the work, especially for quality control purposes.

MATERIALS SOURCING AND PREFABRICATION

Materials were sourced as follows:

- **Local procurement** from project areas: wood and aggregates.
- **National procurement:** cement, iron bars, tie wire, hinges, post straps, *amakan* walling (traditional woven bamboo).
- **International procurement:** CGI sheets, flat iron sheets, hurricane straps, galvanized nails.

A central workshop was established to pre-cut and bend roof ridges and footing bars. Twisted umbrella nails with rubber seal increased construction efficiency and neater finishes, compared to the application of seal paste on every roof nail.

MATERIALS KITS

Overall, logistical challenges of the 500kg kits of materials were significant, given the massive area with complicated delivery needs. As a result, **a flexible approach was established:**

- For easily accessible areas, start small and plan for continuous supply.
- For areas difficult to access, deliver in bulk and plan for storage. In instances like island or far upland, delivery needs to be direct and in almost full quantity. Sufficient time needed to be given for hauling of materials from delivery at the last reachable point, and cash was required to pay for the “last mile” of transport, as part of livelihoods programming. Additional buffer stocks were required and smaller numbers of kits should have been pre-positioned in advance of anticipated poor weather.

Involving barangay councils in material distributions proved to be important for community mobilization and security reasons.

TRAINING OF CARPENTERS AND COMMUNITIES

Initially, the team came with technical plans, drawn by computer and in units not used locally. Craftsmen could therefore not interpret them, so they needed to be re-formatted into a simpler booklet.

Attendance in the training course was an obligatory step for carpenters to be contracted. The best carpenters were retained for ongoing work in the project. During the programme, a total of 1,071 carpenters were trained. At the same time, the whole community learned about good construction practices. The largest long-term impact of the project was in the training for affected people that it enabled.

CONSTRUCTION OF SHELTERS

The preparatory steps (selection of beneficiaries, delivery of materials, cutting of wood, procurement of local aggregates, training of carpenters) took much longer than the actual house construction, which was about four to five days.

It proved better to distribute orders to carpenters at the beginning of the week, to avoid work during weekends, when monitoring teams (one monitor per barangay) were not present. The agency found best results when they selected carpenters, rather than letting beneficiaries choose their carpenter.

More systematic approaches should have been conducted for safety. Contracted carpenters were not always insured and systematic insurance was not in place.

POST-IMPLEMENTATION REVIEW

Shortly after the implementation of the project, another typhoon hit the affected area. In a review of the houses, it was found that only four had failed, three of which due to the use of young coco-lumber and one due to a land-slide.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Rapidity of the response. Early decision to engage in shelter after the typhoon hit the area and very quick activation of the programme before the end of the emergency phase.

+ Previous knowledge of the area and of the communities affected. The organization was present in the area before the emergency for its protection and assistance activities and remained after the response.

+ Logistical capacity. The mobilization of resources from the organization was very fast also thanks to the existing logistical set-up in the country with an additional deployed logistics team.

+ Cooperation with local partners. The national partner organization has an extensive coverage of all parts of the country.

+ High standard of quality. Within the framework set by the government guidelines (including adaptation to the environment and sustainability), all solutions adopted and materials provided through this project were of high quality.

+ Strong accountability. The beneficiary feedback system (hotline) allowed the beneficiaries to raise concerns and the programme to be adjusted where needed.

TECHNICAL SOLUTIONS	
Foundations	Six concrete foundations are used to support each of the six individual columns. With 1:2(cat) mix of concrete and steel reinforcement, the foundation is strong enough to support the structure above the expected load even if using heavier good-lumber in the construction. Foundation is also shaped in STEP (reverse T) type to increase uplift resistance.
Truss	The trusses for the roof are designed to create a hipped roof shape with two original full trusses, six half trusses covering the roof ends, and an additional middle truss.
Floor	The floor is made from coco-lumber boards providing better and steady floor supported by three long and 14 short floor joists.
Wall	Made from the *amakan* sheet clipped with wall studs from the inside and wall clips from the outside in 600mm grid creating a grid-like finish on the outside.
Openings	The shelter design provides three windows and one door for opening and access. Supported by double hinges at 2mm thickness the durability of the opening is guaranteed to last.
Bracing	Diagonal bracing was placed in wall. One bracing is also placed in the roof structure connecting all the trusses into single structure. Although it is advised to use longer bracing in full wall short diagonal bracing was used to allow full modification of the opening across the wall and flexibility of further extensions.

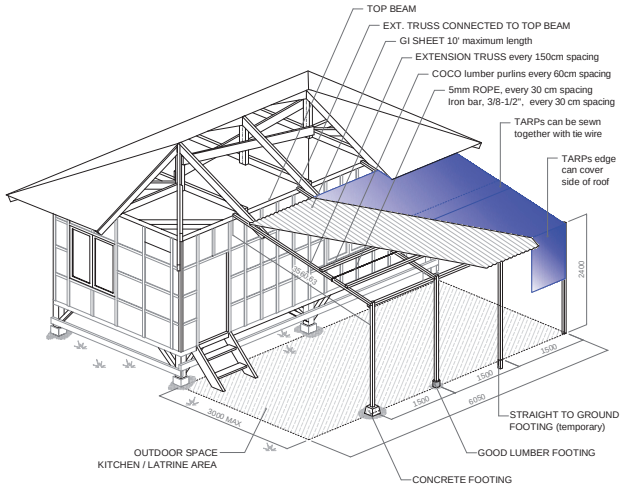
WEAKNESSES

- MoUs with municipalities should have been signed early in the process to facilitate the next steps in full transparency.

- More effort should have gone into **training the field teams working in assessment and data collection,** to ensure consistency.

- Although there was a significant training component, there was **little or no consistent follow up on the impacts of the training** in terms of safer construction outcomes in the broader community. **More attention should have been given to post-implementation monitoring,** to assess short and long-term impacts.

- The sanitation (and hygiene promotion) component should have been included in the project from the outset, instead of having to conduct a secondary follow up to install sanitation. This would have simplified the operations.



Local carpenters didn't understand technical drawings, so concepts had to be explained through simpler and more intuitive ways, and a booklet was produced.

LEARNINGS

- **A full set of recommendations from the project were learnt and compiled** in a single document for future use by the agency. Overall, the project was deemed to have been positive by the agency and a model for future interventions in similar contexts. The various templates and manuals produced were of particular interest to the agency.
- **Starting small through pilot projects and then scaling up** can be a successful approach.
- **A combination of high quality hardware and software** components is essential for project success.

The project used locally available materials (e.g. the amakan sheet, left) and safe construction techniques, including bracing, strong trusses and roof strapping.

CASE STUDY

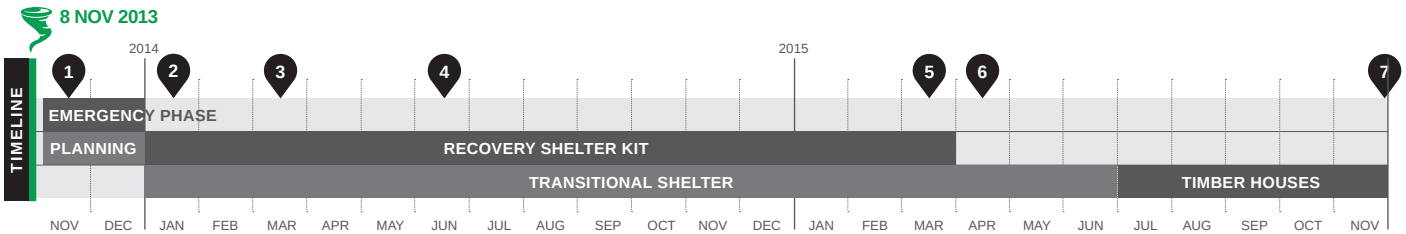
PHILIPPINES 2013-2015 / TYPHOON

KEYWORDS: Emergency shelter, Transitional shelter, Procurement and logistics, Local materials, Training

CRISIS	**Typhoon Haiyan (Yolanda), 8 November 2013.**
TOTAL HOUSES DAMAGED	**518,878** partially damaged. **493,912** totally destroyed. 21,005 houses damaged and 26,515 destroyed in the project areas.
TOTAL PEOPLE AFFECTED	**3,424,593** households (16,078,181 persons).
PROJECT LOCATIONS	**Guiuan, Roxas, Ormoc, Tacloban.**
BENEFICIARIES	**64,113** households.
PROJECT OUTPUTS	**52,096 NFI Kits** **33,994 Emergency Shelter and NFI kits** **58,062 Recovery Shelter kits** **3,500 Transitional Shelters** **72,956 Individuals trained** in DRR (51% women) **640 Timber Houses** built in Leyte
SHELTER SIZE	**18m²** for recovery shelter kits (minimum, variable, size) **23-24.7m²** for transitional shelters.
SHELTER DENSITY	**3.5m² per person** (for Recovery Shelter Kits). **5m² per person** (for Transitional Shelters). (based on five-person-average household size)
MATERIALS COST	**USD 300** for Recovery Shelter Kits. **USD 1,190-1,860** for Transitional Shelters.
PROJECT COST	**USD 385** for Recovery Shelter Kits. **USD 1,960** for Transitional Shelters.

PROJECT SUMMARY

This was a large-scale programme, using a “Debris to Shelter” approach, to support typhoon affected households to repair or rebuild their damaged or destroyed homes. Almost 20 million board-feet of lumber were salvaged, corresponding to an estimated number of almost one million trees. Through 97 vendors in all affected areas, lumber was provided for more than 62,000 shelter interventions. Disaster Risk Reduction and Build Back Safer trainings were given to local carpenters and shelter beneficiaries, promoting safer construction against future disasters.



1. Nov 2013: **First distribution of Emergency Shelter and NFI kits.**
2. Jan 2014: **First Recovery Shelter Kit distributions and Disaster Risk Reduction training.**
3. Mar 2014: **First transitional shelters installed.**
4. Jun 2014: **All four field offices implementing transitional shelters, including in relocation sites in Tacloban.**
5. Mar 2015: **End of Recovery Shelter Kit distributions.**
6. Apr 2015: **Closure of two offices (Ormoc and Roxas).**
7. Dec 2015: **Completion and handover of Timber Houses.**

STRENGTHS

+ Speed of the response.
+ Flexible procurement and implementation methodologies.
+ Local market approach, supporting livelihoods.
+ Removal of fallen or damaged trees helped clear the land.
+ Build Back Safer messaging targeted a range of stakeholders.

WEAKNESSES

- Choice of coco-lumber was not always appropriate.
- DDR training prioritized measures to strengthen roofs.
- Difficult to forecast eventual reductions in coco-lumber availability.
- Some field offices were less adept at establishing partnerships.
- Under-calculation of needs for logistics, procurement and finance systems.

The project used a flexible approach to reuse fallen coconut trees to set up a large-scale shelter response. Most of the milling was done by licensed chain-saw operators, directly where the coco-lumber was sourced.

In a few cases, transitional shelters were built in resettlement sites, such as this one in Tacloban, rather than on people's original plots.

For an overview of the situation before and after the disaster, and the national shelter response, see overview A.23 in Shelter Projects 2013-2014 and overview A.8 in this edition.

THE USE OF COCO-LUMBER BEFORE HAIYAN

In the Philippines, coco-lumber (wood from coconut trees) is a recognized traditional construction material, although with fewer uses than hardwoods. Since 2011 (Tropical Storm Sendong response), coco-lumber has been recommended by Shelter Clusters in the country. Since 2012 (Typhoon Bopha response), there has been a clear policy from the Government of Philippines Coconut Authority (PCA) on the collection and use of fallen or damaged coconut trees for post-disaster shelter, as well as a clear pathway for permission to do so, including the use of licensed chainsaws and chainsaw operators, and a visual grading system for the selection of the lumber. Moreover, the implementing organization had already been using coco-lumber for shelter before its Haiyan response.

SITUATION AFTER THE TYPHOON

Approximately 33 million coconut trees were fallen, or had been damaged beyond productivity by the typhoon, with an estimated 13 million trees[1] which might be accessible and usable. Replanting was not possible until fallen trees were removed and there were concerns that if they were left on the ground for too long, the rot would promote damage or insect infestation to the remaining healthy trees in the area.

PROJECT OVERVIEW

A number of different shelter interventions were chosen. In the first weeks, the organization distributed over 86,000 Emergency Shelter Kits (plastic sheeting, fixings and tools) and NFI kits, however the main part of the programme centred on two different shelter types: Recovery Shelter Kits and complete Transitional Shelters, both reusing the available coco-lumber.

RECOVERY SHELTER KIT

The Recovery Shelter Kit was an upgrade from the Emergency Shelter Kit, replacing the plastic sheeting with corrugated galvanized iron sheets, roofing nails and the coco-lumber. Technical trainings and cash grants were added, but continuing to include the construction hand tools and some of the other fixings. The main target of this shelter type was the large number of families whose homes had been damaged significantly, but could still be repaired. These households already had land available – in most cases their customary plot.

TRANSITIONAL SHELTERS

The transitional shelters were built in smaller numbers and were targeting two groups of people: those whose houses had been completely destroyed and those whose previous homes had been in the coastal No Build Zones, and therefore had to relocate.

In some cases, these shelters were constructed individually, on plots identified by the beneficiary and in negotiation with the owner of the land and the local barangay[2] chief. In a small number of cases, shelters were installed in groups, on larger plots of land identified by the local municipal authorities, but then evaluated for their suitability by the project staff from the organization and other partners (with activities in the same location).

Designs for the transitional shelters were adapted by each office, but were generally based upon those in previous responses. The predicted lifespan of the coco-lumber was 3-5 years.

COMMUNITY PARTICIPATION

Local barangays were engaged and consulted during the beneficiary-selection process, and also through the Build Back Safer information campaigns which accompanied the distributions.

The communities were mobilized by the local leaders to support and participate in the assistance process, either during the distribution of the kits or in the construction of the transitional shelters. In the absence of a warehouse, the materials for the construction of the shelters were handed over to the families. All of the carpenters and their assistants came from the local communities and participated in cash for work schemes, which were a valuable source of income.

Through the establishment of a hotline and the dissemination of the respective phone number, beneficiaries provided feedback and issued complaints regarding the assistance received.

COORDINATION

The Coco-lumber Technical Working Group of the Cluster provided clear guidance on the permission pathway and technical issues for the collection and use of coco-lumber for shelter, as agreed nationally with the PCA. More generally, the Cluster

[1] This quantity was enough for more than 1 million Recovery Shelter Kits (at an estimate of 20 board-feet of lumber per tree, and approximately 220 board-feet of lumber needed per kit – the amount necessary to provide safe support for 12 CGI sheets for roofing repairs).

[2] Neighbourhood administrative units.

Transitional shelters were used as a basis to recover. Families would personalize the shelters and add small stores and other temporary structures outside the shelters, which served as places for livelihood activities.

strategy of prioritizing recovery in a varied and incremental approach, provided a clear framework for the organization's own palette of shelter options.

Coordination had a less obvious positive impact upon the provision of WASH support to complement the shelter activities. At the subnational level, it was not always possible for the organization to find partners who could provide latrines for those with transitional shelters, for instance, despite the fact that the local WASH Cluster was approached in several cases.

Beyond cluster coordination, the organization developed important relationships with the local municipalities and barangays, with the PCA at both the national and local offices, and with the Department of Social Welfare and Development.

DISASTER RISK REDUCTION

Due to the frequency of natural hazards in the country, the organization adopted a DRR approach, and the training which was given to its technical workers and to beneficiaries was focused around the 8 Key Messages, developed by the Shelter Cluster[3]. Post-programme interviews showed that beneficiaries used more DRR measures for their roofs than for the walls or foundations. This was due to the higher costs of materials for the latter and the practical challenges of "punching into" an existing foundation, as well as the fact that most houses had the largest damage in their roofing.

MAIN CHALLENGES

The greatest challenge was to scale up the "Debris to Shelter" approach, whilst remaining efficient, and to respect commitments made to the various beneficiary communities, once the supply of materials became harder, or more time-consuming. Ensuring that the local vendors could respond to the demand of this programme was also a key issue. **The flexibility to scale up the operation in five sub-offices**, use different kits, and to re-assess the methods of the lumber preparation, was key to addressing these challenges.

In order to implement the projects, the organization had to **establish and recruit over 200 staff** for four new field offices, as well as to maintain the necessary **balance between flexibility and rapid-decision-making** at the field level, **with needs for both support and accountability** from the national office, wherein the project was managed.

[3] Philippines Shelter Cluster, 8 BBS Key Messages, http://bit.ly/2lANU3F.

COCO-LUMBER SUPPLY

In the first weeks of the response, the organization sought to persuade beneficiary communities to **provide fallen coconut trees free of charge,** whilst the organization would then take responsibility for processing them. However, by February 2014, it became apparent that many other shelter actors were already paying locals for the fallen trees and that this would help kick-start the local economy. **The organization thus started to pay** for the lumber, from that point onwards.

As the local vendors and lumber producers did not have the capacity to respond to the demand yet, the organization **worked with other humanitarian actors,** who took on the responsibility of hauling and milling the coco-lumber. However, in less than two months, these partnerships also came to a halt and the local market started to show signs of recovery, driving the organization to **use direct procurement.**

Implementing at a **large scale, through small-scale suppliers** (often without formal business documentation), initially proved a challenge for the organization's procurement department, who had experience with more formal tendering processes, often at a national or international level. **A system was established based on the "pakyaw"** Philippine customary supply-chain methods, whereby payment for the lumber would be made to one representative of a group of smaller suppliers. This reduced the number of individual payments, and accordingly the amount of paperwork to process, as well as consolidated the lumber deliveries in the field.

After the first months, **the fallen or damaged trees near vehicle roads had already been taken and competition had increased** from other shelter actors and the private sector. Although there was still large availability, these issues created delays in delivery and an upwards pressure upon the price. In some cases, in order to meet deadlines, some of the procurement was done through larger commercial suppliers. **The field offices had their own warehouses** to aid the integration of this national and international large-bulk supply chain, with the local, myriad, supply chains for the coco-lumber.

PROCESSING OF THE COCO-LUMBER

For the Recovery Shelter Kits, the coco-lumber was milled in only one dimension (2"x3"), to speed up the milling. The transitional shelters required a wider range of lumber dimensions, amongst a range of industry standard sizes. **Much of the milling of the lumber into its final dimensions was done using chainsaws.** The organization relied primarily upon specialized "scalers", recognized by the PCA, to grade lumber from different parts of the coconut trees, according to density and strength. However, this **grading was done visually and was not aided by any machine.**

The organization used a variety of processing approaches:

- Initially, the lumber was **processed in the locations where it was sourced.**
- After March 2014, when fallen coconut trees were no longer available near roadsides, suppliers were paid to bring the trunks to a **central milling site.**
- Later, **suppliers were contracted** to undertake all of the collection, preparation, milling and delivering to site of the lumber.

Overall, this project was innovative in its "Debris to Shelter" approach, as well as its scale-up using multiple sources, solutions, and flexible approaches to supply and milling.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ The organization acted quickly to establish four field offices, each with the flexibility and authority needed.

+ Flexible procurement and implementation methodologies were created, so that the local coco-lumber, collected by small-scale suppliers in irregular quantities, could become one of the main materials for a large-scale programme.

+ Local market approaches were adopted with many local suppliers, giving **livelihoods support** to a wide range of communities.

+ The removal of the fallen or damaged trees was also a massive and necessary boost to the farmers and cooperatives seeking to clear the land, in order to replant new coconut trees, as quickly as possible.

+ Disaster Risk Reduction and Build Back Safer messaging was provided for a wide range of actors in the reconstruction process: beneficiaries, local carpenters and contractors.

Materials in the Recovery Shelter Kit	Units	Quantity
Framing kit, coco-lumber, 2"x3"	Board feet[4]	230
CGI sheets (roofing)	pcs	12
Ridge rolls (roofing)	pcs	3
CW nail #2 (fixing kit)	kg	1.5
CW nail #3 (fixing kit)	kg	1.5
Umbrella nails (fixing kit)	kg	3
GI wire #16 (fixing kit)	kg	2
Nylon rope, diameter 10mm (fixing kit)	m	30
Claw hammer, 13" (tool kit)	pcs	1
Combination plier, 8" (took kit)	pcs	1
Aviation snips, 10" (tool kit)	pcs	1
Crow bar, 18" (tool kit)	pcs	1
Handsaw, 20" (tool kit)	pcs	1
PVC pail, 12L (tool kit)	pcs	1
Shovel pointed #2 (tool kit)	pcs	1
Elasto-seal (tool kit)	pcs	1

[4] The board foot is a specialized unit of measure for the volume of lumber, and it equals 1ft x 1ft x 1in.

Local people cut fallen coconut trees into planks with chainsaws (Guiuan).

WEAKNESSES

- The choice of coco-lumber, with its shorter lifespan, was not always appropriate for the shelters with a lifespan of longer than five years.

- Disaster Risk Reduction trainings tended to prioritize only measures for strengthening roofs, rather than giving equal emphasis to all parts of a house.

- It was difficult to forecast eventual reductions in the availability of the coco-lumber, leading to delays in delivery in the later months of the programme.

- Some field offices were less adept at establishing partnerships, leading to a **lack of WASH support** for some shelter beneficiaries.

- Under-calculation of the needs for logistics, procurement and finance systems and staff, during the programme scale-up, meant that these support departments were often playing catch-up after the field implementation teams.

LEARNINGS

- **Flexibility is the key to scaling up solutions** to meet needs, after large-scale natural disasters.
- **Talking in terms of wider livelihood impacts can go a long way** during engagement with a range of different national and local authorities, as well as with the beneficiary communities themselves.
- **Assisting the affected communities and local authorities in their recovery,** working in partnership, enabled the organization to effectively deliver the assistance in a timely manner.
- **There was a significant gap in documentation and knowledge management,** although the organization had extensive experience in disaster response prior to Haiyan, including in the shelter sector. Based on this experience, **the organization developed detailed Standard Operating Procedures to guide future shelter programmes.**
- **Adding small quantities of other, thicker, dimensions to the kit,** (e.g. 2"x4" or even 2"x6") might be appropriate for future versions. In fact, some beneficiaries have re-used lumber from the kit for other purposes, including the bracing of walls or the construction of toilet superstructures.

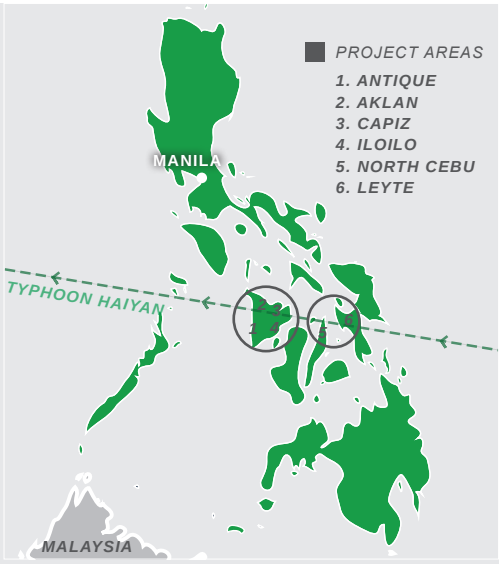
The project distributed timber from fallen trees for various shelter interventions.

CASE STUDY

PHILIPPINES 2013-2015 / TYPHOON

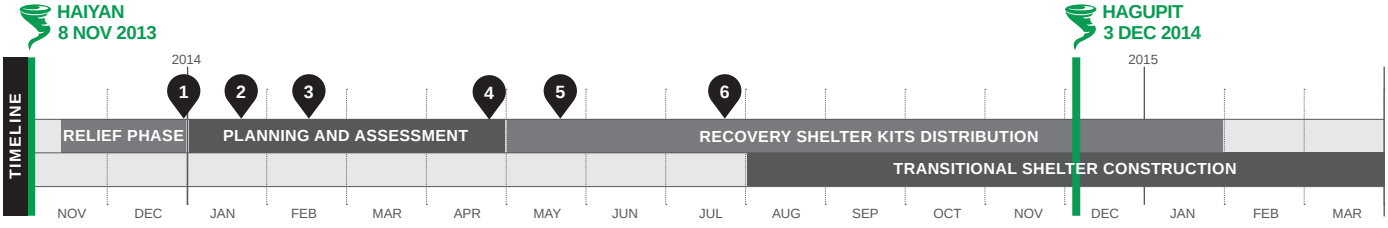
KEYWORDS: Emergency shelter, NFIs, Transitional shelter, Multisectoral, Training, Community participation

CRISIS	**Typhoon Haiyan (Yolanda), 8 November 2013.**
TOTAL HOUSES DAMAGED	**518,878** partially damaged **493,912** totally destroyed
TOTAL PEOPLE AFFECTED	**3,424,593** households (16,078,181 persons).
PROJECT LOCATIONS	566 barangays in 48 municipalities in 6 provinces in Central, Eastern and Western Visayas: **Leyte, North Cebu, Iloilo, Aklan, Antique and Capiz.**
BENEFICIARIES	**19,550** households (Relief phase). **16,585** households (Recovery phase, shelter support, plus 13,450 individuals with awareness and training in shelter and Build Back Safer).
PROJECT OUTPUTS	**19,550 shelter relief kits** (tarps + ropes), 6,313 kitchen sets, 47,875 NFI kits (blankets, mosquito nets, mats). **15,700 shelter recovery kits** and materials for latrine construction. **885 transitional shelters** built with latrines. **160 workshops** on Build Back Safer and 450 carpenters trained and received tools.
SHELTER SIZE	**19.4m²** (size of the transitional shelter).
SHELTER DENSITY	**3.9m² per person** (Based on national average household size of 5).
MATERIALS COST	**USD 400** per household for the shelter recovery and tool kit. **USD 3,500** per household for the transitional shelter (excl. latrine, incl. labour).
PROJECT COST	**USD 460** per household, for the relief phase.



PROJECT SUMMARY

The shelter programme spanned from relief to recovery within an inter-sectoral response. It assisted people across a wide geographical area, with activities such as: material distribution (shelter relief items, NFI kits and shelter recovery materials), transitional shelter and latrine construction, community awareness raising, technical assistance and certified training for carpenters.



1. 31 Dec 2013: **Shelter relief items distribution completed.**
2. Jan 2014: **Shelter recovery strategy developed, market assessments and decision on direct procurement.**
3. Feb 2014: **Shelter kit defined.**
4. Apr 2014: **Beneficiary selection process and Build Back Safer trainings completed.**
5. May 2014: **Temporary shelter design completed**
6. Jul 2014: **Carpenter training completed.**

STRENGTHS

+ High participation and accountability to affected populations.
+ Build Back Safer trainings were well received.
+ Construction trainings to carpenters enhanced their skills and income opportunities.
+ Effective management of beneficiary data.
+ Particular attention and response to vulnerabilities.

WEAKNESSES

- Limited coverage.
- The recovery capacity of communities could have been strengthened.
- Only 50% of beneficiaries actually used the materials received for repairs after four months from the distribution (source: PDM).
- Recruitment difficulties delayed implementation.
- The integrated approach was not implemented very effectively.

SITUATION AFTER THE TYPHOON

For an overview of the situation before and after the disaster, and the national shelter response, see overview A.23 in Shelter Projects 2013-2014 and overview A.8 in this edition.

At first, typhoon-affected families settlement options were classified as follows: (1) remaining in damaged homes; (2) host families; (3) evacuation centres; and (4) formal or informal camps. In an initial displacement survey, close to 90% of evacuees reported their willingness to return home if provided with assistance, demonstrating that resource provision for self-reconstruction could be a quick way of decongesting displacement sites and accelerating recovery. Notably, many families had no legal land title or right to reside where they lived.

Shelter was a priority need both in the relief and recovery phase, followed by livelihoods and food, as shown in a baseline survey conducted by the organization. Particularly, 77% of surveyed households reported that receiving materials for repairs was their preferred solution to shelter needs, followed by daily labour opportunities (19%), longer-term employment (16%) and land tenure security (9%) amongst others.

PROJECT PHASES AND COMPONENTS

Using shelter as an entry point for a wider inter-sectoral approach, this programme covered both the emergency relief phase (mainly with distribution of shelter and NFI kits) and the recovery phase, where the response focused on two major outcomes: shelter – delivered mainly through distributions and technical assistance – and livelihoods, through certified trainings[1]. These further tied into the integrated approach of the response, where target communities benefited from trainings and multisectoral interventions in areas such as WASH, Health and Education.

COORDINATION

The organization was actively involved in inter-agency assessments[2]. The Liaison Officers and Sector Specialists continued to represent the organization at the national, provincial and municipal coordination meetings, wherein sharing of technical information and 4W data[3] facilitated decisions on the nature of responses and operational areas.

TARGETING OF LOCATIONS

Municipalities and barangays (villages) were selected based on organizational tools[4], which used the following formula:

Need = extent of damage x intensity of damage x pre-typhoon vulnerability.

The tools relied upon publically available data, allowing the response team to gain a clear picture of the areas in need and how resources should be allocated. After shortlisting the locations, consultations were held with local authorities due to their local knowledge, as well as using data from the Cluster on other organizations' activities, to avoid duplication of efforts.

[1] Trainings were certified by the Technical Education and Skills Development Authority, http://www.tesda.gov.ph/.
[2] Namely, the Multi Cluster Initial Rapid Assessment (http://bit.ly/2lXnXvv) and Children's MIRA (http://uni.cf/2kB9mFC).
[3] The 4W is an information management tool capturing What activities are implemented, by Whom, Where and When during a humanitarian response.
[4] The Overview of Affected Municipalities (OAM) and the Barangay Prioritisation Tool (BPaT).

The project prefabricated trusses and built transitional shelters.

BENEFICIARY SELECTION

Selection criteria were developed in consultation with community leaders and members and validated by the organization. A participatory and inclusive approach in the selection was adopted to reduce tensions and not to exacerbate existing problems amongst community members, as not all affected households within a barangay could be assisted.

Priority was given to the following groups: the elderly, women, people living with disabilities, female- and child-headed households, internally displaced people and those with totally damaged houses, along with additional vulnerability criteria.

Once compiled, the barangay committees displayed the beneficiary lists for community evaluation and addressed the feedback through several rounds of consultation, to ensure that all were largely satisfied with the process.

PROJECT IMPLEMENTATION AND TEAM STRUCTURE

The operational area was divided into zones where similar activities were implemented, and the same organizational structure was used in each area. The relief-phase blanket distribution was directly handled by the Supply Chain Management and Accountability teams. Then, during the recovery phase, a sector expert (Reconstruction Manager) coordinated three international construction specialists (designated to each zone), who were managing hardware sectoral interventions (shelter/WASH/infrastructure). Each zone had a team of engineers and architects who, based on experience, were assigned responsibility as municipal focal points or technical officers. Each zone had a minimum of six personnel in the shelter team, all reporting to the construction specialist.

Overall, approximately 25 engineers were working in the implementation team for the beneficiary selection process, material distribution, transitional shelter construction and technical assistance phases. Throughout the recovery phase, the sector technical team (both in the field and headquarters) were supported by the Supply Chain Management and Accountability teams. Engineering Design and structural calculations for the transitional shelters were carried out by professional volunteers, deployed by an engineering non-profit organization.

LAST MILE MOBILE SOLUTIONS

The organization adopted an innovative digital technology for the registration and tracking of all beneficiary data for distributions, which provided real-time tracking, remote data collection and management, significantly reducing registration times and inefficiencies, along with systematizing reporting processes[5]. This technology was used to issue a barcoded ID card for each head of household and was adopted for all distributions. The organization had in-house expertise with the system, so it was easier to roll out, build capacity and get the required equipment.

[5] For more information, visit http://bit.ly/1TzqD8K.

LAND OWNERSHIP

The majority of beneficiaries had lived in the same location for many years, in some cases across generations, based on informal agreements. Thus, consultation was held with community members, barangay leaders and beneficiaries, to ensure there would not be threat of eviction. Many landowners expressed no problems with beneficiaries rebuilding in the same location, as long as the structures were not permanent. **Barangay leaders undertook the responsibility** of resolving issues and negotiating on behalf of the beneficiaries, should any land issues arise. **MoUs were also signed with the municipalities, barangays and beneficiaries,** indicating the leaders' responsibilities and that should a beneficiary relocate, they would disassemble the structure and reuse the materials elsewhere. As a result, during the implementation period, minimal complaints were received on land issues.

INVOLVEMENT OF AFFECTED PEOPLE

Affected people were engaged from the assessment up to the evaluation stage. They identified their top priorities and ways of addressing them through participatory workshops. The beneficiary selection and feedback mechanism allowed the whole community to engage with the project processes. Storage spaces for the materials during distribution and construction was provided by the barangay, and the community as a whole was responsible for the safety of the materials. Beneficiaries monitored the progress of construction of their own transitional shelters, ensuring any contracted labour completed the work to standard. Barangay members were allocated the responsibility of monitoring the overall self-reconstruction progress across the villages, for those using the shelter kits.

DISASTER RISK REDUCTION COMPONENTS

Most of the affected population resided in geographical locations which are prone to natural hazards, such as river banks, the coastal belt and areas subject to flooding. As a result, **DRR and climate change adaptation was a focus throughout the response** and local authorities and relevant partners were actively engaged. The Build Back Safer training and messaging were made available at the barangay halls for further reference to all community members, not only direct beneficiaries. The design of the temporary shelter was developed in close consultation with community members, and **pilot shelters were first constructed** directly by the organization, to show best practices and serve as a model to be replicated. Specific guidance was also provided on **land selection and site planning,** to encourage people living in unsafe areas to be informed on how to identify and negotiate for safer locations.

The Build Back Safer principles that were most commonly adopted by the beneficiaries during the repairs were: construction of a simple-shaped shelter (77%), identification of a safe location (71%), use of strong joints (62%), bracing (60%) and good roofing (53%).

Additionally, **a local-level advocacy approach** was used to increase dialogue between ordinary citizens and relevant government entities which provide services to the public, aiming to improve the implementation of national DRR policy at the municipal level.

MAIN CHALLENGES ENCOUNTERED

LOGISTICS AND QUALITY CONTROL. The logistics team was stretched due to the widely spread operational areas and the extent of the shelter response, as well as that of the other sectors' activities. In addition, materials' quality control required extensive commitment and resources. It was initially difficult to find staff with appropriate skill sets to meet these challenges.

SUPPLY CHAIN MANAGEMENT. The slow recovery of local businesses, the high demand of construction materials and climatic conditions affecting the transport route, all impacted the overall delivery of the programme. In addition, a shortage in supply of good coco-lumber and bamboo strips further affected the programme.

AVAILABILITY OF RESOURCES. Although the programme was designed in close consultation with community leaders and beneficiaries, **not all families managed to rebuild their damaged homes** with the assistance provided, mainly because they lacked necessary materials. For those who were unable to build by themselves, **the main challenge was to find the resources** required to hire skilled labour or to purchase additional material. This was mainly due to a lack of alternative funding options, particularly because of the delay of the government's cash assistance, which was originally anticipated to complement the shelter initiative.

CLIMATIC HAZARDS. In December 2014, Typhoon Hagupit made landfall just north of Leyte, followed by series of others storms. **Vital roadways were blocked by landslides, road slips, or washed-away bridges.** The damage to infrastructure, coupled with the staff being deployed to other emergency responses, caused resources to be stretched and generated delays in this programme.

WIDER IMPACTS OF THE PROJECT

In the later stages of the response, the barangay disaster management committee and the trained carpenters were provided further Build Back Safer training, so that they could continue to deliver similar trainings in their communities and monitor the building of houses and structures. **These trainings served as a replicable approach** that could be used in other communities.

Safety measures for construction workers were emphasized throughout the programme, and all staff with access to beneficiaries were briefed on **Child Protection and Prevention of Sexual Exploitation and Abuse** protocols. Community briefings on **contractual obligations** of contractors and workers and **site protection measures** (such as site demarcation to avoid children wandering around the construction) were also carried out, so that there would be a base for community monitoring and mutual accountability. Although new in the communities, it was agreed that this approach would be adopted for future construction activities.

The project included distributions (North Cebu, left) and built model structures for Build Back Safer trainings delivered to communities (right).

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ High community participation and accountability to affected populations. The exhaustive community consultation ensured that **all voices were heard and responded to.** The feedback received was also used to **refine interventions and take corrective actions** when needed, regarding scheduling of activities, quality of materials and workmanship.

+ The Build Back Safer trainings were well received by all sections of the community, who participated actively and were interested to learn more. Further, carpenters from the community were involved in developing the model structures and trainings, which gave them an opportunity to demonstrate their newly acquired knowledge and skills.

+ Construction trainings provided to carpenters substantially enhanced their skills and their income generation opportunities, as they were certified by a government authority.

+ Effective management of beneficiary data from registration to delivery, monitoring and timely reporting, thanks to the use of the digital Last Mile Mobile Solutions technology, which allowed a streamlined multisectoral response.

+ Particular attention and response to vulnerabilities. For example, latrines were constructed in such a way that privacy and security were guaranteed for all users: no gaps in the lower portion of the walls, provision of locks and within close proximity to individual shelters. During distributions, vulnerable persons, such as the elderly and women with nursing children, were the first to receive provisions.

Items in the shelter recovery kit	Unit	Quantity
Tools 20" or 22" Handsaw, Claw hammer, Tape measure (3m), Shovel, Machete, Hoe or Pick Mattock, Crow bar, Tin snips, Chisel.	pcs	1 each
Gloves	pair	2
Shelter materials 10ft length, 4mm Corrugated Galvanized Iron sheets; 10ft length, 4mm CGI ridge roll, 18" wide; 4", 3" and 2" common wire nails; Umbrella nails, twisted shank; 4"x4"x12" Coco-lumber; 2"x4"x12" Coco-lumber; 1/2"x4'x8' marine plywood.	 sheets pcs kg kg pcs pcs sheets	 12 2 3 + 2 + 3 2.5 4 12 6

WEAKNESSES

- Limited coverage. As the response targeted only totally damaged houses, entire populations were not reached. On one hand, the needs of the most vulnerable in the selected barangays were largely met, despite limited resources. On the other, **there was the potential for a wider impact** in the communities if the organization had advocated through the cluster for other agencies to support the families who were not reached by this programme.

- The communities' existing capacities were not well identified early on and incorporated into the programme. There were regional variations in the rate of recovery, demonstrating the absorptive and adaptive capacity of different communities and revealing the need for contextual interventions. **This transformative capacity could have been strengthened** through increased collaboration with community members or advocacy with local government and NGOs. This was confirmed in the monitoring and evaluation phases, wherein barangays with community mobilizers had a higher percentage of houses repaired or rebuilt.

- Despite the target beneficiaries having totally damaged houses, **post-distribution monitoring found that only 50% of them had actually used the materials received** to carry out repairs on their homes (four months after the distribution), while the rest mainly stockpiled the materials. Additionally, the majority of materials for latrine construction (for those where works were pending or on-going) were stockpiled or used for shelter repair, whilst a number of beneficiaries who sold latrine materials, used the proceeds to buy additional materials for shelter repair. The organization assumed that the government's emergency cash assistance would facilitate material purchases and payment of labour, though this did not happen in a timely manner. **Increased advocacy with the government (through the cluster) on the complementarity** of responses would have helped.

- The integrated approach was not implemented very effectively, requiring multiple assessments, beneficiary lists and numerous rounds of distributions and community meetings, due to the limited understanding of how to operationalize such approach to meet shelter, livelihood and food security needs. Ultimately, it was not clear how the multisector intervention contributed to overall recovery.

LEARNINGS

- To ensure a timely shelter response, **adequate planning** for the pre-positioning of goods and contracts, **streamlining procurement and administrative processes, and improving distribution systems** must be undertaken, particularly in contexts where disasters are likely to happen cyclically.
- **It is important to allow sufficient time for the roll out of shelter activities,** so that continued technical assistance can be provided to households and **closer integration of shelter and WASH interventions** ensured. Operations could have been more effective if distribution, technical assistance, monitoring and site planning were carried out as a single unit.
- **Managing expectations.** While trying to achieve programmatic objectives, engagement and communication with households who were not selected for support was necessary.
- Cash-based and livelihood programming can enable income generation, which can then be invested in asset building. In this case, **better complementarity of the livelihood programme with the shelter component** would have facilitated the reconstruction efforts.
- In terms of community level cohesion, it was noted that **capitalizing on the "bayaninhan" system of community support and cooperation** was vital to the effectiveness of the programme.

CASE STUDY

PHILIPPINES 2013-2015 / TYPHOON

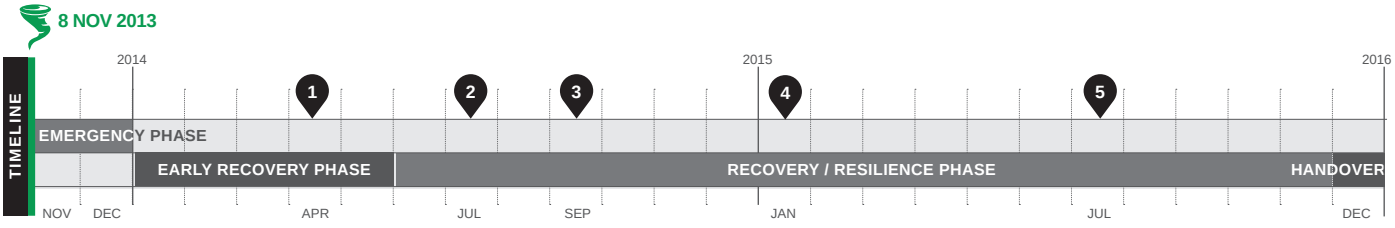
KEYWORDS: Multisectoral, Resilience building, Core houses, Community participation

CRISIS	**Typhoon Haiyan (Yolanda), 8 November 2013.**
TOTAL HOUSES DAMAGED	**518,878** partially damaged **493,912** totally destroyed
TOTAL PEOPLE AFFECTED	**3,424,593** households (16,078,181 persons).
PROJECT LOCATIONS	11 barangays spread across two distinct regions: **Guiuan (Eastern Samar) and Coron (Palawan).**
BENEFICIARIES	**3,197** households (16,209 people).
PROJECT OUTPUTS	**1,028 houses** (668 new houses and 360 repair). **505** individuals trained in hazard-proof construction. **744** houses with improved sanitation.

OTHER OUTPUTS	**41 community managed projects,** which included: an estimated 100,000+ paid labour days for implementing community projects; 49 livelihood groups capacitated; 20 livelihood projects funded; 72 water interventions constructed; 6,000km^2 cultivated for vegetable production; 42 community registered organizations continuing beyond programme life.
SHELTER SIZE	**11.5-23m^2** (sizes varied as beneficiaries could choose from different designs).
SHELTER DENSITY	**Average of 4m^2 per person** (Based on national average household size of 5 and average shelter size of 20m^2. Yet size/densities were ultimately determined by community needs based on direct consultation).
MATERIALS COST	**USD 2,250** per household on average, including a latrine (Most families also contributed salvaged materials or other resources to expand upon the basic core shelter design).
PROJECT COST	**USD 2,550** per household on average.

PROJECT SUMMARY

This community-led resilient recovery programme supported remote indigenous communities on sectors including shelter, infrastructure, livelihoods, WASH and Disaster Risk Reduction. The projects adopted an integrated approach, taking shelter as an entry point for area-based programming and then expanding to a broader programme of community resilience-building. The different offices were given flexibility on implementation within a common principle of maximizing communities' agency. Communities were allowed to manage their own funds, planning and implementation of the activities.



1 Apr 2014: **Households assessments begin**

2 Jul 2014: **First Infrastructure and Housing Projects start**

3 Sep 2014: **First houses completed**

4 Jan 2015: **Livelihood Projects start**

5 Jul 2015: **Water Projects start**

STRENGTHS

+ Adaptable and contextual programme.
+ Communities and households were given full control.
+ Capacity-building and technical advice supported the owner-driven approach.
+ Recovery programming successfully transitioned into development issues.
+ Early projects that served the whole community won their trust.

WEAKNESSES

- The development of new methodologies was not adequately documented.
- Alignment of programmes in distant areas proved challenging.
- Engagement with the local government was difficult.
- Recruitment difficulties delayed implementation.
- The scope of the programme could have been expanded to cover more communities.

Shelters were constructed as a way to build community resilience.

Household mapping exercises were done with communities.

CONTEXT

For an overview of the situation before and after the disaster, and the national shelter response, see overview A.23 in Shelter Projects 2013-2014 and overview A.8 in this edition.

The communities targeted by this programme spread across distinct geographic regions of the country, encompassing a variety of contexts, including regions affected by recurrent extreme weather, marginalized indigenous communities and remote small island communities. All were known to be impacted by climate-induced hazards.

SITUATION AFTER THE TYPHOON

Needs varied by region. The town of Coron was not severely affected, so supply lines were established rapidly and those who could afford them purchased basic items in town. Two months after the disaster, the market was almost back to normal.

The organization conducted a Multisector Initial Rapid Assessment in Coron immediately after the typhoon, determining that 18% of houses were destroyed and 23% were severely damaged. In another early assessment, community members indicated that they were not familiar with resilient construction techniques (due to the significantly less frequent occurrence of typhoons in the western regions). In addition, they were observed to suffer from a number of small-island development issues, ranging from poor access to education, to water shortages and coastal livelihoods threatened by climate change.

Most affected were the coastal fishing communities, whose means and sources of income had been destroyed or damaged to a large extent. Also the physical damage to houses, schools and other communal facilities was greater in coastal communities, which were already in vulnerable positions before the typhoon.

RESILIENT RECOVERY APPROACH

The programme followed a “resilient recovery approach”, using and strengthening available capacities in the communities as much as possible. This focuses on organizing the communities around the common goal of resilience building, beyond strengthening their physical environment (e.g. shelter and infrastructure) and including livelihood groups, new knowledge and increased social capital and organizational capacity.

The approach allows for local people to exchange knowledge and encourages the community to analyse why buildings collapse and how to make them stronger. Ultimately, it encourages programme design to take place together with its “clients”, in order to properly meet their needs – involving communities in meaningful decision-making, engineering shelters together with local builders and not forcing a “one size fits all” design.

LOCATIONS AND BENEFICIARY SELECTION

The geographic regions were chosen strategically, to cover a broad sweep of contexts and to eventually pull in different sources of funding. Within those regions, early assessments helped target a combination of hard-hit and inherently vulnerable communities. **Within each community, the whole population was then targeted** for the integrated resilience approach, with projects such as health centres, water systems, sea walls, etc.

Detailed social and technical assessment determined which portion of the population was more or less affected by the typhoon and, specifically in regard to the shelter programme, those who qualified for housing assistance (destroyed or severely damaged home). Within these, **the final selection was made by applying vulnerability criteria** (defined by community groups during workshops) and voting. This process varied for each community. Broadly, facilitators aimed for the establishment of criteria by the community (e.g. elderly, single headed household, etc.) and then summed the voted scores for each potential beneficiary. However, in some cases, decisions were taken outside of this rigid framework. **Transparency meetings were established** to follow up on selection appeals, among other activities. Contentious selections did occasionally arise, usually due to pre-existing social conflicts within communities. In these cases, inclusive community meetings usually provided the best forum to resolve differences and reach consensus.

PROJECT IMPLEMENTATION

After initial distributions of emergency NFIs through local partners, the organization **focused on developing the resilient recovery programme** for a two year recovery phase, building on Disaster Risk Reduction (DRR) methodologies.

Shelter and community infrastructure needs were identified through early assessment and begun in the first year. This was then broadened out into **integrated programming including Livelihood, WASH, DRR and Health.**

Livelihood programming in particular became very important in addressing the impacts on the fishing communities and building towards longer-term economic resilience – both directly (e.g. Market Hub, Seaweed Cooperative, Rice/Fish/Fuel Resellers) and indirectly (e.g. community labour and logistics for all construction projects, local procurement of materials, boat landings to enhance trade). These projects were all implemented alongside existing activities, during the second year.

The organization was determined to **use a participatory approach**, granting communities agency and sense of ownership over the project outputs. Therefore, **the entire**

Examples of the houses built through the programme. Each household was free to adopt a different design, and manage the construction directly.

programme was designed to be delivered through conditional cash transfers, with community and households taking an active role in managing the projects, while being **supported by capacity-building and technical guidance from the organization.**

In early risk assessments, communities were facilitated to analyse their own risk, develop their own risk-proofing strategies, write their own project proposals and submit them to the organization for review and approval. For some elements of programming, such as infrastructure, communities were even given decision-making power over their total budget, deciding themselves which projects to invest in based on their value for money and impact towards resilience-building.

HOUSING PROJECTS

For the housing project, **a variety of contextual methodologies were trialled** in each different area. In the harder-hit eastern part of the Philippines, the projects focused more on meeting shelter needs, including the implementation of a repairs programme, while in the western areas the lesser urgency allowed for greater diversification of programming and funds.

In one project area, architects from the organization sat with each family and customized each house design based on the beneficiaries' preferences. In another, several housing types were designed based on community consultation, and the beneficiaries could choose from them. All house designs were drawn by a combination of architects and engineers, making sure to **adhere to local vernacular design, while meeting technical standards**. In particular, wind resistance required different standards between the East and West of the country, based on building codes and variance in typhoon wind speed.

Additionally, some areas employed a **cluster-based management of housing projects:** entire groups of families would progress through the cash tranches together, while in other areas beneficiary families were treated separately. This variety was experimental, but ultimately helped to contextualize the project for each area.

Once the projects begun, **communities and households would handle an unprecedented level of responsibility,** managing all the project funds, handling material procurement, record keeping, organizing logistics, hiring and paying their own labour force and managing construction. **A strict upholding of the cash tranche conditions** ensured that beneficiaries would follow the technical guidelines of the organization's engineers and build according to their typhoon resilient standards and designs. In the case of deviation from these conditions, or misuse of the funds, individual projects (or in some cases housing clusters) would have their tranche payments suspended. However, this turned out to be very rare (less than 5% of cases) and successful resolutions were always found.

Additionally, **a master-builder programme (practical training and on-site mentoring) was established,** to support the housing projects through to completion. Experienced local carpenters and masons were trained and contracted to manage housing clusters.

COMMUNITY ENGAGEMENT

To make all this possible, the organization had to support the communities with a **rigorous set of capacity-building workshops**, including on financial literacy, bookkeeping, management, construction and leadership. The organization put significant resources into hiring many community organizers and technical staff, as well as partnering with a local community-development organization to capacitate the staff.

Additionally, **a Transparency Strategy established tools and mechanisms to manage feedback and complaints**

within the community and resolve issues internally, while maintaining accountability. Features included regular **community meetings**, an anonymous **suggestion box** for dealing with potentially contentious issues, and **notice boards** to expand communication of messages (and in some cases even construction receipts) beyond those who attended meetings. When issues arose, they would first be dealt with at community level, and under certain circumstances escalated up, eventually to the organization's regional level, for external judgement. Only a few dozen cases ever reached this level, and supplementary facilitation was provided to avoid potential conflict.

Each project had community-assigned management teams with respective responsibilities, usually including a project manager, construction site foreman and treasurer. Roles were identified based on advice from the engineers and available funds within each project. Later in the programme, some large community infrastructure projects even experimented with **establishing community auditing teams.** This was particularly well received and led to less management problems and smoother running of the projects.

RACIAL DIVISION CHALLENGES

In Coron, indigenous leaders initially refused to work with the migrant communities. In the end, dialogue workshops and suspension of the programme worked to resolve differences and allow access to the whole population. However, this required the organization to adopt a more interventionist approach than usual. This reflects the conflict that sometimes arises between participatory approaches and organizational control.

KEY MESSAGES AND DESIGN SOLUTIONS

Building on the Shelter Cluster 8 Key Messages[1], **design details and safe building location were emphasized and demonstrated** through the construction features and site location of each house, rather than through a single prescriptive design, aiming towards replication by the larger community. In partnership with an international construction NGO, **these features were codified and made obligatory through a checklist** that was distributed to beneficiaries[2]. Compliance was checked through inspection by the primary organization's engineers and linked directly to cash tranche releases.

Following vernacular construction practices, all shelters were designed to be **core houses that could be expanded over time.** Supported by the livelihood components of the project, in time beneficiaries could raise the resources necessary to extend the structure, as is traditionally performed. While it is hard to control the quality of future extensions, the core house itself was designed to resist in the case of another typhoon, leaving each family with a hub from which to build back from.

While a better understanding of resilient building details was established, **the replication of such details outside of the programme was seen to be limited,** in light of the economic circumstances of each family. For example, while some people could afford extra nails to strengthen important connections, few were willing to invest in the relatively expensive bolts.

Community meetings included sessions on how to write project proposals.

MATERIALS SOURCING AND TRANSPORT

Being set in areas where markets were still functioning, **the projects granted responsibility to beneficiaries to procure locally,** according to pre-agreed specifications (included in the agreement between the beneficiary and the organization) **and transport their own materials to site**. By outsourcing the procurement and logistics burden, the beneficiary communities were given more choice and agency over the project and its implementation. This worked especially well in Coron where, spread across remote islands, community management of logistics utilized **local knowledge of the waters and transport routes,** making great savings in costs and efficiencies in the process.

The only point of concern was the **rare occurrence of illegal timber use from local forests.** Because of the superior quality compared to local timber markets, some beneficiaries were occasionally tempted to cut down forest timber, also to save on costs. In the end, this risk was mitigated by coordination with the government forestry department and local administration. The organization played its role by the fast and transparent suspension of projects where such cases arose, and warning against the practice of illegal procurement.

WIDER IMPACTS OF THE PROJECT

Improvements were made in community organization and project management, safety of houses, new and rebuilt community infrastructure, increased knowledge, income diversification and the re-establishment of local businesses. **The involvement of affected people in the programme ultimately enabled the communities to be safer and more resilient to typhoons than before.** The approach also helped communities organize preparedness plans supported by the Local Government Unit, national policies, laws and financing arrangements.

With the appropriate adjustments, and largely based on experiences from this programme, **the organization's Resilient Recovery Approach was used again**, most notably in Nepal after the earthquake of 2015.

[1] See overview A.8 and find the 8 Key Messages online at http://bit.ly/2IANU3F.
[2] Some of the contextually new features introduced to local communities included bolts on major connections (e.g. columns to trusses), bracing and cross bracing in the walls and roof, minimum numbers of nails for each connection, poured concrete pad foundations (as opposed to the less durable timber post foundation used locally), connecting the timber column dry footing to the foundations to withstand wind uplift forces, nailed blocking to fasten purlins to joists, and timber treatment for termite protection.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Adaptable and contextual programme that remained relevant in a changing environment, allowed by a flexible funding.

+ Communities and households were given full control over implementation funds and took on much of the responsibilities, allowing them to truly lead and take ownership of the project.

+ The focus on capacity-building and technical advice supported the owner-driven, community-managed, approach to become a success.

+ Recovery programming successfully transitioned into development issues and became the basis for long term community development programming.

+ Winning the communities' trust with early projects that served all, smoothed the way for participation and cooperation later on.

WEAKNESSES

- Time and resources to properly document the development of new methodologies **were not adequately allocated.**

- Alignment of programmes on different sides of the country proved challenging in some areas. Because ultimately the programmes developed quite differently, some systems and structures designed for one context could not be easily adopted for the other.

- Engagement with the local government was difficult, due to their limited capacity and the organization's community-focused, bottom-up, approach.

- Recruitment difficulties early on, specifically in relation to specialized roles such as engineers, delayed critical paths to implementation.

- In hindsight, the scope of the programme could have been expanded to cover more communities without compromising on quality. In balancing the quality vs. scale dilemma, smaller scale interventions were chosen, to maximize impact in the selected communities.

LEARNINGS

- **Conditional cash transfers can be an effective tool** for strengthening the owner-driven approach in shelter construction, while retaining quality control for the organization.
- **Communities can be capacitated to take on more responsibilities in shelter implementation.** Areas such as logistics and procurement can be managed by the beneficiaries, if training is provided and markets are functioning.
- In supporting self-recovery, **shelter programming should be used as a platform to promote broader learning** about resilient construction techniques and look beyond traditional shelter outputs.
- **Resilience Programmes require "smart baselines"** in order to evaluate beyond the programmatic outputs. Baselines should include elements of social assessment and aim to reflect knowledge, attitudes and behavioural change.
- Elements of typhoon-resilient house design will not be replicated if the materials go beyond the usual budget of homeowners (e.g. bolts vs. nails). **Sometimes, weaker (yet cheaper) alternatives should be used, in order to aspire towards replicability** and ultimately engender behavioural change.

The programme led to a variety of community-wide infrastructure projects and communal facilities, led by the communities themselves.

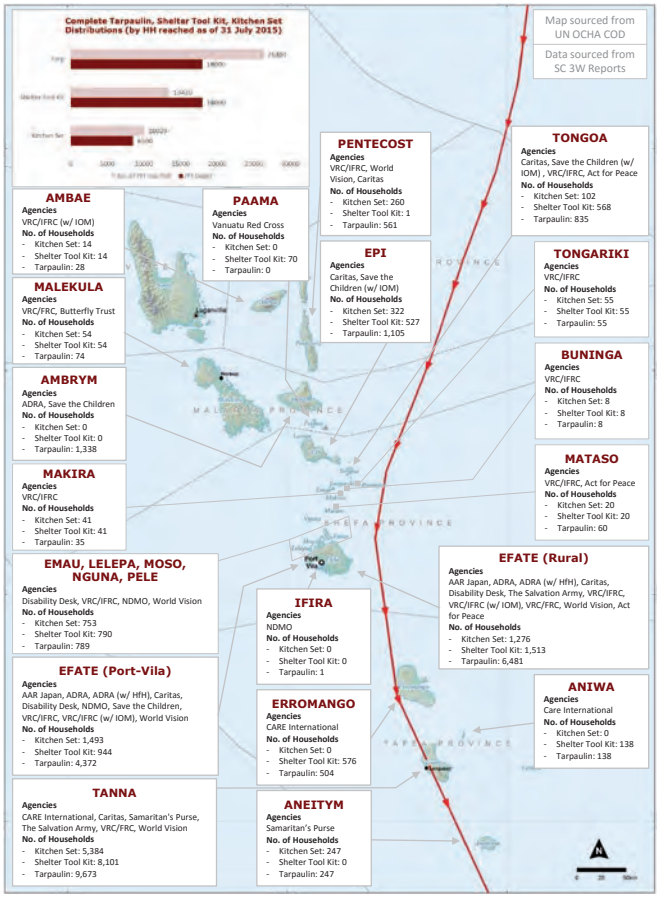
OVERVIEW

VANUATU 2015 / TROPICAL CYCLONE PAM

CRISIS	**Tropical Cyclone Pam, Vanuatu, 13 March 2015.**
TOTAL HOUSES DAMAGED	**16,256** houses: **8,155 damaged**; **8,101 destroyed.**
TOTAL PEOPLE AFFECTED	**188,000** people.
PEOPLE SUPPORTED	**26,304** households.
RESPONSE OUTPUTS (households)	**26,304** tarpaulins. **13,420** shelter tool kits. **8,215** safe shelter awareness. **6,783** fixing kits.

SUMMARY OF THE RESPONSE

On 13 March 2015, Category 5 Tropical Cyclone Pam struck the archipelago of Vanuatu. The government and various national and international organizations first responded with the delivery of emergency shelter items: tarpaulins, shelter tool kits and kitchen sets. The response then moved to supporting self-recovery and strengthening resilience through safe shelter awareness and fixing kits. The Shelter Cluster, activated for the first time in Vanuatu for this response, then remained active for preparedness as part of the Vanuatu clusters platform.



Map of shelter and NFI activities implemented by location, as of 31 July 2015 (Source: Shelter Cluster Vanuatu). The tropical cyclone cause extensive damage in several provinces, including Efate Island, where the capital Port Vila is located.

1. 14 Mar 2015: **Deployment of Shelter Cluster Coordinator** to support the Government of Vanuatu for the shelter response.
2. 22 Mar 2015: **First distributions** of emergency shelter materials.
3. 4 May 2015: Humanitarian Action Plan target of **18,000 households reached with tarpaulins.**
4. 15 May 2015: Shelter & Settlement **vulnerability assessment** completed.
5. 31 Jul 2015: **End of the humanitarian phase**, clusters coordination platform ended and transitioned to the Recovery Framework.
6. 17 Aug 2015: **Shelter Cluster response evaluation** to inform the effectiveness of the shelter operational response and the recovery and preparedness strategies following Cyclone Pam.

The cyclone affected public buildings as well as private ones.

CONTEXT

Vanuatu is a Y-shaped archipelago in the Pacific, with more than 80 islands and a population of 262,691 people – 80% of whom live on their land from generations and follow vernacular practices. It is among the countries with highest risks of natural hazards including cyclones, earthquakes, volcanic events and climate change[1]. The archipelago sits along a volatile seismic strip called the "Ring of Fire". The tropical cyclone season in Vanuatu normally runs from November to April. Throughout this period there is a high risk of strong winds and heavy rains with associated flooding, landslides and road closures.

In Vanuatu as elsewhere in the Pacific, traditional coping mechanisms help to significantly lessen disaster impacts. For example, the understanding of weather patterns and formation of clouds over the island, or the observations of sea birds, indicate impending strong winds, helping to alert local people to prepare adequately. **Such local response capacity has been reinforced through provincial disaster committees based in remote islands,** offering coordination and support at a more local level. Many Vanuatu inhabitants (*ni-vans*) are skilled at building or repairing their own dwellings and, therefore, a large percentage of the population live in self-built houses, made of natural materials that are available locally.

Recognizing its status as one of the most disaster-prone countries in the world, **Vanuatu has set up a national structure for disaster preparedness and emergency operations.** The cluster coordination mechanism was adopted by the National Disaster Management Office (NDMO) and the Vanuatu Humanitarian Team in 2011. The NDMO had contacted the lead agency of the Shelter Cluster within the Pacific Humanitarian Team three weeks prior to Cyclone Pam, to support the establishment of a Shelter Cluster, which did not exist within the existing cluster coordination platform in Vanuatu.

In some communities, NGOs have been working in partnership with NDMO to establish Provincial and Community Disaster Committees in order to facilitate the necessary training to enable them to monitor hazards (e.g. using cyclone tracking maps), mobilize or evacuate communities and conduct an initial assessment of the effects of the disaster.

SITUATION AFTER THE CYCLONE

The cyclone caused widespread damage across five provinces, its eye passing close to Efate Island in Shefa Province, where the capital Port Vila is located, with winds around 250km/hr, and gusts peaking at 320km/hr. According to the Government of Vanuatu, 188,000 people were affected by the cyclone. Various elements, such as community disaster preparedness, traditional coping mechanisms, early warning systems and access to evacuation centres, helped to prevent a higher death toll, with only 11 fatalities reported. Nevertheless, the cyclone had a devastating impact on many government and community buildings, infrastructure, forests, agriculture, water supply systems, and particularly housing. The Post Disaster Needs Assessment, conducted in June 2015, estimated that 8,101 houses were totally destroyed and 8,155 were partially damaged. Damage to housing represented one third of total monetary damages. **On some islands, more than 90% of houses were reported as damaged or destroyed.** Thousands of people were temporarily displaced to makeshift evacuation centres such as schools, churches and community buildings.

[1] Vanuatu ranks first in the WorldRiskIndex 2014 for its exposure to natural disasters: http://bit.ly/2hQXgTz,

Assessments of vernacular architecture were conducted in indigenous communities (here, in Tanna).

Unsurprisingly, **the buildings that suffered the most damages** were those outside traditional communities – mainly in informal settlements – that **were made of mixed traditional and modern materials and incompatible construction systems.** After Cyclone Pam, many of these were being rebuilt the same way as before, thus recreating (when not exacerbating) the same hazard vulnerabilities, due to a lack of proper materials, building know-how and financial resources[2].

NATIONAL SHELTER STRATEGY AND RESPONSE

Due to the impact of the disaster (almost 70% population affected), the National Disaster Committee, following receipt of damage assessment reports, decided that relief efforts had to be applied at all times on a fair and equal basis (according to needs), and to adhere to the government's "self-help" concept wherever possible. The use of cash to support self-recovery was not encouraged, due to cultural acceptance, weak markets in Port Vila, limited stock in country or a non-existent market on outer islands. Shelter and housing recovery had started rapidly, showing once again the resilience of *ni-vans*.

The Shelter Cluster became officially active for the first time in Vanuatu after the Prime Minister's Office assigned the Public Works Department to lead it with the support of the international agency identified before the cyclone. The Department of Local Affairs, the National Disaster Management Office and another international agency were closely supporting the Cluster, reflecting the inter-relatedness of humanitarian shelter and long-term housing issues. At its peak, the Shelter Cluster consisted of 23 partner agencies.

In response to Pam, the main goal of the Shelter Cluster was to support self-recovery through the provision of appropriate tools, materials and technical assistance. This was achieved primarily through the distribution of tarpaulins (to 26,304 households) and tools (to 13,420 households) during the relief phase. In addition, safe shelter awareness was provided to 8,215 households, fixing kits and construction materials to 6,783 households to complement the initiatives of the affected households to repair, retrofit or rebuild their dwellings, and make them more resilient to future cyclones and other natural hazards, by mainstreaming the Build Back Safer approach[3].

[2] For a similar situation see A.39 (Ecuador earthquake response overview).
[3] For more on technical specifications http://bit.ly/2illiE2

Households are composed of at least two dwellings, and include shared kitchens and communal gardens. Recovery had to take into consideration all these elements, not only one shelter.

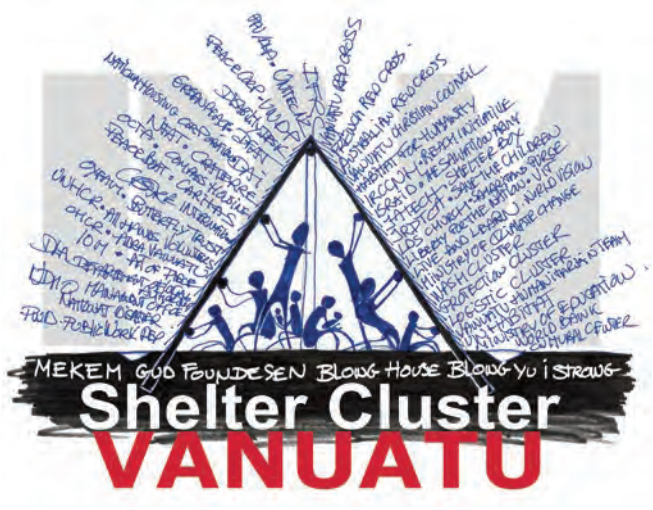
VERNACULAR ARCHITECTURE AND TRADITIONAL COPING MECHANISMS

A significant part of the resilience of Vanuatu is founded on vernacular shelter- and settlement-related knowledge, practices and coping mechanisms. These include specific construction materials, techniques and typologies that are a part of the traditional building culture, social organization and familial safety net that have been established over time. **A household in Vanuatu does not refer to one nuclear family living under one roof, but generally to an extended family,** i.e. consisting of a number of family members (parents and children) and relatives such as grandparents, aunts or uncles **living in a number of buildings in a communal setting.** Accordingly, the "house" is not just one building; it is composed of at least two dwellings with different purpose and design, usually centred around a communal kitchen, and it includes a garden. For example, in Tanna island the **community kitchens or meeting places are usually designed and maintained to be used as safe shelters** when cyclones strike. Men and boys hold down the wooden structure to add strength to the building, thus protecting women, children and other vulnerable community members. To promote and preserve the *ni-van* resilience, the government strongly supported the retention and promotion of this knowledge and practices.

In respect of the "do no harm" principle, humanitarian agencies did not build houses, but instead provided safe-shelter awareness and materials that explored ways in which modern construction can learn from, and be strengthened through, the lessons from the past. This also aimed to reactivate the fading knowledge for the new generations.

Cluster partner agencies conducted Build Back Safer shelter awareness sessions across communities, such as this one in Tanna.

When a community chief in Tanna was asked about the major challenge that his community was facing with housing, he replied "the introduction of western materials". When one agency provided safe shelter awareness to a remote community, based on agreed key messages by cluster partners and government, the elders told the youngest: "you see, we told you".



Shelter Cluster Vanuatu Cyclone Pam response branding. This illustrates the impressive resilience mechanism to cyclones and how it transfers to the response and coordination (Source: Shelter Cluster Vanuatu).

The Shelter Cluster had a Technical Working Group focusing on Build Back Safer awareness and developing a training framework with Vanuatu vocational training institutions.

LESSONS LEARNED AND WAY FORWARD

An inter-agency baseline assessment was completed five weeks after Cyclone Pam and an evaluation of the shelter response five months after the emergency, at the end of the humanitarian phase.

68% of households reported that they had received some kind of assistance.

76% were able to recover shelter materials from debris.

85% completed substantial repairs or reconstruction works to their shelter.

60% had made changes to their shelter-building techniques.

66% took preparedness measures to ensure that their shelter was safer in the event of another crisis.

The changes to building techniques most commonly reported by the households were the general strengthening of the building (46%), addition of bracing (32%), a change in the location of the shelter (31%), and changes to the foundation (31%).

Most of the housing in Vanuatu was built according to vernacular techniques.

Despite the demonstration of their strong resilience and capacity to self-recover from the cyclone, communities' vulnerability to potential new hazards remains high, as the recovery has been hampered by the impact of El Niño[4] and the subsequent significant time needed for the re-establishment of stocks of natural building materials, as well as political instability and the recent disruption to the tourism industry (due to substandard airport infrastructure).

Lessons from the response to cyclones Pam in Vanuatu and Winston in Fiji[5] demonstrate that **promoting Build Back Safer is critical to strengthen long-term resilience to natural disasters,** and this approach should be at the core of shelter response and preparedness. It would also help to learn from and support the reactivation of traditional knowledge, that is eroding due to a combination of factors, such as migration, urbanization and the passing away of elders.

These two responses in the Pacific context also demonstrate that the means to support affected populations' self-recovery and reconstruction should differ on a contextual basis and follow the "do no harm" principle. Resilience could in fact be hampered by inappropriate response, as for the case of cash-based interventions or the introduction of new materials and technologies to Vanuatu.

[4] The El Niño Southern Oscillation (ESNO) cycle is a scientific term that describes the fluctuations in temperature between ocean and atmosphere in the east-central Equatorial Pacific, with El Niño being the warm phase. These deviations from normal surface temperatures can have large-scale impacts not only on ocean processes, but also on global weather and climate. Source: http://bit.ly/1guBq5x

[5] See overview A.15, Fiji.

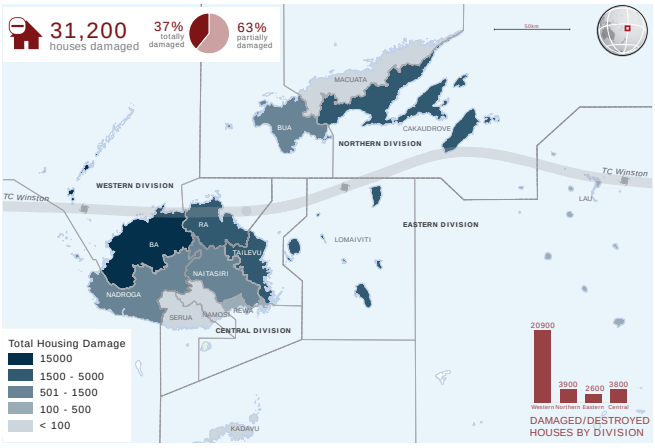
OVERVIEW

FIJI 2016 / TROPICAL CYCLONE WINSTON

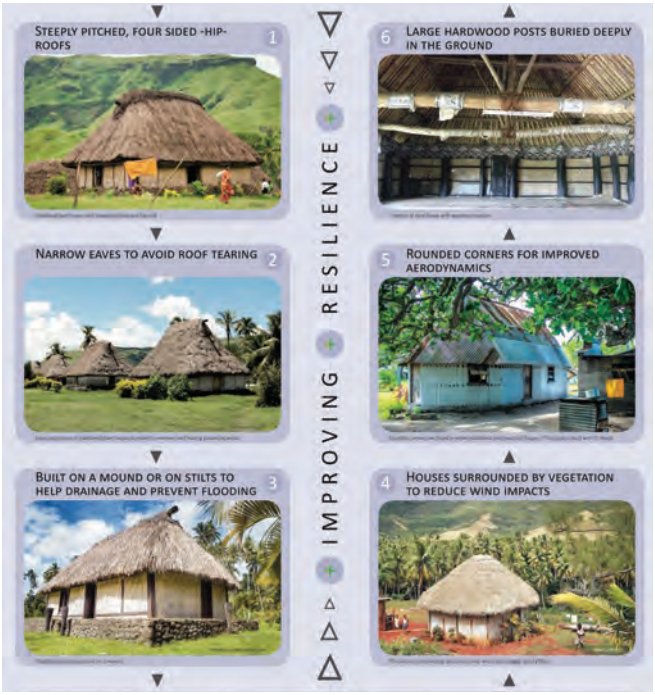
CRISIS	**Tropical Cyclone Winston, Fiji, 20 February 2016.**
TOTAL HOUSES DAMAGED	**31,200.** 19,700 (63%) damaged, 11,500 (37%) destroyed.
TOTAL PEOPLE AFFECTED	**350,000** people (Source: Government of Fiji).
PEOPLE SUPPORTED	**36,609** households.
RESPONSE OUTPUTS (households)	**36,609** emergency shelter items **24,505** vouchers for construction materials **1,671** safe fixing kits, construction material or repair assistance **110** core or transitional shelters **19,765** emergency safe shelter awareness **450** semi-skilled builders and carpenters trained on Build Back Safer

SUMMARY OF THE RESPONSE

Tropical Cyclone Winston hit Fiji on 20 February 2016. The emergency shelter response started with the distribution of shelter items by the government and various national and international organizations. The government response then moved to the dispersal of vouchers to access selected construction materials through hardware shops. Humanitarian agencies focused on training carpenters and homebuilders. The Shelter Cluster was re-activated, to help the coordination of the 30 organizations that contributed to the shelter response and the development of the Build Back Safer framework. Following the response, the government institutionalized the cluster system as a permanent mechanism for disaster management.

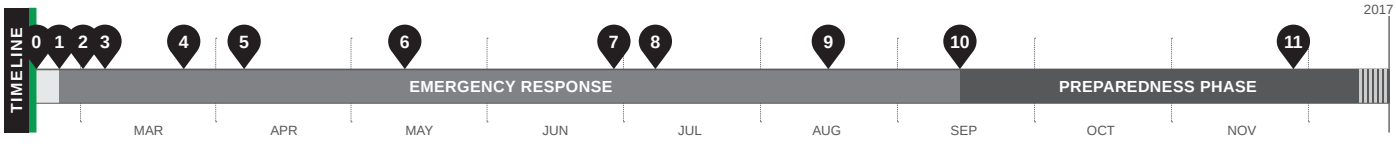


Storm Track and Housing Damage after Cyclone Winston (© Shelter Cluster Fiji).



Traditional housing construction was studied and included in posters and materials that informed the response and the subsequent preparedness phase (From Country Profiles/Fiji, produced by CRAterre for the Global Shelter Cluster).

20-21 FEB 2016



0 20-21 Feb 2016: **Tropical Cyclone Winston impact on Fiji and declaration of State of Natural Disaster.**

1 27 Feb 2016: **The Government of Fiji activates the Shelter Cluster.**

2 28 Feb 2016: **Deployment of Shelter Cluster Coordinator.**

3 3 Mar 2016: **Flash Appeal released requesting USD 5.3 million for the Shelter Cluster for a target of 112,800 people.**

4 21 Mar 2016: **Release of the Shelter Cluster Humanitarian Action Plan.**

5 9 Apr 2016: **Launch of the government "Help for Homes" initiative.**

6 10-12 May 2016: **Shelter Cluster "Training of Trainers" pilot on Build Back Safer.**

7 30 Jun 2016: **24,000 households received e-cards and ordered construction materials.**

8 8 Jul 2016: **Shelter Cluster lessons learned workshop.**

9 14 Aug 2016: **Release of the Build Back Safer framework including the 7 key messages.**

10 14 Sep: **Release of the Build Back Safer tips booklet, deactivation of the Shelter Cluster and handover to new co-leads with preparedness focus.**

11 30 Nov 2016: **Build Back Safer training for 450 carpenters and homebuilders completed, through construction of more than 110 core and transitional shelters in 77 of the most affected communities.**

Build Back Safer trainings were the key component of the Shelter Cluster strategy.

CONTEXT

Fiji is an archipelago of 332 largely mountainous islands of volcanic origin, of which 110 are inhabited low-lying atolls. Spread over 18,300km^2, its population resides primarily on the two largest islands, Viti Levu and Vanua Levu. Fiji is often in the path of tropical depressions and cyclones. While it is seen as a refuge from rising seas for the populations of low-lying neighbours, Fiji itself is not immune to the impact of climate change. Much of its population live on the coastal fringe, and all major cities and towns are either ports or seaside locations. Thirty-one per cent of the population lives below the national poverty line and around 140,000 people live in informal settlements – often in poor quality housing, with inadequate service provision, in environmentally marginal areas and with no legal security of tenure.

SITUATION AFTER THE DISASTER

The cyclone swept through the Fiji Islands as a Category 5 Storm, with wind gusts up to 325 km/hr. The government reported the cyclone had affected more than 350,000 people (40% of the population) across all four administrative divisions, damaging or destroying more than 31,200 houses. Shelter was identified as an immediate priority during the relief phase, when extremely strong cyclonic winds and multiple tsunami-like storm surges caused widespread damage and destruction. The government led the response and called for international assistance. A Flash Appeal was launched, but remained poorly resourced, with only two agencies funded for the shelter response, through the UN Central Emergency Response Fund, supporting only the delivery of emergency shelter items.

NATIONAL SHELTER STRATEGY AND RESPONSE

To coordinate the shelter response, the Shelter Cluster Fiji was activated, after having first been activated for Cyclone Evan in 2012[1]. The Ministry of Local Government, Housing and Environment led the Cluster, with the support of an international agency as co-lead. A coordination team was deployed to support the Ministry and the coordination of the 30 organizations that were contributing to the shelter response. **The goal of the Shelter Cluster was to support owner-driven recovery by investing in disaster preparedness and risk reduction,** while prioritizing the most vulnerable communities, families and individuals, with three objectives: 1) Provision of emergency shelter and Non-Food Items; 2) Support of self-recovery to repair and rebuild damaged houses with hardware or cash/voucher equivalent, and 3) Provision of technical Build Back Safer training, along with information, education and communication materials for skilled/semi-skilled carpenters and homebuilders[2].

By mid-September 2016, cluster partners, including the government, reached over 36,600 households with emergency shelter materials, including tents, tarpaulins, shelter kits and shelter tool kits; 19,765 households with emergency shelter awareness; and 24,505 with cash grants under the "Help for Homes" initiative. Due to the impact of the initiative and the lack of funding, **cluster partners shifted their priority and activities from objective (2) to objective (3) of the initial strategy,** which drove the response to technical assistance complementing the government's programme. Nine months after the cyclone, 450 carpenters and homebuilders were trained on Build Back Safer, through the construction of more than 110 core and transitional shelters in 77 of the most affected communities.

THE "HELP FOR HOMES" INITIATIVE

Two months after the cyclone, the Prime Minister launched the "Help for Homes" initiative, a USD 34 million voucher programme for affected households to access free shelter and construction materials. This programme provided financial assistance to more than 24,500 homeowners to help rebuild their homes themselves, including informal settlers. While this initiative was in line with objective (2) of the Cluster's strategy, it did not include any technical assistance component, and was only a push towards recovery.

The selection of eligible households was based on the damaged houses master list provided by the National Disaster

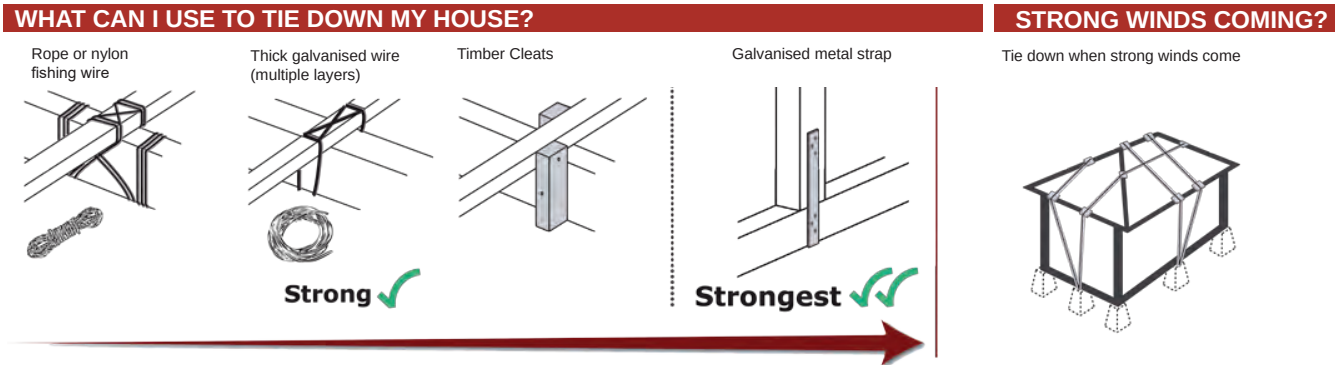
[1] See A.07 in *Shelter Projects 2013-2014*, for an example of a project in response to Tropical Cyclone Evan.

[2] See the cluster factsheet at http://bit.ly/2hrHFIS.

Strapping should be long enough to hold four (4) nails on each side. Note that the diagonal bracing is stretched tight and is wrapped around the frame at the ends. Note also the double top-plate to support the roof frame.

3. Tie down from bottom up & use strong joints - Nails are not enough

- Ensure that you have strong connections at all joints - the roof material to the roof timbers, the roof to the walls and the walls to the foundations.
- Each joints of your house must be reinforced with more than nails.
- Build every joint so it can't be pushed or pulled apart. Nails alone are not sufficient to hold joints together when subject to cyclonic forces. Strong connections can be made with cyclone straps, rope and wire.



A booklet was produced by the Shelter Cluster, including tips to Build Back Safer after natural disasters, presented through posters of key messages.

The Shelter Cluster Fiji conducted Build Back Safer training of trainers.

Management Office; targeting the affected Fijians households earning less than USD 24,000 a year. The Ministry of Women, Children and Poverty Alleviation took the lead role in the distribution of the pre-paid electronic cards across the affected areas, with the support of the Ministry of Finance and the Planning Office. The Shelter Cluster provided awareness on Build Back Safer through banners at distribution points and posters included in the information booklet that all households received.

The pre-paid electronic cards were provided with a set amount and a pin number to purchase building materials from hardware stores selected by the government. The following four grants categories were defined:

1) USD 720 for partial roofing damage;
2) USD 1,440 for serious roofing damage;
3) USD 2,880 for almost and completely destroyed houses;
4) USD 720 for families living in informal settlements in the affected areas, who had their homes totally or partially destroyed.

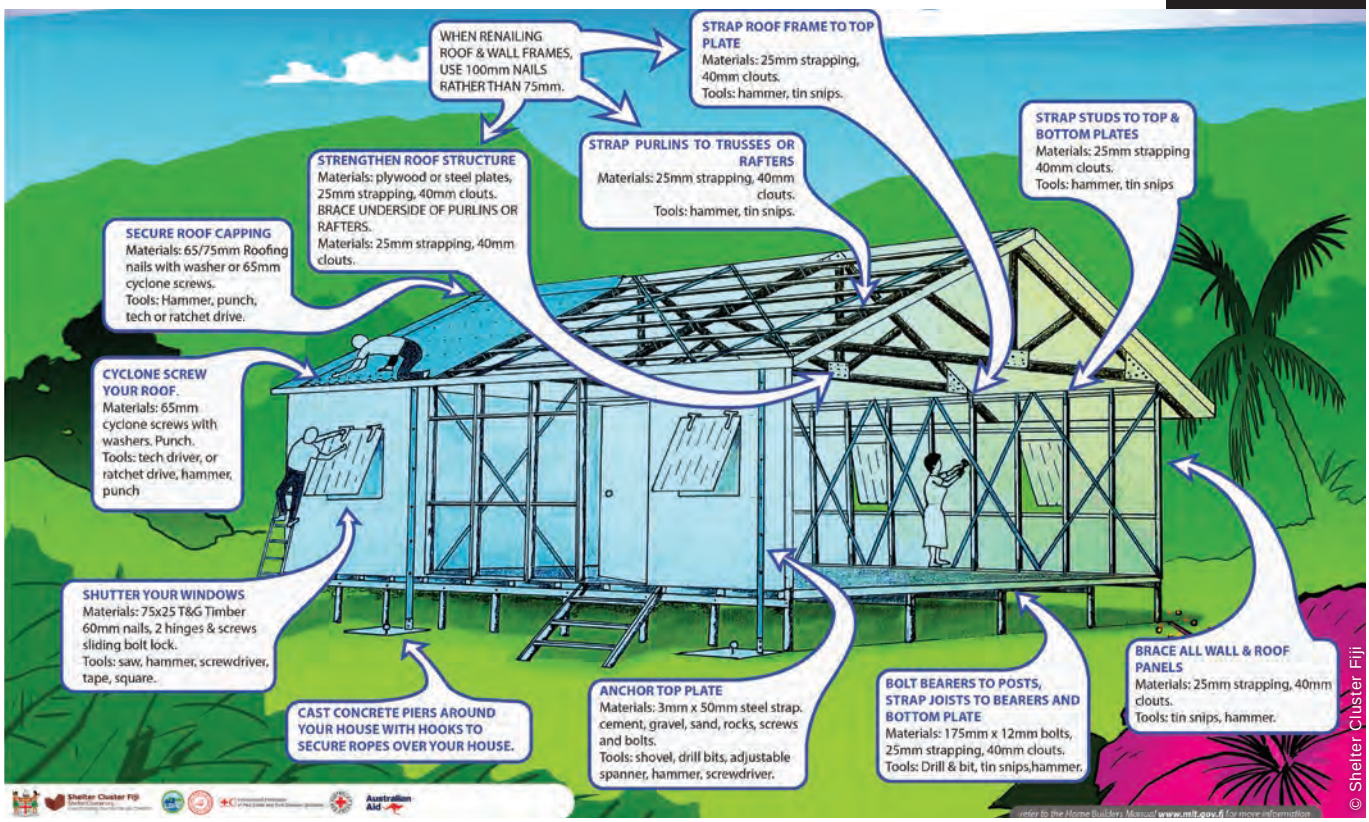
This assistance was only providing some construction materials, therefore labour and other additional costs had to be borne by the family. This programme allowed the selected households to order their construction material before the end of June 2016, but the hardware shops were facing understandable challenges to timely supply and deliver at community level such massive amounts of materials.

BUILD BACK SAFER APPROACH AND TRAININGS

Two months and a half after the cyclone, the main Fijian humanitarian shelter agency and the Shelter Cluster ran a three-day pilot **Build Back Safer "Training of Trainers".** This event allowed 20 staff and volunteers from humanitarian organizations and NGOs, church groups and vocational education institutions, to improve their skills on safer building techniques, as a preparedness effort for future disasters. This event also helped partners to discuss and understand what trainings at community level should encompass and what information and communication material to develop.

Carpenters' and homebuilders' understanding of safer construction methods was enhanced through "learning by doing", around the construction of a transitional or core shelter for one household in the village. **The trained community members would then be better able to support other households in the reconstruction of resilient shelters,** when they received their construction material from the "Help for Homes" initiative. While some households might have wrongly interpreted that the grant was sufficient to support the total cost to repair or rebuild their house, the trainings also aimed to highlight how not to sacrifice safety by stretching out partial assistance. Reinforced connections, bracing and protection of openings were the minimum essential components covered by the training.

During the three-day training, trainees (20% were women) completed the construction of a cyclone-rated core house. One vulnerable beneficiary was selected by the community to receive the house, on the understanding that the structure was to remain as a practical example for all community members to continue learning from. These trainings were



In this response, there was also a focus on how to retrofit existing structures to better withstand future hazards.

accompanied by educational material that portrayed in a graphic and clear fashion how to construct a stronger house, and remained in the community after the end of the training. The "hands-on training" was targeted at local carpenters and builders, many of whom had no formal qualifications, but nevertheless may have wide experience and work to a professional level. Within the framework of communal building, which is widespread in Fiji, these local builders have significant influence. Workshops conducted in one village can thus reach builders from all the surrounding villages.

KEY MESSAGES AND BOOKLET

Based on the pilot training and the outcomes of the Technical Working Group, the Shelter Cluster agreed on a Build Back Safer framework around training principles and seven key messages: 1) Site your house safely; 2) Build on strong foundations; 3) Tie-down from the bottom up and use strong joints – nails are not enough; 4) Brace against the storm; 5) A good house needs a good roof; 6) Leave nobody behind, and 7) Be prepared. While most of these messages were similar to other disaster responses[3], **the sixth was specifically addressing accessibility for people with physical impairments.**

Using existing and new posters, these messages were included in a new "Tips to Build Back Safer" booklet[4]. The first edition of the booklet (in English) was printed in more than 9,000 copies and disseminated to households and communities through trainings and other activities, such as distribution of construction materials. By the end of 2016, the booklet was also translated in Taukei and Fijian Hindi/Hindustani languages, to inform the ongoing response, as well as for countrywide preparedness.

[3] See A.3, A.8 and A.39 for other responses that adopted the same approach.
[4] The booklet was developed with the contribution of the Ministry of Housing, Fiji Institute of Engineers, main humanitarian shelter agencies, key donors, and representatives of the Fiji Business Disaster Resilience Council (including some of the hardware stores involved in the "Help for Homes" initiative). It is available at http://bit.ly/2igK37y.

LESSONS AND WAY FORWARD

It is recognized that, in the Pacific context, shelter responses to natural disaster should focus on promoting **Disaster Risk Reduction in support of affected populations' self-recovery efforts**. For Cyclone Winston, the Government of Fiji demonstrated its capacity to implement a large, shelter-focused, voucher programme at scale, supporting more than 75% of the households with a damaged or destroyed house, allowing them to access construction materials provided by the private sector. It is noteworthy that **this programme included support to informal settlers**.

Although it was swiftly implemented, this programme would have benefited from more investment and support in market analysis, at country and regional level, to support the timely delivery of materials, as well as for post-distribution, impact monitoring and learning for future disaster responses in Fiji and in the Pacific.

This type of approach requires **complementary investment in technical assistance**, in partnership with Shelter Cluster partners through Build Back Safer trainings and safe-shelter awareness. It should also include **support from other sectors,** such as WASH and livelihoods, along with considerations on accessibility, protection, logistics and other cross-cuttings factors.

Learning from the response to Cyclone Winston, the **shelter sector in Fiji is now better prepared** to respond to future natural disasters, with new technical guidelines and an agreed framework, including key messages, trainings and the booklet (available in the three main local languages). Based on the lessons learned from this and other recent natural disasters, **the government took the decision to make the Fiji clusters system permanent** in the disaster management cycle, as part of its new humanitarian policy, building on the successful Shelter Cluster transition from this response towards preparedness.

CASE STUDY

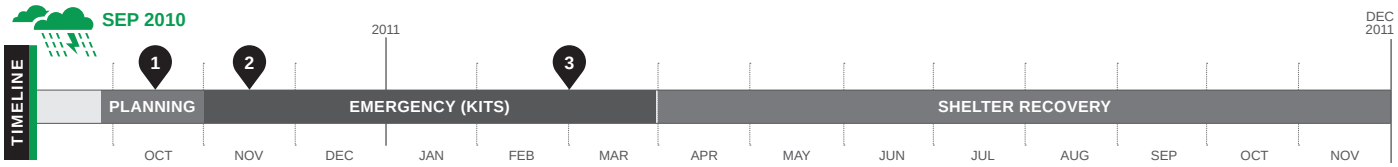
BENIN 2010-2011 / FLOODS

KEYWORDS: Emergency shelter, Host family support, Cash assistance, NFI distribution, Gender mainstreaming, GBV prevention and risk mitigation

CRISIS	**Benin Floods, September 2010.**
TOTAL HOUSES DAMAGED	**55,000**
TOTAL PEOPLE AFFECTED	**680,000** people.
PROJECT LOCATIONS	Benin, six communes: **Aguégué, Dangbo, Adjohoun, Bonou** (Ouémé department)**, Zangnanando and Ouinhi** (Zou department).
BENEFICIARIES	**5,072** households.
PROJECT OUTPUTS	**5,072 Emergency shelter kits** distributed. **31 Demonstration shelters** built.
SHELTER DENSITY	**3.5m²** per person (Average household size is 5).
MATERIALS COST	**USD 83** (Average per household + USD 30 cash distribution in parallel).
PROJECT COST	**USD 90** per household (including organizational overheads).

PROJECT SUMMARY

This project assisted over 5,000 flood-affected households in two phases, with a specific focus on reducing vulnerabilities of women and girls. In the emergency phase, shelter repair kits were distributed to support returns and host families, along with unconditional cash grants. The longer-term recovery phase involved a range of multisectoral interventions to support returnees to rebuild their villages, including cash for work, technical training on Build Back Safer, and dissemination of key messages on land tenure, WASH activities and awareness of Gender-Based Violence (GBV) issues.



1 Oct 2010: **Rapid needs assessment conducted**

2 Nov 2010: **First DRR/construction training**

3 28 Feb - 3 Mar 2011: **Assessment of GBV in target areas**

Flood waters damaged housing, land and other properties, and caused displacement of affected people to temporary sites and host families settings.

STRENGTHS

+ Assistance focused on self-recovery to avoid aid dependency.
+ Kits were designed to best suit the local context.
+ GBV assessment was undertaken.
+ Complaints mechanism was used to report cases of GBV.
+ Training on GBV awareness for community mobilizers and provision of referrals to service providers.
+ Shelter activities were complemented by WASH activities.

WEAKNESSES

- The response team did not include gender or GBV technical experts and field teams did not include gender officers.
- The beneficiary selection process delayed the operation.
- Lack of Housing, Land and Property knowledge.
- Lack of background information on cultural norms, gender relations and understanding of gender issues.
- Poor consultation and participation of village committees.

Tented camps were established for displaced people, near their villages of origin.

CONTEXT

Many villages in Benin regularly face flooding due to the rise of the Niger River, especially in areas where low-income housing structural vulnerability is very high. Homes are traditionally built with mud and wood, using designs and materials that have low resistance to water.

Nearly half of the population of Benin is under the age of 15, and major challenges are to be addressed in the improvement of the legal and political status of women in the country. Polygamy is a common practice, implicating around 35% of households in the flood-affected area.

Gender-based violence (GBV) is a widespread and deeply rooted problem in Benin[1], and can be exacerbated during times of crisis. According to a survey conducted by the Benin Ministry of Family and National Solidarity in 2009, up to 70% of women and girls in Benin have experienced some form of GBV. The most common forms of GBV in Benin include intimate-partner violence, forced and early marriage, rape and sexual harassment[2].

SITUATION AFTER THE DISASTER

Although there is regular annual flooding, the floods of September 2010 were the worst since 1963. They destroyed an estimated 55,000 houses and affected 680,000 people (8% of the population). Housing damage was largely caused by standing water, not the first impact. Most of the existing housing materials were not carried away by the flood.

Many people were forced to leave their homes to find shelter in collective centres or with host families, either outside of their villages or in non-affected areas. Three self-settled camps were also formed, where families built make-shift shelters.

GBV RISKS

As part of planning for the recovery phase, an assessment of the initial emergency distributions was carried out, to inform the long-term programming objectives. The results revealed a relationship between GBV risks and the vulnerable shelter conditions of the displaced populations.

[1] Benin GBV report July 2011, http://www.alnap.org/resource/10249.

[2] The Empower Project: Fostering Alliances For Action Against Gender Based Violence in Benin http://bit.ly/2j7poW7.

Loss of resources and livelihoods (especially women's) and the lack of safe and dignified living conditions heightened the vulnerability of affected populations and GBV risks. Other GBV risks were reported, linked to the incidences of excessive alcohol consumption, inter-family tensions, lack of safe spaces for girls and overcrowding. In addition, women in the camps reported an increase in intimate-partner violence and marital rape. Additionally, **there was a general lack of knowledge about where survivors of GBV could go** if they were abused, especially in more remote communities. Fear, shame, social stigma and distance to services also prevented survivors from seeking help and reporting cases of violence.

AREAS AND BENEFICIARY SELECTION

The project targeted flood-affected populations displaced in collective centres, host families, and self-settled or planned camps. The areas of intervention were selected because of their high level of vulnerability, existing relationships with the communities and the on-going work of local partners. The initial lists of eligible beneficiaries were submitted to the village committee (composed of the chief of village, elders and women groups) for revision, correction and validation.

Priority was given to households which had suffered the greatest housing damage and had the least access to food, with particular attention to: pregnant and lactating women; the elderly; female-headed households; children under five years old; and people living with disabilities.

Technical criteria were also used to target those people who had lost their houses and had little resources to repair or rebuild them. The families in collective centres were initially targeted with cash, due to the unsuitability of these buildings to provide safe shelter and to allow the school year to recommence. For families whose houses were located in flood risk zones, supporting reconstruction was not immediately possible, therefore there were many people in collective centres who did not want to leave.

EMERGENCY PROJECT IMPLEMENTATION

The emergency assistance phase, implemented with local partners, lasted for six months. Households were provided with unconditional cash support (through a local Micro Finance

The programme distributed kits during set dates, and people were responsible to transport the materials home.

Unconditional cash grants disbursed through this project were reported to generate tensions in polygamous households, as only one wife received the cash. Both men and women should have been better consulted during project design.

Institution) and distributions of shelter repair kits (building materials and NFIs). The kits were adapted to best suit the repair and reconstruction needs of each of the three main housing typologies (houses built on riverbanks, in valley regions and in the highlands), and responded to two central priorities:

- **To support return and to repair and rebuild** their damaged or destroyed homes;
- **To help ease the burden of hosting families** by supporting displaced families to **construct a temporary shelter** on the land of the host family.

The unconditional cash grants of USD 30 were intended to support people in leaving their emergency shelter and returning home where possible, and were subdivided in two tranches. The grant was given to the woman in the household who was seen as best placed to spend the money to meet basic needs of the family. Although not implicitly given for shelter support, the cash meant it was easier for families to restart their lives and could be spent on shelter materials, if this was a priority.

The shelter project was part of an integrated approach that included education, water, sanitation and hygiene activities. Hygiene promotion was provided though a Child-to-Child system in schools and 20,473 households (95% of the affected) received WASH kits. There were also social mobilization activities around hand washing and access to drinking water, which led to community behaviour changes in drinking and hygiene practices.

PROJECT TEAM STRUCTURE

An Emergency Response Team was set up and coordinated by a team leader, with short term support from technical specialists for WASH and Shelter in the emergency phase. A logistics and a monitoring and evaluation officer were part of the team for a period of six months. Each field team consisted of two project managers, two project assistants and six field supervisors. Each field supervisor was assigned to a commune and supported by a distribution team managed by the local partner. The country office of the organization also had an on-going commitment to work on gender and GBV in their projects.

RECOVERY SUPPORT

During the second phase of the response, support was provided to **housing and infrastructure rehabilitation,** with the construction of demonstration houses in each commune as models for replication; **livelihoods** reinforcement and regeneration (community-based microfinance and food security, cash-for-work); **hygiene promotion, gender awareness and GBV prevention,** with the support of community mobilizers based in each village. The cash-for-work activities were intended to engage the affected people in the recovery of their communities. However, they also diverted a target amount of the population from their daily income-generating activities.

The organization implemented a Build Back Safer initiative in six communes of intervention. Several model homes were built and community members were trained on improved building techniques. Additionally, selected staff and authorities were trained on Emergency Preparedness Planning and Disaster Risk Reduction. Unfortunately, families living in some of the flood risk area could not return home to rebuild, and it was unclear what rights they had to their original land and property, or what they could expect as compensation or where they would be asked to relocate to.

MATERIALS

Shelter kit materials were procured and stocked locally in a warehouse. Households were provided with a voucher to collect their kits at the warehouse within five days, and were responsible for the transport of materials to their homes. Community mobilization was particularly effective for the most vulnerable, such as pregnant women, the elderly and people with disabilities, who were not able to carry the materials themselves. Other beneficiaries and members of the same communities helped them with transport on a voluntary basis.

MAIN CHALLENGES

It was logistically challenging to reach the affected populations at the planned times. For this reason, the distribution of shelter kits was re-planned to target specific geographical areas during set dates, to ease the logistical load, as well as to make reporting more organized and comprehensible.

GBV incidents related to cash distributions. During the monitoring of the shelter project, incidents of GBV were reported through a complaints mechanism. Unconditional cash grant distributions were conceived to give maximum flexibility and choice to the households to cover their priority needs. However, many households who practised polygamy were considered as one unit, despite the fact that they were made up of an extended family, with children from multiple wives, yet the cash and NFIs were only given to one woman in the household. These distributions were reported to not sufficiently provide for the second wife and her children, raising concerns over favouritism and exclusion. Subsequent GBV incidents were related to the tensions between wives and their husband, including verbal and physical abuse. One year on, a study was made of the gender-related impacts of the project.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ The project **reviewed the risks of long-term dependency** caused by providing emergency support to planned and self-settled camps, and **re-oriented its assistance towards self-recovery solutions**.

+ The shelter repair **kits were designed to best suit the local context**, according to the three major traditional housing types to be reinforced or repaired with slightly different toolsets or materials[1].

+ A GBV assessment was undertaken at the end of the emergency phase, allowing the project to better address GBV risks in the rehabilitation phase and ensure better preparedness and risk mitigation.

+ The complaints mechanism in place was used to report cases of GBV (for domestic disputes related to cash distribution). The project included the training of community mobilizers to promote awareness of GBV at community level, and provided referrals to service providers.

+ Shelter activities were complemented by WASH activities at household and community level.

[1] Contents of the three repair kits can be found in the shelter strategy, available at http://bit.ly/2hA08Vb.

THREE TYPES OF SHELTER REPAIR KITS	
Types of kits	**Cost**
Emergency shelter repair kit type 1 Riverbanks house (on stilts)	USD 64
Emergency shelter repair kit type 2 Valley house (rammed earth slab)	USD 87
Emergency shelter repair kit type 3 Highlands house (monolithic adobe walls)	USD 99

Shelter repair kits and cash grants were provided to support return to areas of origin after the floods.

WEAKNESSES

- The Emergency Response Team did not include gender or GBV technical experts during the programme planning and implementation.

- Field teams did not include gender officers to ensure GBV prevention throughout all stages of the emergency shelter response.

- The beneficiary selection process took longer than expected, delaying the operation.

- Lack of Housing, Land and Property (HLP) knowledge. Field staff did not have the background knowledge, awareness or socio-cultural sensitivity to properly advocate and give programmatic support to communities and village councils on HLP issues (relating to flood risk zones and displacement).

- Lack of background information on cultural norms, gender relations and understanding of gender issues in the emergency context, and how the crisis had affected those dynamics.

- Consultation and participation of village committees could have been stronger (including the traditional and religious leaders and the women's groups).

LEARNINGS

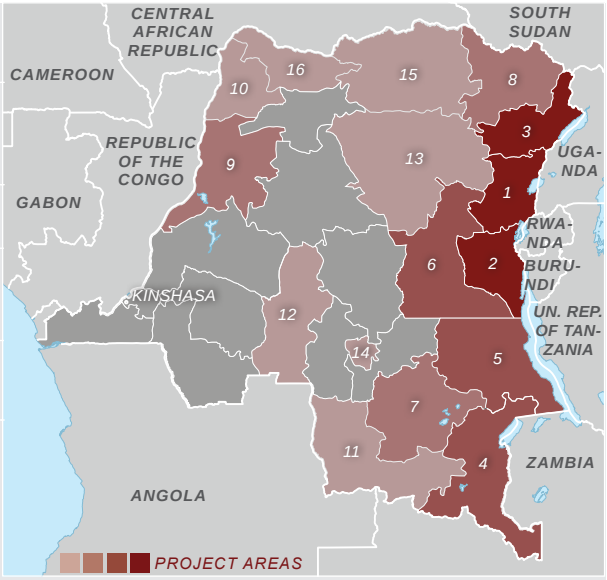
- **Context analysis must go beyond sex and age disaggregated data and look at existing gender dynamics in a society**. For instance, polygamy in Benin communities is a common occurrence, yet it was not taken into account in relation to the quantities of NFIs and amounts of the cash grants. **Both cash and shelter kit distributions were eventually adapted,** so that the support reached all members of the family, including the second wives with their children, who were then considered as independent households with equal needs.
- **An analysis and mapping of services available to GBV survivors** in flood-prone areas (e.g., medical, psychosocial, legal, security, shelter) from the pre-planning phase would have been beneficial.
- **Increased knowledge and capacity of staff on HLP issues**. During the recovery phase, it was highlighted that the Shelter support staff should have taken into consideration the concerns of the community around the location of their homes, especially for those that needed to relocate out of the risk areas.
- **More collaboration and support to existing community-organized women's groups** would have created opportunities for women's inclusion in the shelter programme and better integration of survivor support.
- **Gender and GBV mainstreaming should have been integrated from the planning stage, and orientation sessions for staff should have been accounted for** as part of this response and delivered by GBV/gender specialists, due to the high probability for field staff to witness cases of GBV, while performing door-to-door shelter monitoring.
- **Consideration on who should receive the grant** in the household, **how decisions on expenditures are made** based on the existing gender dynamics, and **identification of issues that create or exacerbate tensions and GBV risks** should be conducted, before implementing cash-based programmes. It should not be assumed that men cannot make good decisions regarding the needs of the household, and **both men and women should be engaged equally in consultations**.

CASE STUDY DR CONGO 2008-2016 / NFI VOUCHER FAIRS

KEYWORDS: Non-food items, NFI voucher fairs, NFI distribution

CRISIS	**Multiple conflicts / Complex, two decades long and ongoing**
TOTAL PEOPLE DISPLACED AND RETURNED[1]	**2.82 million** people (new displacements in 2016: 922,000 people).
LOCATIONS	**DR Congo, country wide.**
VOUCHER FAIRS BENEFICIARIES[2]	**3,950,530 persons** (790,106 households) in the period 2009-2016.
IN-KIND DISTRIBUTION BENEFICIARIES[2]	**4,471,250 persons** (2009-2016).

[1] 2.2 million IDPs between 2009-2016; 620,000 returnees since July 2015 (Source: OCHA 2016 IDP factsheets, http://bit.ly/2nhgaEX.
[2] The number of people is calculated on an average of five persons per household.



Map showing the provinces where the NFI voucher fairs approach has been used between 2009 and 2016 in four shades of colour according to the number of households (HH) assisted (lighter to darker: 0-4,000 HH; 6,500 – 14,000 HH; 40,000 – 60,000 HH; 90,000 – 350,000 HH).

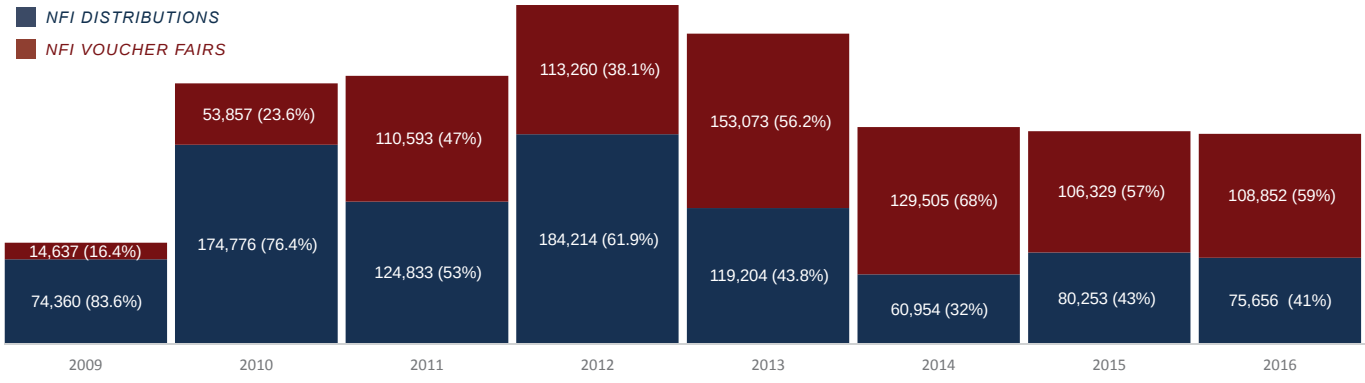
Key: 1. North Kivu (349,872 HH); 2. South Kivu (138,762 HH), 3. Ituri (94,225 HH); 4. Haut Katanga (59,296 HH); 5. Tanganika (57,927 HH); 6. Maniema (40,142 HH); 7. Haut Lomami (13,704 HH); 8. Haut Uele (13,635 HH); 9. Equateur (6,528 HH); 10. South Ubangi (3,893 HH); 11. Lualaba (3,289 HH); 12. Kasai (2,636 HH); 13. Tshopo (2,464 HH); 14. Kasai Oriental (1,438 HH); 15. Bas Uele (1,399 HH); 16. North Ubangi (896 HH).

Source: NFI-Shelter Cluster DR Congo.

SUMMARY

Since 2008, the NFI sector in the Democratic Republic of the Congo (DR Congo) has undergone a dramatic transformation from a response strategy dominated by in-kind distribution of basic household, personal and hygiene items, to the use of cash-based vouchers. The NFI voucher fair approach has allowed families to select items based on their own priorities, while also supporting local economies. By 2013, over 50% of all NFI beneficiaries in DR Congo were assisted using the NFI voucher fair approach. Since the first pilots in late 2008, local and international humanitarian actors have reached over 790,000 families – nearly 4 million people – using this approach.

TOTAL NUMBER OF HOUSEHOLDS ASSISTED WITH VOUCHER FAIRS AND IN-KIND DISTRIBUTIONS, 2009-2016



STRENGTHS OF THE FAIRS

+ Beneficiary preference, as they choose their own items.
+ Reinforcing beneficiary dignity as actors in their own assistance.
+ Cost savings in logistics, transport and warehousing.
+ Supporting local economies.
+ Speed in setting up, when vendors are familiar with the approach.

CHALLENGES / WEAKNESSES

- Smaller scale than in-kind distributions.
- Dependence on market capacity.
- Dishonest vendors can take advantage of beneficiaries.
- Lack of formal registration and tax documents can limit the participation of small vendors.
- Challenges in using the vouchers for some users.

Organizations' staff explain the use and different values of coupons to beneficiaries before they enter the fair (Mutarule, South Kivu province).

Vouchers are exchangeable at the fairs for selected NFIs, including locally made pots, clothing and blankets. Posters show photos and price ceilings of the most popular items (Mangina, North Kivu province).

BACKGROUND

For over two decades, the eastern provinces of DR Congo have been plagued by the humanitarian consequences of multiple conflicts, involving dozens of militia groups and government forces. Although often described as a protracted emergency, eastern DR Congo is characterized by a series of distinct, acute, crises, spread across a landscape of continually shifting zones of violence, displacement and insecurity, and areas of relative stability, where return and recovery are possible.

At the end of 2016, OCHA estimated that there were 2.2 million Internally Displaced People (IDPs) in the country; 922,000 of these people were newly displaced in 2016. Additionally, there were hundreds of thousands of returnees. Nearly 80% of displaced families lived in the homes and compounds of local host families who, although often extremely vulnerable themselves, are the first to provide assistance.

One of the most critical needs of families on the move is access to essential non-food items (NFI) to carry out daily activities. These activities include: clothing oneself, preparing and serving food, collecting and using water for washing and cleaning, carrying out livelihood activities, storing belongings and sleeping. The ability of displaced families, returnees and even some host families, to undertake these essential activities in dignity and security, is undermined by lack of access to essential items. NFI needs are particularly acute in conflict areas, where families flee with very few belongings and – although host families may share some of their resources such as food or cooking utensils – other items such as clothing and bedding are less likely to be shared.

NFI VOUCHER FAIRS

In 2008, some of the NFI actors in DR Congo began to look at cash-based options to meet the NFI needs of affected populations. This shift happened primarily for two reasons:

1) **NFI needs of affected populations varied widely.** Highly divergent and varied needs made the typical one-size-fits-all kit approach of standard NFI assistance less appropriate.

2) **Markets were quite dynamic** for imported and locally produced NFIs in DR Congo, and **supply chains seemed robust, flexible and able to respond** to increased demand.

Food security actors in DR Congo had been using seed fairs since the early 1990s. Based on this model, NFI actors began to conduct pilot NFI cash-voucher fairs.

HOW THE FAIRS WORK

The approach since the initial pilots is to invite beneficiary families to an organized, artificial, market place or “fair” (using the same targeting criteria as direct in-kind distributions). Each family receives cash-valued coupons – an average of USD 75 – which they can exchange for goods[3]. A selected number of vendors – both larger wholesaler and smaller local traders – offer a wide array of NFIs for sale, just like in a regular market. The range of items can be as limited or unrestricted as determined by the organization managing the fair, who sets the “rules” on what items can be sold.

A typical fair includes dozens, even hundreds, of different types of NFIs – sandals to soap, clothing to locally produced cooking pots, foam mattresses to plastic basins, farming tools

[3] The initial choice of USD 75 for a family of 4-6 persons was based on the cost of items and transport of the recommended standard family NFI kit in DR Congo.

Vendors can sell multiple items based on an agreed list, and beneficiaries can haggle and discuss prices under a set ceiling (Kalele, South Kivu province).

NGO workers register vendors' merchandise at the fairs to ensure quality and that no prohibited items have been brought (Aboro, Ituri province).

to flashlights. Depending on the total number of families to be served, the organizing agency sets up several days of fairs in a row, with anywhere between 300 and 700 families participating each day.

Where there might be concerns about vendors charging unfair prices, the organizing agency can set price ceilings on certain key items with representatives of the beneficiaries and vendors; however, bargaining is always encouraged. Selected vendors have to sign an agreement that lays out rules and responsibilities, including no guarantee of sale, respect of price ceilings (and sanctions should these not be followed) and modes of payment. In some instances, a complementary distribution of items such as plastic tarpaulin, jerry-cans, or female hygiene kits, is included, particularly in areas where the market is limited (in quality or quantity) or where the vendor prices for these items are too high.

In line with recommended Cluster practice for direct NFI distributions, adult women in the household are registered as the family's primary beneficiary to attend the fair – although it is encouraged that she come with her spouse or another family member, to help transport the purchases home.

SCALING UP

Since the pilots, the NFI community in DR Congo has scaled up the use of the NFI voucher fair approach. Initially, humanitarian actors and the NFI-Shelter Cluster believed that while fairs were an innovative alternative to direct distributions, their scope would remain limited due to market capacity. This concern proved to be unfounded, as traders were able and willing to travel to remote areas to participate. They were also often more effective and resourceful than the best NGO logistics operations (renting small trucks, motorcycles, and even bicycles) in moving supplies to areas where a direct distribution would have been impossible. In addition, the smaller vendors often pooled resources to transport their merchandise to the fairs.

The NFI-Shelter Cluster actively promoted response analysis to inform programming by hosting multiple training and learning events, as well as by accompanying partners on the ground through "coaching visits". Each year, provincial and national cluster coordinators and NGO co-facilitators conduct field visits to NFI fairs and the distribution sites of different organizations, to provide feedback and coaching on their activities. While direct distribution remains an essential part of NFI response in DR Congo, the Cluster has helped in training and supporting organizations to use the fair approach, reaching a point where all major international and national NFI actors now use voucher fairs, for at least some portion of their response.

EVOLUTION OF THE APPROACH

In the last few years, NFI actors have made significant progress in areas such as:

- **Collaborating** with food aid actors on joint NFI and food fairs;
- **Improving market and purchasing pattern analysis** to better determine an appropriate voucher value for affected zones, as well as to consider simultaneous distributions of certain items;
- **Promoting inclusion of locally made NFIs**;
- **Integrating new technologies** for improved data collection and analysis – particularly of purchasing patterns;
- Piloting the use of **electronic vouchers**;
- Setting fair **price ceilings**;
- Experimenting with **using vouchers in existing markets** (open market vouchers).

Another, more recent, improvement (which some of the major NFI actors have adopted) is **adjusting the value of the vouchers by family size**. Instead of the standard USD 75 per family, these NGOs now have three different voucher values:

1) USD 55 for families of 1-3 persons;

2) USD 75 for families of 4-6 persons;

3) USD 90 and up for families of 7 or more persons.

Post-fair monitoring has shown significant improvement in NFI Score-Card vulnerabilities, by using this approach, compared to the standard one.

Some actors have started looking at the **option of moving to direct cash** to meet NFI needs. Purchasing pattern analyses of organizations using unconditional cash transfers typically reveal 40%-50% of cash being used on NFIs. While unconditional cash to address NFI needs remains an option to explore, it may not be the best in all settings. A 2010 study of 1,688 families revealed that, in terms of availability, over 66% of beneficiaries indicated that items they purchased at the fairs were not regularly available at the markets where they would typically purchase NFIs. Indeed, vendors travelling from significant distances of over 100km to participate in the fairs, are often providing a range of choice that families would not find in their local markets.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

People are able to purchase pre-selected items using e-vouchers in the NFI fairs (Market of Sake, North Kivu province).

STRENGTHS

Driving the transformation was the recognition of the fair approach as a "win-win-win": for affected people, for humanitarian organizations and for the local economy.

+ Beneficiary preference. Monitoring visits with assisted families have shown a significant preference for fairs over distributions. Having choice over one's own assistance reinforces the dignity of beneficiaries, and was continually cited as an overwhelming advantage of the fairs. The concern that vendors might not be able to provide the quality and quantity to meet needs proved unfounded. In the same 2010 study of 1,688 families beneficiaries stated that 96% of items bought at the fairs were of very good or acceptable quality.

+ Cost savings. With savings on logistics, transport, and warehousing, the fair approach is cheaper per family than an in-kind distribution. It also reduces the risks for implementing organizations, who are no longer responsible for the warehousing and security of NFIs before and during distributions. Recognizing the value for the beneficiaries of dignity and choice, as well as the value for money of their contributions, donors were also a catalyst behind the transformation. Humanitarian donors in DR Congo no longer accept proposals of a traditional distribution approach, if the organization has not demonstrated why a cash-based approach is not possible.

+ Local economy. Thousands of local traders and producers of locally made NFIs have benefitted from participating in the fairs. Since the first pilots in late 2008, over USD 59 million has been injected into the local Congolese economy, by organizations using the fair approach. Monitoring with vendors shows how this secondary "impact" of fair programmes has created new employment, opened markets in new areas, and increased the capital and diversified merchandise of local traders.

+ Speed. As the fair approach became more common, humanitarian organizations were also able to increase the speed of implementation, particularly in areas where they were able to draw upon vendors with previous experience in fairs. As of 2016, vendors in some areas were able to access NFIs for fairs and organize their logistics within less than a week (this can take up to three weeks in cases where vendors are not familiar with the fair approach).

CHALLENGES AND LEARNINGS

- Scalability. One important limitation of the fair approach is the scale. Experienced organizations can do a fair for up to 700 families in a day. This mainly depends on the time families are allowed to "shop" and the need to count the vouchers that vendors received, at the end of the day. Fairs normally happen between 10am and 3pm for these two reasons. Organizations usually do 3-4 days of fairs in a row, depending on the number of families to be reached. A well-organized distribution, on the other hand, can reach two to three times as many families in a day. Therefore, NFI distributions are still an essential part of the response in DR Congo – particularly for large-scale interventions, or in new areas, where there are few vendors with experience in the fair approach.

- Market capacity. While the dynamism and reach of the markets in DR Congo has surpassed expectations, there are areas where markets are not able to provide the quantity, scope, and quality of items needed. Strong market and response analyses are needed to enable NFI actors to choose the best modality between fairs, distributions, or a combination of the two.

- Dishonest vendors. Vendors may attempt to take advantage of beneficiaries, despite agreements and monitoring by staff, by not respecting price ceilings, or working with other vendors to fix a price and not allowing beneficiaries to negotiate.

- Smaller vendors. Local / smaller vendors, local producers and artisans sometimes do not have the legally required registration and tax documents. This can be mitigated by encouraging vendors who do have all their registration papers with authorities, to team up with smaller vendors and producers of locally made NFIs, to sell these items at their stands.

- Restricted items. There has been much discussion on when and how to put limitations on the types of items permitted at fairs, or whether organizations should set price caps on certain items, so as to ensure that they remain focused on basic needs – for example permitting items such as shoes, but not shoes which are priced over a certain amount. Monitoring has shown that families tend to spend vouchers on the same types of items as those found in a standard NFI kit. However, questions are raised on whether items like radios, plastic chairs, or small solar panels can be considered essential household NFIs. While the Cluster has developed some guidance, it ultimately remains an issue for each organization to examine with their donors and the communities they are serving, in consideration of the objective of their programme.

- Use of the vouchers. A small minority of beneficiaries have reported having difficulties in using the vouchers. This is particularly true for the elderly, or illiterate. It is critical to ensure that these beneficiaries are encouraged to come to the fairs with someone who can assist them. The organization should also have workers who can help accompany such beneficiaries at the fairs. The learning in DR Congo has been that there is never too much education and information sharing about using the vouchers.

CASE STUDY

NIGERIA 2015-2016 / CONFLICT

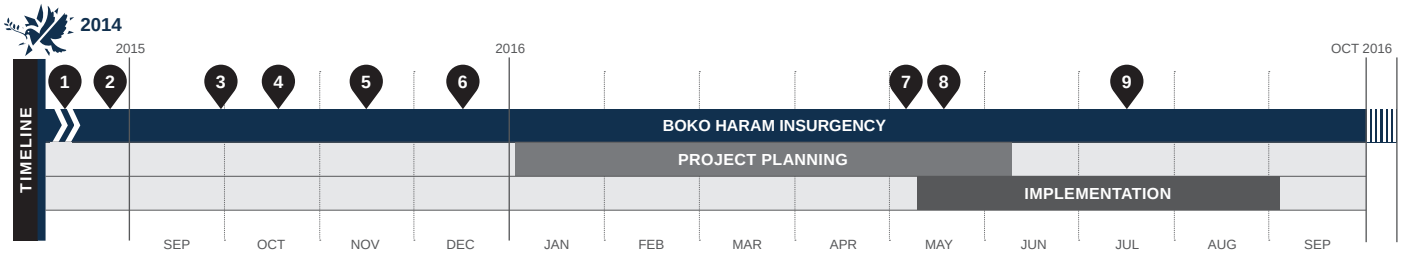
KEYWORDS: Emergency shelter, Site planning, Collective centres, Infrastructure, Protection

CRISIS	**Conflict (Boko Haram insurgency), 2014-ongoing**
TOTAL PEOPLE AFFECTED	**14.8 million affected** (HRP 2016) **1,878,205 displaced**, mainly by Boko Haram (Source: DTM, Aug 2016)
PROJECT LOCATIONS	**Several displacement sites in Maiduguri, Borno State**
BENEFICIARIES	**3,433 households (20,480 individuals)**
PROJECT OUTPUTS	**1,000 Emergency shelters (Bama).** **1,269 Reinforced shelters (Bakassi). 105 for one large family and 1,164 for two small families.**

SHELTER SIZE	**16.2m²** (4.5x3.6m – emergency shelters) / **28.8m²** (4x7.2m – reinforced shelters).
SHELTER DENSITY	**3.2m²** per person (Emergency shelters, maximum five persons per shelter). **4.1m²** per person (Reinforced shelters, maximum eight persons per shelter).
MATERIAL COSTS	**USD 158** for Emergency shelters (including labour and transport). **USD 845** for Reinforced shelters (including labour).
PROJECT COSTS	**USD 564** per household, on average.

PROJECT SUMMARY

The project built emergency and reinforced shelters for over 3,000 internally displaced households across ten sites, using a common design that took into account the needs of different family sizes, cultural practices, as well as climate considerations. The shelter project was part of a broader coordinated effort of the humanitarian community to meet minimum standards while decongesting existing sites, particularly schools.



1. 2014: **Insurgency begins in 2009. It escalates seriously in 2014 when Boko Haram starts to seize territory, and spreads to neighbouring countries.**
2. 2015: **Over 20 IDP sites formally established in Maiduguri and Jere. Nearly half of which are schools, occupied for over two years.**
3. 30 Sep 2015: **High Powered Committee For The Re-opening of Schools Within State Capital approaches the UN and INGOs to assist with the relocation of IDPs to alternative sites.**
4. Oct 2015: **Humanitarian community commits internal funding to start the relocation process.**
5. Nov 2015: **CERF Proposal is made while mapping of available spaces for shelter constructions is carried out. A location is provided by the government for 2,500 shelters.**
6. Dec 2015: **Biometric registration starts.**
7. May 2016: **Existing IDP sites receive shelter upgrades, decongestions, and rainy season preparedness (i.e. drainage improvements).**
8. Mid-May 2016: **Shelter construction begins in Bakassi camp.**
9. Jul 2016: **Inter-Agency multi sector assessments reveal dire needs in new locations and the programme is adjusted. Emergency shelters are used to intervene in these locations.**

STRENGTHS

+ The project enabled the reopening of schools.
+ Capacity-building of local contractors and labourers.
+ Climate and culturally appropriate design.
+ Various types and sensible allocation of shelters.

WEAKNESSES

- Construction began too close to the rainy season.
- Recruitment challenges.
- Lack of site planning technical expertise.
- Different pace of delivery across sectors.

The project took place in the context of major displacement into host community sites, most of which were spontaneous (left), and into temporary collective centres, including schools (right), which needed to be reopened for children to resume their education.

BACKGROUND AND CONTEXT

The north-eastern part of Nigeria has witnessed an **increase in violence since the beginning of 2015**, causing a major humanitarian crisis. The Islamic fundamentalist group Boko Haram initiated their insurgency in 2009, with attacks against government targets in Maiduguri, the capital of Borno State. In 2014, the insurgency ramped up in scale and brutality, with Boko Haram capturing large swathes of the North-East and turning their violence to civilian targets. Massive displacement followed, and persisted throughout 2015-2016.

More than two years after the crisis began, **over 1.8 million people remained displaced** and would continue to be throughout 2017. Displacement was concentrated mainly in Borno State, with Adamawa, Yobe and Gombe States also hosting displaced people. The Nigerian Military regained territory but Boko Haram remained active, forced back into the use of terrorist tactics. The humanitarian response in 2017 would cover all four states, though access to large territories remained very limited, in particular in Yobe and Borno, with high security concerns.

Nigeria's North East has a predominantly tropical dry climate, and the rainy season spans between June and September, with heavy rain and high winds. The rest of the year is hot and dry, with temperatures climbing as high as 40°C. The Harmattan dry wind affects the region with fine dust from November through March.

SITUATION AFTER THE CRISIS

Before the crisis, people in urban and peri-urban settings in the North-East lived in concrete or block dwellings with roofs constructed of corrugated iron sheets or comparable material. In rural areas, mud and thatch dwellings were typical. **The majority of the IDPs found shelter within host communities,** sharing with relatives or friends, or renting. Around 9% of the total displaced people lived in camps or camp-like settings. **The camp populations were generally the poorest** among the affected communities, those who left only at the point of violence, because they lacked the resources or networks to find their own alternative accommodation.

Some sites were open fields where temporary shelter had to be erected, shelter conditions ranging from makeshift shelters (usually domes built of grass or other readily available materials in vernacular style) to tents and emergency shelters constructed with plastic sheeting provided by aid agencies.

The majority of the camps and camp-like settings were collective centres – pre-existing buildings such as **schools, government buildings, and unfinished construction projects.** Usually, these were communal and high-density types of shelters, with overcrowding and persistent health risks. **The use of schools as displacement sites since 2014** severely hampered education in the area, especially in Maiduguri.

NATIONAL SHELTER STRATEGY

The Shelter-NFI Sector Working Group, led at the time by the National Emergency Management Agency (NEMA) and the implementing organization, defined several objectives in the Humanitarian Response Plan 2016:

1) Raising shelter standards in formal and informal camps to meet Sphere indicators through provision of reinforced emergency shelters.

2) Maintaining an adequate pipeline of minimum emergency shelter kits and NFI kits for distribution to the most vulnerable – in particular, newly or secondarily displaced people, including new arrivals in the camps.

3) Extension of support into host community settings, which had received little to no response at the end of 2015, by adding and/or repairing available covered space where there was severe overcrowding.

4) Reinforced emergency shelter or repair upon return, where conditions were conducive (e.g. security-wise), targeting the most vulnerable whose houses had been destroyed.

The strategy emphasized sustainability, including **benefit to local economies** through use and sourcing of locally available materials, and with cash and vouchers to be used wherever appropriate. The sector also sought to **mainstream protection**, including through the provision of solar lights and fuel-efficient stoves, and the prioritization of female-headed households.

SCHOOL CAMPS PHASING-OUT PLAN

Eight school buildings in Maiduguri were occupied by approximately 38,145 IDPs for more than a year and a half. **In late 2015, the government began to work towards the reopening of educational institutions**, and the Ministry of Education and the humanitarian community formed a Taskforce, which created timelines for phasing out the School Camps into relocation sites identified by local authorities. Once space in or surrounding existing displacement sites was identified, **the Taskforce worked with different sectors on site planning to expand and decongest such camps**, as well as upgrading and adding shelters in other sites.

The agency worked on government-allocated land to build improved shelters. For the Bakassi camp, the land was next to housing estates for government workers.

PROJECT GOALS

The main goals of this project were to **establish new sites for the relocation of IDPs** hosted in schools and the decongestion of other overcrowded camps; and **support family reunification** (as displacement sites were often gender segregated). The shelter project was **part of a broader coordinated effort** of the humanitarian community to meet minimum standards, as most of the camps in Maiduguri had been quickly set up during the onset of the emergency as lifesaving centres. Amongst other issues the sector focused on the standardization of shelter designs, proper site layout for mitigation of fire risks, and ensuring access to a full range of basic services.

BENEFICIARY SELECTION

The bulk of the project firstly targeted the people living in schools in Maiduguri. The remaining shelter capacity was used to decongest the most overcrowded sites with worst shelter conditions.

Shelter needs, as well as other priorities and disaggregated demographic data, were collected through assessment teams, which developed site profiles for all school locations based on the following criteria: 1) family reunification; 2) site population; 3) family size. Biometric registration was used to identify and register families, and biometric cards were used for relocation, allocation of shelters and distribution of NFIs at household level.

PROJECT LOCATIONS AND SITE PLANNING

A government-owned undeveloped plot of land of over 650,000m^2 was initially allocated and agreed with local authorities for the extension of the existing Bakassi camp, next to housing estates which were being constructed for civil servants. Further government land allocations were then granted, including extensions of other existing camps. All proposed sites were assessed for hazards and risks, and were agreed in collaboration with humanitarian actors.

The main site planning considerations for the Bakassi camp expansion were to maximize the use of available space, mitigate against flooding risks, ensuring minimum standards and providing infrastructure and basic services. These included clinics, kitchens, drainage, water and sanitation facilities, schools, livelihoods spaces, as well as distribution, registration and camp management points. The whole area was occupied and no further evolution or phasing out plans were made at the time of project planning and implementation.

Additionally, seven other sites were upgraded, decongested and drainage was improved. In informal camps, where displaced people had spontaneously settled (usually on private land), written agreements with land owners were sought and secured.

PROJECT IMPLEMENTATION

The project was implemented with contractors to speed up site preparation, thus facilitating a swift relocation of the IDPs from the schools. The organization also benefited from a partnership with NEMA, whose contribution to the project comprised of roofing sheets, aggregate, cement and water trucking for about 1,000 shelters, through the different phases of the project.

The shelter team was composed of five members: one shelter manager, one shelter officer, and three engineers (WASH, shelter and site planning).

As implementation **started just before the rainy season,** road access to the building sites became almost impossible and all camps were flooded, slowing down construction significantly. Moreover, as soon as the initial relocations were carried out (as this was done in phases), **people began dismantling the unoccupied shelters** to use the timber for firewood. Coordination was undertaken to ensure sufficient access to fuel and security for unoccupied shelters, which were also being repaired in preparation for their coming occupants.

Shelters were **then handed over to NEMA,** and the allocation was carried out together with camp managers from the organization. NFI distributions were conducted by inter-agency relocation teams, and the NFI kit was part of the shelter package distributed when the families moved into the shelters.

During project implementation, the programme was adapted to provide an additional 1,000 emergency shelters to the affected population in newly accessible areas (Bama and Gwoza).

ENGAGEMENT OF AFFECTED PEOPLE

At the sector level, affected people were engaged in **focus group discussions, to define a shelter design** that would meet their needs, as well as being climate and culturally appropriate. Different designs, proposed by various organizations, were validated with the displaced families, to reach an agreement over one prototype to be used by all actors. **Two models were finally adopted**, one for emergency response and one with a longer life span of two years (reinforced shelters).

During this project, **affected people were further engaged**

The shelters were built by contractors, with the condition that they hired workers locally including IDPs, who received on-the-job training.

in a variety of ways, such as in beneficiary selection, flood mitigation measures and basic repairs at the household level, community messaging on relocation or available services.

Cash-for-work was also used to engage IDPs in the construction of the shelters and support households with a daily income to meet other needs. This was included as a condition in the contractual terms with the contractors, although one challenge faced by all partners in the area was the poor quality of local labour. **Locally hired workers required on-the-job training and constant supervision** to ensure use of proper techniques and consistency. The Sector Working Group produced infographics to support training, and the capacity-building component actually turned out to be one of the most successful outcomes of the project. However, the construction-related activities did not engage women, who instead were involved mainly in community activities and messaging.

SHELTER DESIGN AND ALLOCATION

The original design presented by the Sector Working Group featured a **raised roof and an open space under the eaves** for ventilation. The design had to be quickly adjusted to include concrete foundations and metal strips to lock all trusses to the beam, to **prevent the entire structure from being lifted by strong winds**. Backfilling in all shelters was also undertaken, to raise the plinth to prevent water coming into the shelter.

The design proposed **internal partitions** to allow for increased privacy, diversified use of space and adjustment to the needs of families. Following consultations with the communities, all polygamous families were given **one shelter per wife**, which was important to ease tensions and allow for family reunification. Shelter allocation was also based on the family size, primarily the number and age of children. **The different shelter sizes allowed to cater for different family structures** and respect minimum international standards.

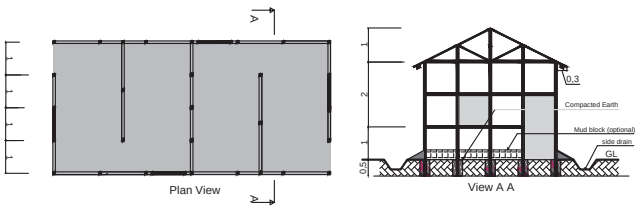
MATERIALS SOURCING

Almost all materials were purchased locally, for cost effectiveness and for the indirect benefit of the local economy. The only item brought from outside was plastic sheeting, as sufficient quality was not attainable in local markets.

Several actors were building shelters at the same time, resulting in a **serious shortage of building materials**, including timber, nails and roofing sheets, and slowing down the construction process significantly. For roofing materials, this was somewhat **mitigated by purchasing directly from local manufacturers** (rather than vendors), though delays of up to two months were still experienced. This was not possible for timber, which was sourced from merchants around town. The high demand affected both availability and prices. Moreover, **the quality of timber decreased towards the end of the project** as there were too many actors buying from few vendors. Although those who benefited the most were larger vendors with the capacity to stockpile large quantities and source from neighbouring states, also small businesses profited, as large vendors would usually source materials from them.

Finally, both timber and firewood trade have had a **significant environmental impact**, with areas suffering desertification, and the risk of this spreading to former conflict areas that became gradually accessible for harvesting.

Two models of shelter were agreed upon by all agencies: one for emergency response and one with a longer lifetime (two years anticipated).



Shelters were of different sizes and it was agreed that, for polygamous relationships, one shelter would be allocated to each wife.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

Shelters included specific details, such as mosquito nets in the open gap beneath the roof, which was intended for ventilation.

Shelters were numbered to facilitate the allocation process.

STRENGTHS

+ The project enabled hundreds of children to go back to school as a result of the relocation of IDPs from the school buildings.

+ Capacity-building of local contractors and their labourers in technical construction skills, many of whom were IDPs. There were clear and definite improvements in the contractor's skill and workmanship over the course of the project.

+ Shelter design was climate and culturally appropriate.

+ Type and sensible allocation of shelters allowed families to be reunited after living separated for more than a year. This was particularly relevant for polygamous families.

WEAKNESSES

- Construction began late, too close to the rainy season, causing problems. Delays were caused by multiple factors, including slow agreement on allocation of responsibility for different camps and locations between some partners.

- Procurement challenges also contributed to the delay on the project. At the time, Nigeria's emergency was under-recognized, which contributed to challenges in securing appropriate and timely human resources. Subsequent prioritization of the emergency through internal L3 designation by UN agencies (in October 2016) enabled to build up the capacity.

- Lack of site planning technical expertise across agencies, when it was most needed during the emergency.

- Different pace of delivery across sectors, such as shelter and water and sanitation.

LEARNINGS

- **Ground works must be initiated as early as possible,** and locations coordinated effectively amongst implementing actors; early procurement, warehousing and storage of materials are essential.
- **The construction of model shelters and trainings on construction techniques and skills are extremely valuable,** particularly where the local skills base is low. This is true both to check and adjust the climactic and cultural appropriateness of the design (prior to large scale implementation) and to identify common technical mistakes early.
- **A coordinated effort should be made to identify local and regional procurement and supply possibilities,** and to plan accordingly for maximum benefit to local markets, minimal delay, and adequate and consistent quality. This is especially relevant when the scale of the intervention is likely to saturate local market capacities.

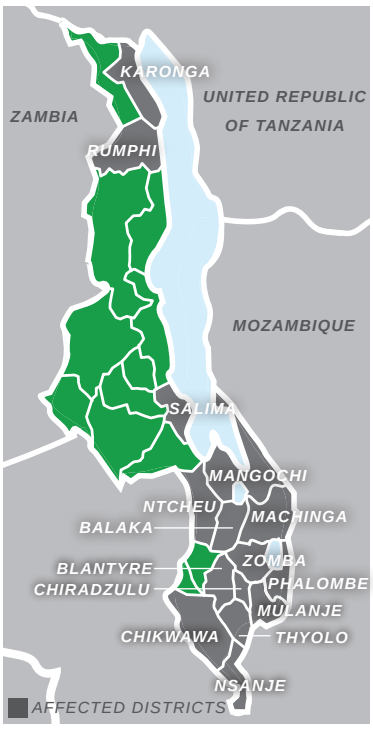
Camp management staff, authorities, and community representatives were all involved in the shelter allocation process.

OVERVIEW

MALAWI 2015 / FLOODS

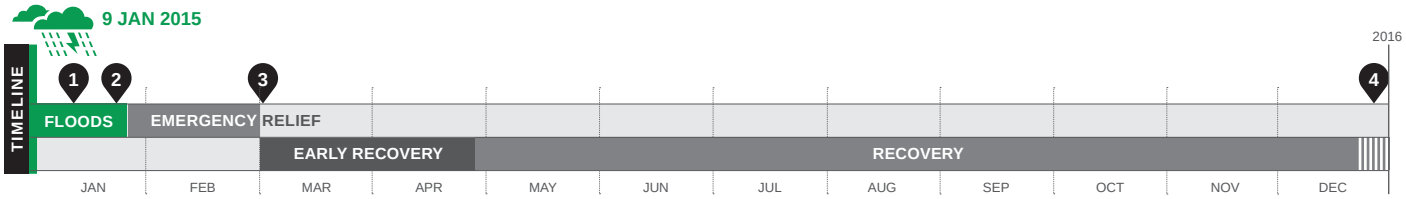
CRISIS	**Malawi floods, January 2015.**
TOTAL HOUSES DAMAGED	**523,347** houses affected. **356,643** completely destroyed[1].
TOTAL PEOPLE AFFECTED	**1,101,364** individuals affected[1]. **336,000** individuals displaced (230,000 in displacement sites; 106,000 in host sites)[2].
RESPONSE LOCATIONS	**15** districts affected (the most affected were Chikwawa, Nsanje and Phalombe).
RESPONSE OUTPUTS (as of August 2015)[3]	Approx. **50,000** households served with NFIs (70,000+ planned). Over **19,000** households assisted with emergency shelter (32,000+ planned). Over **2,000** households assisted with repairs and retrofits (5,000+ planned).

[1] Malawi 2015 Floods Post Disaster Needs Assessment Report, Gov. of Malawi, March 2015, http://bit.ly/2ogiYqQ.
[2] UNDAC Assessment Report, 6 February 2015.
[3] Data reported to the Shelter Cluster 4W by humanitarian organizations. Note that this data may not be 100% accurate nor complete (it does not include the figures of the overall response).



SUMMARY OF THE RESPONSE

The floods in Malawi in 2015 led to displacement and widespread damage to housing in the affected areas. Displacement sites were set up in public buildings (such as schools) during the emergency phase, and assistance was provided primarily in these sites. After the first few months, the focus shifted towards relocation and supporting return to IDPs' places of origin, in order to enable collective centres to go back to their functions, and facilitate early recovery. According to data reported to the Shelter Cluster, emergency shelter support consisted mainly of distribution of tents and tarpaulins, while repairs assistance was primarily in the form of tool kits and/or materials, coupled with trainings.



1. 13 Jan 2015: **Declaration of Sate of Disaster by the Government of Malawi.**
2. 22 Jan 2015: **Shelter Cluster released Preliminary Response Plan.**
3. 2 Mar 2015: **Rapid joint assessment released by Shelter Cluster.**
4. End of 2015: **Deactivation of Malawi Shelter Cluster.**

CONTEXT AND BACKGROUND

80% of the population of Malawi live in rural areas. The economy is primarily agricultural, which accounts for 90% of export revenues. National GDP per capita is one of the lowest globally and the economy has experienced low growth. Malawi is also heavily reliant on investments from global finance institutions. A lack of trust in the Malawian Government by these institutions (since 2013) has led to a reduction in investments, further stagnating economic growth.

Malawi experienced above-average rainfall throughout December 2014 and January 2015. The Southern Region of Malawi received 400% more rainfall than the Long Term Mean for the region. 15 of the country's 28 districts experienced significant flooding, with a **state of emergency declared on 13 January 2015.** As a result of the prolonged, heavy, rainfall, the Shire River reached its highest level in 30 years, bursting it banks in multiple areas.

SITUATION AFTER THE FLOODS

The extreme rainfall event and resulting flooding led to displacement, with many affected households evacuated to collective centres (schools, churches and mosques). As these naturally (and in some cases enforcedly) disbanded after the first two months, affected households with no long-term shelter solution constructed simple emergency shelters, or stayed with host families.

Properties sustained damage through a combination of rain and high winds. The most affected communities were more

After several weeks of heavy rains, the Shire River reached the highest level in the past 30 years, burst its banks in several locations and caused widespread flooding.

vulnerable to the disaster, as a result of their shelter and settlement typologies. Many of the inhabitants of the flooded rural areas resided in one-storey houses, constructed using traditional techniques and materials, such as sun-baked mud-bricks and thatched roofs. The flooding, rainfall and wind caused homes to disintegrate and roofs to blow off. There appeared to be a correlation between the degree of damage sustained and the construction techniques used. As shown by the Rapid Joint Assessment (March 2015), 47% of houses built with fired bricks and CGI roofs reported damage, compared to 71% of those built with sun-baked bricks, and 78% of wood and mud houses.

EMERGENCY SHELTER PHASE

The Shelter Cluster, led by the Ministry of Lands, Housing and Development, was activated shortly after the emergency, and a Rapid Joint Damage Assessment was undertaken by various clusters[4].

The international organization co-leading the Cluster quickly established a large shelter pipeline, and the first significant shelter distributions took place in early February, with tents and shelter kits being airlifted to areas on the east bank of the Shire River that had been completely cut off by the floods.

During the emergency phase, the government promptly erected tents in the most critical displacement sites, in order to clear the public facilities, particularly schools. The sites were selected without sufficient planning and the tents set up hurriedly, leading to challenges such as overcrowding and gaps in WASH and Protection. Additionally, the distribution of humanitarian aid was reported to create a draw to these sites, partially driven by the underlying poverty and also by the food insecurity, created by flood damage to crops and livelihoods. A further challenge in the response was that initial assessments and distributions tended to neglect IDPs in host communities, which increased the draw to displacement sites and complicated coordination efforts.

[4] The Assessment is available at http://bit.ly/2jbPHqw

Displacement site at Bitilinyu. These collective centres were the initial option for those who had to leave their homes and caused a significant draw, due to the distributions of aid (and relative neglect of IDPs in host settings). These sites were also particularly overcrowded and had gaps in protection and hygiene.

The Shelter Cluster's **initial strategic objective was to relocate all people from collective centres** into planned camps or resettlement areas[5]. Expected outputs and impacts of the emergency response were:

- 31,636 households provided with tents and NFIs.
- Assessments conducted in all the 15 districts for strategic positioning of camp sites.
- Displaced people in the camp sites to be trained in construction, for dignity and Disaster Risk Reduction.
- Resettlement areas properly laid out.

EARLY RECOVERY PHASE

By early March, the government prioritized the closure of camps and the return of IDPs. This change in approach led to a swift re-focusing from emergency operations to early recovery planning within the humanitarian community. As part of these efforts, the Shelter Cluster led the process of preparing a "Durable Solutions Framework" and, where feasible, orientated its own efforts towards providing shelter support in areas of return. **Supporting the ability to return was essential to encourage livelihood recovery and to allow collective centres to return to their proper use.** The Cluster aimed to provide adequate shelter in the camps, whilst also strengthening the capacity of the displaced population for early recovery, through training on good construction methods and through the provision of construction materials.

The Cluster and the government promoted the use of fired bricks (as opposed to sun-dried bricks) for reconstruction, so that buildings would be more resistant to disintegration[6]. However, a lack of availability of wood to fire the bricks (or financial resources to purchase fired bricks) led to many households resorting to unsafe traditional building approaches. Some households received shelter **assistance from government and NGOs in the form of shelter kits** (tools and tarpaulins), **tents, or materials to construct temporary timber and plastic-sheet shelters.** In assessments conducted by humanitarian organizations, communities expressed a preference for basic materials and tools, to repair or construct core dwellings supplemented by local materials, including earth blocks and grass thatching. This was considered an appropriate and durable solution to their immediate and longer-term shelter needs, which would also allow them to focus on their priorities, i.e. food security and livelihood recovery.

The case studies that follow show two approaches taken by humanitarian organizations. While the first (A.20) was a short-term project focused on the emergency relief and early recovery phase, the second (A.21) was a longer-term recovery programme looking at housing reconstruction, with significant training and Disaster Risk Reduction components.

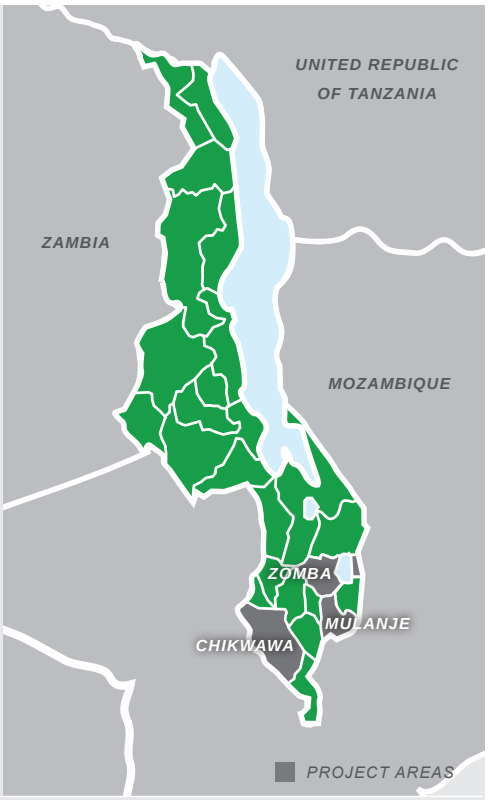
[5] Preliminary Response Plan, released on 22 January 2015 (http://bit.ly/2i0oiKI).
[6] Key Shelter Safety Messages - 2015 Malawi Floods and Storms.

CASE STUDY

MALAWI 2015 / FLOODS

KEYWORDS: Emergency shelter, NFI distribution, Early recovery, GBV risk mitigation

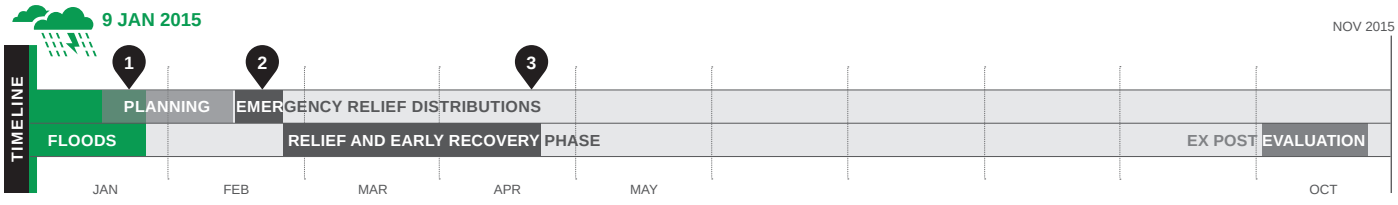
CRISIS	**Malawi Floods, January 2015**
TOTAL HOUSES DAMAGED	**523,347 houses** (Source: Gov. of Malawi).
TOTAL PEOPLE DISPLACED	**230,000** in displacement sites **106,000** displaced in host sites (UNDAC assessment report, 6 February 2015).
PROJECT LOCATIONS	**Chikwawa, Zomba, Mulanje.**
BENEFICIARIES	**1,874** households.
PROJECT OUTPUTS	**1,224 tents with household NFI kits** **650 shelter kits** **500 tarpaulins** **960 solar powered lamps** **20 packs of classroom materials**
OUTCOME INDICATORS	**100%** of shelters distributed were verified as received. **67%** of respondents living at their (or a new) home site at the time of ex post evaluation (Oct 2015), compared to 4% at time of distribution.



SHELTER SIZE	**1 Tent = 18.5m²**	SHELTER DENSITY	**3.6 m²** per person (based on national average household size of 5.1).
MATERIALS COST	**USD 313** per household.	PROJECT COST	**USD 550** per household.

PROJECT SUMMARY

This project had a relief-oriented and a recovery-oriented outcome objective. Through the provision of tents and shelter-related NFIs, it aimed to meet immediate shelter needs and enabled affected households to move out of gender-segregated collective centres, supporting return and easing overcrowding. In order to support early recovery, tarpaulins and fixing kits were distributed to build or repair shelters, coupled with basic training and tools to assist with reconstruction or earning a livelihood.



1 22 Jan 2015: **Shelter Cluster released Preliminary Response Plan.**

2 22 Feb 2015: **Distributions of tents completed.**

3 23 Apr 2015: **Distributions of tents to new caseload with totally destroyed home completed. Distributions of shelter kits and tarpaulins to households with partially destroyed homes completed.**

STRENGTHS

+ Reduced issues and risks related to overcrowding in collective centres.
+ Facilitated the return to areas of origin / own plots.
+ Responded at scale with different modalities.
+ Supported early recovery.

WEAKNESSES

- The recovery capacity of affected households was not properly understood.
- Lack of appropriate technical training to some recipients of the kits.
- Tarpaulins distributions did not include fixing kits.
- Detailed Post-Distribution Monitoring was not undertaken after the relief distribution.

Tents were used to clear the overcrowded collective centres during the emergency relief phase. By doing so, this project managed to address some of the issues faced by the displaced people in those sites, including family reunification and reduction of hygiene and protection concerns.

CONTEXT

For more background information, see overview A.19.

Extreme rainfall in Malawi during January 2015 caused widespread displacement, forcing households to seek immediate shelter in collective centres. In rural areas, the flooding also led to the destruction of harvests and damage to water sources, further exacerbating food-security issues. This created an additional draw to collective centres. Displacement sites became crowded, with a lack of basic services, such as water, sanitation and hygiene, prompting concerns about the outbreak of diseases. The shelter sector was urged to respond in a way that provided immediate lifesaving shelter (alongside appropriate services) and increased the affected community's capacity for early recovery.

RELIEF PHASE

During the initial phase of this intervention, **the organization responded to the immediate shelter needs at collective centres.** Due to severe overcrowding, there were concerns about Gender-Based Violence (GBV) and child protection issues, as well as health issues resulting from a lack of basic services. People were living in gender- and age-segregated rooms, and in some instances men were required to sleep outside. Tents and NFI kits, all imported over several rounds, were distributed to households verified as having a totally destroyed home.

The organization aimed to **support households as part of a return scheme,** motivated by the government's desire to decongest overcrowded collective centres. For those households who did not want to return to their previous site due to flood risks, the team worked with the local Traditional Authority, the District Government and beneficiaries to identify safer areas of land. **In some cases,** most notably in the district of Zomba, **water inundation prevented households from returning home.** In such situations, tents were distributed and implemented in spaces surrounding the collective centres. Due to land restrictions, the number of tents that could be distributed was limited, when compared to the caseload at the centres. In such cases, the organization identified beneficiary families based on agreed vulnerability criteria. As the levels of rainfall dropped and waters receded, distribution teams worked with beneficiary households so that tents could be relocated and families could return to their home sites.

Some structures sustained significant damage due to the floods.

EARLY RECOVERY PHASE

After the initial emergency phase, **the project shifted emphasis towards supporting early recovery.** In Zomba and Mulanje, shelter kits or tarpaulins were distributed to households with a partially destroyed home. Beneficiary households were able to use tarpaulins and fixing kits to repair and weatherproof shelters, until access to resources allowed them to seek a more durable solution. As part of the distribution, a basic level of training was provided on how to use the items to improve structures. Repairs included fixing damaged external walls and replacing roofs that had blown off.

In Mulanje, during the later stages, households with totally destroyed homes, that were still in collective centres or with host families, were also provided with a shelter kit. In such instances, households received lumber and made basic shelters on their home site. During the ex post evaluation, all interviewed families had completed – or were in the process of improving – their structures. Many of these households also reported they wished to reuse the tarpaulins as roof of the new shelter.

LOCATIONS AND BENEFICIARY SELECTION

The organization focused its efforts in more remote regions and rural communities, where fewer humanitarian actors were operating and gaps in the response were soon identified. Communities were selected in coordination with the government-led Cluster. The district government identified the worst-affected communities that had not yet been reached by other actors,

By pitching the tent on their home site, people were able to start to rebuild their damaged houses. Supporting return was essential for enabling early recovery.

Tarpaulins from the shelter kits were used, amongst other purposes, to seal off damaged parts of the houses.

making assessments available to field teams. Assessment and distribution teams would then work with a local representative for the community, often a camp coordinator. The camp committees, appointed by the district government, would generate a beneficiary list based on agreed criteria: totally or partially destroyed home and, in some situations, additional vulnerabilities. The organization's assessment team cross-referenced the lists with data compiled by the regional government and also undertook key informant interviews, to verify that the criteria had been applied appropriately and to mitigate selection bias.

PROJECT IMPLEMENTATION TEAM

This project was managed a by a full-time project manager based in Blantyre, with coordination and strategic responsibilities. This role was filled by a series of overseas staff posted for around four weeks at a time. Two sub-teams (each comprising four staff and volunteers from the organization's roster) were located in the target districts, to manage the implementation and coordinate with the district government and other actors operating in the same region. Overall, 40 overseas staff and volunteers were involved in the response. At the field level, teams used a high number of local staff and volunteers to assist with the implementation. Some of these were drawn from other organizations, while others were recruited directly from the affected communities, and worked as translators and enumerators, assisted with distributions, training and tent erection. In some instances, agreements were formalized through the creation of MoUs with the appropriate organization. However, in situations where this did not happen, the lack of signed documentation caused issues during the implementation. For instance, newly posted staff or volunteers were not always clear on the agreed per-diem rates for distribution teams. Consequently, the organization became stricter in the formalization of working relationships.

ENGAGEMENT OF AFFECTED PEOPLE

Distribution teams from the local community were trained in the erection of tents and were tasked with assisting beneficiary households. These teams also assisted with the relocation of tents from collective centres to households' home sites. Although the organization coordinated well with the camp committees, more efforts should have been made to work more closely with the wider affected communities, particularly in terms of communication and sensitization with non-beneficiary groups. Several cases were uncovered, during the ex post evaluation, where community members had not fully understood the organization's goals and mission. In these instances, families who did not receive assistance did not understand the selection criteria, and felt that targeting was political in nature.

MAIN CHALLENGES

The distribution of humanitarian aid created a **significant pull factor towards collective centres. Identifying the beneficiaries who genuinely required shelter** assistance – from those who were trying to access other items – proved problematic. Flooding in Malawi had washed away crops, exacerbating underlying conditions of poverty, and since food and other items were being distributed at collective centres, it was felt that some households had registered in order to qualify for food aid.

This exacerbated **problems associated with severe overcrowding**. Sanitation was insufficient, families were forced to split, and there were incidences of skin and other communicable diseases. The urgency of lifesaving assistance was stressed in the preliminary response plan, along with the decision to encourage return by supporting families at their home sites, which helped to reduce the draw to collective centres.

Due to underlying resource deficiency and also the scale of the crisis, there was **a lack of access to sufficient lumber** in the emergency phase, for shelter kits to be easily deployed to a large percentage of the affected population. **The deployment of tents enabled rapid distribution,** allowing the immediate easing of collective centres. Households could erect them on their land quickly. Where water inundation prevented return to home, tents could be erected temporarily on land adjacent to the collective centres. As the ground began to dry out, tents were moved to beneficiaries' home sites.

A significant number of families who did not qualify for tents (according to the beneficiary criteria) had a severely damaged house, therefore being exposed to rainfall and high daytime temperatures. These households remained without adequate shelter, as many did not have the resources to make simple improvements and repairs in a timely fashion. This influenced the decision to distribute shelter kits alongside basic training in the second phase, and helped to reduce the issues of inequity felt by those who had not received any assistance.

WIDER IMPACTS OF THE PROJECT

A government representative commented that by promoting return to home – and distributing at people's home sites or assisting with relocation – **this project allowed to clear a number of the collective centres and their timely return to their normal uses.** This had a positive impact on the wider relief effort, beyond the shelter sector, and supported the early recovery of communities following the flood events.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ The project provided a mechanism for rapidly reducing the problems associated with overcrowding at collective centres, with the distribution of tents and selected NFIs. It did so by 1) **Reducing exposure** to vector and water transmitted diseases; 2) Improving **privacy**; 3) In many cases **facilitating the return home** and therefore reinstating livelihoods and supporting early recovery; 4) **Mitigating risks** associated with GBV and child protection, as well as enabling the **reformation of the family unit**, with parents better able to watch over minors. Qualitatively, beneficiaries reported this to be an important outcome of the intervention, as certain aspects of normal household behaviours could commence.

+ The organization was able to **reach a greater number of households** and **reduced the potential for inequity** resulting from the distribution of tents alone, thanks to the distribution of shelter kits or tarpaulins for those with a partially damaged house. This also yielded **further positive outcomes in terms of supporting early recovery**.

WEAKNESSES

- Vulnerability assessments did not inform an understanding of the self-recovery capacity. Early elements of the response were focused almost solely on immediate relief, and failed to consider the longer-term recovery needs of the affected population. Whilst some beneficiaries were able to use the provision of emergency shelter as a platform for recovery, others were unable to transition towards a more durable shelter within the life cycle of the tent. As tents cannot be easily adapted, this raised concerns that some beneficiaries would become exposed to shelter-related issues at a later date.

- Adequate technical training on the use of the shelter kit was not always provided to beneficiaries. This was due, in part, to the general lack of understanding (by implementing teams) of techniques associated with the shelter kit. Following the completion of this project, shelter kit trainings were rolled out across the organization's network of staff and volunteers.

- Tarpaulins were not distributed with a fixing kit, except when part of the standardized shelter kits. Although there were many cases were beneficiaries were still able to use these items to good effect, in some instances tarpaulins were used for non-shelter purposes – such as drying food. This issue may have arisen because beneficiaries did not receive the fixings required to utilize tarpaulins as intended, or due to a lack of training.

- The early emergency phase **did not include detailed post-distribution monitoring.** This further affected the organization's understanding of the barriers to early recovery.

MATERIALS LIST

Materials	Quantity (per HH)	Total Quantity	Unit Cost (USD)
Family Tent	1	1,224	276.9
Shelter kit (IFRC specification)	1	650	51.5
Tarpaulin (IFRC specification)	1	500	11.8
Household water filtration	1	500	32.3
Solar light	2	3,408	9.5
Blanket	5	6,120	7.3
Kitchen set	1	1,224	23.2
Mosquito nets	2	2,448	4.4
Jerry can (10l)	2	2,448	3.5
Tool kit	1	1,224	14.1

LEARNINGS

- **Limited availability of food, inflated prices and a reduction in livelihood activities had a significant impact on the early recovery capacity of affected households**. If access to food and livelihoods is a known issue, this should be recognized and included in assessments. In this response, evidence suggested that many households were drawn to collective centres as a result of damage to crops, thus the linkages between shelter need and food poverty could be assumed from the outset.
- **Vulnerability and capacity assessments should include pre-disaster secondary data,** as well as post-disaster secondary and primary data, and this should be factored into any resulting project design. Providing a household with emergency shelter and NFIs can often provide the appropriate platform to begin the process of self-recovery. However, there are contexts when the pre-disaster conditions significantly inhibit the ability of the affected communities to engage in self-recovery. **Early, vulnerability-driven, emergency shelter, distributions need to be followed by further capacity assessments** and, if appropriate, an additional **recovery-oriented component[1]. Although this intervention provided immediate support for those at greatest risk as a result of the displacement, there should have been more recognition of the impact of vulnerabilities** on the capacity of households to recover.
- **Detailed post-distribution monitoring should be undertaken to recognize specific vulnerabilities early on,** and enable the organization to provide an additional level of assistance, or link the most vulnerable beneficiaries with other shelter actors. Although some informal checks were undertaken in the days following distributions, these were carried out with the aim to identify any immediate gaps in provision, or to address aid-related issues. However, the evidence gathered during an ex post evaluation showed that, due to underlying conditions of poverty, **many households lacked the material, financial or physical resources to transition** towards a more durable form of shelter.
- Shelter kit interventions that do not include the **appropriate level of technical training** have a significantly lower chance of yielding positive shelter related outcomes (both short- and long-term).

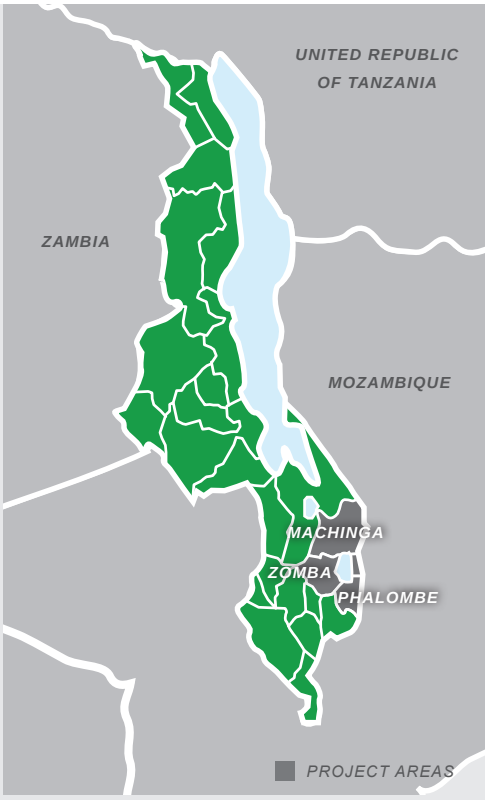
[1] This approach was taken in project A.40 in response to the Ecuador earthquake.

CASE STUDY

MALAWI 2015-2016 / FLOODS

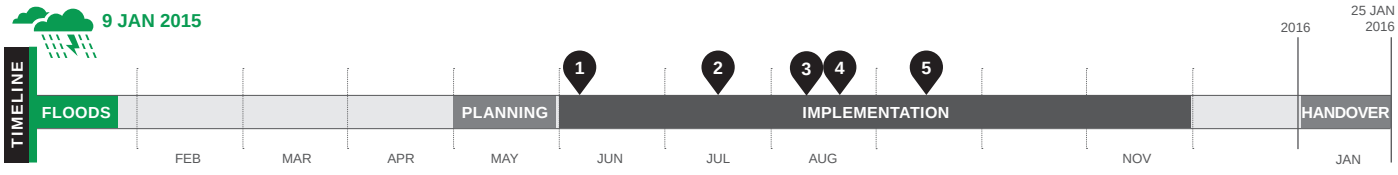
KEYWORDS: Core housing, Housing repairs, NFI distribution, Training, Guidelines, Disaster Risk Reduction

CRISIS	**Malawi Floods, January 2015**
TOTAL HOUSES DAMAGED	**523,347 houses** (Source: Gov. of Malawi).
TOTAL PEOPLE AFFECTED	**1,101,364 people** (Source: Gov. of Malawi).
TOTAL PEOPLE DISPLACED	**336,000 people** (UNDAC assessment report).
PROJECT LOCATIONS	**Zomba, Phalombe and Machinga districts.**
BENEFICIARIES	**1,090** households.
PROJECT OUTPUTS	**1,090 houses** benefited from emergency repair and reconstruction activities. **9 model homes** built in different communities, to be replicated. **109 cash-for-work grants** provided to vulnerable households (10%). **Training** provided to local builders and staff (including 66 building supervisors, and three Trainings of Trainers with 30 builders and 8 programme support staff). **Development of a training curriculum** for builders.
SHELTER SIZE	**22m²** and **16.5m²** (Size of house dependent on family size, assumed at 3.5m² per person).
SHELTER DENSITY	**3.5m²** per person.
MATERIALS COST	**USD 200** per household.
PROJECT COST	**USD 552** (inclusive of training and dissemination).
OUTCOME INDICATORS	The majority of affected households returned to the site of their original dwellings, where possible.



PROJECT SUMMARY

The programme aimed to assist flood-affected people to return to their homes, through the repair and reconstruction of houses. This was done through the supply of tools, materials and technical training. It also included training and information sharing to the community on more durable and resilient housing-construction methods.



1. Jun 2015: **Initial discussions with community**
2. Jul 2015: **Beneficiary selection, shelter workshops with local builders, development of shelter designs and training curriculum**
3. Aug 2015: **Training roll-out**
4. Aug 2015: **Distribution of tools and materials**
5. Sep 2015 onwards: **Continued technical support for reconstruction**

STRENGTHS

+ Increased technical skills of local communities in the construction of durable houses.
+ The programme provided an affordable housing solution.
+ Resources were used directly for housing recovery, accelerating the overall process of recovery.
+ Model houses provided a reference for locals to replicate.
+ The programme recognized traditional skills and knowledge.
+ Capacity-building of local partners.

WEAKNESSES

- The project did not cater for all income levels.
- Lack of organizational experience in shelter projects.
- Poor planning led to delays in beneficiary selection.
- Lack of adequate market assessment led to procurement challenges.

People were given technical trainings and built model houses as part of the project. Here they are working on setting out the foundations of a model house..

CONTEXT

See overview A.19 for background information.

LOCATIONS AND BENEFICIARY SELECTION

The organization selected the three target districts due to the high level of damage and the continued flood risk. Additionally, the local partner had a strong presence in these districts and good relations with the communities.

Priority was given to areas at greatest risk of future flooding (confirmed by flood risk data), where most houses were damaged or destroyed, and that had substantial loss of crops and livelihood and fewest alternative income opportunities.

Household selection was carried out in partnership with the government District Offices and Traditional Authorities and further verified by household visits. Priority was given to the most vulnerable households, based on criteria including: single- and child-headed households, elderly, disabled, households affected by HIV and low-income families with children under 5 years.

The project aimed to advance gender equality and female empowerment against cultural discriminatory norms, involving women in masonry and building workshops.

PROJECT IMPLEMENTATION

Overall, the project was implemented with 52 staff members and builders from a local partner which undertook work at the community level, while the organization provided a total of seven national and international staff for logistical support, coordination and overall supervision.

An initial shelter and housing assessment was undertaken, highlighting that a number of proposed house designs were not affordable and, if adopted, would only support a limited number of families. Given the prevalence of flooding and the need to maximize the scale of the project with the available funds, the organization aimed at supporting families to reconstruct their permanent dwellings, using low-cost, locally available materials, supplemented with in-kind assistance. **Technical training and support were also provided** to identify and build upon existing best local building practices, and to share this information with the whole community. In order to do so, a series of workshops were held at central locations in the target communities. Two builders from each community in the area joined the workshop along with women and local government staff. The workshop included theory, discussion, site visits and practical exercises, to identify best construction practices. At the end of each day, the learning was recorded and used to develop a training curriculum for other builders and to share this with their whole community. During the week, a complete core house was constructed, along with the provision of a curriculum and supporting communication materials.

Workshops were held in target communities to identify best practices and develop contextualized training for the community.

The builders were then engaged to construct houses for the most vulnerable families in each of their communities, which also provided a further training opportunity and model for demonstration. Partner field staff and the builders also provided technical support to families during the construction.

COMMUNITY PARTICIPATION

In order to build upon existing knowledge and practice, the organization worked in partnership with communities and local builders, who were engaged from the outset in helping to refine the affordability of the programme and then share their local knowledge on construction practices and building materials.

Throughout the programme, the organization maintained this collaboration through local and traditional authorities, focus groups, workshops and household-level support.

COORDINATION

The project worked closely with the Shelter Cluster to agree on the areas where the organization and its partners could work, and to ensure that the approach was in line with Cluster procedures. The Cluster Coordinator attended training sessions and assisted in parts of the training programme. All the materials developed during the programme were shared with the Cluster. District government and traditional authorities were involved in identifying the communities, and communication was carried out through them. The communities were then actively involved in deciding the approach for the project.

Model homes were built, according to traditional designs. Additionally, materials were provided and cash-for-work grants for the 10% most vulnerable households.

Trainings included the identification of good soils and mixing for block making.

MATERIALS

All materials were purchased from within Malawi, largely through local markets. Timber supplies came from other districts where trees were available for construction use, so as not to damage the local environment.

Materials such as burnt bricks, cement and corrugated iron sheet roofing were beyond the financial means of the poorest households. Therefore, for wider impact, assistance had to be focused on building solutions using local materials that were affordable, replicable and achievable by the most vulnerable and at-risk households.

While earth for brick-making and grass for thatching were locally available, other materials and tools had to be purchased. Communities were offered restricted cash to purchase materials that were not freely available, but there was an overwhelming request for in-kind support due to the distances to markets, the capacity of markets, the cost of transport and the needs of families to focus on agricultural activities.

HOUSING DESIGN AND TECHNIQUES

Many houses had survived with little or no damage, even after weeks of standing water, including those constructed using earth brick and render. This is because these traditional houses had raised platforms that protected the core structure from erosion, and the veranda and large roof overhangs ensured that the gables and walls were protected. This design, developed over centuries, provided protection from the elements and, other than some minor repairs to the veranda and walls, allowed many families to return to their homes once the floods had subsided.

Many of the traditional houses withstood the floods, as they were built with contextually appropriate features, such as roof overhangs and raised platforms.

The project provided technical solutions, including refinements to traditional house design, so that the roof could continue to be supported by the veranda posts, should the earth walls collapse. During the workshops, emphasis was given to soil selection for making adobe bricks and the correct brick-making processes. The reason why many buildings collapsed was due to the insufficient thickness of the walls, therefore the improved design increased this width (from 10 to 15cm) so that the walls were more stable. It also ensured that internal walls had proper foundations and were connected to the outside walls, to further strengthen the structure.

DISASTER RISK REDUCTION

The communities were prone to heavy rains, high winds and flooding. Therefore, Disaster Risk Reduction was very strongly embedded throughout the programme. Community safer-building information was disseminated to educate, inform and provide examples. Other strategies were also encouraged, including planting trees to protect against driving high winds and rain. Trees could also be used as building materials or for firewood. Information was provided on Safer Earth Building for Floods and Rains, as a simple booklet and training curriculum for builders. This included information on hazards, appropriate site selection and construction techniques to reduce flooding in houses, as well as appropriate protection and maintenance of houses and the environment.

MAIN CHALLENGES

The organization needed to convince government personnel, politicians and other organizations that houses constructed from local materials could provide a sufficiently durable solution. This challenge was overcome mainly by building model houses that demonstrated this potential.

Additionally, extra technical support was brought in during the implementation process, to strengthen the local partner's capacity.

WIDER IMPACTS OF THE PROJECT

The programme explored and **built upon existing local knowledge and practices,** which enhanced the ownership and commitment of the residents and ensured that any recommendations were site-appropriate. The resources and information produced were shared with the Shelter Cluster, so that other actors could use them. Ultimately, **this approach provided a practical, inexpensive and replicable model** to respond to similar flood events, in this and other parts of the country.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Increased technical skills of local builders in construction of durable houses, thanks to workshops conducted at the community level.

+ The programme allowed for a more durable emergency response, using an affordable solution that would help withstand future flood risks, yet was accessible by the poorest and most vulnerable households.

+ Resources were used directly to support housing reconstruction, accelerating the overall recovery process, instead of providing emergency or transitional support first.

+ Model houses provided a reference for locals to replicate. Communities have started building houses using the safer building guiding principles based on the model houses, which therefore had a wider impact by providing a reference for other members of the community.

+ The programme recognized traditional skills and knowledge as an affordable and effective means of coping with heavy rains and floods, managing to convince locals that these traditional methods were a good alternative to more expensive materials, such as burnt bricks or concrete blocks.

+ Increased capacity of the local partner.

WEAKNESSES

- The programme did not cater for all income levels, as it only provided a low-cost solution and did not consider those who could have afforded more durable housing.

- Lack of experience in shelter projects of the organization's country programme and local partners meant that this had to be developed during implementation.

- Delays in beneficiary selection and verification process caused by poor planning slowed down the implementation.

- Lack of adequate market assessment. There were some logistical challenges in finding doors and windows, as no large supplier could be found.

Local materials were provided, as listed in the BoQ below.

LEARNINGS

- **Visible sections of the programme distract from wider goals.** The hard components of the programme, such as the distribution of materials and the construction of model houses, have the potential to dominate the programme and divert from the wider objective of supporting the whole community (by encouraging safer building practices and supplying relevant information).
- **Importance of strengthening the organization's capacity in varying sectors.** The organization's preparedness needed to be reviewed to better respond to future disasters, particularly with regards to technical support, number of staff, as well as in conducting beneficiary surveys to be used during the identification and selection processes.
- **Multisectoral programming, beyond shelter.** The programme should have also covered aspects such as restarting livelihoods and food security, to address family needs of those who were keen to return home earlier than others.

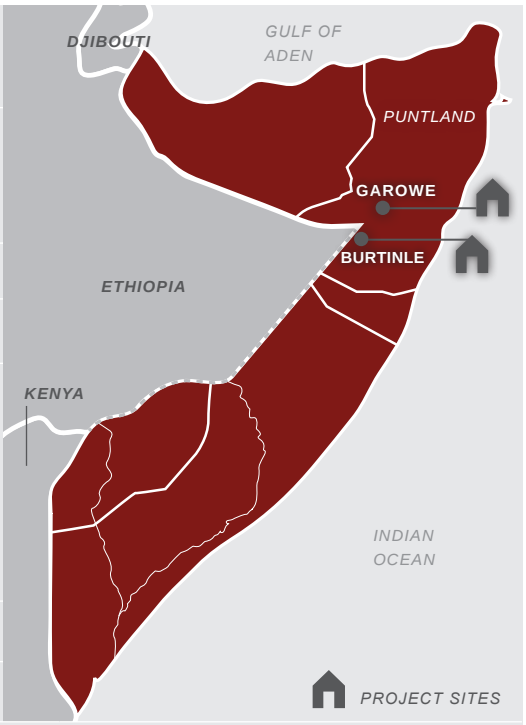
MATERIALS LIST PER MODEL HOUSE

Ref	Details	Unit	Quantity	Unit cost (MK)	Unit cost (USD)	Total cost (USD)
1	RIDGE POLES	Pcs	6	1,000	2.30	13.79
2	RAFTER POLES	Pcs	30	800	1.84	55.17
3	WALL POST POLES	Pcs	10	500	1.15	11.49
4	BATTENS	Pcs	80	200	0.46	36.78
5	BLACK PLASTIC PAPER	Part Roll	1	6,000	13.79	13.79
6	TIE WIRE	Roll	1	2,000	4.60	4.60
7	3" NAILS	Kg	2	1,000	2.30	4.60
8	TIMBER FOR DOOR (Inc fittings)	Pcs	1	6,000	13.79	13.79
9	TIMBER FOR WINDOWS (Inc fittings)	Pcs	2	2,000	4.60	9.20
10	EARTH BRICKS	Pcs	2,400	3	0.01	16.55
11	THATCH	Pcs	1	9,000	20.69	20.69

CASE STUDY SOMALIA 2011-2013 / DROUGHT + CONFLICT

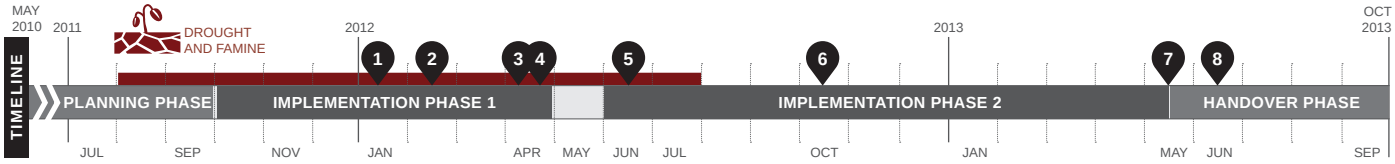
KEYWORDS: Permanent housing, Resettlement, Advocacy, Infrastructure, Community participation, Land tenure

CRISIS	**Complex: Drought** (July 2011 - June 2012) **and armed conflict**. The project started at the peak of the drought in the Horn of Africa.
TOTAL PEOPLE AFFECTED	**3.7 million** people affected by drought and famine crisis (Source: OCHA, 2011). **1.4 million** internally displaced people (ibid.).
PROJECT LOCATIONS	**Garowe and Burtinle, Puntland region, Somalia.**
BENEFICIARIES	**1,200 households** (8,400 individuals).
PROJECT OUTPUTS	**1,200 permanent shelters built** **1,800 individuals benefitting from cash for work** (masons, unskilled labourers and carpenters). **Other outputs include:** access road, one health centre and one borehole in Garowe, water systems in both sites, child-friendly space, public area and police post in Garowe, 14 sex segregated toilet blocks.
SHELTER SIZE	**16m²** (4x4m) one room shelters (10x10m plot).
SHELTER DENSITY	**2.7m²** / person (average household size of 5.9 persons).
MATERIALS COST PER SHELTER	**USD 1,693** including labour.
PROJECT COST PER HOUSEHOLD	**USD 3,493** including site works, WASH facilities and organizational overheads.
OUTCOME INDICATORS	**100%** occupancy rate of shelters in both sites. **Secure land tenure** obtained in both sites.



PROJECT SUMMARY

This was a two-year, multidonor, multisectoral, project aimed at providing a sustainable shelter solution by building 1,200 permanent houses for IDP households in two relocation sites. The shelter programme was linked to Livelihoods, WASH, Health, and Education. The project adopted holistic settlement as well as community-led construction approaches. The organization managed to secure the land and receive additional funding for complementary activities, including infrastructure, facilities and common spaces.



1. Jan 2012: **Beneficiary selection and verification.**
2. Feb 2012: **Recruitment of staff completed.**
3. Apr 2012: **Typology design agreed and start of land titles negotiations.**
4. Apr 2012: **45 pilot houses completed in Burtinle.**
5. Jun 2012: **Land acquisition granted from local administration and Ministry of Interior.**
6. Oct 2012: **80 pilot houses completed in Garowe** (delayed by resolving land issues).
7. May 2013: **All 1,200 shelters and related facilities constructed, land titles processing completed.**
8. Jun 2013: **Commissioning of settlements and start of handover of houses and land titles.**

STRENGTHS

+ Achievement of tenure security and establishment of durable sites.
+ Continuous engagement of all stakeholders.
+ The selection criteria were established and agreed upon by all.
+ Owner-driven approach, transparent and accountable systems.
+ Settlement approach, linkages with vocational training and savings groups.

WEAKNESSES

- Staff turnover and lack of flexibility of internal systems.
- Limited female participation and lack of gender analysis.
- The project provided only one-room shelters, that were too small to meet cultural needs.
- Beneficiaries had to be incentivized to participate in the construction.

The project built 1,200 permanent houses with accompanying infrastructure across two new sites (here, the site in Garowe).

CONTEXT

Food security in Somalia had been deteriorating since 2010, with almost all southern regions being affected; famine was declared in the Bay region, for a total of 6.4 million affected people (more than half of the Somali population). Due to this, and the instability and fighting within the country, the number of IDPs in Somalia was estimated to be 1.4 million[1]. The project areas were hosting the majority of IDPs in the Puntland region, which is primarily inhabited by people from the Somali ethnic group (and of Muslim faith). Despite its relative stability, the region had also endured armed conflict.

SITUATION DURING THE CRISIS

In the wake of a severe drought and the resulting famine in 2011, the population density in Puntland further swelled, due to the influx of IDPs who were fleeing violence in South-Central Somalia, concentrating around Garowe and Burtinle, and some of the long-term IDPs who had settled in Garowe. Displaced people were searching for life-saving assistance, due to limited access to water, food, health care services, and adequate shelter. **The influx of IDPs led to increased tensions between the host community and the new arrivals,** as they competed for limited employment, access to state services and scarce resources. In Garowe, there was insufficient or substandard shelter to meet their needs[1]. Additionally, **the IDP settlements were unplanned and congested,** due to the influx caused by the ongoing drought. In Burtinle, all respondents from a rapid assessment (conducted in two IDP camps) reported that the shelters were inadequate to protect from the weather. The houses were primarily *buuls* (huts made from sticks, cardboard, old rugs and tents), offering little security.

SHELTER CLUSTER STRATEGY

The Cluster response strategy in 2012 contained three pillars: 1) Emergency response, 2) Transitional shelter, and 3) Durable solutions. For the emergency response, the Cluster designed a minimum kit, that would be locally procured and stockpiled by Cluster partners in strategic points in Somalia and Kenya. Transitional shelter was provided to stabilized IDP settlements (in Puntland and Somaliland). Interventions ranged from shelter kits, to houses with corrugated iron roof sheets. The third pillar supported voluntary relocation, or return to the place of origin. Due to the presence of returnees from Yemen and Kenya, **the Cluster adopted an equality approach,** wherein IDPs, returnees and urban poor groups could be integrated. Although this project was initially conceived to fit under the second pillar, it ended up providing permanent shelters with secured land tenure, due to its longer engagement process.

PROJECT IMPLEMENTATION

The project was implemented by a contracted team (Finance officer, Accountability officer, Supply chain officer, Project engineers) and with additional staff, brought in on a need basis, including shelter engineers and humanitarian accountability facilitators. A **community-based construction approach** was adopted, whereby beneficiaries received construction materials and technical support to build their houses. They were likewise responsible for identifying the skilled labour and providing the unskilled labour. Each shelter unit was constructed by an average of five labourers (two masons and three unskilled workers).

BENEFICIARY SELECTION

The project aimed to provide shelter to people displaced from their homes due to conflict and drought, as well as the urban homeless from host communities. **The organization engaged all stakeholders** (regional government, elders, religious leaders, community members) **in the selection of beneficiaries.** The Accountability Officer invited committee representatives from more than 15 IDP settlements in Garowe, explaining the shelter and vulnerability criteria, as well as the selection process. The local authorities were tasked to work with settlement leaders in identifying the most vulnerable residents, based on agreed-upon criteria. Leaflets and posters were distributed in

[1] Humanitarian gaps assessment coordinated by OCHA, 2011

The project established two relocation sites (here Jilab Village, Garowe).

Settlement planning included public spaces.

the settlement, wherever possible, to inform the inhabitants on these criteria, which included:

- People displaced by the insurgency within the target areas.
- Drought-affected people who had lost their livestock and had no shelter.
- Rural self-settled: those outside the urban or peri-urban areas and those settled individually in small family groups on unoccupied land.
- Households hosting and supporting displaced people with housing challenges.

On top of these, the **vulnerability criteria included** age, disabilities, homeless widows, female-headed households, large families, diseases, and no access to livelihoods.

The organization carried out an **independent verification exercise** once the beneficiary lists were submitted. Although most beneficiaries were accepted, a few cases had to be changed in order to include the most vulnerable households. The verified families were issued with a beneficiary ID card, containing the information about their households.

COORDINATION AND PARTICIPATION OF DIFFERENT STAKEHOLDERS

The organization held a series of meetings with all stakeholders, to explain the implementation process. Firstly, awareness meetings were conducted with government officials. **A design workshop** was then initiated to share information with government officials from the Ministry of Interior, Regional Governor and Local Districts, IDP representatives, landowners and clan elders. Different shelter design options were presented, advantages and disadvantages were analysed, and the groups were requested to make recommendations to improve each design. **The coordination throughout the project avoided unnecessary conflicts** with the communities and other stakeholders, such as clan elders, local authorities, and NGOs.

The coordination with cluster members contributed to ensure that basic standards were maintained, based on cluster guidelines. Effective coordination and information sharing with other sectors, particularly the WASH Cluster, enabled the organization to learn from partners' experiences and achieve project goals successfully.

BENEFICIARY ENGAGEMENT

During construction, **the beneficiaries were responsible** for ensuring that the houses were built according to their expectations, as well as for receiving and taking care of the construction materials. The community was also able to **provide feedback through suggestion boxes** in each site. **Regular monthly meetings** were held with the government and beneficiaries to discuss project progress, achievements, challenges, areas of improvement, as well as follow on the feedback received.

LAND TENURE SECURITY

The organization advocated from the beginning of the project to secure land tenure for IDPs, as a precondition for building the shelters. One of the challenges was that the beneficiaries in most cases were from different clans than the land owners. It was decided that these households should be protected and have access to secure land tenure. Government officials agreed to provide titles, as long as the organization would cover the registration costs. The organization publicized the contents of land documents to all stakeholders and further worked with the media to **create public awareness,** that the shelter units provided under this project were not for rent or sale. The Ministry of Interior reposed any shelter unit that was being sold or rented and re-allocated them to other people still living in the IDP camp. This aimed at discouraging people from infiltrating the system with the aim of making profit.

However, the process to obtain tenure security was lengthy and delayed the project, especially in Garowe. Therefore, the team decided to separate the issues of Burtinle and Garowe, in order to not delay the whole project.

In Garowe, **the government was forced to stop the construction** of houses after the organization indicated that permanent houses could not be implemented on land with unsecure tenure. The government was then requested to secure freehold land for the IDPs, if these houses were to be implemented as per the agreed design. **A meeting was held and broadcast on television,** with different sectors of the government, humanitarians, elders, and influential businessmen in the town, during which the government pleaded to allocate special land for the resettlement of IDPs. This resulted into a piece of land

Households received construction materials and technical support, had to identify skilled labour and provide unskilled labour themselves.

measuring 1,000m by 150m being allocated to the organization for the shelter project, which was further subdivided into plots of 10m by 10m for each household.

In Burtinle, the process was smoother, as the organization was permitted to build on three existing sites that were identified for the upgrading of makeshift shelters into permanent houses.

Ultimately, the project's ambitious goal was achieved in both locations, with **land allocated without time limitations and relevant legal titles,** signed by the Ministry of Interior and issued to each beneficiary, as part of the handover process. In particular, the titles were legal documents recognized by the society and the sharia courts, and MoUs were signed with the organization. Notably, the project also included women as household title holders.

MAIN CHALLENGES

Apart from general **security and access constraints** for international staff, **one of the major challenges was related to staffing**, as it was hard to recruit local engineers. The organization therefore suggested to hire engineers from Somaliland, but faced stiff oppositions from the Ministry of Labour. This delayed the employment process, though ultimately local engineers were identified.

Another challenge was to **uphold humanitarian accountability principles,** given that the government tended to assume they would take the lead in communicating with the communities, instead of the organization. More advocacy on the importance of accountability to all stakeholders should have been factored in from the start.

MATERIALS AND SUPPLY

All the construction materials were procured locally. The suppliers were provided with information on the beneficiaries, including the resettlement site and plot number. The materials were then distributed to and received directly by the beneficiaries, using supplier's vehicles.

While the local market in Garowe was able to accommodate the higher demand, the project in Burtinle was partially delayed due to **lack of materials**. The project team held meetings with suppliers and government officials, in order to have the neighbouring businesses to assist, even though this was initially objected.

Due to the high demand, **the price of materials rose**. Meetings were held with the settlement leaders and the government officials, to explain that the project budget was fixed by the donor, thus higher prices would mean less beneficiaries. Additionally, in order to reduce the costs, the organization suggested to **order goods directly from manufacturers**. In the end, both suppliers and government officials agreed to keep the prices stable, unless it was demonstrated that the increase was due to external factors.

WIDER IMPACTS OF THE PROJECT

The long-term engagement with the regional government served not only to build the capacity of the government but also to legitimize its efforts and the goals of the overall project, particularly on land tenure issues. The organization helped to establish the government as a credible voice and partner in the well-being of Puntland residents. Reciprocally, the government formally recognized the site in Garowe as "Jillab Village".

One of the most striking discoveries in the impact evaluation was the **dramatic reduction of crime from the IDP camps to the resettlement sites**. In both sites, village elders reported only a handful of petty crimes within memory. Women, men and youth unanimously reported feeling safe in all parts of the compounds. Additionally, the evaluation indicated a **reduction in gender-based violence**, according to the elders and settlement leaders, to which they credited lockable windows and doors in the new shelters.

Finally, the **lessons learned from this project were applied** in another shelter project that the organization started in Dolow.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

MATERIALS LIST FOR ONE HOUSE (ESTIMATED BEFORE COMPLETION)

Description	Unit	Quantity	Rate (USD)	Tot. Cost (USD)
Stones	m^3	4.4	6.25	27.50
Aggregates for concrete (gravel)	m^3	0.5	10.50	5.25
Sand	m^3	1.3	6.25	8.13
Portland cement (50kg)	Bags	16	8.00	128.00
Blocks (40x15x20cm) made from 1:7 mix cement-sand	No	700	0.65	455.00
Stirrups, 6mm mild steel diameter, 6m long	No	8	2.50	20.00
Steel reinforcement 10mm diameter, 12m long	No	6	12.00	72.00
Roofing Nails	Kgs	3	2.50	7.50
Wire nails - assorted	Kgs	6	2.20	13.20
Galvanized iron sheets, 2.4m long of 28 gauge thickness	No	18	9.00	162.00
Galvanized iron ridge caps of 30 gauge thickness	No	1	9.00	9.00
Roofing timber, 2"x2", 3.9m long	No	9	5.00	45.00
Roofing timber, 2"x3", 3.9m long	No	15	6.00	90.00
Formwork timber, 1"x6", 3.9m long	No	8	6.50	52.00
Steel door complete with frame, hinges, locking system – 1x2.2m	No	1	60.00	60.00
Steel window complete with frame, hinges, locking system - 0.85x1m	No	2	30.00	60.00
Formwork timber 1"x2", 3.9m	No	2	2.50	5.00
Labour costs	Lump sum			343.00

WEAKNESSES

- Staff turnover and lack of flexibility of internal systems and processes impacted the project timeline. For example, the regional accountant and his deputy resigned during the implementing period and no replacement was found for long. This affected the timely processing of financial reports and delayed the procurement approval process, as some decisions had to be referred to Nairobi.

- Limited female participation. Gender inclusion in Somalia is bound by cultural and religious considerations, which affect the ability to engage female staff and beneficiaries to the same extent as males. **Programmatic gender analysis is necessary** and should be built into monitoring systems, in order to tease out power relations and influence biases, flag the level of women participation in the project, and inform actions to improve equitable participation.

- Although in Somalia the common practice is to build several single room shelters (*tukuls*) for one household, which offer privacy for parents, children, relatives and can accommodate large families, **this project provided only one-room shelters.** These could not meet these family needs, however, houses could be further expanded on the plot allocated to each family.

STRENGTHS

+ Achievement of **tenure security** and **establishment of a community** in the targeted areas. Positioning the Housing, Land and Property focal point to coordinate with the government contributed to the strategic engagement and capacity-building of the authorities.

+ Continuous engagement of all stakeholders to explain the beneficiary selection and the implementation process. This was found to have significantly contributed to managing the expectations of suppliers and local authorities, as well as reduce rumours of theft and misappropriation of project assets and materials.

+ The selection criteria were established and agreed upon by all stakeholders. Beneficiaries were able to understand and explain the reasons why they qualified for assistance; the same was true for those who were not selected. This shows how effectively the information was shared amongst the community, and how transparent the system was.

+ Continued engagement of beneficiaries and owner-driven approach to construction. This included **the transparent and accountable systems** that were established for the beneficiaries, to be in control of the materials received and accepted. For instance, beneficiaries refused to accept the supply of blocks when these did not meet the agreed upon standards.

LEARNINGS

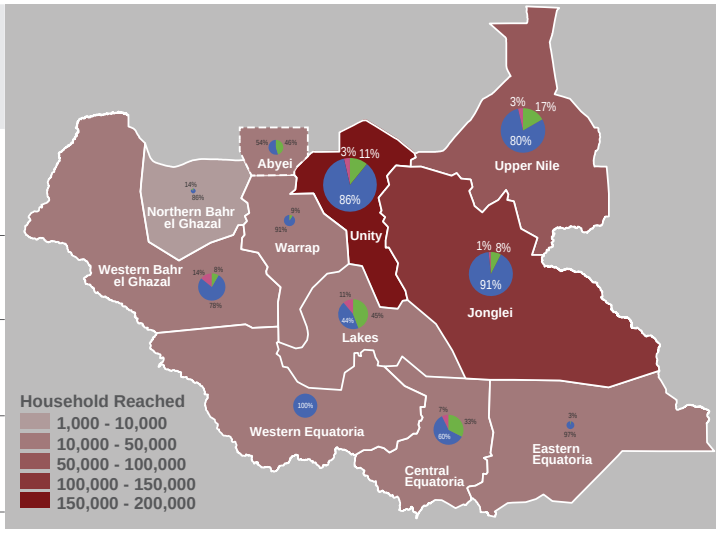
- **Beneficiaries had to be incentivized to participate in owner-driven construction.** This required a good understanding of the local context and skilled community motivators. As the interest in participating in manual construction work was low, the project team advised beneficiaries that they would be given priority if they provided labour.
- **Being clear and consistent from the beginning** on the mandate of the project, and sharing the objectives with relevant authorities, forced them to identify a suitable piece of land.
- **The settlement-based approach allowed the team to consider the root causes of vulnerability in this region** and to avoid the "bandaid after bandaid after bandaid" situation. The organization has embedded disaster risk reduction and resilience building into its development and humanitarian practice, ever since.
- **Linking the programme to vocational training and saving groups helped people to build new skills and earn money**. Offering options is important, as it allows community members an **opportunity to exercise choice,** helping to ensure that they are more than passive actors in the process and can thus find solutions tailored to their needs.

OVERVIEW

SOUTH SUDAN 2013-2016 / COMPLEX

CRISIS	**Complex, 2013** onwards Conflict, economic decline and food insecurity provoking protracted internal and cross-border displacement.
TOTAL PEOPLE IN NEED OF HUMANITARIAN ASSISTANCE	**10 million** (approx. 88% of the total population)
TOTAL DISPLACED PEOPLE	**1.83 million**[1]
SOUTH SUDANESE REFUGEES IN NEIGHBOURING COUNTRIES	**1.17 million**[1]
TOTAL PEOPLE SUPPORTED (shelter-NFI)	**748,430 households**[2] (Dec 2013 - Nov 2016)
SHELTER-NFI RESPONSE OUTPUTS (households)	**569,422** non-food items **146,917** shelter solutions **32,091** shelter-related NFIs

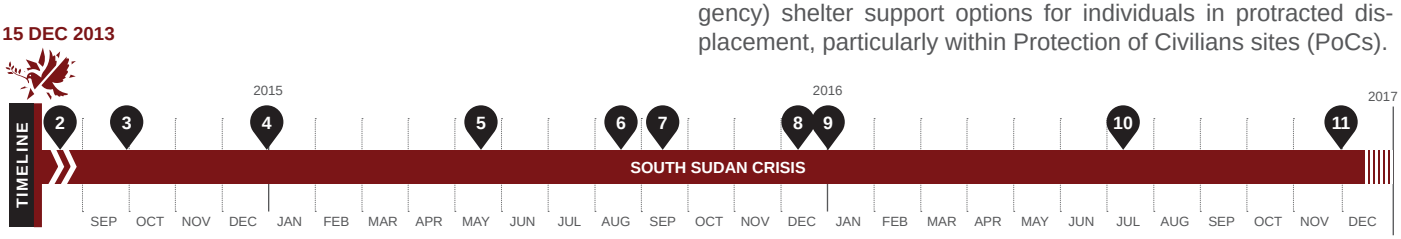
[1] South Sudan Humanitarian Update, 24 Jan 2016, http://bit.ly/2kRPmLn.
[2] Data reported by the Shelter-NFI Cluster.
[3] Humanitarian Response Plan 2015, http://bit.ly/2krYDfp.
[4] Humanitarian Needs Overview 2016, http://bit.ly/2kh9uqe.



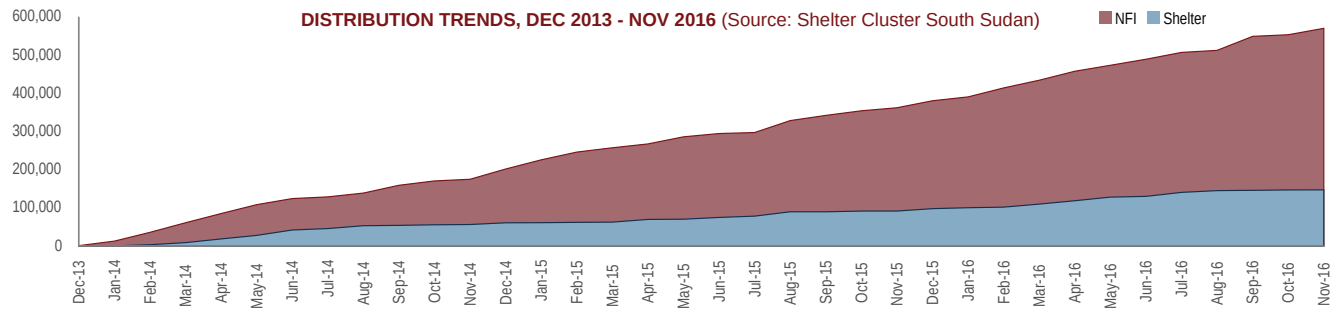
Cumulative figures of households served with shelter and NFI assistance, Dec 2013-Nov 2016: (Source: Shelter-NFI Cluster South Sudan). The pie charts represent the percentage of assistance for each state (Blue = Household NFIs, Green = Shelter, Pink = Shelter-related NFIs).

SUMMARY OF THE RESPONSE

The complex emergency in South Sudan – after the breakout of violence in December 2013 – created massive displacement and required a flexible approach to planning, coordination and implementation. The response focused primarily on meeting immediate needs through emergency NFI distributions. As the crisis continued, increasing efforts were made to include more durable (emergency) shelter support options for individuals in protracted displacement, particularly within Protection of Civilians sites (PoCs).



1. 15 Dec 2013: **Conflict starts in South Sudan.**
2. Feb 2014: **Humanitarian response scaled up.**
3. Sep 2014: **1.43 million people internally displaced; 470,000 refugees in neighbouring countries**[3].
4. 31 Dec 2014: **267,573 households assisted with shelter-NFI.**
5. May 2015: **Emergency airlift operation in Greater Upper Nile begins.**
6. 17 Aug 2015: **Agreement on the resolution of the conflict.**
7. Sep 2015: **Population in PoC sites reaches about 196,000 individuals.**
8. 15 Dec 2015: **1.66 million people internally displaced; 646,000 refugees in neighbouring countries. 6.1 million people in need of humanitarian assistance**[4].
9. 31 Dec 2015: **491,943 households assisted with shelter-NFI.**
10. 11 Jul 2016: **Battle in Juba and resuming of hostilities.**
11. 30 Nov 2016: **748,430 households assisted with shelter-NFI.**



Large-scale displacements in South Sudan led to a significant minority of hundreds of thousands of people seeking refuge in and next to UN bases. These sites were known as Protection of Civilians sites, or PoCs.

BACKGROUND

Following its independence on 9 July 2011, South Sudan was the world's newest state, with high hopes for the future. However, civil conflict started on 15 December 2013 and led to massive internal and external displacement of citizens, with extreme violence, harassment, and the deliberate destruction of community and civil infrastructure. Since then, South Sudan has been experiencing a complex crisis: political, economic and security-wise.

The situation in certain locations, such as Greater Upper Nile and Jonglei, continued to decline throughout 2014-2016. Other areas that were considered stable, such as the Equatorias and Greater Bahr el Ghazals, have experienced intense periods of fighting. Rising food insecurity and the effects of conflict on trade and crop planting have further impacted displacement dynamics and mobility shifts.

The August 2015 Agreement on the Resolution of the Conflict was set-back after major conflict episodes in 2016. Crucially, in July 2016, a major battle in Juba killed hundreds and led to thousands fleeing in fear. This led UN, Embassies and NGOs to evacuate or relocate staff.

PROTECTION OF CIVILIANS SITES

Prior to the conflict, the United Nations Mission in South Sudan (UNMISS) bases had hosted civilians under threat of physical violence, with limited humanitarian response. The continual violence from 2013 on caused people to flee to Protection of Civilians (PoC) sites and stay there for far longer than ever before. International debate has arisen over the sustainability of these sites; resources have continually been stretched and it has become obvious that IDPs in PoC sites require long-term assistance.

Initially, response was difficult, as many organizations were development-based and did not have the capacity or security protocols to respond to a quick-onset emergency. Shelter provision has been, for the most part, in concentrated IDP sites, such as the PoC sites in UNMISS bases, and the towns of Mingkaman and Melut – where large numbers of displaced people settled. While the majority of NFI response has taken place along the same lines, people in need across each state have been assisted with NFIs, since the beginning of the crisis.

SITUATION DURING THE CRISIS

There has been little satellite mapping or systematic collection of housing and construction data in the country, nor on the type of and damage to residential dwellings that have been destroyed. Additionally, South Sudanese people normally migrate between different localities, depending on the season or movements of livestock. Sections of certain towns were assessed post-conflict, however the lack of baseline data complicates assessing damage and, therefore, the collection of information is ad hoc. South Sudan is mostly rural, with underdeveloped infrastructure and roads, which have also been damaged through season weather patterns, conflict or neglect. People have generally been assisted in areas far from their homes, where this type of information would be more easily collected. **Thus, the focus of assistance in South Sudan** has not necessarily been to rebuild shelters, but **to provide new emergency shelters in areas of displacement,** where people fleeing their homes have found relative safety.

SHELTER-NFI RESPONSE

The Shelter-NFI Cluster has been in existence since 2011, when it had been assisting returnees from Sudan to the newly independent South Sudan. Returnees had differing shelter and NFI needs, according to the stage of their journey, and whether they were returning to rural or urban locations. The Cluster Strategy emphasized development and sustainability interventions, which took into account local context and community dynamics, such as disaster risk reduction for

Protection of Civilians sites, such as the one in Bentiu, are heavily secured because of the constant threat of attack by armed groups.

flooding, livelihoods support and cash transfers, linked to the intended three-year Humanitarian Response Plan.

In the first months after the 2013 crisis, operations were scaled up to respond to the vast increase of needs and scope. At a certain point, the mobile team increased from three members, to more than ten. Further, the team employed four technical experts and engineers in shelter design and site planning, to advise on shelter interventions in concentrated sites.

Given the changing and diverse contexts, a flexible approach to response, coordination and strategy was needed. During 2013-2014, the focus was on emergency shelter designs. Due to the protracted displacement and continued conflict, focus then shifted to more durable solutions. This included **developing robust designs and re-enforcing existing shelters,** with complementary framing support to enhance structural strength. With the extreme space limitations and increasing populations flowing into the PoCs, **communal shelter designs were introduced** to ensure space efficiency. At locations where this was not an issue, the Cluster advocated for individual shelters. However, progressive designs have not been an option, due to the protracted emergency.

In 2015, the Shelter-NFI Cluster worked with other clusters to coordinate the **delivery of multisectoral survival kits.** In May 2015, an emergency airlift operation began, to provide lifesaving assistance to civilians who were cut off due to insecurity and access constraints in Greater Upper Nile. The operation delivered lightweight, portable, survival kits, which included: essential, multisector, items such as mosquito nets; short-maturity vegetable seeds; fishing supplies; water containers, water purification tablets, oral rehydration salts and nutritional biscuits; and kitchen sets. By the end of 2015, agencies had delivered more than 27,800 survival kits in 14 deep-field locations, reaching 140,000 people.

COMMON SHELTER-NFI PIPELINE

Following several years of humanitarian needs in Sudan and the former southern Sudan region, a common Shelter and NFI pipeline was established in 2011, to increase efficiencies of scale, as well as the timeliness and predictability of service to beneficiaries.

Annual flooding affects people across South Sudan every year. With crowded conditions in PoCs, this caused significant additional public health concerns.

With the outbreak of political conflict in December 2013, the pipeline scaled up significantly. With ongoing and protracted conflict, multiple waves of displacement, and the need for continuous service in large displacement sites (e.g., the PoCs), **the distribution of NFIs and shelter materials through a common pipeline remained the primary method** of delivering humanitarian shelter assistance. As of late 2016, the pipeline has been used to reach 1,585,850 individuals, though in some cases the same people were reached multiple times, due to protracted displacement.

SITUATION IN 2017

By January 2017, more than 2.6 million people have been forcibly displaced from their homes. There were 1.83 million IDPs and 1.17 million others had fled to neighbouring countries (98,000 per month, since July 2016). More than 224,000 IDPs were seeking refuge at existing PoC sites in Bentiu, Unity; Malakal and Melut, Upper Nile; Juba, Central Equatoria; Wau, Western Bahr el Ghazal. The scale and protracted nature of internal displacement into PoC sites is unprecedented, throughout the UN's history.

The following case studies deal with the set up and operation of the common shelter-NFI pipeline (A.24) and a shelter project and site works conducted in the PoC site in Bentiu (A.25).

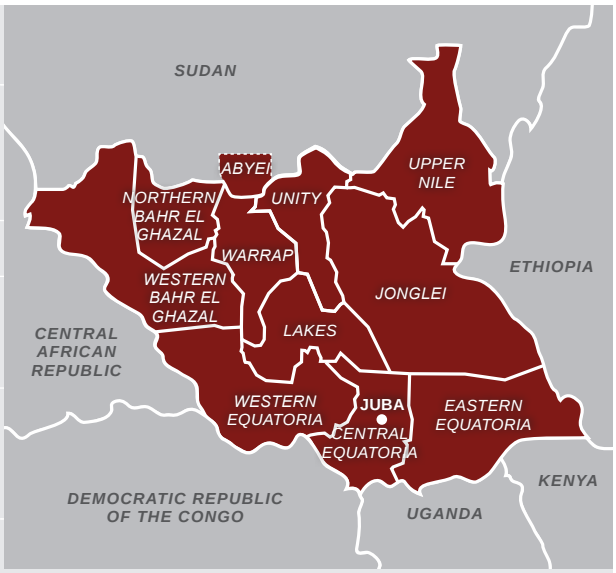
CASE STUDY

SOUTH SUDAN 2014-2016 / COMPLEX

KEYWORDS: Pipeline, NFI distribution, Emergency shelter, Procurement

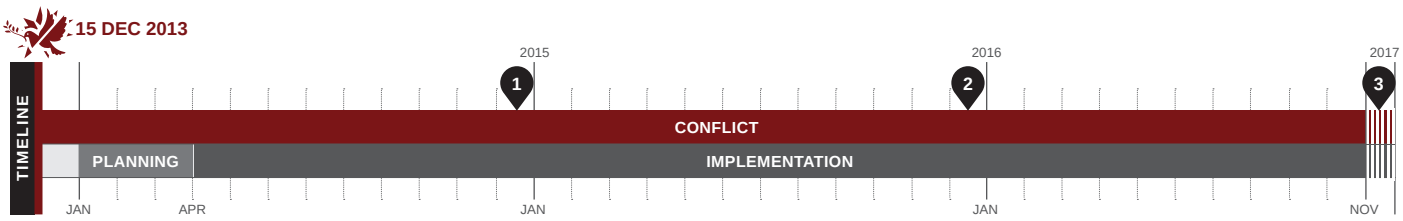
CRISIS	**South Sudan Civil War, Dec 2013 - ongoing. Complex crisis.**
TOTAL PEOPLE AFFECTED	**6.1 million** in need of humanitarian assistance and 1.66 million internally displaced, as of December 2015[1]. *For more updated figures, see overview A.23.*
PROJECT LOCATIONS	**South Sudan, country wide**
BENEFICIARIES[2]	**579,849 households** (2,894,407 individuals, 52% female) assisted between Dec 2013 and Dec 2016
PROJECT OUTPUTS	**438,958 households** assisted with NFIs **140,891 households** assisted with shelter materials
SHELTER SIZE	Shelter designs supported by the pipeline: **72m²** for communal shelters (for 32 people). **16m²** for individual shelters (for 5 people).
MATERIALS COST PER SHELTER	**USD 110** for individual shelters.
PROJECT COST PER SHELTER	**USD 135**

[1] South Sudan Humanitarian Needs Overview 2016, http://bit.ly/2d3Y2tB.
[2] There is some duplication in these figures, as individuals in protracted displacement may be reached multiple times.



PROJECT SUMMARY

Through the management of a common Shelter-NFI pipeline in South Sudan since 2013, this programme has ensured a continual and quality supply of materials for rapid distribution by cluster partners to displaced and conflict-affected communities across the country. The pipeline has helped partners quickly implement emergency shelter interventions, through coordinated planning and prepositioning.



© Muse Mohammed

People were displaced across multiple sites and large distances across South Sudan (here within the PoC site in Wau, Western Bahr el Ghazal).

1 Dec 2014: **54,005 households assisted with shelter materials, 159,725 with NFIs**

2 Dec 2015: **36,011 households assisted with shelter materials, 123,654 with NFIs**

3 Dec 2016: **50,875 households assisted with shelter materials, 155,579 with NFIs.**

STRENGTHS

+ The timely projection of potential breakages in the pipeline enables swift procurement of items.
+ Cost savings, by reducing overheads and staffing needs for partner organizations.
+ Standardized the quality of assistance.
+ Prepositioning of stocks in strategic locations.

WEAKNESSES

- Long lead times, mainly due to administrative processes.
- Lack of flexibility in the items supplied through the pipeline.
- Continuous staff turnover.

A common NFI pipeline allowed materials of consistent quality to be efficiently delivered across South Sudan.

BACKGROUND

For information on the South Sudan conflict and background on the Cluster and the pipeline, see overview A.23.

PIPELINE OPERATION

A common Shelter and NFI pipeline for cluster partners was established in 2011 to increase efficiencies of scale, timeliness and predictability of services. It is managed by a dedicated small team of international and national staff from the cluster lead agency, while all stocks in strategic locations are overseen by the organization's logistics unit. The pipeline programme was designed to support all shelter partners in South Sudan, through a central depository of materials, accessible upon identification of needs. The stocks are prepositioned in key locations across the country (based on strategic planning and continuous context analysis), to facilitate a swift delivery of items in emergency situations. Standard Operating Procedures include statistically weighted assessment and targeting tools. Rapid mobile response teams, as well as post distribution monitoring and evaluation exercises, are standardized and supported by the Cluster.

The primary users of the pipeline are partners of the Shelter-NFI Cluster, numbers of which varying from 16 in 2015, to 21 by the end of 2016. The common pipeline is open to all operational agencies, however requires a formal contract, in order to ensure that minimum humanitarian standards are met and partner organizations are accountable to beneficiaries. The pipeline provides a reliable, cost-effective and steady stream of quality materials for distribution to populations in need, allowing the implementation of humanitarian interventions that are efficient and economic, as well as large-scale procurement and distributions.

LOCATIONS AND BENEFICIARY SELECTION

Humanitarians only engaged in direct construction within Protection of Civilians sites (PoCs), where land was already secured for camp settlement by the UN Mission, or agreed with local government representatives. Other shelter interventions, such as those outside PoCs, have been limited to distribution of materials only, mainly due to unclear land ownership.

Beneficiaries served with materials through the pipeline are identified by State Focal Points in coordination with Operational Working Groups of the Cluster, mostly in priority locations after needs assessments have been performed, and with logistical support prioritized at the Inter Cluster Working Group. Beneficiaries are primarily those residing in concentrated IDP sites, such as the PoCs. Humanitarian agencies focused the assistance to people with specific needs and those who were extremely vulnerable. Gender considerations are integrated in planning, assessments, implementation and monitoring. Populations with specific vulnerabilities (physical disabilities or individuals made vulnerable due to gender or age) are considered and targeted with assistance to meet their needs, using methodologies that ensure access and prevent harassment.

Shelter responses outside of concentrated sites were limited due to transportation challenges and weight of framing materials. Assessments confirmed these locations in most cases have access to local construction materials and are able to construct their own shelters.

BENEFICIARY ENGAGEMENT

Continuous engagement of beneficiaries allowed to incorporate indigenous knowledge into materials specifications. For example, log species suited for a certain area improved the lifespan of shelters and reduced the risk of environmental impacts, including negative effects of insecticides. Shelter-NFI

Common NFI and logistics procurement planning were key to ensure a constant supply, in an environment where it takes over four months between placing an order and it being delivered.

interventions are designed around resilience and self-coping mechanisms of communities. Assessment reports are critically analysed to ensure interventions complement, and not compete with or undermine, community resources.

Communities have been empowered to strengthen their capacities through training and community organizing, including participating during distribution and monitoring activities.

Post-distribution monitoring explored in detail the efficiency and effectiveness of pipeline items. Based on the feedback collected, pipeline items specifications were adjusted and improved, to enhance their quality, durability, functionality and service.

COORDINATION

Working within the Cluster approach, the Inter Cluster and Operational working groups provide a common platform for different service providers and clusters, such as WASH, Health and Livelihoods, to optimize limited supplies, complement resources, address common issues and improve the quality of the humanitarian response. The pipeline is a reliable resource that supports Shelter-NFI partners and the Cluster for coordination by streamlining responses to avoid duplications.

RISK MITIGATION

Shelter-NFI partners work closely with community leadership to ensure interventions are conflict sensitive and respect the ethnic dimensions, privacy, land rights, safety and security of the affected populations. Contingency plans are discussed with communities, taking a holistic view of the context and improving operational preparedness. Methods to make livestock safe, or protect other community assets, are also analysed as a whole, wherever possible.

PROCUREMENT

All framing materials are sourced nationally, while cladding materials such as plastic sheets are imported. These stocks are initially stored in central warehouses and then transported to field locations. In some areas with functioning markets, framing materials such as wooden poles, bamboo poles and rubber rope are locally sourced. Items are then transported to strategic locations via road. However, in cases where this is not possible, items are transported via barge or air. To supply framing materials, “no objection certificates” from the government are mandatory to ensure items come from a sustainable source. Additionally, suppliers need to provide logging certificates issued by the Ministry of Environment. The organization also planned to conduct an environmental impact assessment in 2017, to better understand the effects of its shelter programming on the environment.

MAIN CHALLENGES

Poor infrastructure and road networks often make getting supplies in dispatch warehouses difficult. This is worsened during the rainy season, wherein most dirt roads are inaccessible. To address this challenge, multiple suppliers have been identified and sometimes items are procured from local markets.

The rugged land terrain, insecurity along transport routes, seasonal hazards and vast distances, mean large areas of the country are cut off during the rainy season. Thus, **transport to field locations poses a significant challenge**. Humanitarians must preposition supplies during the dry season after negotiating for access. In this context, a high level of coordination and emphasis on secure, accessible, common, services is required. In some cases, convoys are arranged and items transported in collaboration with other cluster supplies. After July 2016, **access and security challenges increased**, including: looting and ambushes on humanitarian convoys; higher number of checkpoints and armed actors demanding road taxes; seizure of private assets; security threats along unpoliced roads; and increases in transportation costs.

South Sudan is a landlocked country and does not have a well-developed manufacturing industry. Thus, plastic sheets need to be transported through border posts, where **waiting times** are often long. **Delays in obtaining tax exemption certificates** also impact procurement timelines and pose challenges for all partners in the country. The pipeline team must forecast trends and plan procurement activities far in advance, in order to mitigate these delays. As of early 2017, **investments were being made in sustainability and resilience activities** to improve predictability of supplies for local procurement. For instance, in order to reduce delivery time and support local traders (who often lack resources to supply required quantities), the organization was planning a pilot project to form a **consortium of traders** in areas with functional markets. The organization was also working on **Long Term Agreements and Framework Contracts** to ensure a minimum number of supplies are readily available on short notice.

WIDER IMPACTS OF THE PROJECT

The common pipeline allows a uniform, coordinated and efficient response. Its use has improved coverage, by enabling organizations to complement their own resources and achieve large-scale interventions, especially in concentrated PoC sites.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

Partner agencies were essential to ensuring effective and targeted delivery of shelter-NFI assistance.

WEAKNESSES

- Generally, **procurement takes between four to five months,** largely due to the tax exemption process. While this issue is largely factored into programming, and procurement processes start well ahead of time, it still represents a weakness, due to certain funding mechanisms that do not allow long lead times.

- Lack of ability of the pipeline to support flexible responses, as only a few types of items can be supplied.

- The continuous staff turnover within partner agencies has made it difficult for new staff to understand common pipeline systems and procedures.

STRENGTHS

+ Timely projection of potential breakages in the pipeline, caused by a lack of stock flowing through the pipeline or supply chain and transportation challenges, has enabled timely procurement of items.

+ The common pipeline concept significantly reduces overheads and staffing needs for partner organizations with centralized services. The project has contributed to value-for-money efforts and effectiveness of the humanitarian response as a whole, whilst also helping to **standardize the quality** of assistance.

+ Prepositioning materials in strategic locations across the country facilitates rapid deployment of life saving items. The availability of a **network of contracted transporters** has facilitated adequate prepositioning of shelter materials during the dry season, when roads are operational.

LEARNINGS

Post-distribution monitoring, conducted between two to 16 weeks after distribution, highlighted beneficiary feedback and helped to improve the response and planning for future interventions. For instance, **in communal shelters, protection and privacy were highlighted as key concerns.** To address this, shelters were partitioned into smaller, independent, family units that enhanced privacy, especially for women and girls. This addition, although minor, was not planned and stretched the pipeline resources. **Better gender analysis and incorporation in reporting** would have provided an opportunity to segregate and analyse information for gender-sensitive responses, and therefore better resource planning.

The pipeline is a common service that **reduces procurement burdens on partners, ensures standardized assistance** (as per the criteria set by the Cluster), **improves coordination and reduces overlaps** through a centralized control system.

CASE STUDY

SOUTH SUDAN 2014-2016 / COMPLEX

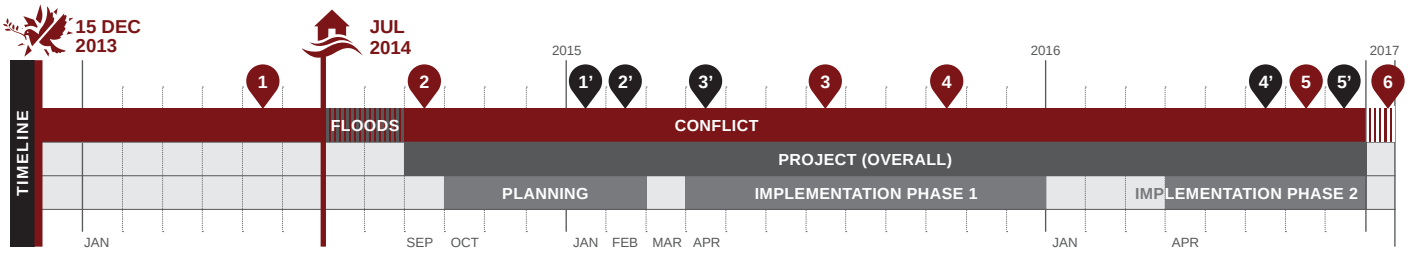
KEYWORDS: Emergency shelter, Site planning, Phased construction, Infrastructure, Planned camps

CRISIS	**South Sudan Civil War, Dec 2013 - ongoing. Complex crisis**
TOTAL PEOPLE AFFECTED	**6.1 million** in need of humanitarian assistance and 1.66 million internally displaced, as of December 2015[1]. *For more updated figures, see overview A.23.*
PROJECT LOCATIONS	**Bentiu, Protection of Civilians (PoC) site, Unity State.**
BENEFICIARIES	**105,786 people** (47% male; 53% female; with 47% under five years old), relocated across communal shelters, at 45 people per shelter.
PROJECT OUTPUTS	**11,778 robust shelters.**
SHELTER SIZE	**84m²** (4.5x21m communal shelters, with partitions to accommodate between 35 and 55 people in groups of 7 to 11 individuals).
SHELTER DENSITY	**1.5m²** at peak. Shelter occupancy has been variable due to space constraints, with huge influx in PoC caused by repeated insecurity.
MATERIALS COST PER SHELTER	**USD 837** (Materials: USD 687, Labour: USD 150 approx.).

[1] South Sudan Humanitarian Needs Overview 2016, http://bit.ly/2d3Y2tB.

PROJECT SUMMARY

The project constructed 11,778 shelters in the Protection of Civilians site in Bentiu. The project was closely linked with the phasing of a broader USD 18 million project of site works, which converted a camp that seasonably flooded into a habitable site.



1 May 2014: **Population in Bentiu PoC: 8,000 individuals.**

2 Sep 2014: **Population in Bentiu PoC: 46,000 individuals.**

3 Jul 2015: **Population in Bentiu PoC: 87,000 individuals.**

4 Oct 2015: **Population in Bentiu PoC reaches 120,000 individuals.**

5 Jul 2016: **Population in Bentiu PoC: 102,000 individuals.**

6 Dec 2016: **Population in Bentiu PoC: 120,000 individuals.**

1' Jan 2015: **Robust emergency shelter design agreed upon, and approved by the community.**

2' Feb 2015: **Site redevelopment begins to reduce overcrowding and provide adequate drainage, addressing the flooding risk.**

3' Apr 2015: **Implementation phase begins with a two-months delay (due to negotiations with UNMISS regarding usage of the space), and as a result of community resistance to being relocated to the new site within the PoC.**

4' Jun 2016: **Site development gradually completed in a phased approach, with sectors/blocks handed over to the partner NGO as the site works ended.**

5' Aug 2016: **Phase 2 of shelter construction completed (though ongoing, as new arrivals continue and reinforcement is done).**

STRENGTHS

+ Provided shelter secure from violence and localized flooding.
+ Effective coordination between all actors.
+ Strong forward-planning for procurement and implementation.
+ Use of local materials where possible.
+ Enhanced cladding with grass to improve comfort and durability.

WEAKNESSES

- Delays due to logistics and weather constraints.
- Assistance was provided only within the site, causing disparities with the populations outside.
- Overcrowding in shelters.
- Issues in timber procurement and poor market analysis.
- Lack of partitions in the initial design.

Although it is widely recognized that camps are an option of last resort, for tens of thousands of residents in Bentiu PoC, conflict meant that there was no other option. However, the site was too small and would flood every year. This required massive expansion and infrastructural works.

BACKGROUND

For more information on the context and the shelter-NFI response in South Sudan, see overview A.23.

Before the outbreak of conflict in 2013, the bases of peacekeeping forces – United Nations Mission in South Sudan (UNMISS) – had hosted small populations seeking protection for short periods, with limited humanitarian response. Following the outbreak of conflict, tens of thousands of people fled to – and stayed in – Protection of Civilians (PoC) sites far longer than expected.

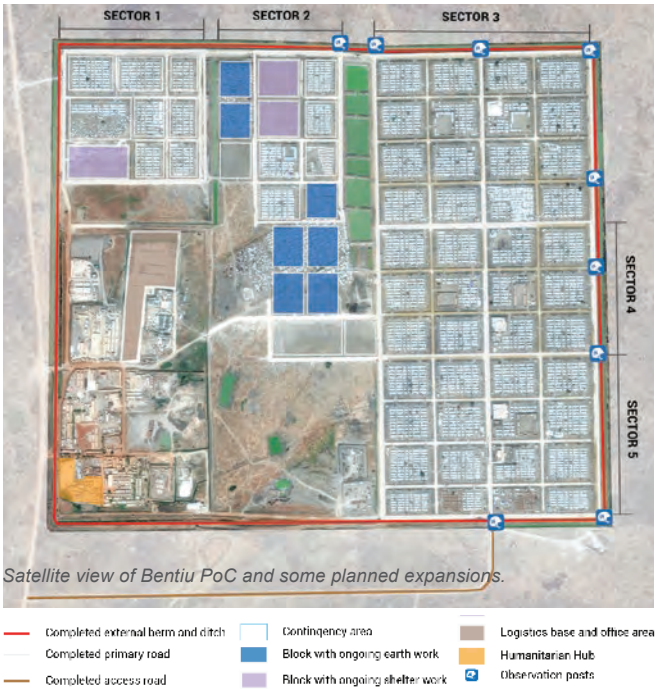
Over the course of the conflict, multiple waves of violence affected the town of Bentiu, leading to 120,000 people seeking shelter in the PoC site. Bentiu is extremely hard to access, with a small airstrip of limited capacity, and is inaccessible by road during the rainy season. During the dry season, it is regularly cut off, due to poor security. As a result, all logistics and supplies had to be planned in advance of the wet season, and plans needed to be flexible, to allow for this variable security context.

Humanitarians arrived in Bentiu in January 2014, to provide essential, life-saving, services to the population residing there. In March 2014, the PoC site in Bentiu hosted 11,000 IDPs, with the population rapidly rising to 43,718 by December 2014 as a result of escalated conflict in Unity State. The huge influxes created overcrowding and difficulties in service provision.

In the rainy season of 2014 **the site flooded for several months**, leaving the camp population trapped, with many parts of the site deep in water. By mid-2014, living space was limited to 9m^2 per person across the site. Overcrowding was compounded by stagnant water, which worsened living conditions and exacerbated the risk of water-borne diseases, such as cholera. The site itself remained highly insecure, with regular violence outside the PoC – and at times inside, due to ethnic conflict – leading to fatalities throughout the project.

SITE WORKS

To respond to the growing site population and address the issues of localized flooding, during 2015 and 2016, the Bentiu PoC was expanded and rehabilitated over 1.68 million m^2 (168 hectares). To create better living conditions for people seeking shelter in the site, **a massive drainage network was established,** based on the Dutch "polder" system. Major works (with 74 pieces of heavy machinery) led to the establishment of a 4m tall berm (mainly for security purposes) and 24m^2 section drainage ditch around the site. This was to prevent surface runoff from the surrounding land. Additionally, a series of drainage ditches and water retention basins were dug. These had large capacity pumps, to remove rainfall from inside the berm.



Satellite view of Bentiu PoC and some planned expansions.

The site works were achieved through contractors and a carefully phased construction plan. This plan allowed for additional timing for contingencies and monitored the volumes of soil moved, as well as the length of drainage ditches and berms.

Beyond the major site works, the site development project included shelter construction, establishment of water, sanitation and hygiene systems, health and education facilities, alongside other services. Given that the site was already occupied, **agencies needed to work together** to ensure carefully phased relocation. Shelters, latrines and other structures could not be

The expansion plan included land that was already spontaneously occupied by camp residents. Careful phasing of major upgrading works was required, as the whole site needed to be upgraded.

Phase 0: survey and de-mining.

Phase 1: Access to site works and perimeter.

Phase 2: Internal access and drainage.

Phase 3: block development and relocations.

Phase 4: block development, relocation and completion.

erected until ground works were ready and, if they were built before people were relocated, they risked falling into disrepair, or being looted.

GROWING SITE POPULATION

The site was designed for 50,000 people with a contingency of up to 75,000 people. As the site population continued to rise, reaching over 87,000 people by July 2015, revisions to site and shelter plans were necessary. In the first phase, there was significant community resistance to the programme, as the population influx meant that the number of people per shelter had to be increased from five to eight. In 2016, this increased further to 11, as the population increased to over 120,000.

IMPLEMENTING TEAM STRUCTURE

The lead organization for the site sub-granted to a partner NGO for the shelter activities. The implementing NGO had a Shelter Programme Manager and a Shelter Advisor, and was supported by the lead organization by two deployments of Shelter Cluster rapid response officers. The project also included an implementation and management team with functions such as quality control, cross-sectoral coordination and information management. In addition to project staff, the project implementation team included around 200 camp residents, who were chosen by the community leadership and trained by the organization on shelter design and construction. The construction of shelters was phased employing six different teams (including plot demarcation, digging, erecting skeletons and spraying walls).

Technical supervisors and contractors were recruited by the partner NGO within the PoC sites, with each of the contractors further recruiting a team of labourers to build shelter frames.

COMMUNITY ENGAGEMENT

Close engagement with the community leadership was critical for maintaining the ability to operate safely in the camp. It was also essential to enable safe and phased relocations within the site, as new shelters were built.

PHASING AND COORDINATION

As people were already occupying the site, a phased relocation process allowed site works to continue, according to an overarching project plan. The site was split into sectors and each sector was moved as the ground works were finished and shelter frames erected.

Relocation could only take place once plots for families and communities had been established, shelter materials had been distributed and construction was completed. Given the limited space, some sectors had to be moved to newly renovated plots before all of the land could be worked on. This made the timing of different activities for the entire site reconstruction project **interdependent and highly time critical**.

On 21 May 2015, the camp management agency coordinated 160 humanitarian workers in a population verification exercise, recording biometric details and assigning addresses within new areas. Verification was an important first step and helped in demarcating plots and defining movement plans.

Overall, UNMISS, peacekeepers, humanitarians and the authorities had to negotiate between each other and **coordinate closely in a very complex military environment** and in incredibly harsh conditions, including shrinking humanitarian access and a protracted conflict situation.

The shelter project built communal shelters due to lack of land and nationally limited resources. These shelters allowed to maximize the use of limited space and impacted shelter strategies throughout the country.

CONSTRUCTION PROCESS

Shelter frames were built by contractors and guards were hired to protect the shelter frames from theft, until they were allocated to a household. Once households had been allocated a shelter plot by the organization (in coordination with camp management agencies), they collected a shelter kit from the implementing partner NGO to complete their shelter. Demonstration shelters were built as prototypes and the partner NGO provided technical supervision to households to ensure that the materials were used effectively. For example, care was taken to ensure that plastic sheets were attached correctly. Individuals with identified vulnerabilities, such as disabled persons, pregnant women and the elderly, were provided additional assistance. A timber workshop was set up at the logistics base in the UNMISS site with outdoor storage for 3,000m^3 of timber. At the workshop, teams prepared the timber for the structures of the shelters, including treating them with anti-termite solution.

SHELTER DESIGN

The shelter design was discussed with the Technical Working Group in Bentiu and the national Shelter-NFI Cluster before being presented to communities. Local adaptations included the use of elephant grass, which could be harvested by women residing in the site. The windows and doors were also revised to be based on traditional local designs. The shelter design had an estimated life-span of one year, providing displaced households with a solution that is significantly more sustainable than standard emergency shelters built in the country by humanitarians. The design was inspired by the local summer housing solution known as *Rakuba*.

In 2016, concerns were raised by the community about security in the site and the security of shelters. As a result, the partner NGO started the process of providing doors to shelters which did not have one, starting with the most vulnerable, as identified by protection partners.

To protect from water coming in, it was initially planned to use sand to raise the floors of the shelters, but this proved impossible to procure. Households were therefore encouraged to use white soil to raise their floors instead.

Shelter frames were built by contractors.

THE SITE IN THE LONGER TERM

Relative stability in the first half of 2016 and the expansion of humanitarian services to wider Unity State led to a net reduction in the number of people in the PoC site. However, a resumption in hostilities following the July 2016 crisis led to a population increase in Bentiu PoC (as of 31 December 2016, the population was 119,853 individuals). The sustainability of this and other PoC sites has been object of debate, due to the limited resources, the protracted nature of the crisis and the need of displaced populations for long-term assistance.

WIDER IMPACTS OF THE PROJECT

Humanitarians have been running similar sets of projects in other PoC sites, such as in Malakal, where the organization has been redeveloping and rehabilitating the PoC site throughout 2015 and 2016. The shelter partner in that site has applied the communal shelter design and aimed to ensure the continued provision of essential emergency shelter services through distributing shelter kits, repairing damaged communal shelters when required and providing assistance to people with special needs to construct shelters.

The implementation of activities across the country has been in line with the Shelter-NFI Cluster objectives and humanitarian best practices, including lessons learned in Bentiu.

Through regular monitoring and technical guidance, humanitarian shelter teams have been working to help residents construct their shelters in more durable ways.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ The project provided (relatively) **secure shelter from violence and localized flooding**.

+ Coordination between all actors was key to the success of such a large-scale programme, which required careful phasing within many constraints.

+ Strong, forward-planning regarding required supplies helped the project team mitigate extreme weather variability and the lack of transport infrastructure. This enabled over 1,000 units to be constructed per week, at the height of the relocation process.

+ Wherever possible, local materials were used. 84,000 bundles of elephant grass, bamboo and garang rope were procured. The local elephant grass was procured from women over a period of two weeks, through a large community-mobilization campaign.

+ The plastic sheet cladding was enhanced with grass to improve insulation and extend the lifespan of plastic sheets.

WEAKNESSES

- Activities were delayed by approximately eight weeks compared to the proposed work plan. This was primarily due to logistics and weather constraints.

- The site became the only significant location where assistance at scale could be provided in the state. **This caused disparities** between the assistance provided to those living in the PoC and those outside and was one of the causes of population growth of the site.

- The site became very crowded and shelters were relatively small. Although the reasons for the lack of space were unavoidable (both political and financial), the overall density was higher than desirable.

The site works were based on a Dutch "polder" system. They included 28m² section drainage ditches, berms, water retention basins, and large volume pumps to evacuate water.

MATERIALS LIST FOR ONE COMMUNAL SHELTER

Material	Unit	Unit cost (USD)	Quantity	Total cost (USD)
Plastic sheet (4x5)	Piece	15	8	120
Rubber binding rope	Bundle	5	20	100
Bamboo poles	Bundle of 10	5.5	10	55
Timbers 3 x 2" x 3m	Piece	4	28	112
Timbers 2 x 2 x 4m	Piece	6	10.25	61.5
Timbers 2 x 2 x 3m	Piece	4.5	12	54
Timber 4 x 2 x 5m	Piece	11	4.25	46.75
Timber 3 x 1" x 3m bracings	Piece	3.5	8	28
Nylon Rope 30m	Roll	8	5	40
Nails 4"	Kg	2	2.5	5
Nails 3"	Kg	2	5	10
Nails (roofing)	Kg	3	1.5	4.5
Anti-termite and wood borer	Piece	10	5	50

LEARNINGS

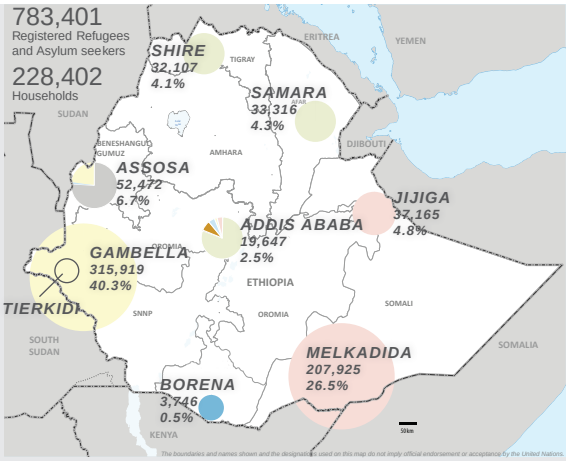
- The project demonstrated the **value of early collaboration and planning**, particularly in such a complex and challenging environment. While shelter activities in 2014 were constrained significantly as a result of a lack of dry space and logistical challenges, the convening of stakeholders and the establishment of a technical working group to plan the redevelopment project in September 2014, as well as the relatively timely procurement of materials during the dry season logistical window, ultimately ensured the success of the project.
- Shelter designs that are meant to accommodate households beyond an acute emergency phase **should take into account privacy considerations and install partitions.** The communal shelters were initially built without partitions, as the shelter approach was based on individuals-per-shelter (and not households). This was mainly a result of limited space available and the increasing population in the camp.
- For such large projects, **it is important to have a proper market analysis** and adopt a design that suits locally available materials. Not enough consideration went into the **procurement** of timber, nor its **potential environmental impact.** With a non-functional timber market, non-standardized sizes and right species available, it was difficult for the supplier to keep up the demand; compounded by its limited understanding of the requirements, as well as access to appropriate tools and workshops to provide desired sizes.

CASE STUDY

ETHIOPIA 2014-2016 / S. SUDAN CRISIS

KEYWORDS: Transitional shelter, Site planning, Training, Local techniques

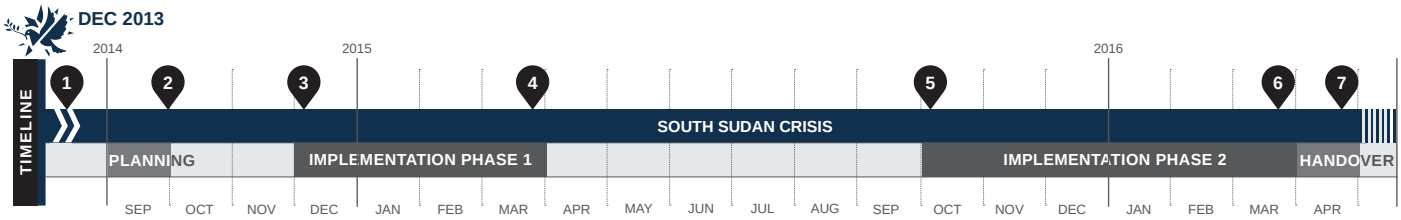
CRISIS	**South Sudan refugee crisis, Dec 2013-ongoing**
TOTAL PEOPLE DISPLACED	**245,298** refugees in Gambella region **48,507** refugees in Tierkidi camp (as of September 2014, at the start of this project).
PROJECT LOCATION	**Tierkidi Refugee Camp, Gambella.**
PROJECT BENEFICIARIES	**835 households** (4,125 individuals).
PROJECT OUTPUTS	**835 Transitional shelters** (*Tukuls*).
SHELTER SIZE	**17.6m²** (4.2m x 4.2m).
SHELTER DENSITY	**3.5m²** per person (average household size is 5).
MATERIALS COST	**USD 604** per shelter (including labour).
PROJECT COST	**USD 800** per shelter (estimated).
OCCUPANCY RATE	**100%** (based on data from camp management agencies).



Map showing the locations of arrival of refugees to Ethiopia and the respective total figures for each region, as of November 2016 (source: UNHCR).

PROJECT SUMMARY

The project supported the construction of 835 transitional shelters in a refugee camp in the Gambella region, for South Sudanese fleeing conflict, alongside WASH and NFI activities. The shelters were constructed with traditional techniques, locally available materials and a high involvement of the beneficiaries.



1. 27 Jun 2014: **Refugees from South Sudan reach almost 240,000 in Gambella, after a steady growth since the beginning of the conflict.**
2. End Sep 2014: **Project planning and shelter designs completed.**
3. Dec 2014: **Project starts. Refugee population in Tierkidi camp is approx. 49,000.**
4. Mar 2015: **Safe water provided to all camp residents through initial trucking of purified water and subsequent establishment of 33 emergency water points. 500 tukul shelters constructed in zone D.**
5. Oct 2015: **Second phase of the shelter project starts, with different funding.**
6. Mar 2016: **Completion of 335 additional tukul shelters in zone C of the camp.**
7. Apr 2016: **Beneficiaries are relocated from the Emergency Centres to the newly constructed transitional shelters, although the project was handed over to the local authorities and the community at the end of 2015.**

STRENGTHS

+ Engagement of all actors in the process.
+ Use of local building practices.
+ Skills and knowledge of workers and refugees were enhanced.
+ Effective coordination and technical assistance.
+ Efficiency and savings.

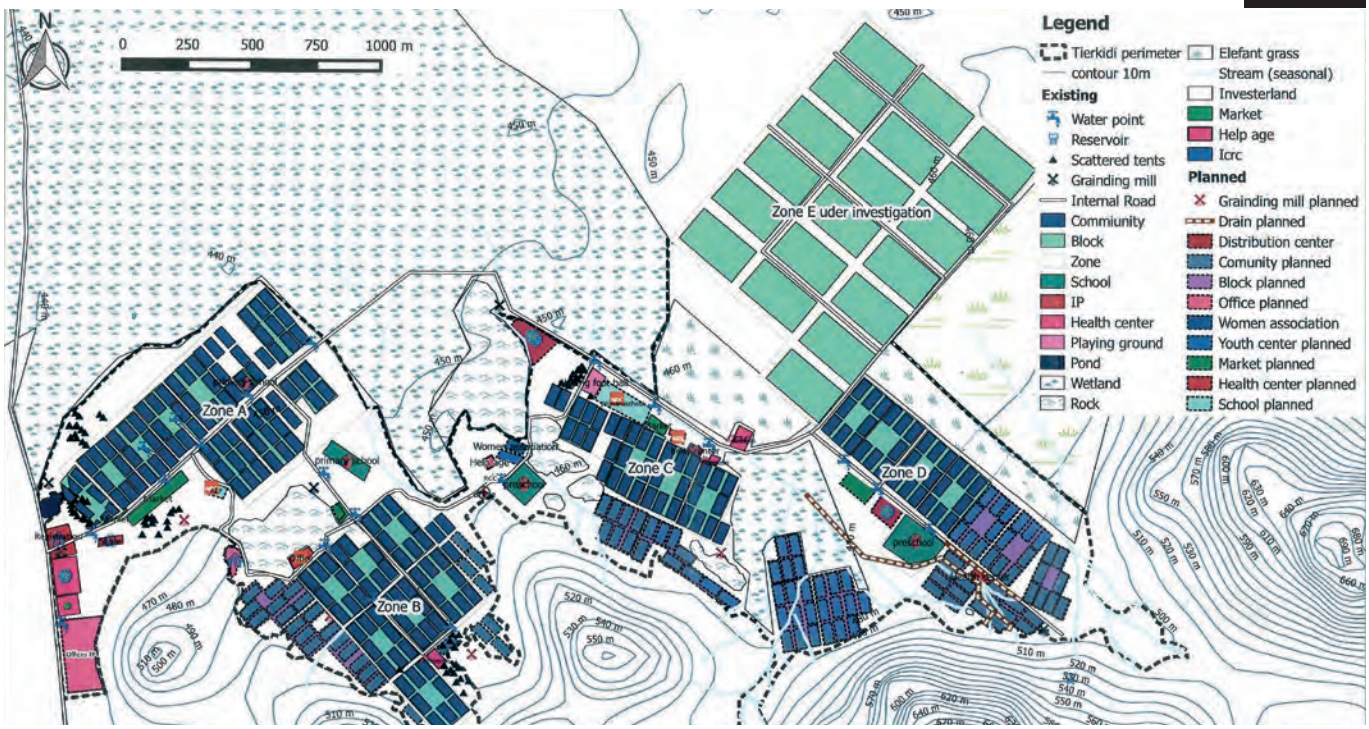
WEAKNESSES

- Scarce availability of raw materials.
- Poor site selection.
- Sourcing of the soil for walling delayed the project.
- Limited involvement of women.

CONTEXT

The Gambella region is located in the western part of Ethiopia, next to the border with South Sudan. It has a tropical climate, characterized by hot temperatures, heavy rainfalls from April to September (average of 229mm in July), however it is very dry during rest of the year. Settlement location is therefore particularly important in regards to the rainy seasons. Ethiopia is the country hosting most refugees and asylum seekers in Africa, with a total of 783,401 individuals as of November 2016, mainly from South Sudan, Somalia, Eritrea and Sudan[1].

[1] UNHCR, 30 Nov 2016, http://bit.ly/2jO0A1E.



The shelter project built shelters in areas D and C of Tierkidi, a planned refugee camp (plan as of January 2015).

SITUATION AFTER THE CRISIS

The conflict in South Sudan erupted in December 2013 and caused massive displacement, both internally, and into neighbouring countries[2]. The Gambella region received large numbers of refugees fleeing the conflict in the eastern parts of South Sudan. As of August 2014, there were over 190,000 refugees in the region. This number continued to increase, reaching almost 250,000 individuals by the end of the year.

Several refugee camps were set up and received a high influx of people seeking protection and adequate shelter, along with access to food, water and basic services. At the planning stage of this project, in September 2014, Tierkidi camp was already hosting approximately 48,500 refugees and asylum seekers from South Sudan[3], most of whom were living in emergency tents, in dire conditions.

NATIONAL SHELTER REFUGEE RESPONSE

In 2014, the refugee shelter response in Gambella was led by humanitarian organizations, in coordination with the Administration for Refugee and Returnee Affairs (ARRA) and the lead refugee agency in the country. The strategic focus of the sector for 2015 was to transition from emergency to stabilization, and to relocate refugees away from transit centres and flood-prone camps.

Two types of shelters were provided in camps, 1) Emergency shelters, primarily tents or *Bajaj* (plastic sheeting on wooden frames); and 2) Transitional shelters, mainly traditional structures known as *Tukuls*. Upon arrival to the camps, households were registered in reception centres and received the emergency units, which were gradually upgraded or replaced with the transitional options. Implementing partners undertook the sourcing and construction of the superstructures, including roof construction, and the refugees usually complemented the process by mud plastering the walls. This project supported 835 households in the Tierkidi camp, as part of a wider programme that included NFI, water and sanitation components.

[2] For more information on the South Sudanese crisis and shelter response, see overview A.23.
[3] UNHCR Information Sharing Portal, http://bit.ly/2kzuifp.

BENEFICIARY SELECTION

The project targeted South Sudanese refugees who were residing in three camps in the area (Tierkidi, Leitchuor and Kule). The targeted households were new arrivals who temporarily settled in the camps, without basic shelter. The lead camp management organization and the refugee government agencies were directly involved in the assessment and selection of beneficiaries, according to common vulnerability criteria. Priority was also given to those who had been living in emergency shelters longer.

The government had already allocated the land for the refugees, which was demarcated in collaboration with ARRA along with camp management actors.

TEAM STRUCTURE AND STAKEHOLDERS' ENGAGEMENT

For the implementation of this project, the Country Director provided operational oversight, with support of a Grants Management Officer. At the field level, an internationally recruited Area Manager was responsible for the quality of the intervention, supervision of staff and liaison with ARRA, the camp management agency and other stakeholders. A WASH technical specialist and a team leader were also in place and a shelter project manager was being recruited at the time. The field team consisted of more than 30 staff. To ensure standardized application of organizational compliance regulations, accountability and quality of programming across the region, regional and Headquarters staff were also employed as part of this project.

The shelter design was based on the standards in Gambella, used by different agencies, and agreed upon by the Shelter Working Group. Initially, there was resistance from the refugee community about the standard design; the organization, who joined the larger shelter programme at a later stage, therefore faced difficulties in adopting the selected model. This issue was overcome by incorporating the feedback that beneficiaries had given to the Working Group and other agencies. In fact, sector partners, relevant authorities and the beneficiaries, such as elders and vulnerable people, were involved in the design phase.

Skilled workers were paid to build shelters in the following stages: 1. The site was demarcated and structural poles were erected. 2.The structure and door were built. 3.Wall matting was added. 4. The roof structure was built. 5. The roof was thatched. 6. Once the thatching was complete, the Tukul was ready to be plastered with mud (see picture on the opposite page).

SHELTER DESIGN AND MATERIALS

The chosen design consisted of a mud *tukul* (traditional house) with a eucalyptus wooden structure finished with bamboo or grass-thatch matting for the mud render. The shape, as well as the thick mud layer, protect the structure from the elements and helps in maintaining a cooler indoor temperature. The materials, grown in large plantations, are normally abundant in the region. However, a quick market survey showed the possibility of a shortage of bamboo, so the project chose to use primarily grass lattices.

The traditional shelter components included:

- Treated eucalyptus posts (with anti-termite solution using engine oil);
- Bamboo split-bracings, tied to vertical posts with nails, ropes, or grass thatch;
- Mud-plaster made with termite soil;
- Steep-sloped grass roof, on top of treated eucalyptus rafters and purlins (top height 5m);
- Lockable door made from eucalyptus pole frames and corrugated iron sheet;
- 60cm gap above the walls, left open for ventilation.

PROJECT IMPLEMENTATION

After beneficiary selection, the project was implemented as follows:

- **Plot demarcation,** followed by the mapping of the shelters location.
- **A prefabrication workshop was set up,** in a warehouse in section D of the camp, to produce the shelter elements, such as doors, poles and frames, in a standardized approach. The capacity of pre-cutting and processing was strengthened to meet the construction targets, within at least three days in advance of the construction.
- **The superstructure (frame and roof) was built** by a team of carpenters from the host community.
- **The bamboo or grass lattice** was undertaken by paid refugee workers, skilled in this type of construction.
- **The grass thatch** was installed by a team of skilled refugee workers. The thatching technique was improved in the second phase of the project, due to the observation of some parts of the roof deteriorating relatively quickly.
- **The house was then handed over** to the identified beneficiary family.
- **Suitable locations for the quarrying of soil** was agreed with ARRA and the host community, to ensure that safe practices were adhered to and conflicts with the host community mitigated. The soil was sourced by the refugees themselves, with assistance from field officers.
- Refugees then organized, in self-help groups, and were provided with the necessary local materials, tools and technical assistance to **undertake the mud rendering and the raised embankments** to protect from flooding.
- **Regular technical assistance and supervision** was provided, according to the design and agreed criteria.
- **Coordination and monitoring** of the process was ensured with the organization staff, ARRA and other implementing partners, to address any problems that may have arisen.
- The organization conducted a **post-implementation assessment,** collecting sex and age disaggregated data. The majority of beneficiaries reported to be satisfied (over 80%) or very satisfied (over 10%) with the shelter design and materials. The results were shared with the Shelter Working Group and its members.

COMMUNITY INVOLVEMENT AND TRAINING

The refugee community was involved in the implementation of the shelters through several tasks, including the overall layout and construction, aiming to incorporate their requirements and ensure a higher sense of ownership and user satisfaction. This was demonstrated in the post-implementation monitoring and by the fact that people personalized their shelters with decorations and paintings, as well as building fences, hedges and gardens on their plots.

During implementation, one of the main challenges was finding skilled workers (like carpenters, masons and foremen). Such technicians were not readily available, especially among the refugees. This was solved by providing on-the-job training and technical assistance throughout the project. Some workers were promoted to “shelter foreman level” due to the technical skills gained during their involvement. The refugee community also participated in the plastering of the shelters according to their traditional construction skills; however, women were not involved, only contributing to the collection of grass for thatching.

COORDINATION

As the proposed programme was implemented in a refugee camp, there was coordination with development actors and programmes, and interventions were designed to be sustainable. Coordination with other agencies and sectors in the camp was essential to avoid duplication and create complementarity, particularly as the organization adopted a “Linking Relief, Rehabilitation and Development” approach. Based on the understanding of the socio-cultural, environmental and technical components of existing building practices, the use of locally available resources and the improvement of traditional techniques was favoured.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

Refugees plastered the walls of the shelters with mud, made from soil sourced by the refugees themselves, in areas agreed with authorities and host communities.

MATERIALS LIST FOR ONE TUKUL SHELTER

ITEMS	UNIT	QTY	TOTAL COST (USD)
Bamboo poles, 10cm diam.	pcs	8	27.3
Eucalyptus poles, 8cm diam.	pcs	16	49.9
Eucalyptus poles, 6cm diam.	pcs	4	10.9
Bamboo poles, 5cm diam.	pcs	200	237.4
Corrugated Iron Sheet	pcs	1	6.9
Bolt, latch, hinges for door	lump	1	3.5
Local fibre string	roll	1.5	5.2
Plastic rope	m	200	4.9
Roofing nails	kg	0.5	1.5
Assorted nails: 10cm, 8cm, 6cm	kg	5	7.2
Soil for walling and plaster	m^3	4	59.4
Grass: 55cm, 150cm long	bundle	35	103.9
Transport + labour to load	lump	1	4.9 + 1.0
Used motor oil	litre	1	1.0
Community mobilization	lump	1	24.7
Labour for shelter structure	lump	1	32.1
Labour for roof thatching	lump	1	22.3

STRENGTHS

+ Involvement of all actors and the affected community in project design and implementation.

+ The shelters were designed **respecting the local building culture.**

+ The project engaged both the host community and some refugees, to enhance their skills and knowledge of building practices.

+ Effective coordination, technical assistance and supervision of works.

+ Efficient implementation, minimizing unnecessary expenses. In the first phase, 500 shelters were completed in four months.

WEAKNESSES

- Scarce availability of raw materials for the roof, due to seasonality.

- Poor site selection. The second allocated site was at the bottom of a hill, therefore being more prone to flooding.

- Sourcing of the soil for walling. The soil chosen for the construction was far from the site, therefore affecting procurement times and delaying the whole project.

- Women were not involved beyond collecting the grass. Their involvement in activities such as pit excavation and mudding of the shelters would have created income opportunities and help them to support their families.

LEARNINGS

- **Engaging affected people at all stages** of a project is key to facilitating implementation, skill transfer, as well as enhancing ownership and building trust.
- **Strong coordination at all levels and technical and managerial support** significantly contributed to the effectiveness and efficiencies of the shelter project.
- **Effective monitoring and documentation of activities** throughout the project can provide lessons for future evaluation and planning of similar interventions.
- **Cash-for-work as a modality of assistance is highly dependent on assessments** and thorough analysis. Without a proper assessment of existing economic activities and household-level livelihoods, as well as careful targeting to ensure that all affected groups can benefit from the assistance, cash may not be effective and exclude certain groups, such as women and persons with limited mobility.

CASE STUDY

TANZANIA 2016-2017 / BURUNDI CRISIS

KEYWORDS: Transitional shelter, Adobe brick making, Training, Community participation

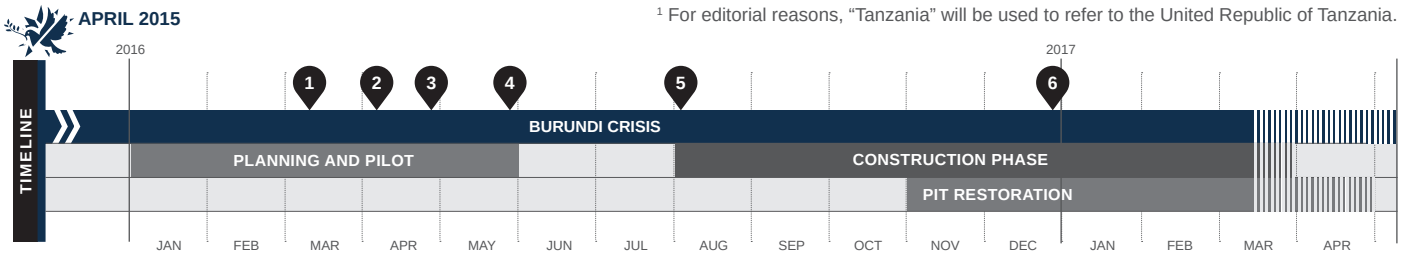
CRISIS	**Conflict / political tension, April 2015-ongoing. Refugees from Burundi.**
TOTAL PEOPLE DISPLACED	**178,000** Burundian refugees in the United Republic of Tanzania (approx. 40,000 households). **326,000** total Burundian refugees in neighbouring countries. **139,000** people internally displaced in Burundi.
PROJECT LOCATIONS	**Nyaragusu, Nduta and Mtendeli camps** in Kibondo, Kakonko and Kasulu Districts, Kigoma Region, Western Tanzania.
PROJECT BENEFICIARIES	**37,760 individuals** as of December 2016 (65% female).
PROJECT OUTPUTS	**7,552 Transitional shelters** (target: 11,000). 30% are duplex shelters for small families/individuals.
SHELTER SIZE	**18m²** covered living space.
SHELTER DENSITY	**3.6m²** per person (average household size is five).
MATERIALS COST	**USD 395** per shelter
PROJECT COST	**USD 500** per shelter (including transport, water trucking, labour, support payment to persons with specific needs and project administration costs).

The project was implemented in the three camps of Nyaragusu, Nduta and Mtendeli camps, near the border with Burundi, Western Tanzania. From Burundi Situation: Regional Refugee Response Plan, January-December 2016.

PROJECT SUMMARY

This project provided durable shelter for refugees fleeing violence in Burundi, across three refugee camps in Western Tanzania[1]. The programme was based on a community engagement model to produce adobe bricks within the camps and was accompanied by training and the production of a technical manual.

[1] For editorial reasons, "Tanzania" will be used to refer to the United Republic of Tanzania.



1. Mar 2016: **Three different model shelters completed and tested with the community.**
2. Apr 2016: **Start of brick making and testing.**
3. End-Apr 2016: **Completion of first 100,000 stabilized adobe bricks.**
4. End-May 2016: **Completion of first 64 T-Shelters.**
5. Aug 2016: **Funding awarded and construction started for 11,000 Transitional Shelters.**
6. Dec 2016: **7,552 shelters completed and handed over.**

STRENGTHS

+ Community mobilization ensured high efficiency and speed.
+ Suitability and flexibility of the shelter design.
+ Use of locally available materials.
+ Significant sense of ownership and buy-in from the community.

WEAKNESSES

- Limited experience in adobe brick-making and lime stabilization.
- Adobe bricks can be problematic in wetter months.
- Shelter staff with technical background needed guidance on the community engagement processes.
- Minor delays and high turnover of staff.

CONTEXT

Civil unrest in Burundi has resulted in over 326,000 refugees fleeing to the neighbouring countries of the Democratic Republic of the Congo (DR Congo), Rwanda, Tanzania[1], Uganda and Zambia. An L1 emergency was declared in April 2015 and escalated to L2 in May, with a Regional Refugee Coordinator appointed. In addition to political instability and increasing violence, Burundi's deteriorating economy and several natural disasters (floods, landslides, heavy rains and storms) over the last year have contributed to displacement.

The project was implemented in the Kigoma Region, Western Tanzania, which borders Lake Tanganyika to the south and Burundi to the north. The climate is bimodal with a wet season from November to January, reoccurring again from February to April. May to the end of October is primarily dry.

Women were involved in mixing clay, lime and sand (Nduta camp pilot project).

The process of adobe brick making in Nyaragusu refugee camp managed to produce a total of over 11 million bricks, used for the construction of the shelters.

SITUATION BEFORE THE CRISIS

Kigoma is one of the poorest regions in Tanzania and has regularly hosted refugees in Government Gazetted refugee campsites. The road network is poor, with mostly dirt roads, and thus access to the region is difficult, particularly in the wetter months of the year. While larger towns, such as Kasulu and Kibondo have benefited from increased employment and local economies (as a result of the presence of humanitarian organizations), smaller towns near border crossings have seen minimal change. The environmental impact of refugee influxes, particularly on the surrounding forest resources (wood collection), has been significant. The Government of Tanzania was expected to increase focus on the host communities and regional infrastructure.

Prior to the development of an additional four refugee camps throughout 2015 and 2016 near the border with Burundi, all refugees were residing in Nyarugusu. This led to very poor conditions and heightened tensions between groups of longer-term refugees and new arrivals, as the camp, its facilities, and infrastructure, far exceeded its capacity.

SITUATION AFTER THE CRISIS

As of 16 October 2016, Tanzania was hosting more than 240,000 refugees and asylum seekers, mainly from Burundi (171,934) and DR Congo (68,009). The overwhelming majority of these persons of concern resided in one of the three refugee camps in North-Western Tanzania. Due to continued insecurity in Burundi, from April 2015, refugees continued to flee to Tanzania, through over 18 border entry points.

New camps (including Nduta and Mtendeli) were established to allow the decongestion of Nyarugusu through relocation, as well as to provide space for new arrivals. 18,493 Emergency Family Shelters were constructed and 7,466 tents erected.

SHELTER STRATEGY

The national shelter strategy focused on providing more durable and secure transitional shelters, as well as responding to the immediate need for shelter and NFIs amongst new arrivals from Burundi and DR Congo. Shelter responses included standardized family tents, to ensure that persons of concern did not spend more than three days in mass shelters. Emergency shelter construction was prioritized to minimize the use of tents and ensure the rapid upgrading to transitional shelter.

This project aligned to the sector priorities, by constructing transitional shelters in the three camps of Nduta, Mtendeli and Nyarugusu.

BENEFICIARY SELECTION

The older areas of the camps, which had been occupied first, were prioritized for this project. Households living in tents were also prioritized, due to the shorter lifespan of tents compared to emergency family shelters. People with specific need for support, such as single female heads of household, the elderly and those with disabilities, were also identified and prioritized (preventing their engagement in the construction phase).

PROJECT IMPLEMENTATION

Three implementing shelter partners were engaged for this project, one for each camp. The project team consisted of one project engineer, two assistant engineers for each implementing partner and foremen (to directly supervise the construction of the transitional shelters). The shelters were fully constructed by refugees, using local materials, skilled and daily labour from the camp population.

PILOT SHELTERS

During the first phase of the project, a Shelter Working Group was established with the lead agency, implementing partners and other shelter actors, to manage and coordinate the project. **Three shelter designs were constructed and tested** with the community: 1) traditional clay and stick, 2) complete corrugated galvanized iron, and 3) adobe brick.

The three pilot shelters were constructed and trialled against the following criteria:
1) **Economic** (cost of materials, benefit to local community, cost to transport materials);
2) **Social** (maximize ownership, employment, and cultural appropriateness);
3) **Environmental** impact (materials used from natural resources, distance to transport, impact on host community, water, forest and other environmental resources);
4) **Socio-cultural** impacts (communities' ability to self-construct, acceptability of the shelter, protection issues, suitable size, security, plot size and layout, ventilation, storage, cooking and social space).

The adobe brick shelter design was preferred by the community and was deemed the most environmentally harmless and culturally acceptable. The government was very supportive of

Duplex lime-stabilized shelter completed in Nduta refugee camp. Some of the shelters were designed to host two small families and followed the same design, but had two doors and a partition that divided the indoors in two units.

this type, as the national environmental policy prescribes limiting the use of native timber. While some partners and beneficiaries initially expressed preference for contracted shelter construction, or other design types, once the shelters started to be completed and community participation increased, this challenge was overcome.

BRICK MAKING

Once partners and the community had agreed on the type of shelter and design specifications, **community-led brick-making commenced in each camp.** Tests were carried out on different lime or cement stabilized bricks throughout the project, as variations in soil were encountered in different areas of the camps. It was initially decided to use lime, but later in the project the team discussed the suspension of lime distributions, mainly due to its scarce effectiveness in such minimal proportion, fear from some users that it would irritate their skin, and the fact that families did not use it at all in one of the camps. Brick-making was carried out in groups of 16 households, overseen by one full-time supervisor (foreman) from the implementing agency. Each group included at least one family with persons with specific needs. The bricks were air-dried and could therefore be produced in any weather, as long as cover was provided during wetter months.

A brick-making guide was also produced in the local language with diagrams to support best practice. These were distributed to communities, with regular community meetings held to ensure continuous targeted messaging. Trainings were held regularly for masons and carpenters, organized in mixed male and female groups to ensure that enough skilled labour was available to support households during the construction phase.

CONSTRUCTION PHASE

Each targeted household was assigned a construction plot within the camp. In Nduta camp, the plot was 20x15m, making it possible to construct the new shelter while the family continued to occupy their tent or emergency family shelter on the plot. In Mtendeli and Nyaragusu, the plot was 15x10m, making simultaneous construction more challenging. If living in tents, families were recommended to move their tent to the firebreak (or another space) while construction took place.

Once the bricks were produced and transported to the family plot, **a trained builder from the refugee community was assigned to each household to support the masonry work.** Households were responsible for mixing mortar, carrying water and other general activities. Following this, a carpenter was assigned to support roof construction. **Skilled builders from the refugee community were remunerated through incentive payments.** A small payment was also available to support correct finishing of the shelter. For persons with specific needs, cash support was provided to allow the hiring of labour to support the skilled builders. In 2016, approximately 700 masons and carpenters were involved in the project.

SHELTER TYPES

The adobe brick shelters were 18m^2 which accounted for the average household size (five members). Small families and individuals were provided with “duplex” shelters. These were of the same size, with a partition wall in between and two separate doors to each of the rooms. 975 shelters also had a 4m^2 kitchen attached, built under a different project, which included the use of gas stoves.

The design was slightly adapted for each partner, due to the soil type in each camp and the partner’s capacity.

LIME STABILIZATION

Lime for brick stabilization was chosen over cement due to the high content of clay in the local soil, which hampered the efficient mixing with cement. 2x10kg lime bags were distributed to targeted households, while it was agreed that grass could also be used as a straw mix to protect the outside walls from rain – a technique that has long traditions within the refugee communities in the region. Protective gear was not distributed due to the minimal content of lime, which reportedly did not cause concerns by the users.

PIT RESTORATION

The soil for making the bricks was mainly extracted on the beneficiaries’ plots. For environmental reasons, a strong focus was put to ensure the restoration of the soil extraction areas in each community. A parallel project implemented by and environment partner, in coordination with Environment and Camp Management actors, planted banana trees in the pits as part of this restoration phase.

WIDER IMPACTS OF THE PROJECT

The project set a minimum standard for shelter construction across the refugee camps in the Kigoma region, ensuring equality of assistance and providing households with a **durable shelter option which could easily be upgraded** through extensions or partitioning. It also resulted in the **training of thousands of refugees** in lime-stabilized adobe brick making and shelter construction. It had a **positive effect on local economies**, through encouraging the sustainable use of resources from local and national sources, supporting local businesses, as well as allowing skilled tradesmen and labourers from amongst the refugee population to generate income. **The design was also approved and promoted by the government,** as it meets the required minimal environmental impact standards, while also providing a durable solution.

Large-scale community engagement, and linkages with other projects and technical coordination through the Shelter Working Group, has brought considerable improvements to living conditions of Burundian refugees in the three camps.

The lessons learned through this first phase also fed into and informed the continuation of the project, which aimed to deliver an additional 3,500 shelters in 2017.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

Mason laying the bricks of a shelter in Nduta refugee camp. Skilled builders from the refugee population were employed for the construction of the shelters.

STRENGTHS

+ Community mobilization kept the shelter construction cost low and enabled a large quantity of shelters to be constructed in a short time.

+ Suitability and flexibility of the shelter design. The plot size left sufficient space for a kitchen, individual latrine and garden. The shelter was adequately designed for the local climate (hot days and cold nights), with the clay walls providing good insulation and protection. The low-tech, simple technique and the design itself allowed beneficiaries to adapt the shelters, ultimately achieving high flexibility (extensions, partitions, upgrades, etc.).

+ The chosen materials were easily available locally (particularly clay and lime), allowing local families to get involved more closely with the brick-making and construction process.

+ Community sense of ownership and buy-in was significant, thanks to the comprehensive process of community engagement and consultation over the design and construction of the shelter. This could be seen in the care and pride families took over their new shelters after completion.

Lime-stabilized transitional shelters were built in Nduta refugee camp. The emergency shelter solution (tent), where the family was living during the construction, can be seen on the same plot near the shelter.

WEAKNESSES

- Lead agency and local partners had limited experience in community-driven lime stabilization and brick making. The identified need for initial sensitization, training and advocacy caused implementation delays of several months. However, pilot brick testing, capacity-building and consistent community messaging increased the quality of the bricks over time and the acceptance and understanding of the technical design.

- Stabilized adobe bricks can be problematic in the wetter months and a significant amount of training was required to ensure correct and maintained drainage in the areas surrounding their shelter.

- Shelter staff in the sector had primarily technical backgrounds (e.g. engineers) and were in need of additional guidance on the community engagement process of the project. These skills were particularly necessary during the pilot project, as a lot of skilled consultation was required in order to assess the acceptability of the design.

- The lead agency annual funding cycle and the need to accommodate capacity-building activities, prior to start of the project, **led to minor delays** and pushed back the delivery date of the project. However, all materials for the continuation of the project have been prepositioned and no major disruption was experienced.

- High turnover of staff, due to short contracts in emergencies, was problematic to ensure project continuity and consistency.

LEARNINGS

- **Shelter partners working in community projects require training in community mobilization and communication,** particularly those with a highly technical background. Piloting the ideas with the community proved beneficial in bringing partners and beneficiaries on board and exemplifying the benefits and shortcomings of certain technical solutions.
- **A realistic time frame is required** to take into account the significant time for planning such a project. Donors, lead agencies and implementing partners' funding and budgeting cycles have to be seriously considered and discussed openly during the planning phase, to avoid unrealistic expectations and implementation work plans.
- **A large-scale community-driven project requires a very high level of monitoring and quality assurance.** A lack of monitoring can result in poor site demarcation, change of orientation of the shelters, inconsistency in brick quality, refugees paying for support in construction, or the sale of sites to families not targeted by the project, which can all lead to poor quality and heightened protection risks for already vulnerable populations.
- **Different organizations have different capacities and networks.** As funding was an issue in the early stages of the project, the international organizations were better able to pre-fund their own work and scale-up more quickly. Local organizations were more knowledgeable about the local context and could therefore access materials more cost-effectively. **Better synergy and consultations with local partners** would have avoided some of the tensions at the project start.
- **The skills, ability and enthusiasm of the refugee community** to participate in shelter construction projects should not be under-estimated. With correct support and facilitation, as well as strong communication and community engagement, a very successful project with a high level of beneficiary' satisfaction can be implemented. Feedback and complaints mechanisms also needs to be in place.

CASE STUDY GAZA (PALESTINE) 2014-2016 / CONFLICT

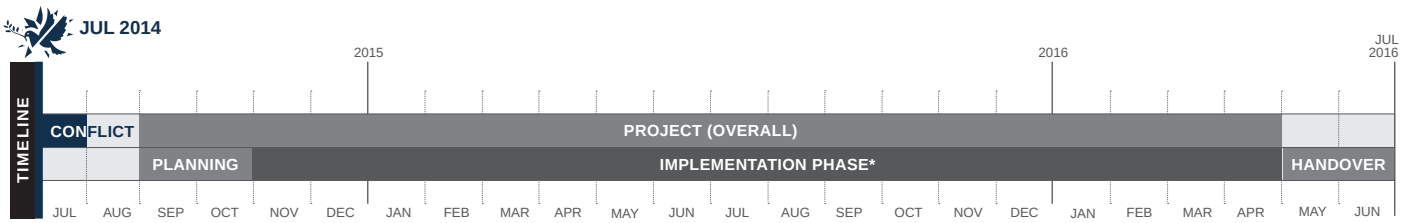
KEYWORDS: Transitional shelter, Cash assistance, Infrastructure, Training, Guidelines

CRISIS	**Israel-Hamas conflict in July-August 2014.**
TOTAL HOUSES DAMAGED	**160,000** severely or partially damaged **11,000** totally destroyed (Source: Shelter Cluster factsheet).
TOTAL PEOPLE AFFECTED	**974,700** individuals.
PROJECT LOCATIONS	**Khan Younis, Rafah and Middle Area governorate, Gaza strip, Palestine.**
BENEFICIARIES	**484 households** (2,831 individuals).
PROJECT OUTPUTS	**470 Transitional Shelters** (344 small, 98 medium, 13 large, 14 two-story, 1 pilot). **235 conditional cash grants.**

SHELTER SIZE	**44m²** up to 7 persons, **53m²** up to 10 persons, **62m²** for 11 or more, **80m²** (two-story shelter for extended families).		
SHELTER DENSITY	**More than 5m²** per person.		
MATERIALS COST PER HOUSEHOLD	**USD 4,600** (average).	**PROJECT COST PER HOUSEHOLD**	**USD 6,600** (average).

PROJECT SUMMARY

This project provided 470 transitional shelters to the most vulnerable households in Gaza, whose homes were completely destroyed in the conflict, but had sufficient rubble-free space on their land. This assistance allowed beneficiaries to return to their neighbourhoods to begin rebuilding their permanent houses, while living in an adequate, safe and dignified shelter.



*The project was implemented in different phases, depending on different sources of funding. However, the main steps were:

1) **Project publicly announced.**
2) **Home verification visits.**
3) **Selection of most vulnerable households.**
4) **Shelters completed and inspected by staff.**

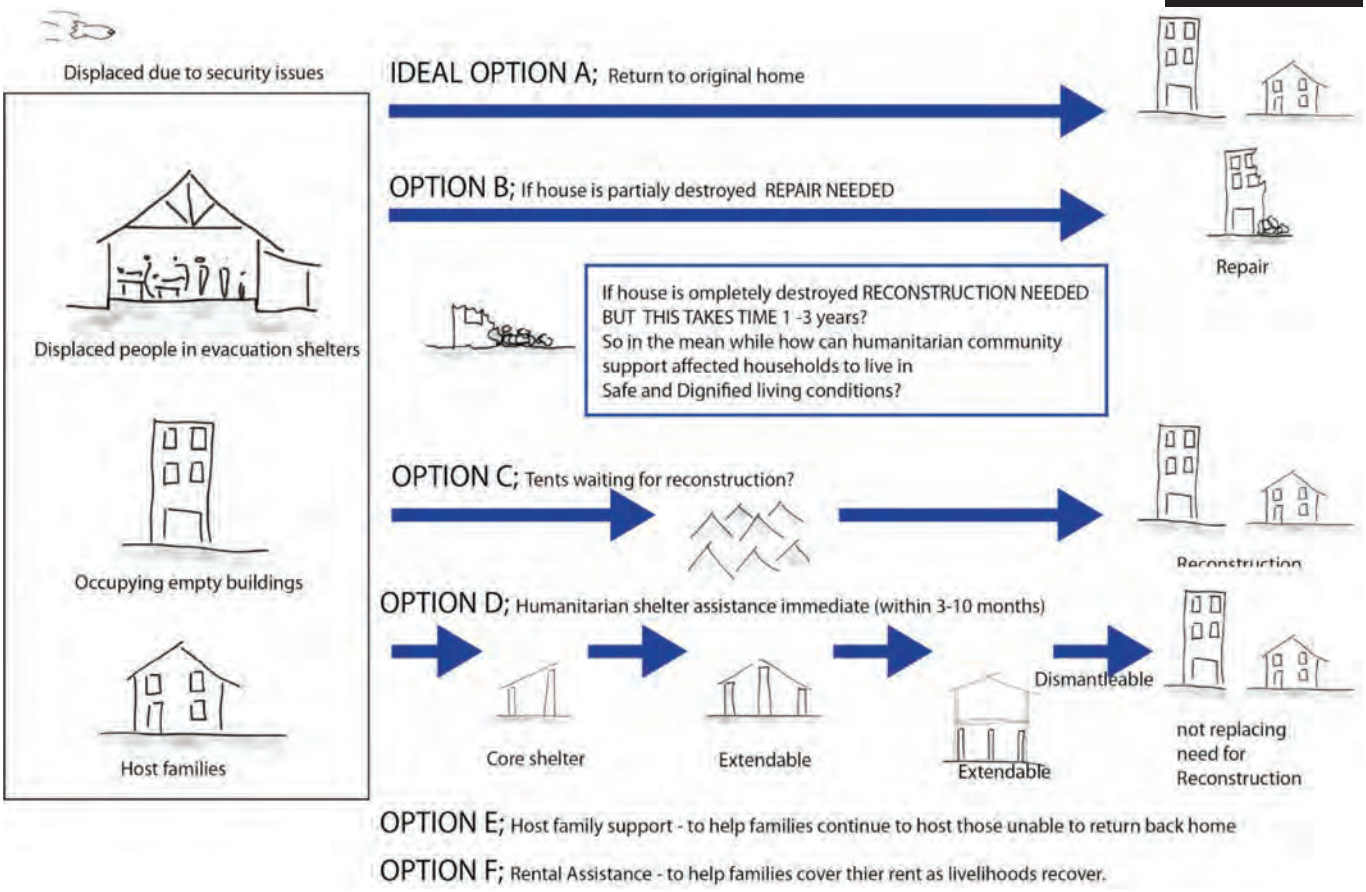
STRENGTHS

+ Online registration and mobile-app surveys.
+ Durable solution using available materials.
+ Different shelters for a range of family sizes.
+ Hotline and email address for feedback and complaints.
+ Shelters built on beneficiaries' original plots.

WEAKNESSES

- Limited scale compared to needs.
- Long implementation time.
- Some design/building constraints due to limited budgets.

Project staff consulted beneficiaries in order to determine the orientation of the shelter according to their preference, and to sign the contract.



The humanitarian shelter strategy included a menu of options. The project chose to provide transitional shelter support between emergency phase and reconstruction.

BACKGROUND TO THE CRISIS

Fifty-two days of intense fighting in July and August 2014, between Israel and Hamas, caused massive loss of life and infrastructure damage throughout Gaza. The incredibly dense urban environment, coupled with Israel's belief that Hamas was operating in civilian areas, caused significant impact on civilians, infrastructure and land. During the conflict, the Israeli forces instructed the population of Gaza to evacuate a 3km-wide zone. This area was subject to bombardment, and then land forces caused further destruction of houses and property. Many people evacuated to stay with relatives and friends, while others found refuge in collective centres, mainly schools. Given the urgency, people left their homes with minimal possessions.

SITUATION AFTER THE CRISIS

Before the conflict, the majority of homes were built with reinforced concrete and concrete blocks and had access to public services, such as water and electricity. The conflict damaged or destroyed many homes. People either stayed with host families (usually relatives), or constructed make-shift shelters on their land, next to the remains of their house. Some households rented private apartments, but rental space was very limited and anecdotal evidence estimated that prices had doubled since the conflict. Long after the conflict, the majority of affected people remained in approximately 19 collective centres, as well as in rented accommodation and with host families. A minority moved to individual shelters.

Given the time needed to raise the capital for reconstruction and the procurement restrictions in Gaza (e.g. cement and reinforcement bars), people needed a more durable shelter solution until they had the materials and funds to rebuild.

NATIONAL SHELTER RESPONSE

A joint shelter survey was undertaken, to identify the level of damages and needs and inform the reconstruction process. The Shelter Cluster supported the provision of household NFIs and hygiene kits, as well as emergency shelter materials to support individuals in collective centres and those with host families to provide some basic level of privacy in crowded conditions. Materials were also provided to seal off damaged houses. Various forms of assistance for basic repairs and temporary accommodation were provided. Some agencies imported steel caravans (modular buildings) as transitional shelters, which in some cases generated complaints for lacking privacy and adequate drainage, being cramped, too hot in summer and too cold in winter. There were cases where people refused this form of assistance.

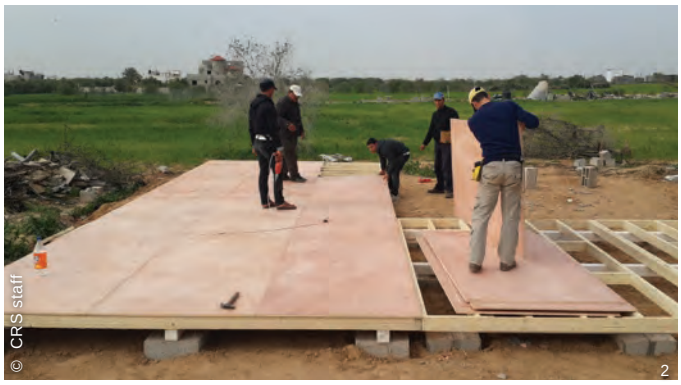
BENEFICIARY SELECTION

Through public announcements, household visits and community meetings, the target communities were informed about the project and affected households were invited to register their interest. Beneficiary selection was based on an initial set of criteria:

- House completely damaged and uninhabitable.
- Family owned the land, or had written permission to live on it for at least two years.
- Sufficient space in the plot to build the transitional shelter.

This required various levels of verification, and there were some cases of false documentation, which, amongst other issues, slowed the beneficiary selection and consequently the construction process.

The selection then proceeded on a case by case basis, using criteria based on both pre-existing and conflict-related



Timber-frame buildings were built on a platform with a plywood floor. From left to right, top: 1. Laying the foundation and ground beams for the transitional shelter. 2. Installing plywood layer over the ground beams. Bottom: 3. Fixing the external wall cladding with screws. 4. Contractor staff placing CGI roofing on the shelter.

vulnerability factors, developed by the organization in collaboration with local communities. These included households with people with disability, young children, female-headed households and low-income households.

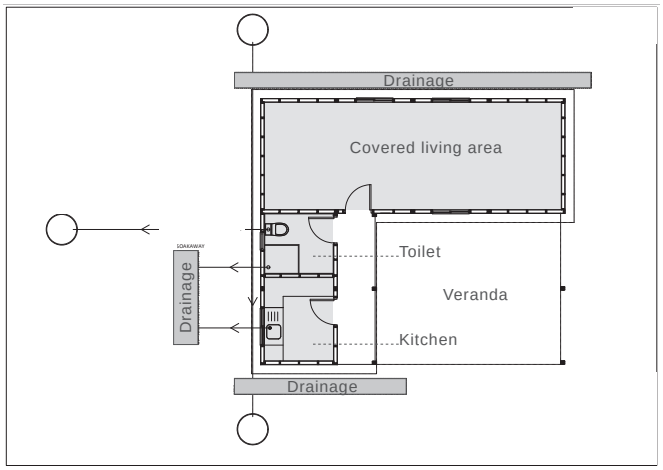
PROJECT IMPLEMENTATION

The organization and a local partner developed the designs for the shelters through a series of workshops and consultations with the community, before beneficiary selection. A pilot building was constructed for the community to review, and was followed by a technical evaluation, to allow the most efficient, safe, and culturally appropriate construction process to be agreed upon. Extensive feedback sessions with community members also confirmed the agreed solution.

Because of the embargo on most building materials other than timber, the organization decided to use a timber frame structure. **The organization then employed a consultant** with experience in timber construction, to assist the procurement and implementation of the project. Timber construction was not common in Gaza and, due to the available time and skills, as well as for quality control, the wooden panels were assembled off-site, and construction done using a **building contractor.** This was selected through a competitive tender process and training was provided by the organization and the consultant. Once the first shelters were built, the contractor worked independently, with supervision from the organization and partners.

The timber frames were constructed in a workshop and then transported by truck to the site. Once erected, the cladding, flooring and roofing materials were delivered and fitted to the frames. Other building trades, such as electricians, plumbers and dry-lining wall fitters completed the building. This **combination of on- and off-site** method of working allowed for greater speed, efficiency and quality control.

While the organization supplied the buildings, **households were responsible for constructing or connecting to a septic tank,** as well as for other enhancements. A user manual



The project built shelters of different sizes, to adapt to the different family sizes. Shelters included a bedroom/living area, a toilet, a kitchen and an open veranda, that could be used to expand the covered space, by adding walls. People had to take care of the external sanitation system, e.g. septic tank.

was developed for the buildings, and all families were provided information and training on fire safety. The contractor was required to supervise their workforce, while field engineers from the organization oversaw the works and liaised with households and the larger community. The organization also assisted with monitoring and technical support, including all design and engineering, quantity surveying, and financial administration.

A conditional cash grant of USD 500 was also provided to 235 households to enhance their shelters, its amount defined following a market assessment. This component was added at a later stage only for some of the shelters, as funding was received in separate tranches. This form of assistance gave households freedom to choose and install shelter improvements, such as false ceilings, wall partitions, electrical network, CGI roofing in the courtyard, sinks, showers, tiling for toilet, kitchen shelving, window screens and water tank stands.

Some people were able to extend the shelters, by closing the open sides of the veranda.

SHELTER DESIGN

Each shelter consisted of three rooms – a bedroom, a kitchen and a bathroom – and was designed to meet cultural needs and expectations, especially privacy and dignity of women. This led to a density of more than 5m^2 per person, above recommended standards. Moreover, the shelter was specifically intended to be upgraded, extended and re-purposed after the estimated life span of five years. The L-shape design with the veranda allows households to easily construct perimeter walls using timber posts and sheeting material, to expand the living space and allow greater privacy and freedom of movement for women. Examples of modifications included installation of electricity, addition of room dividers, construction of external walls, lining of ceilings, landscaping around the shelter and a variety of other decorative and functional upgrades.

INVOLVEMENT OF AFFECTED PEOPLE

Key informant Interviews with community leaders, other shelter actors and beneficiary households were undertaken and project details were shared through the Shelter Cluster. Focus group discussions (including female groups) were held to discuss shelter needs, designs, and implementation approaches, and the pilot construction facilitated direct discussion and feedback from the beneficiaries. Feedback could also be collected through an email address provided to the families and a toll-free hotline.

Moreover, the organization and partners made regular home visits to beneficiaries, to ensure that they were kept informed and to help with any issues or requests, such as works schedules and where to construct the shelter in the plot. All family members were involved, including children. Gender-balanced teams of trainers allowed both men and women in the family to participate.

Given the risk of wooden structures catching fire, shelter owners were given fire safety trainings and were provided with fire extinguishers.

RISK MITIGATION

Training was provided to avoid risks associated with unexploded remnants of war and also hazardous waste, such as asbestos. The organization initially considered using rubble for construction, but was advised against and therefore avoided using it. The project included the distribution of fire extinguishers and electric lanterns and delivery of fire safety training to all shelter beneficiaries, to reduce fire hazards and improve safety.

MATERIALS AND PROCUREMENT

Procurement was done locally, since materials could only be purchased in Israel. This was a major constraint for the programme and there was little option to query to the environmental sustainability of the sources. The reliable supply of materials was indeed a major threat to the success of the project. While timber was not initially restricted, later the availability of large-section timber was prohibited. The programme overcame this by redesigning timber frames that could be made by fixing timber studs together to obtain the required size.

TECHNICAL SOLUTIONS

The project used an adaptation of modern platform-timber-frame construction, where the panels are the load-bearing structure – as opposed to the post-and-beam technique. The shelters were built with floor frames (a frame of floor joists) covered with a decking material, which created the platform. The walls of each level were then fitted to the platforms. To meet the challenge of limited space, two-storey buildings were constructed using this approach. A timber frame structural engineer checked all the designs prior to implementation.

WIDER IMPACTS

This shelter model was highly demanded, as it was viewed as one of the best transitional options in Gaza, while many communities rejected other alternatives such as caravans. By providing a solution to live on their properties, the project also allowed people to restart livelihood activities and rebuild financial and social safety nets within their neighbourhoods of origin, hence supporting recovery.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

The timber-frame construction was new to the country, thus an experienced consultant was hired and, with senior staff from the organization, supervised the contractor.

STRENGTHS

+ Online registration for beneficiaries was developed, to avoid the lengthy hard copies application process, and the beneficiary lists were shared with partners to avoid duplication.

+ The use of timber provided a durable solution using available materials. This provided optimal space and thermal comfort unlike other shelter options.

+ Satisfaction surveys on mobile devices provided a fast and efficient means of information and data collection.

+ Choice was given to beneficiaries through the cash grants for shelter enhancement.

+ Variety of shelter sizes ensured that the programme catered equitably for a range of family sizes.

+ A toll-free hotline and email address allowed a discrete and efficient feedback and complaints mechanism. Complaints were mainly about delays in people's applications or non-selection as beneficiaries.

+ The transitional shelters were built on the beneficiaries' original plots, helping them restart livelihoods.

+ Beneficiary willingness to invest in the shelters with additions and enhancements was a strong indication of their commitment to living in the shelters and to using them for their intended purposes. Two years after the project, the shelters were still used by those who were unable to rebuild.

WEAKNESSES

- Issues with the design became apparent during the construction, such as the limited internal height. The design has been altered for future responses.

- The programme did not include external sanitation systems and required households to be responsible for this. The design provided for a septic tank was not suitable, the cost presented a constraint for low income households, and the availability of materials was a challenge.

- Limited scale and long implementation times. Due to the narrow funding, the project had to prioritize beneficiaries, although in fact all affected households were in need of shelter. Even if the transitional shelter solution was not expensive per se, procurement delays – coupled with the decision to achieve a high level of durability and quality for large, extended, families – caused the project to be relatively slow and reach only a limited number of households.

MATERIALS LIST	
- White wood for the main framework - Flooring plywood 17mm thickness - External cladding from wood (Tongue and Groove) - Internal cladding (Normal Gypsum boards) - Corrugated Galvanized Iron (CGI) for roofing	- Vinyl for the Kitchen and bath - Aluminium windows and doors - Tarpaulin - Nails and screws - Painting material - Sink with stand - Toilet bowl

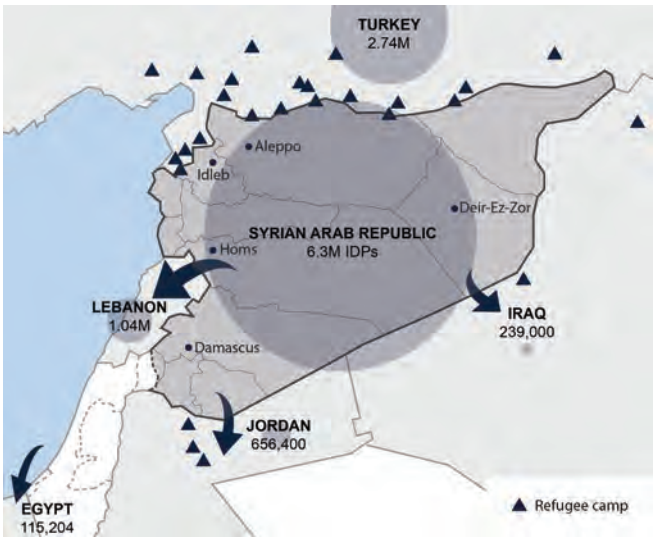
LEARNINGS

- **Communities should be involved early on,** and the shelter model should be considered earlier in the process.
- **The organization improved efficiencies and gained significant insights** through this project, such as developing a strong working relationship with the contractor, which helped building its capacity and efficiency.
- **The selection process was refined** based on lessons learned from this project. Given the extensive need in heavily affected border communities, it was challenging to select the most vulnerable people. **A more nuanced scoring criteria** was developed for future projects that takes into account factors related to socio-economics, health and economic assets.

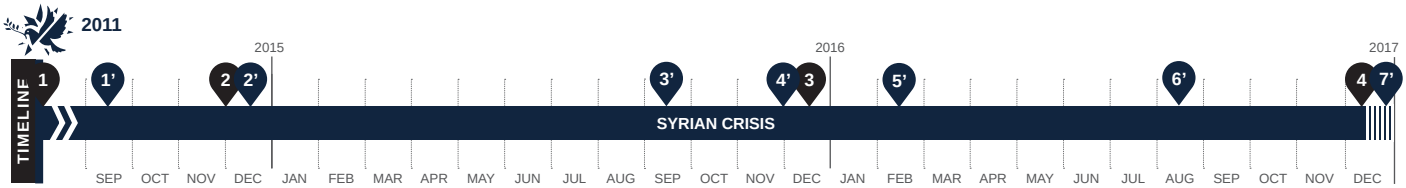
OVERVIEW WHOLE OF SYRIA 2014-2016 / CONFLICT

CRISIS	**Conflict, 2011** onwards
TOTAL PEOPLE AFFECTED[1]	**22.3 million**
SYRIAN REFUGEES	**6.2 million** (total estimated[2]). 4.8 million registered in neighbouring countries[3]. 303,000 registered elsewhere[4].
PEOPLE IN NEED WITHIN SYRIA[5]	**13.5 million**
BENEFICIARIES OF THE SHELTER-NFI SECTOR (2015-16)[6]	**770,400** people (Shelter). **12.7 million** people (NFIs).

[1] For this overview, see all notes on page 125.



Numbers of refugees and IDPs as a result of the Syrian conflict[7].



1 Mar 2011: Syria Crisis begins; **first 5,000 refugees** (to Lebanon).

2 Dec 2014: **3.8 million registered refugees.**

3 Dec 2015: **Over 1 million Syrians** arrive in Europe during the year.

4 Dec 2016: 3RP for 2017-2018 launched. **4,810,710 registered Syrian refugees in neighbouring countries.**

1' Sep 2014: **Whole of Syria (WoS) Approach launched.**

2' Dec 2014: **12.2 million people in need.**

3' Sep 2015: **13.5 million people in need** (**4.5 million** in hard-to-reach or besieged areas).

4' Dec 2015: **Humanitarian Response Plan 2016 launched.**

5' Feb 2016: **First "cessation of hostilities" agreement**.

6' Aug 2016: **Second "cessation of hostilities"** breaks down after a few days.

7' Dec 2016: **2017 Syria Humanitarian Needs Overview released. 13.5 million people in need.**

KEY SHELTER APPROACHES ACROSS COUNTRIES

- **Emergency tents / emergency shelter kits** (plastic sheeting, poles, fixings, tools).
- **Upgraded shelters in camps** (concrete slabs, kitchens, water and sanitation units per family, prefabricated caravans).
- **Sealing off kits** for shelters and unfinished and abandoned buildings, as part of an emergency response, for interim shelter improvements or as part of climatization packages.
- **Climatization packages** for winter and summer, often with complementary shelter and NFI items and materials.
- **Repair, rehabilitation or "durable upgrades"** of inadequate, unsafe or substandard buildings, often with negotiated tenancy agreements.
- **Cash-for-Rent** schemes.

For shelter projects in the region, see:

A.16 and A.17 in SP2011-12, and A.31 in SP2015-16: Lebanon, on shelter repairs/upgrades and sealing off.
A.9 in SP2013-14: Iraq, on cash/voucher programmes for shelter maintenance.
A.35 in SP2015-16: Iraq, on accessibility upgrades in camps.
A.10 in SP2013-14: Jordan, on transitional shelter in camps.
A.11 in SP2013-14: Jordan, on upgrading of unfinished buildings used as refugee rental stock.
A.12 in SP2013-14: Jordan, on tent recycling projects in camps.
A.13 in SP2013-14: Lebanon, on sealing off kits.
A.14 in SP2013-14: Lebanon, on multisector, mixed-modality interventions.
A.15 in SP2013-14: Lebanon, on conversion of buildings into collective centres.
A.32 in SP2015-16: Lebanon, on fire retardant insulation kits in informal settlements.
A.30 in SP2015-16: Syrian Arab Republic, on repairs and winterization of damaged houses.

Given the very different operating environments, different responses took place in different countries. To promote some consistency, the Whole of Syria approach was adopted in 2013. In this picture we see assessment for a housing repair project within Syria.

THE SITUATION IN THE SYRIAN ARAB REPUBLIC

- In 2016, the Syrian population remained the largest provider of shelter support, with **27% of households hosting** people in need in their homes.
- **Multiple and temporary displacements** were frequent. 50% of IDPs arrived in camps in 2015 from another location of displacement.
- **3,030 collective centres** (schools, public buildings, mosques, etc.) have been established in the country.
- **Camps and collective centres were the last resort** for the population, in tented camps (primarily self-settled), collective centres and makeshift settlements. These typically hosted the most vulnerable IDPs (1.1 million people), as all other alternatives had been exhausted. IDPs tended to move out once other options arose.
- 1.2 million housing units have been damaged and 400,000 destroyed. There has been a **28% increase in damage to housing stock since 2014**[8].
- The high level of damage sustained by residential infrastructure forced populations to reside in **substandard, inadequate and unsafe shelter,** without access to basic amenities such as electricity, water and latrines, and often without windows and doors. Overcrowding (and shelters housing multiple families) increased **protection risks** significantly.
- **Lack of sites and buildings suitable for transitional shelter** solutions that can be implemented by affected populations themselves.
- **Restricted admission to neighbouring countries** left 170,000 people stranded near borders.

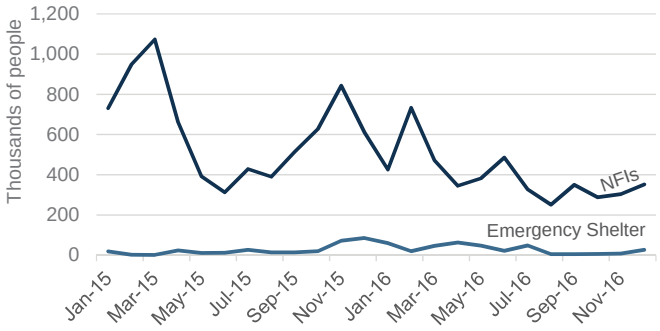
For an overview of the shelter situation and response up to 2014, see overview A.8 in Shelter Projects 2013-2014.

The challenges faced in accessing people in need across the Syrian Arab Republic (Syria) remained high, six years after the start of the crisis. Increased targeting of civilian infrastructure and humanitarian convoys and workers reduced the ability to provide assistance to populations in greatest need. **Widespread violations and abuses** left populations with little protection, while **bureaucratic and administrative barriers** hindered timely and effective interventions. The scale and length of the crisis resulted in a convergence of severe needs across sectors, requiring an urgent multisectoral response.

To counter some of these huge challenges, **the Whole of Syria Approach (WoS) was developed** in 2013, to coordinate humanitarian actors working inside the country with those operational from neighbouring countries and engaged in cross-border assistance. It also sought to support increased access, particularly to besieged and hard-to-reach areas, and to enable the articulation of protection concerns within the country, through three operational hubs (in Syria, Turkey, Jordan). **Focus on coordination and information management** at sector/cluster level, across hubs and field locations, along with joint analysis, has reduced duplication, inconsistencies, and gaps in services. From January to August 2016, 1.9 million people were accessed in hard-to-reach locations with multisectoral humanitarian assistance (food security, livelihoods, shelter, NFI, CCCM and nutrition), for at least one month, through **a combination of cross-line, cross-border and air-drop operations.**

Simultaneously, the 4.8 million Syrian refugees that were residing in the neighbouring countries of Turkey, Lebanon, Jordan, Iraq and Egypt, were requiring ongoing assistance. As their displacement was prolonged, **host systems, services and communities went under increasing pressure;** inflated rents, increased prices for consumer goods and heightened competition for scarce jobs in struggling economies, all led to growing social tension. These countries also needed stabilization and resilience-building, as a mid- to long-term solution, covered under the 3RP (Refugee and Resilience Response Plan).

MONTHLY PEOPLE REACHED WITH SHELTER-NFI INTERVENTIONS IN THE WHOLE OF SYRIA (2015-2016)



SHELTER-NFI RESPONSE IN SYRIA

A primary challenge in Syria resulted from the **shifting conflict and local power dynamics,** which led to changes in security and access contexts from one period to the next. This impacted the ability of agencies to effectively provide assistance in a sustained manner, or to respond to sudden and unpredictable displacement. Complex formal requirements and administrative procedures further limited the ability to operate, and had repercussions on scale, scope and timeliness of interventions[13]. Additionally, shelter programmes require consistent access to sites over a longer period in order to ensure effectiveness, but this was hindered by the **limited number of NGOs** – with constrained operational capacity. Agencies had to adopt a variety of working methodologies, from partnering closely with local organizations, to **integrating shelter programmes** closely with protection, education or hygiene-promotion activities.

The use of shelter construction activities as an opportunity for skills-building and training supported affected families by offering a possible source of income, at a time when unemployment had exceeded 50% and the poverty rate was estimated at 85%[14]. Due to the scale of needs and constrained access in many locations, **prioritizing assistance was necessary** – for example, targeting severely damaged houses for winterization repairs, or tailoring assistance to particularly vulnerable groups (such as child-headed households, Palestinian refugees and the elderly). This needed a joint approach, with the **involvement of all stakeholders, to conduct structured assessments**, which form a key part of the Whole of Syria approach.

The Shelter-NFI Sector in Syria[15] took a dual approach, by **addressing emergency needs while promoting household and community resilience** amongst displaced, hosting and non-displaced populations. This evolved, since the start of the crisis, from distribution of shelter material (as part of a core relief package), to improving collective shelters and into upgrading unfinished private buildings, in various stages of completion.

Throughout 2016, the Shelter Sector focused on **more durable solutions,** by supporting owners and tenants to rehabilitate the premises to achieve adequate shelter, targeting houses with minor damage in beneficiaries' places of origin, while restoring main services and utilities in neighbourhoods for the benefit of the wider community.

In parallel, the Shelter Sector continued to make provisions for **contingency planning and emergency response,** through tents and kits. Additional areas of the response included strengthening awareness among affected communities of Housing, Land and Property rights through awareness sessions, and supporting ongoing capacity development to enhance governmental response to the IDP crisis[16].

In Lebanon there was a no camp policy, and some families settled in temporary structures, often built with salvaged, improvised, materials.

A Shelter Technical Working Group (based in Gaziantep, Turkey), was established in late 2015 to develop technical designs, standard operating procedures and improve coordination around shelter programming.

SITUATION IN LEBANON (1.04M refugees)

- **Lebanon is extremely diverse,** religiously, environmentally and politically. The country's socio-political dynamics are complex and fragile, tensions between communities led to polarized ideological and political views, and remained high since the last civil war. The relationships with its neighbours, Syria and Israel, are equally complex.
- Despite being an upper middle-income country, **a noticeable proportion of the population lives in poverty.** Community vulnerabilities were further compounded by the State's inability to provide blanket cover of basic resources and services evenly across the country.
- Limited government housing-development polices, lack of affordable housing supply and market regulations, and real estate speculation resulted in an **ongoing housing crisis for the past few decades.**
- The large influx of refugees increased rental prices and **saturated the limited market of adequate and affordable shelters,** compounded by the absence of formal camps and the wide dispersal of displaced persons. This resulted in a **large proportion residing in substandard or overcrowded conditions,** such as garages, worksites, unfinished buildings, informal settlements and collective shelters, often lacking basic services, protection from the climate and security of tenure.
- 80% of the displaced population was living in **urban areas,** as of 2016. The informal rental market offers little protection for vulnerable tenants in these areas.
- In 2016, there was a 13% increase in the number of **informal settlements**[9].
- **Other groups who needed shelter assistance** were: vulnerable Lebanese, Lebanese returnees from Syria and Palestinian Refugees, both from Syria and from Lebanon. The latter hosted most of those from Syria in their camps and adjacent areas. Conditions in camps were typically overcrowded and lacked adequate shelter and infrastructure. The remaining Palestinian refugees settled in areas inhabited by impoverished and vulnerable Lebanese communities, with limited service provision.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Almost one in three people in Lebanon in 2016 was displaced from Syria or was a Palestinian refugee[17]. The significant increase in population (37% since the Syria crisis began) burdened existing service provision, infrastructural systems (such as energy and water) and household economies. The most vulnerable Lebanese also started requiring support, as competition for low-cost housing drove rent prices higher. Furthermore, this situation posed a risk to exacerbate existing social tensions within the country's fragile context.

SHELTER-NFI RESPONSE IN LEBANON

An integrated stabilization and humanitarian approach was developed, to reach a broader scope of vulnerable individuals and institutions in need of support, with significant measures for capacity development of institutions and national organizations[18].

The Shelter Sector aimed to ensure access to adequate shelter, through maintaining or improving shelter standards, improving living conditions within temporary settlements and poor urban areas characterized by large populations of displaced and vulnerable groups, and ensuring public and private institutions were aware of (and responsive to) the shelter situation of these groups. This was undertaken through:

- **Minor repairs or enhancement** to shelters, apartments and houses to meet minimum standards, including prevention and preparedness measures (insulation, fire protection kits, raising of floors).
- **Effectively combined winterization support** for both household items and shelter insulation and weatherproofing, including identification of alternative fuel and stove / heating sources.
- **Cash-for-Rent schemes** to encourage selection of adequate shelter befitting household size.
- **Shelter rehabilitation** in exchange for affordable and secure occupancy.
- Assisting households living in makeshift shelters and informal settlements to **weatherproof shelters and protect against other risks,** to ensure minimum humanitarian standards at settlement level. This included water and sanitation upgrades, drainage, levelling and improving streets and paths, upgrading water points and soakaway pits, and decommissioning defunct latrines.


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In Lebanon, the shelter strategy included minor repairs and rental assistance for those who could find buildings to live in, and water and sanitation upgrades, drainage and site improvements For families living in temporary shelters. Some of these were in urban areas (including Beirut, Mount Lebanon and Tripoli), while others in more rural or peri-urban ones (such as in the Bekaa). As the crisis continued, agencies began to make direct repairs of shelters (with negotiated lease agreements) in urban and rural areas.

- Supporting neighbourhoods and vulnerable communities with **shelter and infrastructure projects, through holistic and innovative approaches** that aim to strengthen social cohesion and dialogue. This could be achieved through site-level improvements, upgrading and maintaining little-used buildings as collective centres, establishing Collective Site Management and Coordination structures or neighbourhood committees, or conducting community training on referral systems, conflict mitigation and Housing, Land and Property rights.
- **Enhancing the technical capacity of local institutions** to participate in and support shelter assistance activities.

In Jordan, 83% of Syrian refugees were living outside of camp. However 120,000 people were sheltered in Azraq and Za'atari refugee camps.

SITUATION IN JORDAN (654,400 refugees)

- 120,000 people were living in the **two refugee camps of Azraq and Za'atari,** with another 10,000 people in other camps, as of 2016.
- **83% of Syrian refugees were living outside of camp settings,** with the areas containing the highest proportion of Syrian refugees characterized by severe vulnerability.
- **17% increase in the cost of rent** and higher prices for consumer goods impacted the host population as well. **Overstretching of public services and competition for jobs** compounded growing resentment and alienation.
- **Lack of housing:** 91,300 housing units were required in Jordan in 2015 to meet demand from refugees and migrant workers, compared to an estimated annual requirement for 32,000 units[10].

SHELTER RESPONSE IN JORDAN

Taking a similar approach to Lebanon, **Jordan evolved its response to the refugee influx into a resilience-based comprehensive framework,** that tied in directly to mid- and long-term national and governorate-level development plans. It aimed to address the key issues facing the estimated 1.4 million Syrians residing in Jordan, of whom 750,000 had already been living there before the crisis. However, as the crisis prolonged and return to Syria was not possible soon, **the burden on social structures, public services and host communities began to show,** especially as macroeconomic performance was poor. Oversupply of housing at the middle and upper end of the market led to an **acute shortage of affordable housing.** It contributed significantly to tensions between refugee and host communities[19], and to the deterioration of living standards, with exploitative subdivision of existing units and conversion of buildings into rental accommodation, with little consideration of household size or standards.

Within camp settings, the main focus was on maintenance and upgrading of existing shelters, facilities and infrastructure, including winterization. Some expansion or relocation could be foreseen, as shelters were upgraded to "permanent" prefabricated caravans.

The 2015 inter-agency **Shelter and Settlement Strategy aimed to promote a resilience-oriented approach** to both urban and rural settings in Jordan, with a Shelter Task Force developing guidelines for activities. These included conditional cash-for-rent, upgrading substandard shelters, increasing the number of habitable housing units through the upgrading of unfinished buildings, provision of home adaptation and sealing-off kits (particularly for winterization), and raising awareness of rental rights and obligations. In some cases, energy saving measures, such as solar panels, insulation and water savings fixtures, were integrated into the shelter response. This provided additional incentives to landlords to assure adequate, safe, shelter for refugees. Simultaneously, municipal services and infrastructures were strengthened, with prioritization of areas with highest population stresses.

However, with the shelter sector comprising less than 2% of the plan's budget, **a private-sector funding approach was required to provide a source of income** for Jordanians (as owners) and vulnerable Syrian refugee and Jordanian families (as renters), accompanied by a programme of legal, institutional and policy reform. **The Jordan Affordable Housing Programme commenced,** with extensive land, market and financial sector surveys completed. A national design competition was held, and model houses were planned, while workshops with developers were arranged to secure their interest.

Syrian refugees in Turkey often seek shelter in unfinished and abandoned structures, as well as in shared accommodations. Humanitarian organizations started to implement winterization, repair, and cash-based interventions to support refugees in these situations.

SITUATION IN TURKEY (2.74M refugees)

- In 2016, approximately 91% of refugees were residing within the host community, while 9% lived in 25 camps.
- Despite a change in regulation in favour of integration, **the large number of refugees accessing social services stretched national structures and capacity** to the utmost, particularly in areas which host a high proportion of Syrians; especially in the border provinces and towns.
- While the government provided comprehensive assistance inside camps, including shelter, NFIs and winterization, **those living within the host community in urban or rural settings struggled to meet their basic needs,** including accommodation, NFIs, electricity and heating.
- The average reported income remained well below the minimum wage[11]. Cost of rent and food accounted for a high proportion of expenditure, meaning that **households often resorted to negative coping strategies to make ends meet** and prioritized food and rent over their winterization needs.
- **Refugees continued to inhabit poorly structured buildings,** with about 60% living in shared accommodation, and around 10% in unfinished buildings, barns, shops and other forms of inhabitable dwellings. **Approximately 35% of shelter types were in need of some form of repair** or rehabilitation, and 82% of households were found in need of winterization assistance[12].

As with other countries involved in the humanitarian crisis, Syrian refugees in Turkey found themselves in the situation of progressive destitution, as their displacement continued. Unable to become self-reliant due to difficulties in accessing the formal labour market, refugees continued to work informally (often on low salaries), with dependence on assistance from both the government and aid agencies.

SHELTER-NFI RESPONSE IN TURKEY

Multiple and repeated interventions were required in order to provide access to minimum standards, key services and to meet basic needs. Shelter actors operated under the Basic Needs and Essential Services sector, tying together shelter, NFI, sanitation and hygiene and public infrastructure support.

At the start of the crisis, a vast quantity of Core Relief Items was mobilized by the government to respond to the new arrivals, supplemented by partners. This evolved into 3RP partners creating and maintaining emergency stocks of tents, food, NFIs, medicines and equipment for potential influxes, as part of an inter-agency contingency plan. **The government continued to play the lead role** in the response to Syrian refugees in Turkey.

In the refugee camps, 3RP partners supported shelter, NFI and camp infrastructure in close coordination with the government. **Outside of camps,** however, due to partners' lack of access to refugee registration and vulnerability data, the identification of needs among Syrians in host communities remained the biggest challenge. As the crisis continued, organizations began to provide assistance to refugees living outside of camps through NFI distributions and cash-based responses, and more recently direct repairs of shelters (with negotiated lease agreements) in urban and rural areas. Assistance packages comprised emergency, regular and seasonal assistance, with resilience activities focusing on the host community relating to education, livelihoods and social cohesion.

From 2016, winterization support and cash-based interventions were scaled up for refugees outside of camps.

SITUATION AND RESPONSE IN IRAQ

For information on the crisis in Iraq and the shelter-NFI response, see overview A.33.

Syrian refugees in neighbouring countries live in a variety of accommodation types, often in urban areas, such as in this apartment block in Lebanon.

LOOKING FORWARD

In early 2017, **hosting countries** were increasingly looking to stabilize the situation of refugees, as the conflict continued and the opportunity for safe return remained unfeasible. **Two-thirds of funds were allocated towards shelter and upgrades outside of camps,** for refugees and vulnerable host community members. Mobilizing partnerships to **incentivize the supply of affordable housing** was another key approach, alongside increasingly durable upgrading and rehabilitation work, including climatization measures, to ensure multiseason habitability. NFI provision was going to target the poorest and most vulnerable refugee populations, with a **scaling up of cash-based assistance** (e.g. through multipurpose cash grants)[20]. In addition, there was a **shift towards providing mid- to long-term support,** supplementing existing governance structures and social capital, as host governments and primary duty bearers developed strategies to address the new and increasingly established refugee populations within their jurisdictions.

Within Syria, host communities remained the largest provider of shelter assistance, highlighting the need for community-focused solutions[21]. Local authorities also expressed the need for more durable shelter options along with emergency shelter support, focusing more on a resilient-oriented type of assistance. In late 2016, the sector also started designing a winterization shelter kit, to be tested during the winter and included in the 2017 shelter response[22]. NFI needs continued to be not uniform and required more flexible and specialized responses, including alternative modalities (e.g. cash and vouchers) where the existing local markets could be supported.

ENDNOTES

[1] Excludes 3.2 million IDPs displaced within Iraq as a result of internal conflict. Calculated as follows: 4.8 million (refugees) + 4 million (affected communities as a result of refugee crisis) + 13.5 million (PiN in Syria – IDP + host/non-displaced)
[2] Includes government estimates and unregistered refugees. From 3RP Regional Strategic Overview 2017-2018.
[3] Registered refugees, OCHA, December 2016.
[4] Registered refugees and asylum seekers in 120 other countries (excluding 3RP countries), as of June 2015. From 3RP Regional Overview 2016-2017.
[5] OCHA, December 2016.
[6] Data reported to the Shelter-NFI Cluster.
[7] Data from Syria Humanitarian Needs Overview 2017, UN-OCHA Dec 2016.
[8] Syria Humanitarian Needs Overview 2016-2017.
[9] Inter-Agency Quarterly Dashboard: Shelter, January – May 2016.
[10] According to the Sector Vulnerability Assessment (May 2015), in the Jordan Response Plan for the Syrian Crisis 2016-2018.
[11] As per the minimum wage of Turkey at the time of writing (TRY 1,273). On average Syrians earned 35% below minimum wage. This amount used to be lower in rural areas compared to urban.
[12] Assessment carried out between Sep-Dec 2016 by IOM field staff for winterization assistance of 17,500 households, representing 96,386 individuals in Gaziantep, Hatay, Sanliurfa and Adiyaman provinces.
[13] Syria Emergency Shelter Sector Factsheet, August 2016.
[14] Syria Humanitarian Needs Overview 2017. 69% of affected people in 2016 were living in extreme poverty and 35% in abject poverty.
[15] Activated in 2012, the Shelter Sector in Syria consisted of 20 partners as of October 2016, covered 30 out of 272 sub-districts in Syria and completed 147 shelter projects (Syria Hub Shelter Sector Profile Sheet, Oct 2016).
[16] Syria Emergency Shelter Sector Factsheet, August 2016.
[17] Palestinian refugees residing in Lebanon may have either been displaced from Syria (where they were also refugees) during the recent conflict, or may have experienced historic displacement to Lebanon directly from the Palestinian territories.
[18] Lebanon Crisis Response Plan (LCRP) 2015-2016.
[19] An assessment in June 2014 indicated that "housing was the most commonly cited sector linked to community tensions by respondents with a total of 81 per cent", cited in the Jordan Response Plan for the Syrian Crisis 2016-2018.
[20] 3RP 2017-2018.
[21] Syria Humanitarian Needs Overview 2017.
[22] Shelter Sector monthly update October 2016.

CASE STUDY SYRIAN ARAB REP. 2015-2016 / CONFLICT

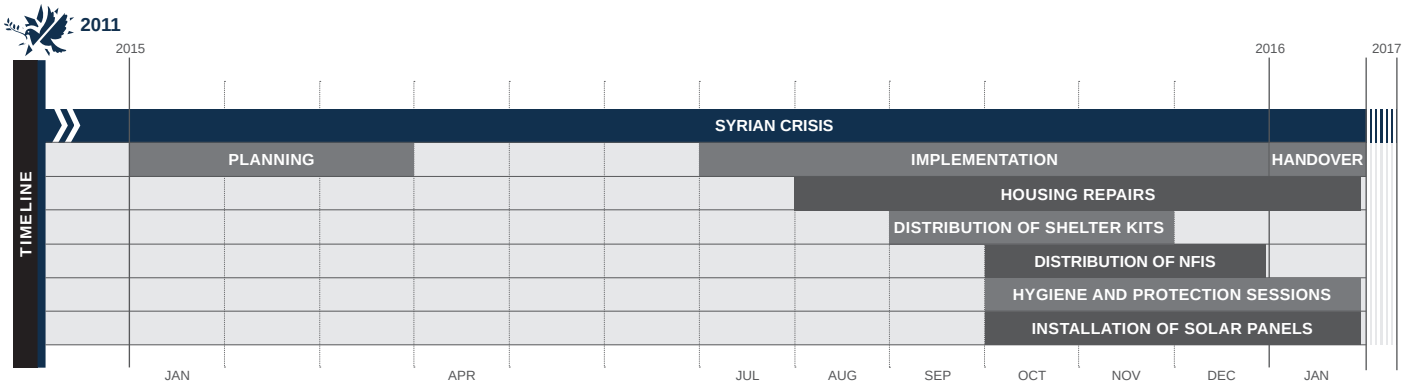
KEYWORDS: Housing repair, Host family support, NFI distribution, Training, Structural assessment, Gender and GBV mainstreaming, Protection

CRISIS	**Syrian conflict, March 2011** - ongoing.
TOTAL HOUSES DAMAGED	**1.2 million** damaged (approx.). **400,000** destroyed.
TOTAL PEOPLE AFFECTED	**13.5 million** total people in need within the Syrian Arab Republic (6.3 million IDPs, 5.7 million in acute need), including 6 million children. **6.2 million** total estimated Syrian refugees.
PROJECT LOCATIONS	**Idleb and Aleppo governorates**
BENEFICIARIES	**873 households** (552 in Idleb and 321 in Aleppo). **143** (16.4%) were **headed by women.** Total of **5,722 individuals**. **51% female and 52%** were **children** (1-18 years of age).

PROJECT OUTPUTS	**463** houses rehabilitated - **1,460** winter and kitchen NFI kits distributed - **150** solar panels for lighting installed **305** shelter kits provided - **600** people attended 15 awareness sessions on hygiene and protection.
COSTS	Materials cost per household: **USD 226.8** / Project cost per household: **USD 322.7.**
OUTCOME INDICATORS	**1/ Beneficiary satisfaction: 46.5%** were very satisfied and 35.5% satisfied with the assistance received, in average. **2/ 80% of beneficiaries** (IDP and host community) had increased awareness on hygiene and protection topics through mainstreaming activities.

PROJECT SUMMARY

Linking relief to recovery, the project targeted IDPs and host communities with repairs to the main damaged parts of their houses and distribution of shelter repair kits, heaters, winterization kits and kitchen utensils. All activities were accompanied by awareness sessions on protection as wells as hygiene habits.



STRENGTHS

+ Installation of solar panels.
+ Coal heaters: suitable for indoors, easy to maintain and more affordable.
+ Using local materials and labour.
+ Integration of protection and hygiene components.

WEAKNESSES

- Short duration of the project.
- Limited budget allocated for shelter rehabilitation.
- Delays in the procurement and transport of materials.
- Dissatisfaction of most beneficiaries with the shelter repair kits.

Repairs included the replacement of window frames or sealing off of openings.

The extent of the damage to private properties, particularly the housing stock, has reached extreme levels within the Syrian Arab Republic. Before the rehabilitation of each house could start, the technical team had to check the local conditions and structural integrity.

CONTEXT

See overview A.29 for more on the crisis and shelter response within Syria and neighbouring countries.

The level of damage sustained by residential infrastructure in high-conflict zones in the Syrian Arab Republic (Syria) is evident in the destruction of homes that have been targeted by aerial strikes, tanks, shootings, and other violent mechanisms. The uninhabitable nature of damaged buildings have forced people to reside in inadequate and unsafe spaces, without access to basic amenities, such as electricity, water, and latrines. Many of these makeshift homes lack doors and windows, causing privacy, safety and protection concerns, and exposing households to theft, abuse, and other hazards. Further, given the reduced housing and the amount of displacement, many homes are inhabited by two or more families.

LOCATIONS AND BENEFICIARY SELECTION

The organization and its local partner identified six regions in Aleppo and Idleb governorates marked by significant destruction, as a result of continued attacks. Due to the unstable security situation, selected sites were constantly monitored prior to launching operations, to ensure they were safe for staff to carry out daily operations.

Residents of the selected regions consisted of both host communities and returning IDPs that hoped for stability and safety for their families. The following vulnerability criteria were used:

1. Families hosting IDPs in their home;
2. IDPs living in unfinished buildings due to inability to afford rent;
3. Home was 40-75% destroyed by the conflict and residents cannot repair it;
4. Household with more than eight members and with teenagers who do not have any privacy;
5. The family has disabled/elderly and does not have the means to cover their needs;
6. Female- and child-headed households.

According to these criteria, the organization identified beneficiaries with the local council, while the field team verified the selected households, by conducting visits before the interventions were performed. A second visit was conducted by the technical team, to check that the conditions and structural integrity of the house would allow the project to proceed with the rehabilitation. Finally, MoUs were signed with homeowners, to make sure IDPs could be accommodated for at least one year after the completion of the works, therefore avoiding the risk of eviction and speculation.

PROJECT IMPLEMENTATION

The project was implemented by the organization from its office in Turkey, in partnership with a local NGO. After recruiting key personnel in the target governorates, the two partners performed community needs assessments, in conjunction with local councils and community groups, and distributed over 500 questionnaires to gather demographic data.

Damage assessments were conducted by a technical team, to categorize homes as mildly, moderately, or severely damaged. Families residing in mildly or moderately damaged homes were provided with shelter repair kits, and received training from the organization's field staff on how to conduct repairs independently. On the other hand, field staff directly repaired homes identified as severely damaged. Repairs were carried out within six months of the assessments, to ensure that families had adequate living conditions in advance of the winter. Specific repairs for each home were made in accordance with the full-home assessment, on a case-by-case basis, with repairs such as the following:

- Conversion of dirt floors to concrete;
- Repair of plumbing/piping of homes in damaged bathrooms;
- Installation of electrical wiring for solar panels for lighting purpose (150 panels were distributed);
- Latrine installation in homes without functional bathrooms;
- Replacement of damaged doors and addition of locks;

The project included installation of solar panels for selected households.

- Replacement of broken windows;
- Repair of damaged walls and replacement of destroyed walls;
- Repair or replacement of ceilings according to the level of damage.

Beyond the repair of homes, over 50 jobs were created for locals from the target communities who had technical backgrounds, including civil, architectural and electrical engineers, carpenters, constructions workers, plumbers and electricians. Brief training sessions were conducted and maintenance kits were designed and distributed to be used in rehabilitation activities.

Additionally, charcoal or firewood for heating units (*Sobas*) was distributed to beneficiary families in lieu of fuel, given the high cost and intermittent availability in Syria and the logistical barriers of cross-border procurement and delivery. Beneficiary families received trainings on the safe usage of heating units, to avoid fire hazards and ensure adequate ventilation for poisonous gases produced.

PROTECTION AND HYGIENE COMPONENTS

Given the scale and devastation of the Syrian conflict, the organization decided to extend the reach of its interventions to a wider target, not only the most vulnerable. Throughout this project, protection awareness and education were integrated into the other activities, viewing physical and psychological protection as a priority, alongside other aid and development efforts.

Protection encompasses both physical safety and the emotional and psychological needs of survivors of conflict. The most pressing physical protection needs are from aerial bombardments, warfare, gender-based violence (GBV), as well as environmental conditions, such as exposure to harsh weather, and other factors that contribute to poor physical health, such as poor sanitation. Creating safe havens within communities, wherever possible (homes, schools, underground sites), and privacy within households, by establishing barriers between genders, can address some key elements of protection.

The most relevant emotional and psychological protection efforts for Syrians requires addressing outlets for grief, anger and aggression, frustration over continued poverty, lack of employment opportunities for both men and women, and creating GBV referral pathways and post-traumatic support.

The organization delivered sessions to families receiving shelter and winter kits, and communities at large, based on the results from questionnaires distributed in the project areas. These sessions focused on 1) human rights; 2) anti-violence, and prevention of domestic abuse and GBV; 3) energy sources; and 4) hygiene and health promotion, and the importance of maintaining healthy interpersonal relationships. Particularly, the organization emphasized the need for gender equality, shared decision-making between men and women, early marriage prevention, family planning decisions and mutual and self-respect.

COMMUNITY ENGAGEMENT

The project partners coordinated and collaborated with local authorities and consulted IDPs and vulnerable people, particularly to identify the items for the repairs, aiming to use local materials appropriate for the area. All staff recruited for the implementation were from the target communities, and all activities were implemented side by side with the heads of household. Where possible, beneficiaries contributed to the reconstruction efforts. In post-implementation assessments, they identified that participating in the work had a positive effect on their morale, such as giving them the feeling of being able to take care of their family.

PROCUREMENT AND MATERIALS

All contents of the kits were established after coordination amongst other shelter agencies. Items were procured from local markets as much as possible. Most of the construction materials for rehabilitation were purchased nationally, while the kits and a few other items were purchased in Turkey. The delays associated with transport of procured items across the border delayed the implementation of shelter and NFI distributions. As a result, the bulk of activities were carried out during the winter and were then impacted by slight weather-related delays.

In terms of winterization, coal heaters – which can also burn wood and olive pomace – were chosen due to their affordability, as fuel-burning heaters are expensive to maintain. However, the coal heaters came with safety concerns, as families were unfamiliar with how to operate and maintain them, with the main risk of carbon monoxide poisoning. To address this issue, instructions were printed onto aluminium panels that were later attached to the heaters.

SOLAR PANELS

An interagency study in early 2015 revealed that roughly 83% of the electricity operating in the country before the conflict had been cut off. In severely damaged areas, such as the Aleppo district, only 3% of the electricity sources remained active. Limited access to power has resulted in widespread hardships, including the dependence of hospitals and clinics on costly fuel-powered generators, the inability to resume basic daily activities and the increased risks of theft, kidnappings and violence, due to a lack of lighting. Considering the severity of the impact on people's well-being, long-term, sustainable and efficient solution to the power shortage were essential. This prompted the organization to install 150 solar panels on the rooftops of beneficiaries' homes, each providing 100 watts. The free electricity provided by the panels had a significant impact on households' lives, leading the organization to increase the use of this technology for future responses.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

The project included repairs and upgrades to walls, floors, ceilings, doors and windows and installation of wiring, plumbing and latrines.

WEAKNESSES

- Short duration of the project, which affected the quality and extent of the repairs.

- Limited budget allocated for shelter rehabilitation activities, which resulted in many households being dropped from the beneficiary list; with more funds, more vulnerable families could have been reached.

- Delays in the procurement and transport of materials across the Turkey-Syrian border.

- Dissatisfaction of most beneficiaries with the shelter repair kits, as the needs were very diverse for each house, and much greater than what could be solved by the materials provided. Also, some households felt that they did not have the skills to do the repairs, and this led the organization to change its modality.

STRENGTHS

+ Installing solar panels, which provided an efficient and renewable energy source.

+ Distribution of coal heaters, which were suitable for indoor usage, easier to maintain and more affordable compared to other types.

+ Using local materials and labour for implementing rehabilitation activities.

+ Integration of protection and hygiene components for the communities at large.

MATERIALS LIST

Items	Unit	Quantity	Cost per unit
Winterization Kit	Kit	300	USD 107
Kitchen Utensils	Kit	300	USD 31
Shelter repair kit	Kit	305	USD 81
Solar lighting panels	Panel	150	USD 325
Heaters (*Soba*)	Pcs	430	USD 46
Heating fuel	ton	430	USD 220

LEARNINGS

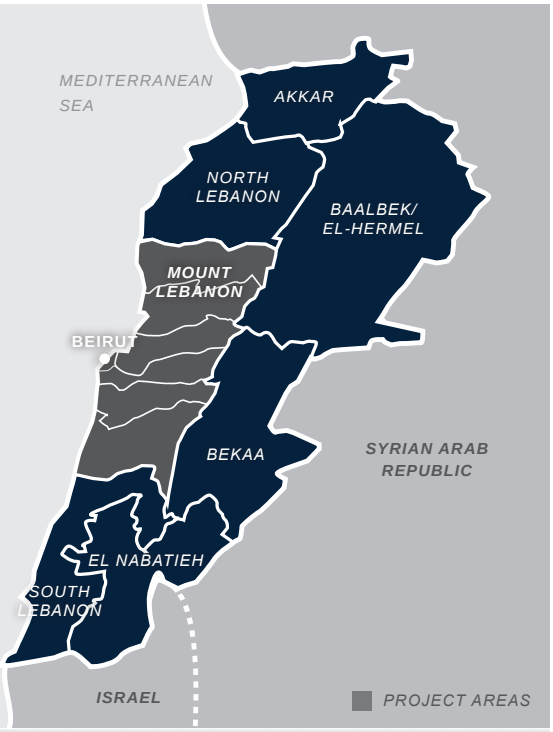
- **Necessity of conducting trainings for local labours** (on carpentry and construction) to enhance the quality of shelter interventions for future programmes.
- **The importance of finding local alternatives for fuel** used for cooking and heating.
- **The need for more comprehensive projects** that include multisectoral activities, such as shelter, WASH and protection.
- **Ensuring the integration of protection** to improve dignity and taking into account the needs of the most vulnerable (women, elderly, children, etc.) in a culturally appropriate manner.
- **The amount of kits (both repair and winterization) should be decreased** in future projects, in order to increase the funding allocated to each household to cover more critical shelter needs. Following this project, the organization was also **considering the use of voucher and cash-based approaches,** which improve the dignity and choice of beneficiaries, on the precondition that markets are accessible and functioning. Given the unstable situation in Syria, this has proven challenging. However, the organization was piloting a voucher programme for fuel in an area where the market is working.

CASE STUDY

LEBANON 2015-2016 / REFUGEE CRISIS

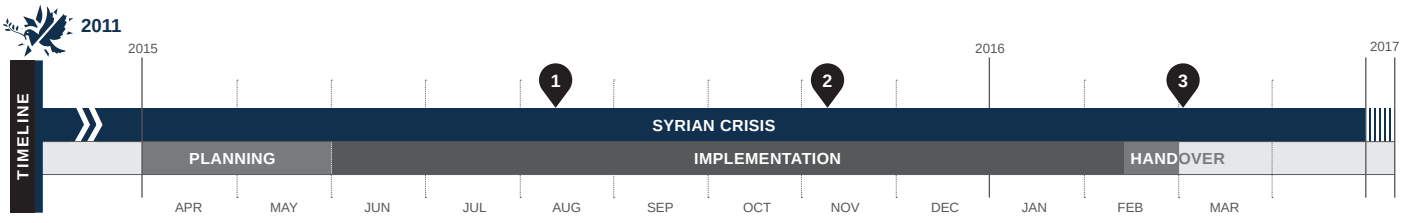
KEYWORDS: Urban, Housing repair / retrofitting, Cash / vouchers, Advocacy / Legal, Training, Guidelines / Mass communications, Community participation

CRISIS	**Syrian Refugee crisis in Lebanon, 2011-ongoing**
TOTAL PEOPLE AFFECTED	**1.04 million Syrian refugees in Lebanon** (Source: Syria Humanitarian Needs Overview 2017)
PROJECT LOCATIONS	**Beirut and Mount Lebanon governorates**
BENEFICIARIES	**706 households** (3,751 individuals) assisted with shelter repairs (Including Lebanese and Syrian families, with a minority of Palestinian and other minorities). **2,745 households** attended hygiene promotion sessions (Lebanese, Syrian and Palestinian households). **35,700 individuals** attended HLP awareness sessions.
PROJECT OUTPUTS	**499 shelter upgrades** **207 shelter rehabilitations** Other outputs: **25** Focal Points and Committee Members trained; Establishment of a roster of **14** skilled workers; **1,222** man-days of construction activities.
MATERIALS COST PER HOUSEHOLD	**Upgrades: USD 636 - Rehabilitations: USD 1570**. As per sector standards, upgrades are minor works up to USD 700 and rehabilitations are major works up to USD 1,500.
PROJECT COST PER HOUSEHOLD	**USD 1,731** on average.



PROJECT SUMMARY

The organization used a holistic, neighbourhood, approach across delineated zones in dense urban areas. Shelter rehabilitations and upgrades were provided to 207 and 499 households respectively, along with improvements to water and sanitation facilities. Campaigns on hygiene promotion and housing, land and property rights were also conducted. Community-wide projects were implemented to improve service delivery, such as water and solid waste management.



1. Aug 2015: **Neighbourhood-level social and shelter mapping, establishment of focal point networks and committees, and capacity-building.**
2. Nov 2015: **Beneficiary-led voucher-based emergency shelter and WASH upgrades to substandard shelters completed.**
3. Mar 2016: **Rehabilitation of occupied shelters units completed.**

STRENGTHS

+ Enhanced local technical skills and sense of ownership.
+ Raised awareness about HLP rights and obligations, and improved landlord-tenant relationships.
+ Served as a platform for information sharing between community members and municipalities.

WEAKNESSES

- Strategy had to be adapted due to a lack of empty units available.
- Information flow and community participation could have been improved.
- Recruitment of staff/labour from within the community, quality control and flexibility in specifications could have been stronger.

The majority of refugees in Lebanon stayed in rented accommodation. High housing demand, combined with the high cost of living, led to many people living in substandard and overcrowded conditions.

CONTEXT

For more background information on the situation and shelter response in Lebanon, see overview A.29.

Lebanon suffered from structural inefficiencies even prior to the Syrian conflict. **In 2015, an estimated 87.7% of the population was urban[1],** and there was a significant heterogeneity between rural, urban and peri-urban areas, in terms of institutional service delivery and governance[2]. This was further exacerbated by the conflict in Lebanon (lasting over two decades) and the political fractionalization that brought the country to a standstill.

The influx of Syrian refugees into such context dramatically deteriorated the living conditions for both refugees and host populations. The crisis increased population density in Lebanon from 400 to 520 persons per km^2, especially in urban areas, leading to urban congestion, competition over housing, increasing pressures on existing resources and tensions between host populations and refugees[3]. This situation was particularly constrained in Beirut and Mount Lebanon, with only a limited number of informal settlements in the area. Most refugees in Beirut and Mount Lebanon (92%) resided in rented apartments or houses, although the comparatively high cost of living meant that **many refugee families were only able to afford substandard or overcrowded accommodation.** An assessment by the organization in the target areas showed that 23% of households in Beirut and 59% in Mount Lebanon lacked basic facilities and were in need of urgent rehabilitations.

PROJECT GOAL AND TEAM STRUCTURE

The objective of this project was to provide immediate community-driven WASH and Shelter support to the most vulnerable Syrian populations and their host communities in Beirut and Mount Lebanon.

The organization had been registered in the country since 2006 and had an established country office in Beirut, as well as a field office in Akkar, with established links with local authorities and civil society stakeholders. The team for this project included one project manager, two team leaders, nine field staff and four technical staff, in addition to support staff.

[1] CIA World Factbook, [Accessed 6 August 2015].
[2] Lebanon: Promoting Poverty Reduction and Shared Prosperity, World Bank, June 2015.
[3] Lebanon Crisis Response Plan, 2016, pp. 16.

LOCATIONS AND BENEFICIARY SELECTION

Firstly, target communities were identified based on 1) refugee concentration; 2) socio-economic vulnerability; 3) access to basic services; 4) willingness of local stakeholders to host refugees and collaborate; and 5) interventions by humanitarian actors. This selection was informed by Key Informant Interviews and inter-agency rankings. Based on the knowledge of the target areas, the organization provisionally identified clusters from which target communities were selected.

Secondly, the priority in target neighbourhoods was to **gain a thorough understanding of local community dynamics,** including mapping key stakeholders from relevant demographic groups (Syrian and Lebanese), inter-community dynamics and current WASH and shelter conditions. This included an overview of main shelter types, the state of landlord-tenant relationships, and any issues which could impact the prioritization and implementation of shelter activities. In order to do this, a social-mapping process was conducted, which involved semi-structured interviews and focus-group discussions with immediately identifiable local key informants, including municipal authorities and local NGOs or community-based organizations. Within target areas, vulnerable households were targeted irrespective of shelter type or nationality.

COMMUNITY PARTICIPATION

The neighbourhood approach used to implement this project relied on beneficiary involvement in the development and delivery of all activities, at both the community and household levels. Following the mapping of local stakeholders and identification of community representatives, consultations were held to review the proposed selection criteria (for household-level assistance) and identify key challenges of the target communities, to be addressed through small-scale emergency projects. Following consultations, the organization established a network of community focal points, committed to improving their neighbourhoods. These assisted in identifying shelter units in need of rehabilitation, and in liaising with landlords.

Many refugees in Lebanon settled in unfinished buildings, often in urban areas.

PROJECT IMPLEMENTATION

The project initially focused on the rehabilitation or upgrading of empty shelters within the targeted community, to have alternative housing options for families facing eviction. However, due to a number of contextual challenges, **the organization shifted to a beneficiary-led model of rehabilitation or upgrading of their own properties.** Through this, beneficiaries received the main inputs with a voucher scheme, and were paid for fittings and installation on cash-per-task basis. Apart from providing livelihood opportunities to some beneficiaries, this modality also helped the organization to overcome the issue of having limited access to the sites.

Agreements were signed with local suppliers for material procurement, and vouchers provided to each family in one instalment. The value was based on a bill of quantities that covered the repairs specific to each household. The beneficiaries redeemed their vouchers through one purchase and were given ownership over their own installations. In addition, the organization closely monitored the distribution of materials, to ensure high quality.

In order to support vulnerable populations without formal rental contracts, landlords and tenants were asked to sign a lease agreement in order to participate in the project. **The organization also provided sessions on hygiene promotion and legal advice on Housing, Land and Property (HLP) issues** through this intervention. This included training for local committee members, as well as campaigns in targeted neighbourhoods. Participants of these campaigns received information on how to obtain a lease agreement, obligations of each party and how to avoid legal trouble. This included advice on handing over of the rented premises, guaranteeing against hidden defects upon move-out and against eviction following end of lease, and advice on conducting major repairs and maintenance, to avoid unexpected costs upon lease termination.

COORDINATION

In addition to conducting coordination through the Sector Working Group meetings in Beirut, the organization liaised with local NGOs conducting other shelter projects by sharing beneficiary lists to avoid overlaps, as well as by referring cases between agencies to avoid gaps in coverage. The organization also liaised with NGOs conducting other protection and WASH projects in the target area, to share ideas on the neighbourhood approach used and, in some cases, other INGOs attended the organization's forums to learn more about this approach.

MATERIAL PROCUREMENT

The organization conducted detailed market assessments and selected local suppliers for materials to be procured locally. This reduced operational costs and increased support for the local businesses, thereby contributing to the area's economic development, and reduced tensions with host communities over limited resources and jobs.

For larger rehabilitations, the organization signed contracts that included material specifications and prices with local contractors. Sourcing the materials from within the neighbourhood or district was key to reduce transportation costs and contribute to the local economy. Moreover, it was important to rely on materials that were accessible and affordable to all beneficiaries. Finally, cash was provided for transport in cases where a large volume of materials had to be shipped to the beneficiary's house.

MAIN CHALLENGES

SECURITY ISSUES IN ACCESSING CERTAIN AREAS. Such risks imposed restrictions on the selection of target communities. The rapidly evolving security context in Lebanon required the organization to increase engagement with neighbourhood focal points and local municipalities. Daily monitoring of shelter activities also contributed to stronger relationships with beneficiaries. However, in many other vulnerable areas where other INGOs faced difficulties for gaining access (due to socio-political issues), the organization was able to successfully implement the project, through its engagement with local authorities.

LOW QUALITY MATERIALS. Due to complaints of low quality materials being used for rehabilitations and upgrades, the organization instituted a new process, in which a follow-up agreement was signed with the supplier, specifically on material quality. In some cases, low quality items were replaced, in order to address beneficiaries' complaints. The quality of materials was continuously assessed by the project engineers during the distributions. In any event where materials were considered substandard, they were returned and the distribution was delayed.

MANAGING BENEFICIARIES' EXPECTATIONS. Some complaints on the quality were also due to high expectations that were unrealistic, given the project budget. To avoid this challenge, the organization ensured that each household received complete information on the quality of work that would be provided. Agreements were signed with one local supplier per target area, which beneficiaries could select to complete the works if they desired. Beneficiaries were informed of their ability to register complaints at fora and via the organization's local hotline, and these were followed up by the project engineer after implementation.

LAND OWNERSHIP ISSUES AND INSECURE TENURE AGREEMENTS. Some of the targeted households had no proof of ownership, which is a widespread issue, given the complex context in Lebanon. Close collaboration with the municipality was needed for verifications of ownership. Additionally, very often only verbal agreements existed between landlord and tenants, without any rental contract. This was tackled through prolonged negotiations between both parties, to clarify the terms of the housing arrangement and to sign a lease agreement.

WIDER IMPACTS OF THE PROJECT

At the community level, the project provided a catalyst for change, combined with continued community engagement and capacity-building activities, to highlight needs such as HLP, protection, hygiene promotion, conflict resolution, participatory planning and community-based solutions. The project also helped to identify engagement opportunities for better responses in the future. For example, the committee in one of the neighbourhoods was able to solve a ten-year problem related to solid waste management, by relying on the initiative of the community and planning opportunities that were generated during this project.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

The project made basic upgrades, but it became challenging to find enough buildings in the targeted communities.

STRENGTHS

+ The cash-for-task concept allowed beneficiaries to contribute in their own communities and enhanced their technical skills. While all supplies were made available before the works, cash was given following the completion of activities.

+ The project improved the organization's visibility and credibility. Community engagement activities, conducted throughout the course of the project, led to a widespread acceptance of the organization for future interventions.

+ HLP considerations and significant improvement in tenant-landlord relationships, as both parties became more aware of their rights and responsibilities.

+ Served as a platform for information sharing between the community members and the municipalities, and responded to the urgent needs of both parties.

Bathrooms were also repaired and upgraded under the project.

WEAKNESSES

- The organization could not identify sufficient empty shelters in the target communities to be rehabilitated and, for the small number identified, landlords refused to sign rental agreements (binding them to keep the shelters empty until potential evictions occurred). Given such a context, the organization modified its strategy, and capacitated the focal points to rapidly respond to evictions, by providing housing to beneficiaries in alternative houses within the same neighbourhood, as well as conducting emergency referrals to other agencies working in the areas, until a more permanent housing solution could be identified.

- Community engagement could have been improved. Better information flow and participation of affected communities in the identification of activities and target areas, as well as in the discussion of gaps and challenges, could have ensured a more tailored and effective assistance.

- Recruitment of staff/labour from within the communities (by the organization and contractors), **quality control** of materials, **stricter procedures** in signing changes in BoQs and **flexibility in specifications** could have been stronger.

LEARNINGS

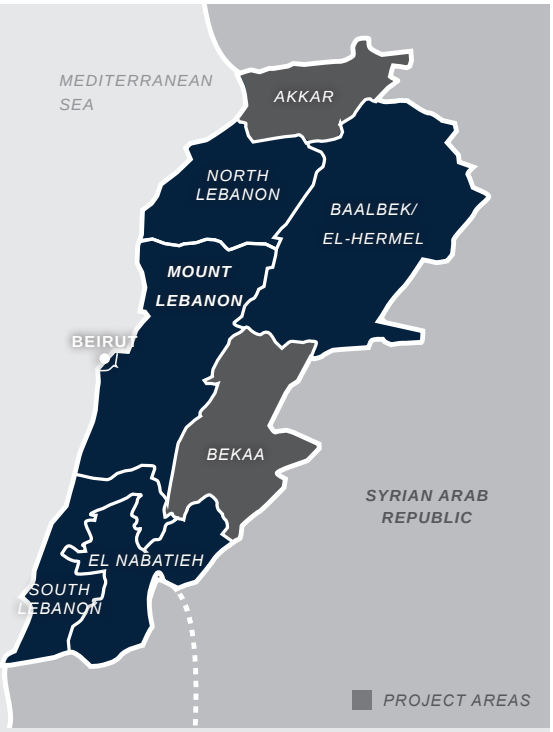
- **Stimulating local livelihoods.** The beneficiary-led approach was largely successful in stimulating the local economy and empowering beneficiaries in implementing their own rehabilitations. The final assessment found that the target of 490 man-days of labour was greatly surpassed, with 1,222 man-days created through these works.
- **The organization was aware that not all target households would have sufficient technical skills** to conduct such upgrades. As a result, the team identified skilled workers from the neighbourhoods, and households were able to utilize these workers to complete their upgrades. In addition, 30% of beneficiaries were found to have conducted further home improvements at their own expense.
- **Maintaining community ties and livelihoods.** One of the key learnings from previous programming was that geographically spread-out shelter works, especially for empty shelters, created a problem for evicted beneficiaries by forcing them to move to a new neighbourhood, severing ties with their communities and threatening their livelihoods. The neighbourhood approach was specifically designed to overcome this.

CASE STUDY

LEBANON 2015-2016 / REFUGEE CRISIS

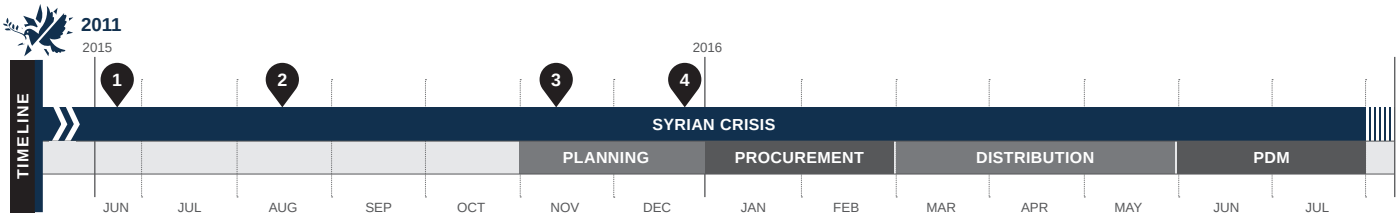
KEYWORDS: Shelter retrofitting, NFI distribution, Winterization, Insulation

CRISIS	**Syrian Refugee crisis in Lebanon, 2011-ongoing**
TOTAL PEOPLE AFFECTED	**1.04 million Syrian refugees in Lebanon** (Source: Syria Humanitarian Needs Overview 2017).
PROJECT LOCATIONS	**Bekaa and Akkar regions, Lebanon.**
BENEFICIARIES	**2,346 households** (11,608 individuals: 3,259 boys; 3,005 girls; 2,301 men and 3,043 women).
PROJECT OUTPUTS	**2,346 insulation kits distributed** (set of roofing nails, carpentry hammer, stanley knife, insulation adhesive tape, 2 insulation foil and foam rolls - 30x2m, instruction sheet and content list)
MATERIALS COST	**USD 229** per household.
PROJECT COST	**USD 295** per household.
OUTCOME INDICATOR	**80%** of vulnerable children and families reporting improvements in thermal comfort in their shelters.



PROJECT SUMMARY

This project provided fire-retardant insulation kits and weatherproofing to over 2,300 refugee households in informal settlements and incomplete dwellings. The kits provided thermal comfort, enhanced health outcomes and decreased fuel consumption, without adding to the fire hazard.



1. Jun 2015: **Approval of insulation materials by the Ministry of Social Affairs**
2. Aug 2015: **Insulation kit pilot project in informal settlement**
3. Nov 2015: **Mapping assessment in all informal settlements in East Akkar and North and Central Bekaa**
4. Dec 2015: **Start of procurement of insulation foam from China**

STRENGTHS

+ Significant improvement to living conditions, effective weatherproofing and fire hazard mitigation.
+ Buy-in and high beneficiary satisfaction.
+ Adaptable kits.
+ Significant saving on fuel.
+ Speed and scalability of the intervention.
+ Additional support provided for vulnerable cases.

WEAKNESSES

- Inadequate fixing items in some cases.
- Communication issues with beneficiaries.
- Part of the winter window was missed due to procurement delays.
- Adequate insulation material was not available locally.

CONTEXT

For more background information on the situation and shelter response in Lebanon, see overview A.29.

Since the start of the Syrian crisis, a significant proportion of the population in Lebanon has been living in poverty, concentrated in the impoverished North of the country and the Bekaa region. With over one million Syrian refugees registered in Lebanon, the government's refusal to establish camps (fearing that they would turn in permanent settlements) has been particularly detrimental for those in mountainous areas, such as North Lebanon and Bekaa (which hosted the bulk of the displaced population).

Lebanon's weather conditions can be extreme, and vary throughout the year. Winter usually begins in November and lasts until March, bringing rain, snow and a significant drop in temperatures. The North of the country and Bekaa valley experience particularly harsh conditions, with even colder temperatures and snow in the mountains and at higher elevations.

Socio-economic vulnerabilities, substandard accommodation and exposure to winter conditions have had severe impacts on households, making adequate shelter especially important.

NATIONAL SHELTER STRATEGY

In the absence of formal refugee camps, the sector lead agency, in collaboration with the Ministry of Social Affairs and in coordination with other international organizations and national NGOs, has implemented a number of integrated shelter interventions. Although shelter assistance is provided all-year round, there has been a focus on providing vulnerable households with weatherproofing kits to help withstand the harsh winter months. There are five kits provided as part of shelter winterization interventions: Sealing off kit (for unfinished houses), Light repair kit (plastic sheeting), Medium repair kit, Heavy repair kit / New arrival kit, and Insulation kit.

PILOT PROJECT

In early June 2015, the Ministry of Social Affairs approved the installation of insulation materials within informal settlements. In August 2015, the organization piloted a winterization project, upon request of the sector lead agency. The aim was to develop a technical intervention that could support the Shelter Working Group and shelter actors in the field, give recommendations on winterization solutions and improve protection against the elements more generally. Two insulation foams were used: 1) Expanded polyethylene insulation foam (EPE), foil faced on both sides; and 2) Cross-linked polyethylene insulation foam (XPE), foil on one side and white PE film on the other. Both reflect radiant energy and act as effective barriers against moisture, air currents and vapours, protecting from both hot summer temperatures and wet and cold winter conditions. The second option achieved better results and was therefore chosen for the subsequent phases.

The pilot project demonstrated that the installation of insulation provided physical protection from the harsh weather, improving the thermal conditions inside shelters. Testing carried out in the summer indicated that indoor temperatures differed on average by 5°C from the outdoors. Once the pilot results were analysed, the organization decided to include the insulation kits in its weatherproofing interventions.

LOCATIONS AND BENEFICIARY SELECTION

An informal settlement mapping assessment was carried out, using the Inter-Agency Mapping Platform, in all informal settlements in East Akkar and North and Central Bekaa. This tool has been used by partners on the ground to collect information of all informal settlements on a bi-monthly basis. The information was then used to coordinate humanitarian activities in these informal settlements. Partners were assigned areas of implementation, to ensure there were no overlaps or gaps in interventions. Coordination also ensured effective targeting of the most vulnerable households.

Informal settlements in Bekaa and Akkar (at altitudes higher than 800m above sea level) were prioritized for this project, based on a combination of needs (most vulnerable to the harsh, wet and cold winter conditions), gaps in assistance and the organization's operational coverage. **A blanket approach was used in these areas,** for equity reasons and staff security, as well as to mitigate any possible tension between households in the informal settlements. A total of 11,608 individuals were targeted for insulation support – across 48 informal settlements, in 17 villages in East Akkar and 127 informal settlements, in Central and North Bekaa. Within these relatively large areas, cadastral zones were prioritized on the basis of community-level vulnerability, as defined by the inter-agency mapping tool.

The insulation foam was to be applied to both walls and ceilings, and in some cases people were creative and made decorations out of the same material.

PROJECT IMPLEMENTATION

The project was implemented directly – and distributions carried out – in partnership with key actors, including the sector lead agency and partners.

A total of 37 project staff implemented the project: seven technical staff, 20 unskilled distribution support staff and 10 drivers. As part of distribution, field staff explained programme selection criteria and the technical guidance (needed to install the insulation) to recipients. Each kit contained a toolbox and two rolls of insulation foam that can cover 60m^2.

Participant feedback mechanisms allowed beneficiaries to evaluate the programme and contribute to its ongoing improvement. Regular and timely communication of relevant information was vital to maximize participation of all stakeholders and beneficiaries. A monitoring, evaluation, accountability and learning specialist team also monitored project indicators, through the organization's Post-Distribution Monitoring tool.

FIRE RISK MITIGATION

An increasing number of fire incidents, injuries and fatalities have been reported in informal settlements and substandard buildings. Contributing factors range from heating practices to electrical wires being exposed to the rain during the winter, whilst in the summer incidents are due to dry materials and melting of electric wires. These factors are further compounded by the use of high fire-loading building materials, such as wooden frames, plastic, cardboard and hardboard sheeting, used to construct shelters in informal settlements. This led to the decision to use a **fire retardant insulating foam.**

PROCUREMENT

The insulating foam was procured from China, as **no insulation material available in country met the minimum standards** outlined by the sector. Procurement was undertaken in January, once funding had been secured, and the lead time required 60 days from production to delivery, delaying implementation and causing the project to miss coverage for part of the winter. However, as the insulation kits were intended to be used all-year round, this was not detrimental overall.

WIDER IMPACTS OF THE PROJECT

In September 2015, following the successful pilot project, the Shelter Working Group **adopted the insulation kits as part of the winterization component of the integrated Lebanon Crisis Response Plan.** The main agencies active in the country have since distributed the insulation kits.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

People installed the insulation foam to reduce the heat loss, which generally tends to be higher through the ceiling/roof and the floor/ground.

STRENGTHS

+ Significant improvement to living conditions and effective weatherproofing. The insulation kits were one of the most significant improvements made to shelters, with 84% of sampled households reporting their living conditions having greatly improved as a result of installing the kits. The main added value was the improved thermal comfort during both winter and summer seasons. Some beneficiaries also reported that the presence of insects decreased.

+ Buy-in and beneficiary satisfaction. Post-Distribution Monitoring reports indicated that 94% of beneficiaries installed the kits fully, and the remaining 6% partially. In some cases, refugees took initiative to use the insulation to improve their homes in alternative ways. 95% of households expressed satisfaction regarding the quality of the kit received.

+ The kits are adaptable and can be utilized within shelters or incomplete buildings.

+ Significant saving on fuel. Heat loss calculations showed that the insulating foam can lead to significant heating savings, of up to USD 150 per household.

+ Speed and scalability of the intervention. A large number of shelters can be insulated in a short period of time.

+ Fire hazard mitigation. The use of fire retardant insulation foam ensured the intervention was not adding to the fire hazard in the makeshift homes.

+ Additional support provided to install the kits. Due to their high vulnerability, some families required additional support, which was provided by skilled daily workers, hired specifically for these cases.

Before installation of the insulation kits, poor quality plastic sheeting and other temporary materials, such as cardboard, were commonly used in most of the shelters targeted by this project.

The foam was applied to walls and ceiling, while mats and pillows were used to insulate the floor. This achieved a full insulation of the shelter, which ensured a significant reduction of the heat loss during the winter, as well as good performance during the summer.

WEAKNESSES

- The items provided to fix the insulation were not always adequate. Roofing nails provided in the kits were in some cases too long and pierced through the timber into the covering plastic. The insulation in some cases was difficult to secure adequately, due to adhesive tape becoming loose. This was due mostly to the irregular surface of walls and ceilings.

- Communication issues. A combination of tips sheets (including pictures) and verbal instructions were used during distribution. However, community sessions explaining the benefits of the kit and the best practices for installation were observed to be more effective.

- Lack of locally available insulation material that met minimum standards outlined by the sector.

- Part of the winter window was missed due to procurement lead times that caused delays in the project. However, the kits were intended to be used for both summer and winter conditions.

LEARNINGS

- **The insulation was one of the most significant improvements made to shelters.** The installation of insulation foam on walls and ceilings in contact with the outside led to an **indoor temperature decrease of 5°C during the summer,** on average**. In the winter, the indoor temperature was 4°C higher** than the outdoors, on average.
- Beneficiaries attempted to resolve the lack of adequate fixing items by using other methods, for example screws, shorter nails and staples. As a result, **the content of the kit was revised** as part of following procurement and distributions, to ensure that a variety of nail sizes and lengths would be included.

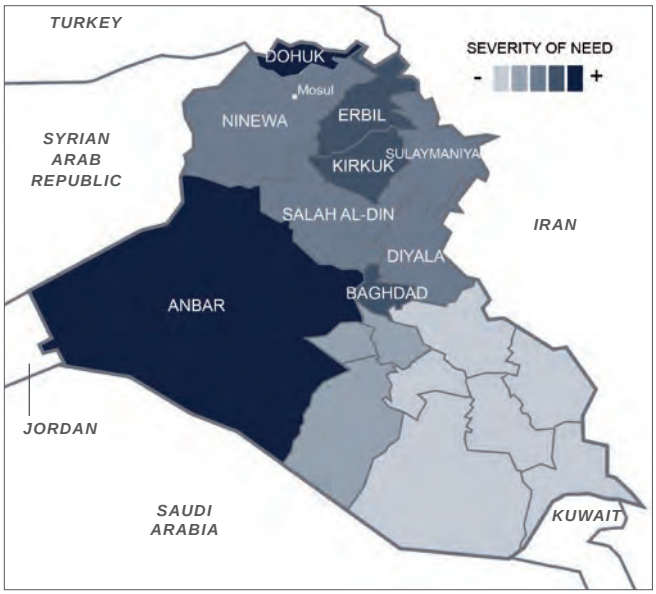
OVERVIEW

IRAQ 2014-2016 / CONFLICT

CRISIS	**Conflicts in the Syrian Arab Republic and Iraq** provoking protracted cross-border and internal displacement, **2012-onwards.**
PEOPLE AFFECTED[1]	**4.4 million** in need[1] **3.1 million** IDPs[2] **1.3 million** returnees[2] **228,894** Syrian refugees in Iraq (74,984 families)[3]
PEOPLE SUPPORTED BY THE RESPONSE[4] (2014-2016)	**597,841 households** (NFIs). **201,682 households** (Shelter assistance).

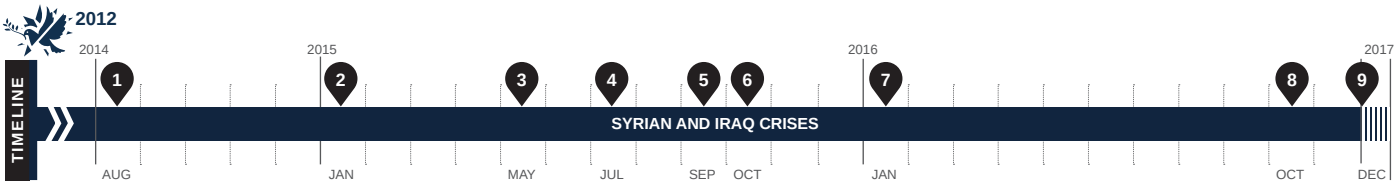
SUMMARY OF THE RESPONSE

The situation in Iraq has been unstable for several years for both the internal conflict and the impacts of the Syrian crisis. The shelter response has taken a range of approaches, from mobile assistance for populations on the move, to a variety of interventions for displaced, host communities, refugee and returnee caseloads in multiple settlement situations, including camps, which have been the preferred form of assistance from the government. Integrated programming, protection and accessibility considerations have become essential in responding to such protracted crisis.



Map based on Iraq Humanitarian Needs Overview 2016. Severity of needs has been calculated on: proportion of displaced people compared to the population of Iraq; proportion of displaced people to host governorate population; percentage of displaced people living in critical shelter arrangements.

[1] SHNO / HRP 2017.
[2] 2017 HRP Advanced Executive Summary, http://bit.ly/2iCMO24.
[3] UNHCR (30 November 2016).
[4] Data reported to the Shelter Cluster, as of December 2016.
[5] Displacement Tracking Matrix factsheet # 10.



1. Aug 2014: **The UN declares a Level 3 Emergency in Iraq.**
2. Jan 2015: **2.2 million Iraqis have been displaced from their homes since the start of 2014.**
3. May 2015: **Military operations in Tikrit create some displacement, but also allow returns to commence.**
4. Jul 2015: **The Anbar offensive commences, with 100,000 people displaced over the following six months.**
5. Sep 2015: **Cholera outbreak lasts until November 2015.**
6. Oct 2015: **Heavy rain and flooding creates additional displacement.**
7. Jan 2016: **3.2 million Iraqis have been displaced since January 2014, 50% in Anbar, Baghdad and Dohuk governorates. 400,000 people have been able to return home. Procurement, planning and prepositioning begin, as plans for the Mosul offensive are shared with the Humanitarian Sector.**
8. Oct 2016: **The Mosul offensive starts; mass displacement prompts humanitarian actors to scale up emergency preparedness and response plans.**
9. Dec 2016: **121,158 people displaced due to the Mosul crisis by the end of the year, and increasing[5].**

For projects in Iraq or similar approaches see:

Shelter Projects 2011-2012, A.16 and A.17: Lebanon, on shelter repairs/upgrades and sealing off.

Shelter Projects 2013-2014, A.13 and A.14: Lebanon, on sealing off kits; and on multisector, mixed modality interventions.

Shelter Projects 2013-2014, A.9: Iraq, on cash/voucher programmes for shelter maintenance.

Shelter Projects 2015-2016, A.34, A.35 and A.36: Iraq, on repairs of damaged homes and religious buildings; on accessibility upgrades in camps; and on resettlement of IDPs to a planned site.

Camps have been established in Iraq since 2013 to host Syrian refugees.

Sealing-off kits were distributed as one of the shelter response options. IDPs live in a variety of conditions, including in rented accommodation, collective centres (such as schools) and spontaneous, self-settled, sites. Most of the displaced population (both refugees and IDPs) lives outside of camps.

BACKGROUND TO THE CRISIS

Against the background of the ongoing Syrian crisis as it entered its fifth year, Iraq's internal conflict against armed opposition groups has resulted in a protracted crisis that has left almost 3.2 million people displaced. The economic crisis has seen a 40% drop in oil revenues, resulting in the collapse of the social protection floor across the country and seriously compromising the ability of communities to access basic services, maintain incomes and meet everyday needs. Overcrowding, dwindling resources, perceptions of disproportionate assistance, lack of (or competition for) employment opportunities, and continued insecurity threatened to exacerbate already fragile ethnic and sectarian tensions across the country, particularly as sections of the non-displaced population are already in a situation of destitution. By the end of 2016, **it was estimated that over 10 million people in Iraq required some form of humanitarian assistance,** of whom a large proportion were host communities. More broadly, informal settlements increased significantly after 2003, due to a shortage of land allocated for housing, lack of services and infrastructural investment, corruption and poor governance, compounded by significant waves of displacement in 2003 and 2007-2008[6].

SHELTER STRATEGIES AND RESPONSES

The Shelter and Non-Food Items (Shelter-NFI) Cluster in Iraq was activated in January 2014 to address the IDP crisis, with a Shelter Sector Working Group already established to focus on the Syrian refugee response. Given that many host communities (particularly in northern Iraq and the Kurdistan Region of Iraq) were composed of a mix of vulnerable non-displaced, refugee and IDP families living in similarly substandard shelter and settlement conditions within proximity of each other, the **Shelter-NFI Cluster merged to consider both IDP and refugee responses in this mixed crisis**.

In parallel to allowing longer-term displaced families achieve and maintain adequate shelter, agencies in Iraq have also had to prepare for **regular waves of new displacement across the country,** as the active conflict continued. This required a **phased and incremental approach,** covering emergency, post-emergency and early recovery activities, often in the same locations during the same timeframe. Building on the national strategy set out by the Ministry of Migration and Displacement, the Shelter-NFI Cluster in Iraq set out the response strategy in the following three packages: **1) first-line response** to address the emergency shelter needs of the newly displaced; **2) second-line response** to upgrade shelter for existing IDPs in critical need; and **3) full-cluster response** to maintain shelter for the most vulnerable and support rapid return. However, due to the scale of emergency needs, funding for first-line, and sometimes second-line responses, has had to be prioritized over the longer-term responses. For 2017, the strategic objectives also included: replenish core households items (second-line) and expand shelter and housing options for vulnerable households, according to standards (full-cluster).

[6] Over one million people were already displaced during these years, according to the Iraqi Ministry of Displacement and Migration.

"Transit camps" with tents as a temporary measure were initially established for temporary accommodation of the influx of Syrian refugees. These grew in number and size over time, and structures were partially upgraded. The number of refugees was only a fraction of the total number of people displaced (IDPs and returnees).

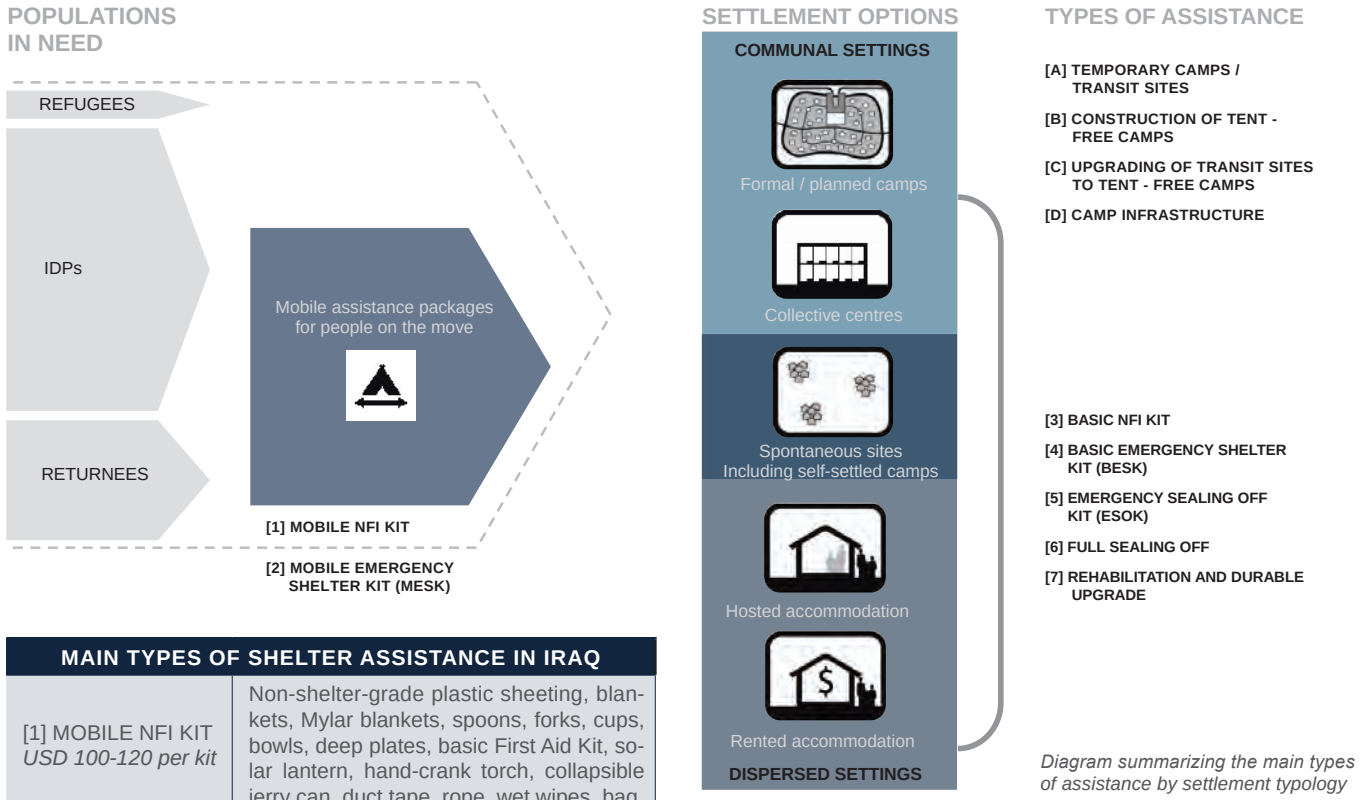


Diagram summarizing the main types of assistance by settlement typology

MAIN TYPES OF SHELTER ASSISTANCE IN IRAQ	
[1] MOBILE NFI KIT *USD 100-120 per kit*	Non-shelter-grade plastic sheeting, blankets, Mylar blankets, spoons, forks, cups, bowls, deep plates, basic First Aid Kit, solar lantern, hand-crank torch, collapsible jerry can, duct tape, rope, wet wipes, bag
[2] MOBILE EMERGENCY SHELTER KIT (MESK) *USD 60-80 per kit*	One woven bag containing: 2 x tarpaulin (shelter-grade); 1 x rope (30m); 1 x wire (5m); 0.5kg x roofing nails; 0.5kg x wire nails; 1 x claw hammer; 1 x shovel; 10 x tent pegs
[3] BASIC NFI KIT *USD 220-260 per kit (including supplemental seasonal support)*	Shelter-grade tarpaulin, blankets (possible to replace with sheets in summer), mattresses, hygiene kit (30 day), kerosene or gas cooker, kitchen set, solar lantern, water jerry can
[4] BASIC EMERGENCY SHELTER KIT (BESK) *USD 80-100 per kit*	One woven bag containing: 2 x tarpaulin (shelter-grade); 4 x timber lengths or poles (2.3m); 1 x rope (30m); 1 x wire (5m); 0.5kg x roofing nails; 0.5kg x wire nails; 1 x claw hammer; 1 x shovel; 10 x tent pegs
[5] EMERGENCY SEALING OFF KIT (ESOK) *USD 250-300 per kit*	Select items and quantities to form a kit within cost envelope in response to needs assessment at each location: (1) Construction materials: tarpaulin and plastic sheeting, square cut timbers, other framing material, plywood sheeting, fixings and rope, sealants and adhesives, metal straps and angles, insulation materials (2) Personal and site safety equipment (3) Tools
[6] FULL SEALING OFF	BoQs and technical design led by agency, implemented by beneficiary families with supervision or by hired contractors. Includes more durable sealing off measures such as insulation, PVC windows and doors, and roof repair
[7] REHABILITATION AND DURABLE UPGRADE	Repair of existing shelters (e.g. unfinished and abandoned buildings) and/or installation of good quality shelter or settlement level interventions that address priority issues identified through technical assessments of shelter safety and adequacy. Security of tenure and scope of works confirmed through signed agreements with legal owner. The Shelter Cluster works very closely with the HLP Sub-Cluster to develop robust guidelines on how to ensure that HLP issues are addressed and do not become barriers for the upgrades. All partners follow the same process.

OUT-OF-CAMP

While the preferred response option for the authorities in Iraq has been the establishment of formal, planned, camps for both refugees and IDPs, 62% of the Syrian refugee population[6] and 86% of the IDP population[7] across the country have been living outside of camps within the host community, though there has been insufficient focus on their needs and conditions. As the crisis in Iraq continued, **greater efforts towards supporting self-reliance, sustainability and building resilience has become increasingly urgent.** This had to be addressed within affected populations, as well at the administrative level through local authorities.

As of December 2016, **45% of the displaced population were in rented accommodation** (including hotels), facing increasing financial pressure, as a result of saturation in the rental market and high rental costs, leading to greater vulnerability – and particularly a risk of eviction – as resources were depleted and families fell into debt. In addition, the ability to rent private accommodation did not necessarily correlate with achieving adequate shelter, with **17% of families living in what was considered "critical shelter" types** – unfinished or abandoned buildings, schools or religious buildings and informal settlements[8]. A main approach of cluster partners working outside of the camp context has been to **improve shelter alongside securing tenure,** while coordinating closely with WASH, CCCM and Cash and Livelihoods actors, to ensure displaced families do not fall into deteriorating shelter and settlement situations over time. Therefore, the shelter response had to adopt a holistic and cross-sector approach towards meeting complex, multi-faceted, needs outside of camp settings, over a longer duration.

Approaches have included combinations of the following:

- Standardized and complementary **Mobile** or **Basic Emergency Shelter Kits (ESK)** and **Mobile** or **Basic NFI Kits,** to respond to anticipated new and large-scale

[6] 3RP, 2016-2017.
[7] Shelter-NFI Cluster Factsheet, September 2016.
[8] See case study A.34 for an example of a repairs project in these shelter types.

Unfinished buildings were occupied by some people. Where agreements were possible with landowners, repairs, light or durable upgrades were made. In some cases, frame tents or sealing-off kits were provided.

displacement, aiming to address emergency, life-saving, needs in a variety of potential transit, non-camp and camp-like settings.

- **Sealing-off shelters** through distribution of sealing-off kits or implemented sealing-off activities. Inter-agency joint methodologies and mobile site monitoring by CCCM teams have been developed to ensure site, shelter & settlement, WASH and protection (including HLP/tenure security) issues are addressed.
- Development of **Emergency Sealing-Off Kits (ESOK)** for rapid distribution in the case of a large influx, returns, or for climatization measures.
- **Repair, rehabilitation and "durable upgrades"** of collective centres and unfinished / abandoned buildings, including the installation of appropriate shelter-level water and sanitation facilities, as part of shelter actors' responsibility.
- **Phased and incremental approaches** towards collective centres, unfinished and abandoned buildings and spontaneous sites transitioning to more formally managed settlements. These include sealing-off (often non-structural, for climatization purposes), followed by rehabilitation and durable upgrades to ensure protection against climate in the short term, while longer-term shelter needs are addressed comprehensively.
- **Tenure security and incentives** have been integrated through negotiated bi- or tri-partite agreements between beneficiary, land or building owner, and sometimes with local authorities and/or the agency. For example, in exchange for allowing a displaced family to remain in a house with set rent levels and duration, durable upgrading works to the property (such as installing windows and doors, or bathrooms) would be undertaken. Cash-for-Rent and other cash-based programming have also been piloted.
- **Community construction activities**, such as Quick Impact Projects, to support over-stretched public services in host communities with large populations of refugees and IDPs, often engaging Cash-for-Work or skills-building modalities.

WITHIN CAMPS

In some locations, shelters have been established from the start in so-called **"permanent" (or "tent-free") camps** with concrete slabs, kitchens and bathrooms, or planned as transitional settlements with prefabricated composite panel caravans forming single-family dwelling units. In other areas, where **"transit camps"** were initially established for temporary accommodation of the influx of Syrian refugees, a process of transformation and shelter upgrading has been underway since 2014. Tents as temporary, emergency shelter solutions have been phased out and replaced with more durable shelters.

A key aspect of camp activities has been **installing, upgrading and maintaining camp infrastructure**, from public service facilities, educational buildings and recreation areas, to roads, electrical connections and drainage. Close working relationships with WASH and CCCM actors have been required, in order to coordinate both hardware and software components, with increasing coordination and engagement with local authority counterparts, as management of camps and their associated infrastructure and service provision was handed over to primary duty-bearers. Although rules vary between camps, single-storey construction (masonry or using mixed materials) has been permitted, resulting in the stabilization of the areas as settlements.

SYRIAN REFUGEE RESPONSE

Refugees and IDPs comprised 25% of the total population of the Kurdistan Region of Iraq (KRI) in 2016. A spike in arrivals of Syrian refugees came in August 2013, with a subsequent influx in late 2014. The majority of Syrian refugees entered the KRI. As of December 2016, around 39% resided in one of ten camps established from 2013, with the remaining 61% of refugees living outside of camps, in host communities. The refugee population remained largely stable, with movement into and out of camps characterizing population movements in some areas, alongside migration to Europe and other countries.

IDP and refugee camps, in some cases, initially consisted of emergency shelter solutions (e.g. tents), which have been gradually replaced by more durable shelters.

Throughout 2015 and 2016, the refugee camps have moved into a period of significantly reduced involvement of humanitarian actors, accompanied by an increased role for the government authorities, through mentorship, capacity development and partnership programmes. For this, a Joint Crisis Centre was established by the Kurdistan Regional Government in 2015, to continue coordination of responses. Enhancement of livelihoods remained a key focus of resilience-building amongst the refugee population and within host communities, which have struggled to cope with the influx of both refugees and IDPs since 2014.

INTEGRATED PROGRAMMING

The needs encountered by the newly displaced, those experiencing multiple and/or prolonged displacement, returnees, host and non-displaced communities have been of large scale and complexity. This has made **necessary to trial ways to effectively integrate sectors,** for reasons of stimulating longer-term impacts, cost-effectiveness and sometimes due to changing security and access situations. Examples include:

- Encouraging the use of **conditional and multipurpose cash-based modalities** for shelter and NFI activities.
- Shelter activities include installation or repair of household-level and shared **water and sanitation facilities**; WASH cluster partners could then more effectively focus on addressing the high needs of community-level networks and municipal systems.
- Development of **referral databases** and staff sensitization across the sectors (particularly between Shelter, WASH, CCCM and Protection), to refer potential issues rapidly to relevant counterparts.
- **Mobile site monitoring** (or CCCM) teams roving between settlements to monitor conditions, identify issues and engage or follow up with responsible agencies.
- **Combining NFI distributions with sealing-off kit distributions**, assessments and information dissemination.
- **Training beneficiary and host community** households in basic safety and construction, using emergency shelter kits and sealing-off kits, complemented by training in fire prevention and fire-fighting by CCCM actors.
- **Hiring local labour and residents** to install shelter and WASH facilities, with training in operation and maintenance to ensure shelters and settlements remain in serviceable condition and to strengthen a sense of ownership.

PROTECTION, ACCESSIBILITY AND INCLUSION

The crisis in Iraq has been called “a protection crisis” and required to address the challenges faced by persons with special needs, supporting the security of women and girls within the household and settlement (often in very overcrowded conditions), and ensuring that health and safety considerations are woven through physical interventions, as well as in use and behaviour of beneficiaries. Shelter actors have been active in attempting to mainstream protection through:

- Using sealing-off and upgrading activities for **partitioning, segregation or fire compartmentalization,** to provide more culturally acceptable, safe and secure shelter and settlements.
- Participating in **gender-based violence and safety audits,** to identify critical areas at shelter and site level.
- Awareness-raising campaigns with displaced communities on **electrical and fire safety**, fire prevention and fire fighting.
- **Adapting shelter improvements** to meet both physical and cultural needs, and facilitating the role of carers[9].
- Developing “**Quality of Life**” indicators, in addition to technical assessments, and furthering **consideration of accessibility** through multiple sectors.
- Designing **mobile, agile and rapid response packages,** to deliver assistance on the move, in temporary situations, scattered across dispersed host communities or wide geographical areas, and in insecure or inaccessible areas.

LOOKING FORWARD

Prior to the start of the Mosul offensive by the Iraqi government on 17 October 2016, partners prepared for the expected displacement by pre-positioning standardized NFI and shelter kits and building camps. Once the offensive started and villages and districts of Mosul became accessible, partners moved in to provide first-line critical shelter and NFI assistance. During this period, temperatures dropped to below freezing, with heavy rain and snow.

As of early 2017, the East of Mosul was largely taken back from the so-called Islamic State, and the focus was shifting to the West, which prompted Shelter partners to pre-position items and prepare camps again, as well as facilitating safe and voluntary return to the regained areas. The Cluster and its partners were also working very closely with the authorities, to ensure gaps were filled and to avoid duplication.

[9] See case study A.35, on accessibility upgrades in camps

CASE STUDY

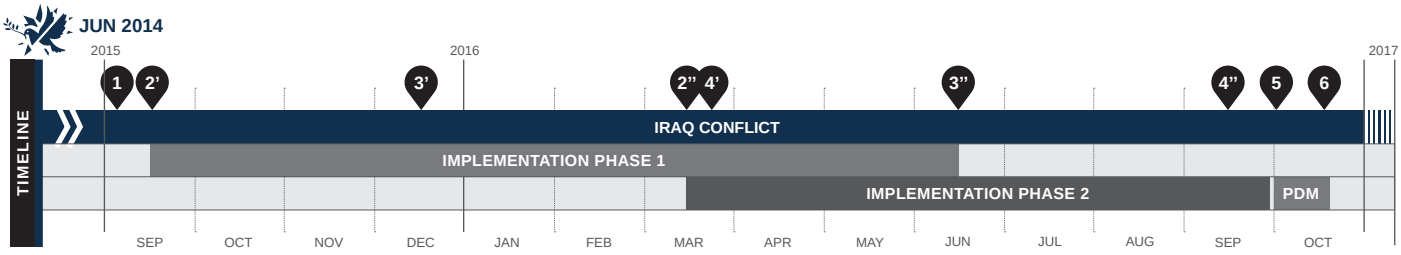
IRAQ 2015-2016 / CONFLICT

KEYWORDS: Housing repair / retrofitting, Religious buildings upgrade, Training, Guidelines

CRISIS	**Armed conflict in Iraq since January 2014**
TOTAL HOUSES DAMAGED	Approx. **70-80%** of the private houses owned by returnee families were **majorly or partially damaged** due to the conflict in the region (Source: OCHA).
TOTAL PEOPLE AFFECTED	**3.1 million** IDPs in Iraq (Source: 2017 HRP Advanced Executive Summary). **1.3 million** returnees (Ibid.).
PROJECT LOCATIONS	**Salah al-Din, Baghdad, Najaf, Kerbala, Wassit, Qadissiya, Babylon and Diyala governorates**
BENEFICIARIES	**2,278 households** (13,028 individuals).
PROJECT OUTPUTS	**300 religious buildings upgraded.** **400 returnees damaged homes rehabilitated.**
SHELTER SIZE	**21m²** floor space for each family (**3.5m²** per person for 6 people per family).
MATERIALS COST PER HOUSEHOLD	Religious buildings rehabilitation: **USD 840** per household (**USD 4,200** per building). Damaged house rehabilitation: **USD 1,540.**
PROJECT COST PER HOUSEHOLD	Religious buildings rehabilitation: **USD 1,200** per household (Total: **USD 6,000** per building). Damaged house rehabilitation: **USD 2,200.**

PROJECT SUMMARY

The project assisted 2,278 displaced and returnee families to rehabilitate and/or reconstruct damaged and deteriorating shelter structures. Rehabilitation prioritized infrastructure upgrades of religious buildings (Husseinyas) and other critical shelter arrangements, including the damaged houses of returnees. The interventions included the construction of internal wall partitioning, WASH and electrical upgrades, replacing damaged roofing and minor structural repairs.



1. Sep 2015: **3.19 million internally displaced persons and 370,000 returnees in Iraq.**
2. Mid-Sep 2015 and Mid-Mar 2016: **On-the-job training conducted for host community and IDPs on rehabilitation works, by the organization's engineers and contractor's skilled workers.**
3. Mid-Dec 2015 and Mid-Jun 2016: **Upgrade and repair of damaged water and sewer pipes and septic tanks completed.**
4. Mid-Mar 2016 and Mid-Sep 2016: **Construction of internal partitions, plastering, roof leaks repair, electrical rewiring, repair of damaged concrete floor, installation of protection perimeter fencing completed.**
5. End-Sep 2016: **Awareness sessions on hygiene promotion, electrical safety and fire protection. Handover to host communities / beneficiaries.**
6. Mid-Oct 2016: **Post Distribution Monitoring, Quality Control and M&E Assessment completed. Project close.**

STRENGTHS

+ Protection measures for the most vulnerable.
+ Provided work opportunities to IDPs and host community.
+ Effective communication with local government and partners.
+ Completion of works ahead of schedule and high beneficiary satisfaction.
+ Publication of a step-by-step guidelines booklet.

WEAKNESSES

- Procurement from outside target areas delayed the project.
- Inaccuracies in cost estimations due to price fluctuations.
- Issues in contractor pre-qualification exercise and evaluation process.
- Insufficient capacity-building for staff, in the supervision of shelter-related projects.
- Project management approach was not always consistent with other programmes.

CONTEXT

For more background on the Iraq crisis and shelter responses, see overview A.33.

As of September 2015, the organization identified a total of 91,440 displaced families (an estimated 548,640 individuals) who lived in critical shelter arrangements, such as schools, religious buildings, informal settlements and unfinished or abandoned buildings. Internally Displaced Persons (IDPs) in critical shelter arrangements were extremely vulnerable, with little protection from the harsh weather conditions (below 0°C during the coldest months and above 50°C during the summer). Furthermore, IDPs in these shelters generally suffered from inadequate WASH conditions, health services, as well as educational and employment opportunities. Multiple displacements were common, causing long-term instability and vulnerability for IDP families. Furthermore, IDPs were increasingly difficult to access, caught behind front lines, or held at security screening centres.

SITUATION DURING THE CRISIS / NEEDS ANALYSIS

Since 2015, IDP families from the districts of Iraq that were recently liberated by Iraqi Security Forces (ISF) and/or Kurdish Peshmerga, have slowly returned to their area of origin (12,784 families as of September 2016). However, many of these returnee families have found their homes damaged and in need of urgent rehabilitation or repair. Therefore, the organization targeted these families in the Central Belt of Iraq with shelter assistance, to aid in the rehabilitation and/or reconstruction of partially damaged private homes. According to the Displacement Tracking Matrix (DTM), more than 16,000 families were living in religious buildings called “Husseinyas”, or Shiite prayer halls, primarily within the central governorates of Kerbala, Najaf, Qadissiya and Wassit[2]. Religious buildings were classified as a critical shelter arrangement, as they failed to provide safe living conditions, and were not sustainable in the long-term. Furthermore, as the prayer halls are open, the majority of Husseinyas lacked adequate partitions, sanitation facilities, household items and other infrastructure to meet the specific shelter needs of a growing number of IDP families. Consequently, during the Ashura holiday, when thousands of Shiite Pilgrims travel to these areas, IDPs were temporarily evicted from the Husseinyas.

SHELTER CLUSTER STRATEGY

In 2016, the Shelter-NFI Cluster delivered assistance to IDPs in varying geographic locations and across all shelter types and phases of displacement. The minimum assistance consisted of two components: 1) ensuring sufficient, covered living space, which provides thermal comfort, fresh air and protection from the climate; and 2) providing critical household and shelter support items. Thus, it supported the upgrade of substandard housing using durable materials, as well as rental support, small scale repairs, and phased assistance to host families,

[2] DTM assessments started in mid-2016.

The project conducted upgrades in religious buildings hosting IDPs, including the addition of partitions between units (here in Kerbala).

especially for those in critical shelter arrangements. Persons returning to partially damaged homes were to be provided with shelter and NFI materials, as well as housing, land and property rights support. Cash-based, occupant-driven, or owner-driven, approaches were encouraged. Sites in the greatest need of WASH support were also identified and in general responses had to be coordinated with relevant clusters.

This project was initiated after field assessment reports depicted the worsening conditions in critical shelter conditions of the Central, Northern and Southern regions of Iraq. In cooperation with the government and the Ministry of Displacement and Migration (MoDM), this project provided shelter rehabilitation and basic repairs and upgrades to waste water, electrical, structural and ground upkeep, as well as infrastructure maintenance, in line with Cluster objectives. Additionally, the project fell under the second line of the humanitarian response strategy[3].

SITES SELECTION

Firstly, DTM surveys prioritized three categories: governorate of origin, period of displacement and governorate of displacement, within each shelter type. The surveys further categorized shelters into districts, family units and sex and age disaggregated data for the individuals. DTM reports (inclusive of safety audits) and assessment reports from REACH captured the unsuitable living conditions of IDPs in informal settlements and returnees’ damaged houses. **Follow-up focus groups** by shelter technical field staff with vulnerable IDPs were also conducted for two rehabilitation work sites. Finally, safety and living environment **assessment audits** were carried out with rapid shelter assessment forms. A total of 300 critical shelters (Husseinyas) and 400 damaged houses were assessed and recorded. The criteria used regarding the rehabilitation needs included WASH plumbing repair and upgrades, electrical repairs and upgrades and roof leakage repair.

Before starting the project, the **findings were shared with local authorities** and MoDM for endorsement. **Focus group discussions** were held with district representatives, community and religious leaders, **and formal Memoranda of Understanding** – specifying the type of rehabilitation works allowed – were signed with the owners of the Husseinyas. Work plans, quality control,

[3] Iraq 2016 HRP, http://bit.ly/1U3LFAI.

The project repaired damaged homes of returnee families through a variety of works. Here in Salah Al-Din, before (left) and after the upgrades (right).

monitoring and evaluation (M&E) reports were also prepared, to ensure the project's quality and mitigate delays.

PROJECT IMPLEMENTATION

Project implementation began with a **selection exercise** of residential construction contractors, through an open tender advertised in local newspapers and through social media. The organization's technical staff in each governorate were then provided **basic training** in supervising rehabilitation works; the shelter team was involved in direct management and quality control supervision of the project. IDPs and returnees were selected to take ownership of the project through a **participatory approach**, by engaging in the repairs of the Husseinyas and damaged houses. Their involvement contributed to increase their skills and provided livelihood opportunities.

The 300 Husseinyas and 400 damaged houses were then randomly inspected once again (after project completion) by senior shelter engineers, to check the technical quality of the interventions, as well as beneficiaries' satisfaction. Post-distribution and assistance monitoring was performed by the M&E unit.

COORDINATION

The organization worked in close coordination with the MoDM, the Iraqi Government and the Shelter-NFI Cluster, prioritizing governorates based on the influx of IDP arrivals to informal and unfinished settlements and buildings. Following the completion of the generalized surveys, CCCM Cluster partners conducted site focused "Red flag" assessments, which captured "prioritized needs" in rehabilitation, in regards to WASH, presence of mines, electrical security, lack of food and NFI, as well as other critical needs. In addition to the above mentioned tools, shelter partners conducted caseload assessment and focus group discussions in each governorate, using the shelter assessment form developed by the organization for this project.

Finally, the organization worked closely with all stakeholders and humanitarian partners, in referencing each partner's site assessment caseload, in order to avoid duplication. Assessments were shared with Shelter-NFI and WASH partners in coordination meetings, as well as with contractors.

ENGAGEMENT OF AFFECTED PEOPLE

Shelter staff conducted initial focus group discussions with displaced persons, as recommended by representatives from religious leaders, heads of households and adolescent groups. Selected IDPs were provided with on-the-job skills training in shelter rehabilitation, such as: WASH plumbing, roofing, concrete work, wall plastering, painting and basic electrical wiring. In addition, community groups were briefed on the planned rehabilitation scope for each family unit, specifically on dignity, privacy and protection. Post implementation monitoring indicated more than 95% beneficiary satisfaction.

RISK MITIGATION COMPONENTS

Protection measures were included in the rehabilitation of Husseinyas, through partitions for privacy and adequate lighting along open corridors and water and sanitation facilities. Separate toilets and bathroom facilities were installed for women and men, with adequate lighting along corridors, as well as open washing areas. Health and hygiene promotion campaigns were conducted to mitigate the risks of vector-borne diseases. Finally, awareness-raising campaigns on electrical and fire safety and prevention were also delivered.

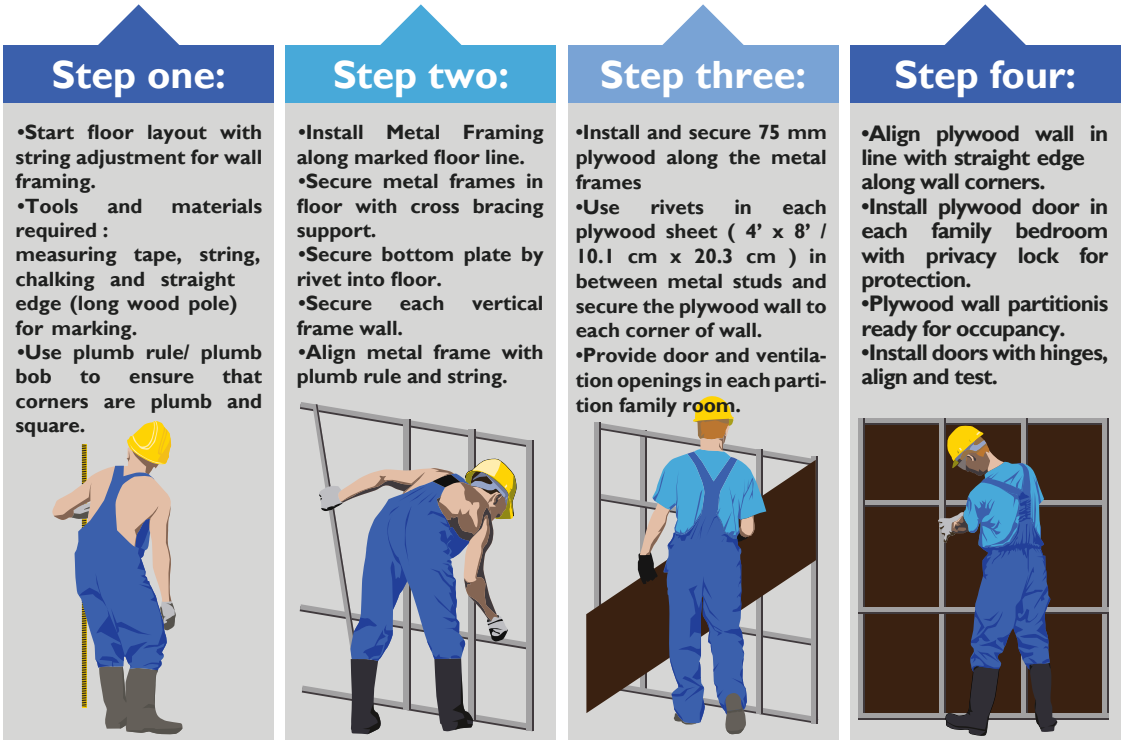
MAIN CHALLENGES

In addition to infrastructural challenges, several logistical issues were encountered, such as the **lack of access** through military controlled check points into post-conflict liberated regions, controlled by separatist Militias. As such, material deliveries were frequently disrupted or put on hold for long periods. Further, there was a **lack of qualified contractors** with proven track records in building construction, especially across Central Iraq. To rectify this, focus group discussions were initiated with the local district mayor, religious leaders, and militia leaders. This resulted in the organization's **staff receiving special access permits** (contractors and suppliers) for humanitarian projects. Further, the organization's site engineers provided pre-selected contractors with trainings on good construction practices for rehabilitation works.

WIDER IMPACTS OF THE PROJECT

This was the first emergency shelter project focusing on rehabilitation in the region, after the start of the conflict. Ongoing lessons learned from this project, particularly in light of the increasing displacement of communities, were utilized in the fast-track procurement and contractor selection processes, to expedite responses in these emergency environments. A booklet on rehabilitation works was also produced, as an outcome of this project.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



The organization produced a step-by-step booklet for rehabilitations and upgrades, as an outcome of this project.

STRENGTHS

+ Emphasis on protection measures for the most vulnerable (women, girls, sick and disabled persons).

+ IDP heads of households, as well as adolescent male and female members of the family, were provided **work opportunities** through: basic skills training in masonry, electrical wiring, concreting, plastering and roof repairs.

+ The programme developed **effective communication with the local government** and partner agencies.

+ Field staff received training in project planning and budgeting, timeline management and quality controls, before undertaking programme responsibilities.

+ Rehabilitation projects were **completed ahead of schedule** and with high beneficiary satisfaction.

+ Publication of a booklet with step by step guidelines on Rehabilitating, Repairing and Upgrading of Critical Shelter and Damaged Houses (*see snippet above*).

WEAKNESSES

- Lack of local building materials and sourcing of items outside conflict zones delayed the project, also due to inconsistencies at military checkpoints on import regulations.

- The organization's estimates did not match contracted projects costs, due to an escalation in building materials and transportation costs across different regions in Iraq. Consideration of this cost variations would have expedited the project.

- Issues in contractor pre-qualification exercises and evaluation processes resulted in the hiring of contractors who were not familiar with international humanitarian standards.

- Insufficient capacity-building for shelter staff in project management, specifically in the supervision of shelter-related projects. Due to the lack of experienced local contractors, staff was recruited from other regions. This also caused some tensions with local municipalities and residents.

- The technical project management approach was not always consistent with other programmes, including other shelter and livelihoods initiatives of the organization.

LEARNINGS

- **Repair of broken and dysfunctional plumbing was mostly missing in the scope of works** (sanitation piping, septic tanks, waste water drainages and water supply pipes). The lessons learned workshop revealed major gaps and WASH repair and upgrades were included in subsequent rehabilitation works.
- **A database of pre-qualified contractors was developed** to expedite hiring of competent contractors for various projects (including civil infrastructure, building and electrical works).
- **Extra capacity-building was needed.** A project-management training and a lessons learned workshop were conducted on planning, quality control and construction management, during a retreat with shelter staff.

CASE STUDY

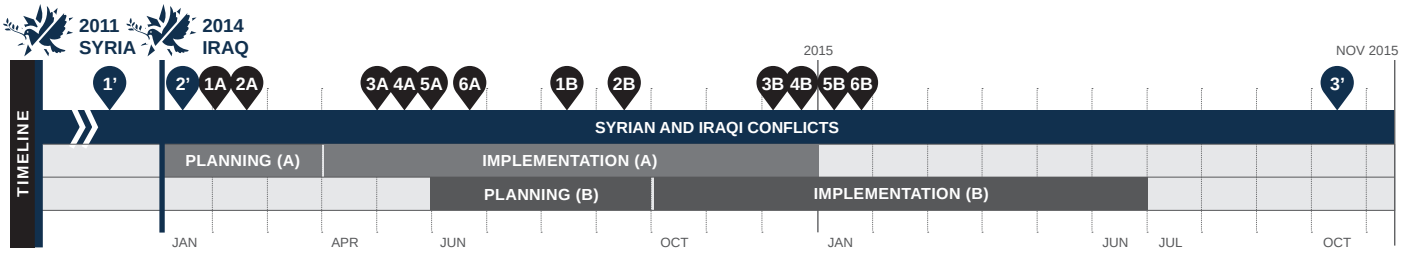
IRAQ 2014-2015 / REFUGEE CRISIS

KEYWORDS: Accessibility, Disabilities, Planned and managed camps, Materials distribution

CRISIS	**Syrian conflict, Refugees in Iraq. 2011-ongoing**
TOTAL PEOPLE AFFECTED	**239,000** Syrian refugees in Iraq (as of 2016) **3.1 million** IDPs in Iraq (as of 2016) **213,000** Syrian refugees (January 2014) **85,000** IDPs in Iraq (January 2014)
PROJECT LOCATIONS	**Domiz refugee camp**, Dohuk Governorate (Project A). **Kawergosk, Qushtapa, Darashakran, and Basirma refugee camps**, Erbil Governorate (Project B)
PROJECT BENEFICIARIES	**901 households** (including 1,047 individuals with disabilities). 362 HH in Domiz camp, 157 HH in Darashakran camp, 112 HH in Basirma camp, 147 HH in Kawergosk camp, and 123 HH in Qushtapa camp
PROJECT OUTPUTS	**901 shelters upgraded**
MATERIALS COST PER HOUSEHOLD	**USD 350** (average for Project A), **USD 500** (average for Project B).
PROJECT COST PER HOUSEHOLD	**USD 640** (Project A), **USD 900** (Project B). Estimated.

PROJECT SUMMARY

The programme was carried out in five refugee camps in Iraq in two separate projects, focusing on shelter-related issues specific to persons with disabilities. The projects upgraded existing shelters and plots and adapted global accessibility standards to the camp context and cultural norms of the Middle East. The programme sought to adopt a holistic approach, through focusing not only on the individuals with disabilities, but also on the needs of the caregivers.



1. Project **A**: Feb 2014, Project **B**: Aug 2014: **Development of social and technical assessments and prioritization scoring.**
2. **A**: Winter 2014, **B**: Sep 2014: **Initial household level technical assessments completed, allowing the creation of a materials database.**
3. **A**: Early May 2014, **B**: Dec 2014: **Framework Agreements established.**
4. **A**: May 2014, **B**: Dec 2014: **Recruitment of skilled and unskilled labour.**
5. **A**: Late May 2014, **B**: Jan 2015: **Works initiated in camps.**
6. **A**: Jun 2014, **B**: Jan 2015: **Rolling handover of shelters.**

1' Mar 2013: **First refugee camp established in KRI for Syrian refugees.**

2' Jan 2014: **213,223 Syrian refugees in Iraq. 95,587 individuals** (26,924 households) **live in camps. Conflict begins between the Iraqi forces and the Islamic State in Iraq and Levant. 85,000 people displaced.**

3' Oct 2015: **245,585 Syrian refugees in Iraq. 94,628 live in camps. 3.21 million IDPs in Iraq.**

STRENGTHS

+ Tailored interventions for persons with disabilities.
+ Addressed a gap in accessibility and quality of life in camps.
+ Provided income to assisted households.
+ Challenged teams to think “outside the box”.
+ Pushed the issue of accessibility and upgrades to the forefront of discussions.

WEAKNESSES

- Tendency for staff to adopt standardized approaches.
- Fencing off household plots further isolated some households.
- Quality of work carried out by paid labourers varied greatly.
- Difficulty in finding balance between the specific needs and the more general household needs.
- Poor communication about targeting and project objectives.

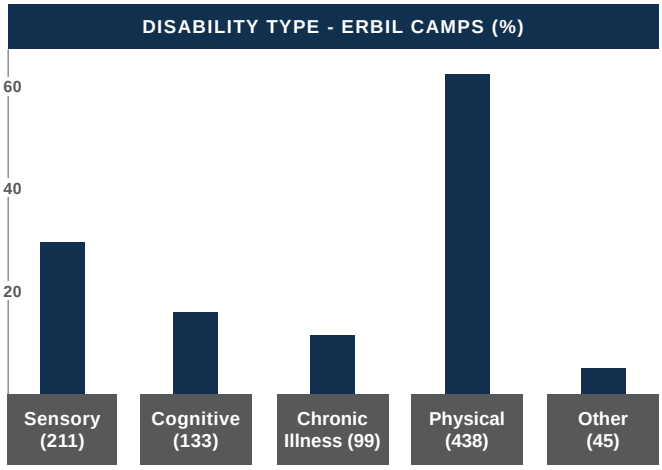
Camps were established to accommodate Syrian refugees in the Kurdistan Region of Iraq. Over time, residents and organizations upgraded the shelters in the camps. However, many gaps remained in terms of accessibility and mobility throughout the sites. This project tried to address some of these issues.

SITUATION IN THE CAMPS

The first camp constructed to host Syrian refugees in the Kurdish Region of Iraq was established in March 2013 in Dohuk Governorate, with a camp population of approximately 55,000. In 2014, four additional camps for refugees were established in neighbouring Erbil Governorate, with a total population of 27,700. In the winter of 2014-2015, 13 camps were established for IDPs escaping conflict in Southern and Central Iraq.

In early phases, households were principally provided with tents as an emergency shelter solution, along with the required basic camp infrastructure. In the later-established camps, there was a greater variety of shelter types, ranging from pre-fab shelters to tents on concrete platforms. Concurrently, an increasing number of camp residents engaged in incremental upgrades, using construction materials from local markets. Local authorities initially restricted the use of “permanent” construction materials (e.g., concrete and blocks), though later opened up to their utilization in a controlled manner. In early 2015, the vast majority of shelter coverings in the camps were still constructed with soft materials. This was even more prevalent amongst households with individuals with disabilities, as they were less likely to have access to resources to improve their shelters.

Prior to implementation, the organization worked with UN agencies, local authorities and the refugee community representatives, to assess the number of households in need, the most common types of disabilities, and the current levels of support from other humanitarian actors. Many of the families with persons with disabilities reported that **the organization’s field staff were the first humanitarians to engage with them directly,** or that they had received no prior assistance addressing their specific needs. When the organization was funded for the Erbil project, two other organizations also received funding to provide assistance to persons with disabilities. **All three organizations worked together in the identification and provision of assistance.** Approximately 9% of households in the camps of Erbil were found to have at least one individual with disabilities. Although the types of disability were varied, the most prevalent were physical, sensory and cognitive and, in 30% of the cases, multiple conditions.



SHELTER SECTOR STRATEGY

In camp settings, the shelter strategy principally focused on four points: land allocation for new camps; expansion of existing camps; provision of emergency shelter for new arrivals; and shelter improvements for refugees in camps prior to the influx. The strategy highlighted the general needs of different vulnerable groups, but there was no specific technical guidance on shelter construction or upgrading for persons with disabilities.

PROJECT GOALS

This project aimed at improving accessibility in shelters, shelter plots and surroundings in camps, as well as the quality of life for individuals with disabilities, through different types of upgrades, such as floors, walls, openings and coverings, and including access to nearby water and sanitation facilities. It also intended to provide a starting point for incrementally improving accessibility across the camps.

BENEFICIARY SELECTION

The organization targeted refugee populations in camps in Dohuk and Erbil governorates. Domiz camp was initially selected, following a multisectoral needs assessment carried out by another organization, which identified gaps in specific service provision for households with persons with disabilities. The camps in Erbil were later identified as having similar gaps. IDP camps were not targeted under these projects, though the organization had other projects and funding streams which targeted the shelter needs of IDPs.

The project worked on a variety of upgrades focused on improving the accessibility and Quality of Life of individuals with disabilities. From left to right: Shaded area and fencing around prefab shelter. Concrete slab improving wheelchair access. Fold out support railing. Shaded entrance and support posts for better access.

Potential individual beneficiaries and households were identified in close coordination with protection agencies, camp management and other actors providing services within the camps. Following the initial pre-identification process, social and technical assessments were carried out at the household level and were scored based on weighted vulnerability (both socio-economic and technical, as well as severity of disability and mobility or quality of life issues). This scoring phase determined which households were to be assisted, in which order, and played a role in defining the unit costs.

PROJECT IMPLEMENTATION

Both **skilled and unskilled workers from the camp population** were employed to implement the projects. The aim was to include one unskilled labourer from each beneficiary household as a means to provide a source of income. Each project was implemented by a separate team of six to ten individuals, supervised by a project coordinator. Area based teams worked in pairs, with **technical staff** focusing on technical assessments, design solutions and construction monitoring, while household assessments, outreach and monitoring were covered by **non-technical shelter officers or assistants.** Materials were delivered to each household and works were carried out by labourers at household plots.

Though the construction time was generally brief, the overall implementation required multiple visits: an initial social and technical assessment, the development of a bill of quantities (sometimes this was carried out more than once due to the movement or modification of the household structure), regular supervision of works and follow-up monitoring visits.

SOCIAL ENGAGEMENT

Detailed social and technical assessments were carried out at the household level, focusing on the needs and capacities of the household member(s) with disabilities and technical shelter conditions, as well as general household information. **Social and technical field staff worked closely with the individual with disabilities and their primary caregivers, to identify and prioritize specific upgrades** to improve mobility and quality of life. The teams continued to engage the households to ensure that upgrades would be used as intended and met the needs of both the individuals and their caregivers. Visits were done jointly with a partner organization carrying out WASH upgrades, in order to ensure complementarity of the interventions.

Commonly experienced engagement challenges included:

- Eliciting the priorities of the individual beneficiaries when their disability prevented them from communicating effectively;
- Balancing the expectations and wishes of the families with the issues related specifically to the persons with disabilities;
- Observing the shelter and plot to recognize usage patterns, in addition to listening to expressed needs;
- Time required to elicit information from persons with special needs and their caregivers;
- Dealing with requests to replace mobility items that were outside the project scope and expertise of field staff;
- In Erbil, targeted assistance led to significant pressure from households who did not meet the selection criteria.

COORDINATION

The organization closely coordinated with other actors implementing shelter and WASH activities in the targeted camps, to ensure complementarity and higher impact. At the household level, the organization focused its efforts on the plot and the shelter itself, while another organization aimed to address the WASH specific needs. **Assessment forms were harmonized, initial planning was done collaboratively, and project managers met regularly** to discuss project implementation. Technical teams jointly carried out the technical assessments during implementation, to ensure that all inputs were considered when designing the interventions for each plot. Additionally, **a multisectoral Technical Working Group was formed** to develop guidelines for accessibility and quality of life upgrades in the camp settings of Iraq. Though the final product was never completed, the working group served as a coordination and communication forum, to address some of the challenges encountered during implementation.

MAIN CHALLENGES

There are a number of guidelines at the global level for the construction of shelter in emergencies for people with disabilities[2]. Although the guidance highlights the need to tailor interventions to each individual's needs, it includes little regarding how this tailoring can be done practically, and at the same time how such projects can be scaled up, or streamlined, given the time and budget constraints often faced by humanitarian organizations in the field.

Commonly found challenges included:

- Attaching handles to soft tent or plastic sheeting walls and working with non-standard self-built shelters, expansions and plots;
- Support for people (or their caregivers) sitting down and standing up from the floor;
- Extending supports to the outdoor of the shelters;
- Improving accessibility to latrines on public pathways, in between tents in close proximity;
- Improving access points (particularly for tents) for persons with disabilities and their carers;
- Customization versus standardization;
- Redesigning solutions to adapt to new locations, when households moved;

[2] See, for instance, All Under One Roof, IFRC 2015 (http://bit.ly/2iDTTCT), and Guidelines for Creating Barrier-free Emergency Shelters, Handicap International 2009 (http://bit.ly/2iuB30o).

Works also included mobility upgrades within plots or across the camps. From left to right: Concrete pathway and railing leading from shelter to shared/communal latrine. Concrete slab improving wheelchair access. Handrails, concrete stairway and pathway around or between shelter plots.

- Rapid evolution of camps and varying and inconsistent rules for shelter upgrading;
- Households uninstalling materials and repurposing them for things other than accessibility.

MATERIALS

Materials were sourced from local vendors, through flexible framework agreements that allowed the organization to procure most items based on need. Materials were then distributed to each household according to site-specific BoQs, developed by the technical staff. While this approach allowed for rapid delivery, it also had the unintended consequence of pushing the team to work within existing material resources. This, at times, hampered creativity in identifying unique solutions to the specific needs of the individuals with disabilities.

REMARKS AND WIDER IMPACTS

In their geographical areas of implementation, **the projects were unique,** as they targeted the specific shelter-related needs for individuals with disabilities and their caregivers, through tailored upgrades. Although these interventions reached a relatively small number of households, niche projects such as this enable to fill gaps created when carrying out larger scale standardized interventions (such as the construction of plots/shelter/WASH facilities). Of course, there were other vulnerabilities, within the camps, that fell outside the scope of this project and have been addressed in following projects, by the same and other organizations.

Finally, these camp-based projects served as a basis for additional programming, which addressed these same issues for households residing out of camps.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Tailored interventions were implemented, based on comprehensive consultations, to address specific and self-identified needs of persons with disabilities and their caregivers.

+ The project addressed a significant gap in accessibility and quality of life at the household level, existing since the establishment of the camps.

+ Short-term income was provided to assisted households, and additional short-term employment opportunities to camp residents.

+ Teams were challenged to think "outside the box" and develop innovative solutions to address the specific needs of the individuals assisted.

+ The issue of Accessibility and Quality of Life upgrades was pushed to the forefront of discussions within coordination meetings and amongst shelter partners.

WEAKNESSES

- Tendency for staff to adopt standardized (rather than tailored) approaches led to inconsistent outcomes, principally due to time constraints and the feeling to be bound to the originally developed material lists.

- Fencing off household plots was a frequent request, to keep children with cognitive disabilities from wondering off and potentially endangering themselves and others, but it also potentially further isolated such persons from the community.

- The quality of work carried out by paid labourers varied greatly; supervising a large number of sites spread over numerous camps posed significant challenges for the team.

- The difficulty in finding a balance between the specific needs of individuals with disabilities and the more general needs of the household as a whole.

- Poor communication about targeting and project objectives with the camp community at large. As the project was the first in camps using targeted coverage, the communication could have been improved, in order to reduce requests for assistance by households that were not within selected groups.

LEARNINGS

- **Keep the needs of persons with special needs at the forefront** of shelter interventions, from the onset of an emergency.
- **Standardized items and materials,** available through framework agreements, **can impair the development of customized solutions** to address specific needs, which could instead use items procured outside these agreements.
- **The lack of consistent leadership in the Technical Working Group** focusing on Shelter and WASH Accessibility, led to the final intended product not coming to fruition.
- **Foster and encourage the lateral thinking and observation skills** of team members, in order to identify creative solutions for individual needs.
- **Provide additional support to staff** that are consistently interacting with individuals and households in dire conditions, including early **training on engagement with persons with special needs**.

CASE STUDY

IRAQ 2015-2016 / CONFLICT

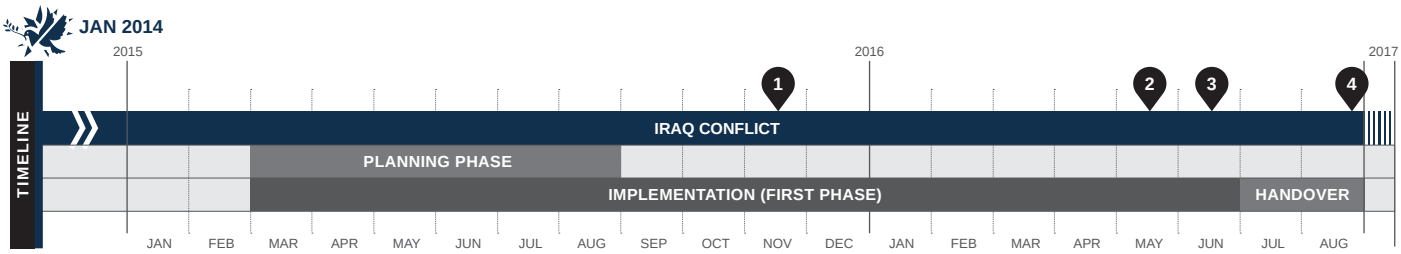
KEYWORDS: Prefab shelters, Site planning, Infrastructure, Capacity-building, Protection, Gender, Advocacy

CRISIS	**Conflict, January 2014-ongoing.**
TOTAL PEOPLE AFFECTED	**11 million** people in need. **3.1 million** IDPs. **1.2 million** returnees[1].
PROJECT LOCATIONS	**Baghdad, Dohuk, Kerbala, and Missan Governorates.**
PROJECT BENEFICIARIES	**1,252 IDP families** (8,231 individuals, 4,506 female and 3,725 male), including 145 female-headed households and 488 physically or mentally impaired individuals. **512 students.**
PROJECT OUTPUTS	**Four planned sites** with infrastructure and services. **1,406 prefabricated shelter units.** **25 university classrooms** and **128 student residential units.**

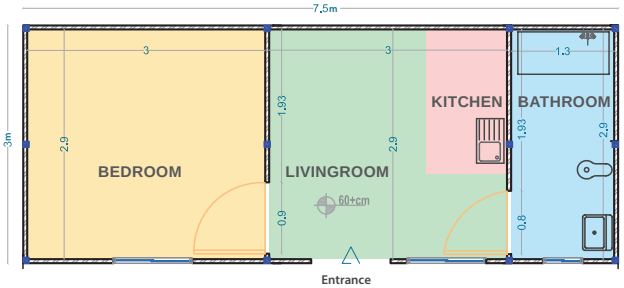
SHELTER SIZE	**22.5m²** per shelter unit.	**SHELTER DENSITY**	**3.75 m²** per person (Average household size is 6 persons).
MATERIALS COST PER HOUSEHOLD	**USD 5,500** (average) Dohuk: **USD 4,255**; Baghdad: **USD 6,505**; Missan: **USD 5,987**. All including labour.	**PROJECT COST PER HOUSEHOLD**	**USD 9,621** (including site preparation and infrastructure).

PROJECT SUMMARY

This project established four durable sites for vulnerable IDPs, equipped with 1,406 prefabricated shelter units accompanied by basic infrastructure and public facilities. It also developed institutional capacity of the targeted governorates and introduced guidelines and plans to develop and manage these sites. Additionally, the project provided temporary premises (classrooms and accommodation) for 512 students of Fallujah University.



1. Nov 2015: **Approval and handover of land by the targeted governorates.**
2. May 2016: **Completion of construction and infrastructure projects.**
3. Jun 2016: **Handover of the IDP sites to the targeted governorates.**
4. End Aug 2016: **Relocation of IDPs to the sites completed for first phase.**



Shelter layout. The prefab units included a living space with kitchen separated by the sleeping area, as well as a bathroom.

STRENGTHS

+ Close coordination with all actors.
+ Organizational expertise in site planning and construction.
+ Collaboration with other agencies to enhance basic services.
+ Contribution to reduce the emergence of informal settlements and mitigate tensions with host communities.

WEAKNESSES

- Initial costs for establishing the sites were high.
- Small percentage of the total needs in the country were covered.
- Uniformly designed prefabricated units reduced costs, but flexible designs/sizes could have better addressed households' needs.

[1] Humanitarian Response Plan 2017, Advanced Executive Summary, http://bit.ly/2iCMO24.

The project planned and built four sites equipped with durable, prefabricated, shelter units for vulnerable IDPs across the country (here, the Darkar Ajam site).

BACKGROUND

For more information on the background and shelter response in Iraq, see overview A.33.

The conflict in Iraq has had profound humanitarian consequences, with more than three million Internally Displaced Persons (IDPs), who in some cities have now exceeded their original population, putting host communities under severe pressure.

In protracted displacement situations, temporary shelter interventions can lead to the formation of informal settlements and are inadequate to protect vulnerable groups, including women and girls, from harsh weather conditions and safety concerns. These settlements increased significantly after 2003 and some became "self-ruled zones", potential incubators for extremism and radicalism.

The humanitarian crisis has deteriorated rapidly since June 2014, generating further displacement, exacerbating pre-existing vulnerabilities throughout the country, and putting existing infrastructure and services under increased pressure. More than 90% of IDPs were living outside of camps.

The Government of Iraq through its Ministry of Displacement and Migration (MoMD) has the overall objective to "create an enabling environment in Iraq to achieve longer-term shelter solutions for people affected by displacement". To achieve this objective, the national strategy focuses on addressing the following key issues: land for housing, dispute resolution, basic services, housing options, housing finance, host communities, livelihoods and governance strategy.

CORE ISSUES ADDRESSED BY THE PROJECT

Within this framework, the project aimed at offering more durable solutions to protracted displacement, enhancing protection and livelihoods opportunities, as well as considering ways to alleviate tensions with host communities and prevent further conflict. It did so by establishing four sites with prefabricated shelter units and infrastructure.

Firstly, the project considered **social and economic vulnerabilities,** as well as cultural differences. In terms of **protection aspects**, the prefabricated shelters have one living space and a bedroom, with a partition to ensure privacy for women and girls. Furthermore, all units are equipped with a lockable door, to ensure security of the residents. Each site has facilities for local police or security guards to be regularly stationed. The project also provided trainings for site managers to enhance their managerial capacity, as well as to increase awareness on gender and gender-based violence risks.

Secondly, the sites included **social facilities that are open to the host communities**, enhancing their access to basic public services – which is lacking especially in areas with a high IDP presence – and contributing to increase acceptance and mitigate tensions with IDP residents.

Finally, the project aimed at **providing livelihoods opportunities to the residents**, as well as temporary **educational facilities** and accommodation for students.

LOCATIONS AND BENEFICIARY SELECTION

Locations were selected through **extensive consultations with the governorate counterparts.** The organization identified a number of sites that could be allocated, which were away from the conflict zones and at the same time close enough to the major cities (so that basic services could be extended), and conducted technical surveys to assess the geophysical conditions of the sites.

The organization then provided technical support to the targeted governorates to **develop beneficiary selection criteria,** taking into consideration the vulnerability, socio-economic background and gender sensitivity – for example prioritizing female-headed households and individuals with physical or mental impairments. **Special consideration was also given to displaced families living in unfinished buildings, public buildings** such as schools and mosques, **in tents** out-of-camp and **in rental accommodation** (at risk of eviction). These were considered to be in worse living conditions, with less access to social and public services, and the local authorities needed to make public buildings (particularly schools) available to serve local populations, including newly arrived IDPs.

PROJECT IMPLEMENTATION

The organization first consulted with the targeted governorates and the MoDM to identify their needs and plan the responses appropriately. **Steering Committees and working groups** consisting of governorate officials, the organization's staff and implementing partners, were then established to consult key stakeholders, monitor the progress of activities, identify risks and highlight learnings and good practices. The organization developed the site plans, which included basic infrastructure such as roads and electricity networks, as well as public facilities such as health clinics, women's centres and open spaces. **Official agreements** were made with the governorates and Fallujah University that they would be responsible for operating and maintaining the sites, to secure local ownership and sustainability. Based on the site plans and on research of local market prices, **the organization developed BoQs and provided overall coordination, as well as technical supervision,** of the activities carried out by the implementing partners (NGOs and contractors), for quality assurance.

INVOLVEMENT OF AFFECTED PEOPLE

IDPs and host community members were actively engaged in the project, as labourers for the construction activities. This contributed both to improve their livelihoods and gain support and understanding from the local communities. Local committees composed of representatives from the IDP families were then created in the established sites, to assist with management duties.

COORDINATION

The steering committees were key in identifying challenges and discussing preventive or corrective measures. One committee, for instance, foresaw the risk of delay in the construction, due to snow and wet ground conditions in winter. The committee recommended to increase the work force to make maximum use of the limited time, and increased the frequency of monitoring. These measures enabled the project team to catch up on the progress despite the difficult weather conditions, and resulted in the timely delivery of the project. Secondly, coordination with relevant cluster members allowed the joint development of beneficiary selection criteria, prioritizing the most vulnerable. Finally, collaboration with specific agencies was essential, on one hand, to operate and maintain the reproductive health clinics and women's centres and, on the other, to establish a primary school in one of the sites.

DISASTER RISK REDUCTION COMPONENTS

In order to minimize the risks posed by hazards such as flooding, land-sinking and fire, **extensive technical surveys** were conducted to assess geo-physical conditions of the proposed sites. For instance, one of the surveys identified that one site had been used as agricultural land and, therefore, the soil was soft and muddy, which could result in cracks in the dry season and land-sinking in the rainy season. To address this hazard, the top layer was removed and the ground was compacted.

MATERIALS

After a competitive bidding and selection process, the **materials for the prefabricated units were procured from the local markets** (though originally imported from neighbouring countries). Once the site preparation and basic infrastructure were ready, the implementing partners transported the materials to the site, where small workshops were established to assemble the units. This partially avoided the potentially negative impacts of using imported prefabricated solutions.

MAIN CHALLENGES AND COUNTERMEASURES

Security concerns have been the major challenge faced during implementation. For example, security concerns were raised after one site had been assessed and approved, after lengthy discussions. The project team tried to negotiate with the local authority, but at the end had to identify another site and delay the project. Furthermore, there were several occasions where **construction materials were confiscated** by the militias, and the organization had to liaise with local authorities and the Iraqi Security Force to have the materials released. This caused slight delays, although they were covered by speeding up the construction works.

The project was also able to adapt in its second implementation phase (ongoing at the time of writing), thanks to lessons learned from its first phase. Although the design was agreed within the Cluster and with the local authorities (based on the average household size of six), **due to cultural reasons some families complained about the size of the shelter units.** This led the organization to adopt a different design (with larger space) in the most recent site, where the family size is even higher. Secondly, the use of **buried electrical cables was changed to hanging cables** – which are easier and quicker to maintain – based on reactions from the local authorities. Finally, the **floors of the living space were initially damaged** due to washing inside the units, and floors were not waterproof, except in the bathrooms. In the following phase, this challenge was addressed by producing clear instructions that were printed and distributed to the families.

WIDER IMPACTS OF THE PROJECT

The overall project approach was **praised by the governorates and became a model** to address complex and prolonged challenges faced by IDPs in Iraq. Moreover, the construction of temporary educational premises contributed to support displaced youth who bear enormous human, social and economic costs, by enabling them to proceed with their education. While not envisaged in the original project plan, the university facilities were later added, due to the request from the Governor of Anbar. Lack of access to education, basic social services, economic opportunities, grievance over injustices, and a generalized distrust in the capacity of the state to account for its citizens, fuel a cycle of poverty, hopelessness and frustration that can lead to radicalization. While there is no evidence that this is the case, **it is hoped that the facilities will help the affected youth to resume their education** and maintain their positive attitude.

Finally, global trends show that, with protracted displacement, unplanned sites can turn into urban slums, further exacerbating social and environmental challenges that already exist within the host community (in conflict-affected areas). Establishing planned sites that can function as a neighbourhood, equipped with basic social and public infrastructure, services and durable shelter, **contributed to prevent the irregular expansion of informal settlements**. Additionally, while in some cases planned IDP sites are poorly located and do not consider livelihood opportunities, this project prioritized the **proximity to the existing urban areas, and encouraged livelihood interventions** carried out by specialized actors.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

The new sites and the shelters represented a significant improvement in terms of security, privacy and dignity for the selected households. However, the project targeted a very small fraction of the affected population in Iraq.

STRENGTHS

+ Close coordination with governorate counterparts and implementing partners, and creation of steering committees to discuss challenges and mitigation measures.

+ Organizational expertise in site planning and construction.

+ Collaboration with other agencies to enhance basic services, such as health and education, strengthening the sustainability of the project.

+ Contribution to **reduce the emergence of informal settlements** and also to **mitigate tensions** between IDPs and host communities, reducing risks of future conflicts.

WEAKNESSES

While more economical in the mid- and long-term, **initial costs for establishing these sites with prefabricated shelter units were higher** than providing other emergency shelter solutions, making the number of beneficiaries relatively small compared to the scale of the crisis in Iraq.

The project had to **find the right balance between scale and quality** in the mid-term. To achieve this balance, it applied minimum standards of living for the units, to minimize the cost, thereby maximizing the number of beneficiaries. Ultimately, the project directly benefitted approximately 8,200 vulnerable IDPs, which is a **very small percentage of the needs** (with over 3 million IDPs in the country).

IDP families before (bottom) and after (top) the shelter intervention.

MATERIALS LIST FOR ONE SHELTER UNIT	
Component	Items
Main steel structure	Base frame (10cm x 10cm 3mm), Hollow steel tube columns, Roof frame, Rectangular hollow tubes, Steel plate, Steel angle
Walls and Partitions	External and internal wall coverings: PU insulated sandwich panel upper layer
Flooring	Floor covering, Plywood sheets, Fibre-glass sheet for bathroom floor
Roof and ceiling	PU insulated sandwich panel upper layer Canopy top: galvanized steel sheet
Windows (3 pcs)	Frame, Wing, Handle
Doors (3 pcs)	Frame, Wing, Handle and lock
Sanitary works	Toilet with water outlet, Shower base and mixer, Hand wash basin and mixer, Stainless steel kitchen sink, Mirror
Electrical installation	Distribution board, cables, wires, lighting and water heaters

LEARNINGS

- **Consultation and agreement** with governorate counterparts and other humanitarian actors **are crucial to ensure the sustainability of the project**. This is true especially on roles and responsibilities for operating and maintaining the IDP sites, after the completion and handover to the governorates, including camp management and delivery of basic services.
- While uniformly designed, prefabricated, shelter units contributed to reduce the project cost, **adaptable, culture- and context-sensitive designs may have helped to better address the needs** of the IDPs.
- In two sites, the organization faced difficulties due to security issues, as well as some grievances of farmers in the area, after the site selection and official handover from the government. **Additional and rigorous verification efforts** through different concerned departments should be carried out **to confirm the suitability of the assigned land.**

OVERVIEW

YEMEN 2015-2016 / CONFLICT

CRISIS	**Yemen conflict March 2015-onwards.**
PEOPLE AFFECTED	**18.8 million** people with humanitarian needs, as of September 2016[1]. **4.5 million** people with shelter or NFI needs. **2 million** IDPs.
RESPONSE OUTPUTS[2] (2015-2016)	**81,953 households** (Shelter assistance). **211,199 households** (NFIs).

SUMMARY OF THE RESPONSE

Working in an extremely insecure environment, with international and national armed actors and enormous needs, the shelter response in Yemen struggled under enormous access and funding constraints. Programmes primarily provided non-food items and emergency shelter materials. At a smaller scale, shelter programmes rehabilitated collective centres and provided conditional cash transfers for rental assistance or non-food items.

1. 19-26 Mar 2015: **Suicide bombings target two mosques in Sana'a. Houthi/Saleh forces advance south. Saudi-led military coalition begins air strikes. Fighting and air strikes escalate quickly across the country.**
2. 12 May 2015: **Five-day humanitarian pause begins. Frequent violations are reported.**
3. 1 Jul 2015: **UN designates Yemen a "Level-three" emergency.**
4. 10 Nov 2015: **Two consecutive cyclones batter the southern coast and Socotra Island.**
5. 15 Dec 2015: **Ceasefire comes into force during peace talks. Frequent ceasefire violations are reported. Ceasefire ends in early January.**
6. 10 Apr 2016: **A renewed cessation of hostilities comes into force.**
7. May and Aug 2016: **Heavy rains in May and August cause flooding in seven governorates.**
8. 6 Aug 2016: **Peace talks in Kuwait adjourn without agreement. Clashes and air strikes intensify immediately afterwards.**
9. 6 Oct 2016: **The Ministry of Health announces a cholera outbreak.**

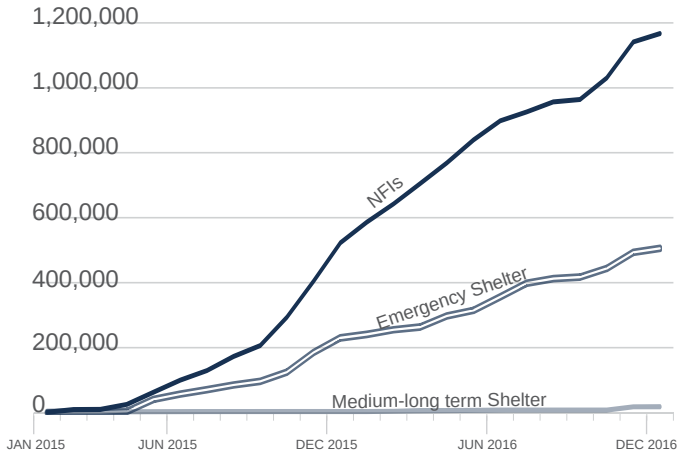
BACKGROUND TO THE CRISIS

Yemen is dry, with very low rainfall. It is very hot in the summer and cold in the winter, particularly at night. It has a conservative society and a population of 26 million people.

Even before the conflict escalated, the country faced enormous levels of humanitarian need (15.9 million people in late 2014). These needs stemmed from years of poverty, under-development, environmental decline, intermittent conflict and widespread violations of human rights.

In March 2015, **the conflict in Yemen developed from intermittent clashes, to a full-fledged military conflict,** involving several foreign countries. Access to food, clean water, fuel and medical supplies became increasingly difficult throughout the country, and many families remained trapped in their places of origin, struggling to access basic services.

As the conflict dragged on, economic conditions deteriorated, worsening the humanitarian situation. The commercial sector was unable to easily import and export goods, as the air and sea space was controlled by conflicting parties.



Cumulative number of people reached per intervention type in Yemen in 2015-2016[2]. Emergency shelter included provision of tents, emergency shelter kits or individual items (including cash/voucher for these items), and cash for rent.

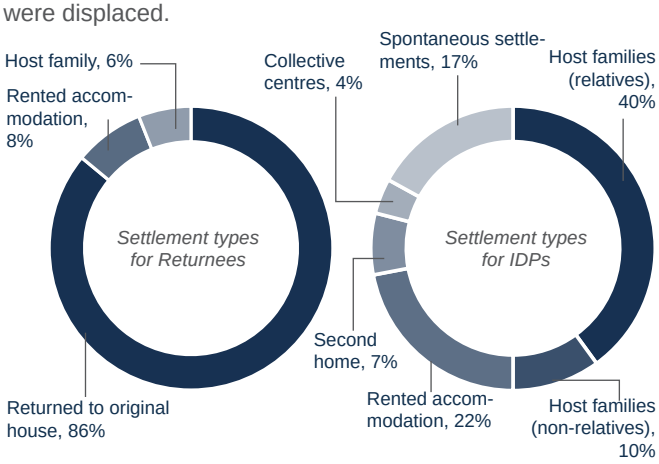
[1] Yemen Humanitarian Needs overview 2017, http://bit.ly/2jzVbjB.
[2] Data reported to the Global Shelter Cluster, as of 31 Dec 2016.

DISPLACEMENT

Damage to houses and fear caused by airstrikes and combat, often in residential areas, led thousands of families to flee their houses. Displaced people were mainly hosted by relatives, often in crowded conditions. Some families hosted up to seven households. Displaced people were also living in collective centres, mainly schools and health facilities, or in open air spaces, or makeshift shelters, in dispersed self-settled sites.

The government did not allow formal camps to be established, and access to many areas for humanitarian workers was severely restricted throughout the conflict.

By the end of 2016, more than 4.5 million people required assistance with shelter, non-food items (NFIs), or management of collective centres in which they were living. Of these people, 3.9 million were in areas of acute need, and over 2 million were displaced.



CHALLENGES DURING THE CRISIS

LACK OF FUEL. With the entire country's oil production at a complete halt due to the conflict, Yemen witnessed a severe shortage of fuel in the markets. Prices skyrocketed from USD 0.7 per litre, to nearly USD 7 in some areas. The black market in fuel thrived, making it extremely difficult to locate transporters; who, if located, asked for extremely high prices.

BLOCKADES. Unavailability of items in the local markets, due to imposed blockades, represented a major procurement challenge for implementing organizations. Supply options meant that international procurement was often required, with careful routing of supplies to ensure that they could arrive in Yemen.

SECURITY AND ACCESSIBILITY CHALLENGES. Due to ongoing security incidents, including assassinations and bombings near agency offices, staff were often advised not to report to work. In order to overcome this challenge, the teams often worked from home and in the field, whenever the situation warranted it. Since many roads leading to target areas of assistance were either blocked, or witnessed clashes, longer routes to reach target areas were often used. The challenges in accessing areas also made it harder to effectively monitor interventions.

NATIONAL SHELTER STRATEGY

The Shelter-NFI Cluster was merged with CCCM. Its response strategy prioritized the delivery of assistance to all affected populations, including provision of cash assistance as a rental subsidy. Rehabilitation of a limited number of damaged houses, construction of transitional shelters and rehabilitation of collective centres, were also considered in the strategy.

Though the majority of the displaced population in Yemen has found shelter in host settings or rented accommodation, there were also a high number of spontaneous displacement sites. Here, about 200 families, displaced from Sa'ada by fighting, live in a site in Khamer, Amran Governorate.

The Shelter/CCCM/NFI Cluster was only 36% funded in 2016. As of December 2016, the Cluster had reached 81,953 households with shelter assistance since the start of the conflict, and 211,199 households with NFIs. The Cluster had 40 active members, including UN, INGOs, local civil society partners, and government authorities (including the IDPs Executive Unit). A key advantage of the Cluster in Yemen has been its robust linkage with national NGOs, which ensured effective coverage, capacity and better access nationwide.

MAJOR CHALLENGES IN THE RESPONSE

Given the context, there were several challenges encountered. Areas for particular engagement in shelter were:

- Insufficient funding.
- Finding alternative shelter solutions for IDPs currently living in schools (or other public buildings) and facing high pressure from the host community to vacate the premises. If the set-up of camps continued to be excluded, the question would remain as to where people could be moved to, the potential establishment of transitional shelters, and how the displaced population could integrate in the host community.

LOOKING FORWARD

The Shelter/NFI/CCCM Cluster strategy for 2017-2018 envisioned a comprehensive response package, tailored to each governorate, targeting the most vulnerable families, working with other clusters, and with protection mainstreaming as its core.

As the conflict continued in early 2017, additional challenges such as depleted savings and lack of access to financial resources, and/or saturation of available housing capacity, meant that all viable alternative shelter options needed to be pursued. CCCM approaches had to be developed, working with affected populations, and emergency relief items had to be prepositioned. The use of cash and vouchers, and working through multifunctional mobile teams in areas requiring such approaches, also needed to be considered.

To face the large influx of returnees to areas that were destroyed, assistance should include emergency support on return, as well as fuller support for housing rehabilitation. There also had to be increased focus on capacity-building of national stakeholders, to support shelter design and programming and camp management approaches, based on a strong understanding of local needs.

CASE STUDY

CHILE 2014-2016 / FIRE

KEYWORDS: Housing reconstruction, Subsidies, Self-recovery, Urban

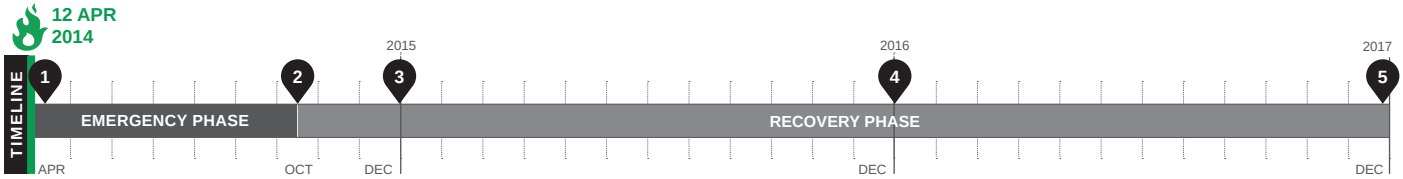
CRISIS	**Valparaiso fire, Chile, 12 April 2014.**
TOTAL HOUSES DAMAGED	More than **3,309** destroyed (ONEMI, April 2014).
TOTAL PEOPLE AFFECTED	**12,500** people (ibid.).
PROJECT LOCATIONS	**Various locations across the city.** The affected areas were the hills in the south, particularly the ravines known as "Quebradas".
BENEFICIARIES	**Emergency: 2,000** households (planned). **Reconstruction: 3,870** households (Target: 4,912).
PROJECT OUTPUTS (As of Dec 2016)	**2,000 Emergency shelters (planned[1]).** **1,588 Reconstruction subsidies** (target: 2,977). **1,914 Self-reconstruction projects.**
SHELTER SIZE	**Emergency shelters: 18m²** **Reconstruction: more than 45m²** (Minimum requirement to apply for the subsidies).
SHELTER DENSITY	**Emergency shelters: 5.3m² per person** (based on average family size of 3.4). **Reconstruction: min. 13.2m² per person** (permanent houses).
PROJECT COST PER HOUSEHOLD	Approx. **USD 40,000** (weighted average of the four subsidies described in this case study).

Map highlighting the area affected by the fire and the density of the dwellings, from high (red) to low (yellow). Source: Salinas-Silva 2015.

PROJECT SUMMARY

This government-led programme provided four types of reconstruction subsidies to over 3,800 families affected by the fire in the steep hills of Valparaiso, Chile. The majority of the subsidies were provided through an assisted self-reconstruction scheme, whereby the funds would be disbursed along with technical assistance by architects or engineers in coordination with local NGOs, and the families would take care of rebuilding themselves.

[1] ONEMI, April 2014, http://bit.ly/2lXbLYa.



1 17 Apr 2014: **Government agency announces the construction of 2,000 emergency shelters for the families affected by the fire.**

2 Oct 2014: **Government launches revised reconstruction plan including self-reconstruction subsidies.**

3 Dec 2014: **1,095 reconstruction subsidies granted (302 paid) 347 self-construction subsidies granted (25 paid).**

4 Dec 2015: **1,948 reconstruction subsidies granted (835 paid) 1,420 self-construction subsidies granted (382 paid).**

5 Dec 2016: **2,829 reconstruction subsidies granted (1,588 paid) 1,914 self-construction subsidies granted (961 paid).**

STRENGTHS

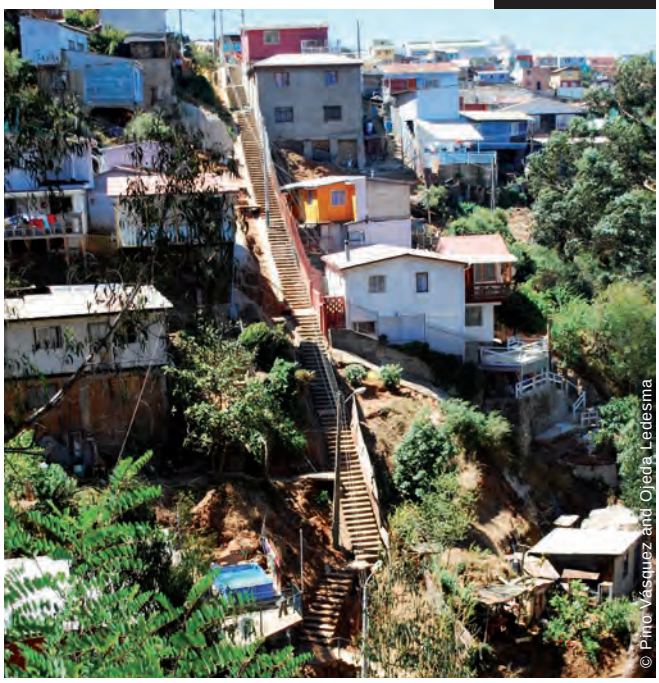
+ Large-scale programme to support safer self-construction.
+ Combined action of government subsidies and NGOs.
+ The subsidies took into account people's needs.
+ The initial plan was adapted in response to the requests of the affected people.

WEAKNESSES

- The initial response did not consider affected people's preference.
- Many families did not receive any subsidies due to land tenure issues, side-lining the most vulnerable.

The fire on 12 April 2014 affected the hills in Valparaiso, where most of the people settled in informal land, in very dense environments, close to the forest.

The "Quebradas" are the ravines overlooking the city of Valparaiso, famous for their colourful houses of great aesthetic value, but also site of many hazards.



Access to the ravines is extremely challenging, and the density is very high, as families build on informal plots and tend to expand their dwellings over time.

SITUATION BEFORE THE FIRE

Valparaiso is a coastal city of about 250,000 inhabitants, famous for its colourful housing stretching across densely populated hills of great aesthetic and cultural value. The hills are also the source of vulnerability to hazards, as a significant part of the city is built informally on the 39 so-called *Quebradas* (ravines). These form a historic informal area with many land seizures, which concentrate the highest rates of poverty and unemployment in the country. The *Quebradas* have little or no connection to urban infrastructure and vehicle accessibility is generally difficult, as access is mainly provided by steep stairways up and down the hills. **The hazards in these locations** include not only fires, but also landslides and slope failures, flooding in the lower areas, as well as the ever-present earthquake and tsunami risks along the Chilean coast.

According to a survey before the fire, the inhabitants feel that "inefficient policies" of the government have failed to meet the housing demand. Many current inhabitants of the *Quebradas* moved to this location as consequence of previous earthquakes destroying their homes (in 1906, 1965, or 1985). According to interviews, especially poor communities felt they did not receive enough assistance from the government for rebuilding or repairing their houses in the city centre after these disasters, hence moving to the ravines to build their own neighbourhoods, mainly by occupying unclaimed land. In the urban area, near the port, this would not have been possible.

Moreover, the government may have added to the desire of locals to remain on these sites, as staying in an illegally appropriated site is key to its subsequent legalization. A decree states that to legalize an occupied site one must be able to prove a presence on this site (in the form of a home) for more than five years, and the site also needs to be approved by the government. However, the sites on the ravines are often not legalized after these five years, due to the precarious and high-risk locations (steep slopes or proximity to the forest). Moreover, up to the legalization, people live in constant fear of eviction and they do not trust government agencies, even in the context of post-disaster reconstruction.

Self-construction in Valparaiso has happened for generations and many residents work in the construction industry, developing intuitive construction knowledge, including of structural risks and possible mitigation measures. It is estimated that approximately 80% of the housing stock in the city is self-built[2].

SITUATION AFTER THE FIRE

On 12 April 2014, a forest fire quickly spread into the urban settlements and destroyed over 3,000 homes, consuming 2,500 acres of land[3]. The fire, which was the largest urban fire in the history of Chile, also killed 15, injured 500 and left 12,500 people without a home[4].

The fire affected especially the poorest areas, as they were informally constructed without any urban planning, leading to a high density of structures, proximity to the forests, and poor accessibility. During the emergency, fire-trucks could not reach the affected areas, worsening the situation further. The density of construction, mainly due to extended families building large complexes on the same plot of land to live in close proximity, contributed significantly to the fire spreading faster and more devastatingly. **Some neighbourhoods were hence burnt down completely.**

Despite being at risk of future catastrophes in the current locations, most residents of the ravines affected by the fire started to self-rebuild almost the next day. **Inhabitants of the ravines returned to their homes within hours** of the fire being under control, to salvage any material goods and clean up their land, worried about losing their land and unwilling to resettle outside of the city (as intended in the initial government plan).

INITIAL GOVERNMENT PLAN AND LOCAL REACTION

After the fire, the initial government plan was to clear everything and to rebuild the ravines in a "more orderly manner"[5]. The government also proposed to relocate citizens to safer sites, including social housing estates built outside the centre[6].

[2] Pino Vásquez and Ojeda Ledesma, 2015, http://bit.ly/2lthcAe.
[3] IFRC, 2014, http://bit.ly/2ltg7bI.
[4] Salinas-Silva, 2015, The "great fire" of Valparaiso 2014.
[5] Vergara, 2014, http://bit.ly/2kJ92zI.
[6] Social housing had been built prior to the fire but in part it was also being built in response to it.

Houses were often built in clusters by families in the ravines of Valparaiso. These typical "Kinship-based Residential Complexes" were heavily affected by the fire, but people started rebuilding almost the next day. From left to right: January 2010; February 2012; April 2014, just after the fire; and October 2014, only six months later.

Moreover, the Ministry of Housing and Urbanism (MINVU), **developed specific subsidies** to address the scale of the disaster, but also the particular situation of illegal settlements in the ravines. However, before the legal framework of the new subsidies was established, **the people had already started rebuilding.** The government agency in charge of emergency shelter provided 6m by 3m units that were erected on new sites and in the *Quebradas* in "safe zones" determined by the government. The shelters were deemed of bad quality by the local population, further accelerating the drive to self-reconstruction.

Within six months the ravines were nearly completely rebuilt by the local population, much faster than public management and the vision of the planners. Notably, self-reconstruction in Valparaiso **was heavily driven by women,** who traditionally lead the household in the *Quebradas*, are very attached to their homes and try to keep the extended family close together. For this rapid recovery, locals used recovered building materials, but also improved the quality of their homes, partially due to the availability of government grants for self-construction.

ADAPTATIONS TO THE PLAN

The initial response plan by the government (relocation and emergency shelters) was heavily criticized by the local population, which resulted in the subsidies being adapted in order to be more efficient and useful for the needs of self-builders. This happened in approximately six months from the fire, thanks to demonstrations and the support of local NGOs, who consulted the residents and advocated with the government to propose alternative solutions.

MINVU's revised plan in October 2014 (with a timeframe until 2021) was to invest about USD 510 million in the reconstruction of Valparaiso's affected neighbourhood[7]. This included investment in a road around the city, as well as access roads to and in-between the *Quebradas*, and a geotechnical study of the slope stability of the affected areas.

[7] MINVU, 2016. Visit http://bit.ly/2l5vFlt.

RECONSTRUCTION SUBSIDIES

Four separate types of subsidies for reconstruction were given to house the affected population, with the precondition that the new house be in a low risk zone (chosen by MINVU).

1) The first subsidy applied to families renting a property, as well as families living on their own site. It involved buying a new house with a value of 900 UF[8] or an existing house with a value of 700 UF in a new location.

2) The second subsidy was for reconstruction of pre-designed houses in a new location by external contractors. No completed construction was reported by the end of 2016.

3) Subsidies for reconstruction in the same location were also available. The payment could be done before or after construction, but in the second case a contractor must have been hired for construction. This subsidy could be used to build a house according to designs proposed by MINVU, or own designs with assistance by an architect, often from a local NGO. The house could be an individual house or a group of houses for densification of a site owned by other family members. The subsidy covered 1,050 UF broken down as follows: 600 UF for construction costs, 300 UF for mitigation measures (e.g. seismic improvements), including the structure and ground, 80 UF for site preparation and any demolition work required, and 70 UF for technical assistance by architects. Additional funding was available for site densification (150 UF) as well as for mobility-impaired residents. About a half of the construction was finalized for this type of subsidies by the end of 2016, with the remaining projects mainly in the process of construction.

4) The fourth type was a subsidy for assisted self-construction (ACA). This offered about the same total financial aid as the previous one, with an average of 1,090 UF assigned per family[9]. From the fire up to the end of 2016, a total of 5,090 self-construction programmes were financed in Valparaiso by MINVU, of which 1,914 were reconstruction projects, corresponding to 39% of all reconstruction projects.

[8] The Unidad de Fomento (UF) is a unit of account used in Chile and created in 1967. The exchange rate between the UF and the Chilean peso is constantly adjusted for inflation. In 2016, 1 UF was approximately USD 40.
[9] MINVU and CEHU, 2016.

* MINVU, 2017, http://bit.ly/2lhe48v. // ** MINVU and CEHU 2016.

TYPES OF SUBSIDIES FOR RECONSTRUCTION

	SUBSIDY	VALUE (USD)	TARGET (FAMILIES)	PROGRESS TO DATE	SITUATION AS OF JANUARY 2017*		
					FINALIZED	ONGOING	NOT INITIATED
1	BUYING A HOUSE IN NEW LOCATION	~35,000 / 27,000	994	98.2%	976	18	0
2	RECONSTRUCTION IN NEW PLOT	~41,000	761	0%	0	684	77
3	RECONSTRUCTION ON ORIGINAL PLOT	~41,000	1,222	50.1%	612	539	37 + 34
4	SELF-CONSTRUCTION**	~42,500	1,914	50.2%	961	NA	NA

Architects and local NGOs helped affected people rebuild their damaged houses, thanks to the "assisted self-construction" subsidies provided by the government.

SELF-RECONSTRUCTION SUBSIDY AND THE ROLE OF LOCAL NGOS

Conversations with residents suggested that **many people did not like the government-designed solutions**, as the houses were too small, built with a poor choice of materials (steel profiles + PVC), and all adopted the same design. In Valparaiso, family identity is strongly associated to diversity in style of the house, and people have a strong feeling for location and aesthetics of their homes, hence preferring staying in unsafe sites than moving to often smaller social housing or locations outside their communities.

The ACA subsidy provided the resources to design and build a house, as long as the beneficiary owned or had some rights over the land. This could **also include densification of a site**, in which other family members lived, which was particularly relevant in the ravines of Valparaiso.

A local NGO was very active in informing the population about the possibility to self-rebuild and assisting in the process using the ACA subsidy. The NGO believed that self-reconstruction was the best way for the local community to get involved in shaping housing that responded to the needs of each individual family.

The role of local NGOs in sharing the information about the ACA and the other types of subsidies was essential, as many residents were not aware of the different options available and had a general distrust in the government, mainly due to past initiatives that failed to assist them.

In coordination with local NGOs, **architects (paid through the ACA subsidy) provided technical advice to the families**, teaching them how to build their own houses, which were designed based on their needs and proposals. This ensured a safe design of the house, as well as a more lasting impact, as families often expand their houses with time. Several NGOs worked on rebuilding sustainable wood and earth structures, based on traditional construction concepts in Chile.

THE CASE OF MINGAVALPO

A group of local architects and volunteers joined after the fire to provide a model of self-reconstruction using local and recycled materials, based on sustainability principles and a community workshop approach (*Minga*, a Chilean tradition of community self-help). The structures are built with a timber structure, walls are made of reused pallets, filled with straw mixed with mud and in some cases eco-bricks (plastic bottles filled with compacted plastic bags), finished with a mud and straw render. The result is a well-insulated house with a very low carbon footprint, for a cost of approximately USD 39,000 excluding labour, which was provided by volunteers.

Franco, 2014, http://bit.ly/2lXsKd3; Visit http://www.mingavalpo.cl/.

The statistics do not paint a full picture of the number of self-rebuilders and also crucially ignore the geographical and social component of subsidy allocation. However, it can be said that assisted **self-reconstruction is particularly popular in Valparaiso**, especially compared to the much lower number of such subsidies after other disasters, both in Valparaiso and in other Chilean cities. Similar ACA funds existed after the 2010 earthquake, but much lower numbers of these were applied for and allocated. Additionally, the subsidies were heavily improved after the 2014 fire, due to the fact that Valparaiso represents a special case in Chile, with such a high number of self-built houses.

LAND TENURE ISSUES

Land tenure issues proved to be crucial in the context of this response, as it is often the case in similar post-disaster scenarios[10]. Given that access to the subsidy was conditional to a proof of land ownership, many households were not assisted. Several disputes over land ownership arose, but no large scale solution was found. Most of the families who knew they could not apply to the subsidy started rebuilding very quickly, replicating the same vulnerabilities that existed prior to the fire, e.g. high density, proximity to the forest and poor accessibility.

In January 2017, a new fire in the same areas affected again those who were in these hazardous situation. Although the municipality started to work towards an improvement of the land tenure situation in Valparaiso, **this example shows how the cycle of vulnerability was not broken**, even though best efforts were taken to consider the needs of the local population through the ACA subsidies.

[10] See for instance the overview A.39 of the Ecuador Earthquake in 2016.

Local groups of architects organized building workshops to rebuild some of the houses affected by the fire on the Quebradas.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

Many houses were rebuilt thanks to the subsidies, with the help of local architects. In some cases, houses were built during community self-build workshop, experimenting with low-cost materials.

The damage caused by fires in the ravines of Valparaiso is often extensive. Entire neighbourhoods were burnt down by the fire in April 2014. The same areas were again affected by a fire in January 2017.

STRENGTHS

+ As of late 2016, **almost 2,000 houses had been rebuilt by their owners with the guidance of architects,** having improved construction quality, materials and size. Before the fire of 2014, the houses built in the ravines were precarious, constructed mostly with recovered materials from shelters and emergency housing.

+ The combined action of government subsidies and NGOs that tried to promote the use of these subsidies to help people rebuild, engaging them in the design and teaching them how to build safer.

+ The subsidies took into account people's needs and for instance allowed for the option of densifying a site to ensure families could live together and self-built houses could evolve with need and occupancy.

+ The initial plan was adapted to take into consideration the needs and requests from the affected population.

WEAKNESSES

+ The initial response did not account for affected people's preference in terms of designs or location.

+ Many families did not receive any subsidies as they decided to remain and self-rebuild in informal locations, without ownership and in high-risk zones. The risk of fires spreading across the ravines hence remained, as many structures were rebuilt close to the forest. The fire in January 2017 proved that **the most vulnerable remained so,** even after this large-scale response.

LEARNINGS

- **Affected people are the first responders, and will start rebuilding as soon as possible.** This response showed how recognizing this and supporting self-recovery as quickly as possible can have a significant impact in the success of the reconstruction and longer-term resilience of affected people.
- **Relocation is seldom the solution.** People settle in specific locations due to a variety of reasons, and as proved in this case they rarely want to relocate to far-away areas, distant from their social ties and livelihood opportunities, or to move into standardized housing blocks which did not cater for their needs and aspirations. **Locally sensitive, tailored solutions proved to be more effective** and accepted by the residents of the affected areas.

OVERVIEW

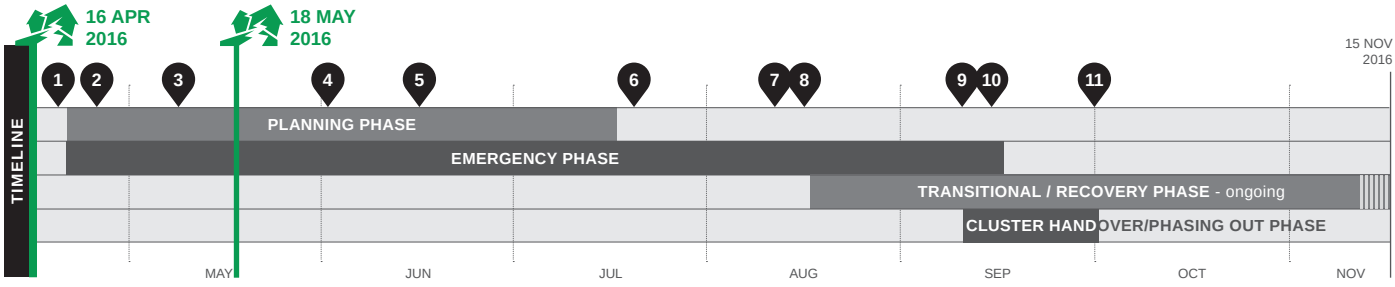
ECUADOR 2016 / EARTHQUAKE

CRISIS	**Ecuador Earthquake, 16 April 2016** More than 2,000 aftershocks were felt in the 6 months after the earthquake. 9 of these were equal to / greater than 6 on the Richter scale, adding to the initial damage.
RESPONSE LOCATIONS	**Primarily the Provinces of Manabí and Esmeraldas** (total of eight affected provinces).
TOTAL HOUSES DAMAGED	**45,455** houses categorized as insecure or of restricted use (Government figures as of Dec 2016).
TOTAL PEOPLE AFFECTED	**386,985** people (as per the Government Register).
BENEFICIARIES OF THE RESPONSE	**151,699** people (38,045 families).
RESPONSE OUTPUTS As of December 2016	**45,464** households reached with NFIs / kits. **14,581** households reached with tarpaulins. **1,186** tents. **12,178** households trained. **1,453** houses repaired. **2,962** t-shelters built. **505** households receiving construction materials.

The earthquake affected primarily the two north-western coastal provinces of Manabí and Esmeraldas, with its epicentre near the town of Muisne.

SUMMARY OF THE RESPONSE

On 16 April 2016, a 7.8 magnitude earthquake struck the coastal areas of north-west Ecuador, impacting eight different provinces across the country and damaging or destroying over 45,000 houses. The response was led by the government and consisted of an emergency subsidy package followed by a reconstruction plan for the longer term. The international community assisted primarily in the emergency and transitional phases in rural areas and with advocacy and capacity-building activities.



1. 20 Apr 2016: **Shelter Cluster activated.**
2. 28 Apr 2016: **Establishment of Technical Working Group.**
3. 4 May 2016: **Draft shelter sector strategy document agreed.**
4. 30 May 2016: **Temporary shelter options submitted to government.**
5. 13 Jun 2016: **Position paper submitted to government** (MIDUVI).
6. 20 Jul 2016: **Updated shelter options presented to government.**
7. 11 Aug 2016: **Finalisation of agreed key messages.**
8. 15 Aug 2016: **Request from government** (MICS) **for implementation of transitional shelter solutions.**
9. 9 Sep 2016: **Workshop on lessons learned.**
10. 12 Sep 2016: **First Training of Trainers in use of key messages.**
11. 28 Sep 2016: **Official cluster handover.**

Families affected by the earthquake set up emergency shelters (Chamanga).

The urban area of Portoviejo was particularly affected by the earthquake. Here is an image of the centre, soon after the first earthquake in April 2016.

The initial response of the government was to set up 28 camps across the affected areas. About a year after the earthquake, many of these were still open.

CONTEXT

Ecuador is an upper-middle income country in Latin America, with a population of around 14.5 million people. It is a country that is resource rich, but also highly vulnerable to natural hazards. Around 96% of the population live in coastal and mountainous areas that are exposed to earthquakes, volcanic activity, floods, landslides and El Niño hazards including drought.

In the early to mid-2000s, the economy in Ecuador enjoyed a high growth, due in large part to its petroleum resources and strong global oil markets. Although there was rapid growth and progress in health, education and housing, it did not always ensure high standards. Income during this time also remained unequal and levels of poverty high in some provinces. In 2015 and 2016, the collapse of oil prices contributed to push the economy back into recession, further exacerbating disparities for vulnerable populations and increasing general pressure on society.

SITUATION BEFORE THE DISASTER

Prior to the earthquake, there were a number of pre-existing vulnerabilities in the country. The hardest hit provinces of Manabí and Esmeraldas had levels of poverty about 30% and 40% respectively. Both provinces were over 40% rural. Almost half of the homes lacked access to public water networks and only a third had access to a sewerage system. The livelihoods of many people in the affected coastal areas depended on fisheries, aquaculture and tourism.

In urban areas, poor land use planning in many towns had resulted in an increase of inadequate and informal settlements. A high proportion of the population across rural and urban areas had no access to recognized land titles. Substandard and unsafe building practices and regulations were in evidence across a number of different building typologies, from lightweight to masonry construction.

SITUATION AFTER THE DISASTER

The above vulnerabilities played a significant part in the high impact of the earthquake. Post disaster, an estimated 60% of the affected people found themselves without adequate housing and/or sanitation and little knowledge of how to access support. In some communities, up to 80% of the local housing stock was lost. Many people were forced to find alternative housing solutions away from their home, affecting critical socio-economic networks and support systems. In the first weeks following the earthquake, people sought refuge in makeshift camps or in community buildings, such as schools. Government-run, planned, camps - the official national solution - were established from May onwards and financial incentives were given during the emergency to support: 1) host families; 2) rentals (though the available rental stock was scarce).

Despite these options, many people chose to stay either on or close to the land they inhabited prior to the quake, often staying in unstable or inadequate shelter to retain links to their livelihoods, networks and assets, until more permanent solutions could be found. This presented a number of problems, not only because people stayed and rebuilt in dangerous situations, or designated no-build zones, but also as it hampered their access to formal assistance mechanisms.

NATIONAL SHELTER RESPONSE

Given the extent of the damage, the government requested international support. Two weeks later, the Shelter Sector leads established coordination services and set up a response team, ensuring co-leadership of the Sector with the Vice-Minister of the Ministry of Housing and Urban Development (MIDUVI). The Sector leads provided field and desk support and ran weekly meetings in the hubs of Quito, Portoviejo and Pedernales for the first four months and thereafter every two weeks, until the formal handover in late September 2016.

The government's reconstruction plan "Reconstruyo Ecuador", was released by MIDUVI in early May as a mechanism to provide rapid support for housing repair and reconstruction through financial assistance in the eight affected provinces. To complement these plans, which were mainly focused on urban areas and outskirts, Shelter Sector partners directed their assistance predominantly to the rural areas. The strategies of the Sector built up from immediate lifesaving activities, to transitional and permanent shelter options, along with technical assistance to communities, which included Build Back Safer messaging and Housing, Land and Property (HLP) support.

Sector partners were restricted in the early months of the response, especially with transitional shelter options, due to perceived conflicts with government reconstruction plans. Successful projects by humanitarian actors (including A.40), were able to provide assistance by being adaptable and not compromising the position of the humanitarian community, or the government. Such responses included distribution of relief items (tools and emergency shelter kits) along with brief technical training, to allow beneficiaries to make simple repairs to their homes, or build small impermanent shelters that allowed them to stay on their land. More durable solutions from the Sector were later approved in areas where the government was projected to take many months to provide permanent housing solutions.

The Shelter Sector also collaborated with the Protection Sector, to establish the HLP Working Group. This group has worked closely with the government at all levels to ensure more inclusive access to the reconstruction and repair incentive package, to respect people's rights in the reconstruction process (including relocations) and to improve the regulation in building codes, promoting the participation of non-governmental actors in the

Although initially challenged by the government, many agencies proposed temporary or transitional shelter solutions, that would use local materials (such as bamboo) and provide adequate living conditions in the time span between the emergency phase and the formal reconstruction process (planned by the government).

process. These efforts helped to enable the implementation of repairs and transitional shelters, and some regulations were modified or adopted in order to protect HLP rights.

COORDINATION CHALLENGES

Although the Shelter Sector was successful during the initial response in providing essential non-food items to the affected communities, the challenge was finding space to act in the transitional phase. With the presence of a strong government plan for reconstruction, with a short timeline, there was little political will to allow the implementation of transitional solutions from Shelter Sector partners (in spite of significant needs for such options).

These delays in the roll out of the incentive scheme and the construction of permanent housing meant that many affected families remained without adequate shelter for months. The Shelter Sector advocated successfully for the necessity of temporary shelters (including water and sanitation) in rural communities, especially where the government would take more than six months to provide permanent housing. The Sector also worked to gain approval for alternative permanent housing options as part of the reconstruction/recovery planning. There was resistance to this from government actors, due to the use of alternative materials (i.e. bamboo) or the incremental nature of sector partners' solutions.

LAND AND PROPERTY ISSUES

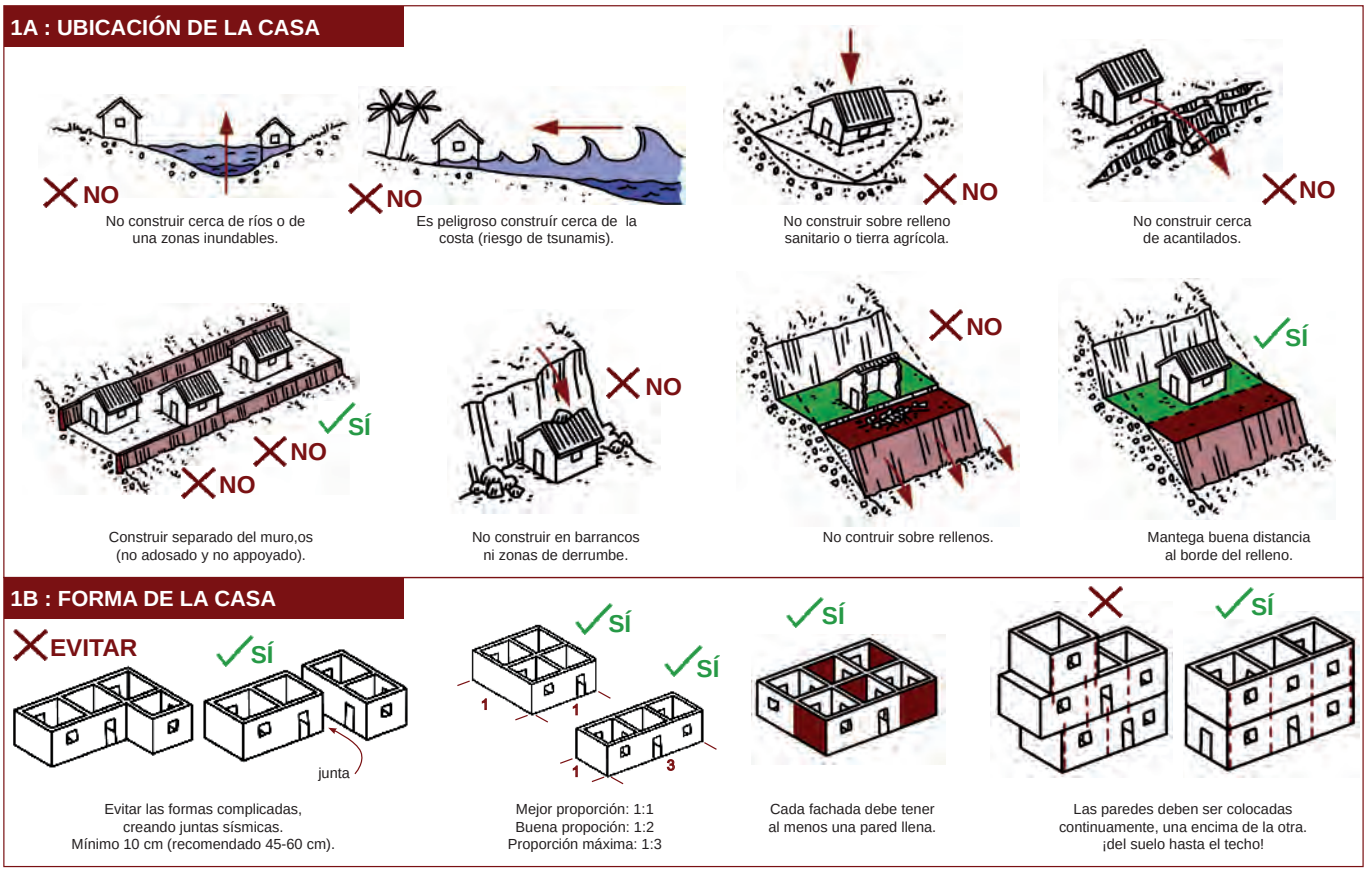
Estimates indicated that only between 20% and 30% of people in the affected areas had access to legally recognized or formal land titles. This presented a major challenge to the Sector as it meant that the majority of the affected population may be excluded from government assistance. The incentive package, when first offered by the government, only included legally recognized "owners" of land. The HLP working group advocated with government authorities to include a wider range of possible beneficiaries of the incentives, ensuring that the majority of the population that held no land tenure would also be included. The advocacy was successful and resulted in the government reforming the regulation to recognize different forms of tenure, as appropriate or relevant to the context. For instance, *bona fide* landowners who may not have possessed legally recognized title, but could prove their link to the land, were granted tenure through "right of use". Moreover, the new regulation granted a grace period of three months after receiving the house, to deliver documents proving that the person was legal owner or *bona fide* landowner.

ENVIRONMENTAL AND SOCIAL IMPACT

One consequence of the damage was a shift in support for non-standard construction materials. Many affected communities expressed a desire to move away from poorly built reinforced concrete buildings (which collapsed, causing many causalities), to use more lightweight materials that were seen as less dangerous. Although the use of local materials was advocated for by the Shelter Sector, it was also very important to protect natural resources and discourage use of protected or endangered species, especially timber. The Sector facilitated the production of a timber guideline that was circulated as a resource to all sector partners[1].

The Shelter Sector worked with key academic institutions in the affected area to develop a registry of alternative materials (bamboo, timber) which included resources required and available, sustainable producers and potential supply pipelines, in an effort to control pressure on these materials. During the response, the government developed new building regulations for the use of bamboo in construction (yet to be fully released). A detailed evaluation tool was developed to assist the government, sector partners and industry stakeholders in evaluating various models of permanent housing design in a more holistic way (including the social, environmental and economic impact of each model)[2].

[1] This guideline is available online at http://bit.ly/2hNEHDs
[2] All these documents, along with other resources, can be found on the Shelter Cluster Ecuador webpage, http://bit.ly/2k0hTR0



The first key message from the Cluster in Ecuador, as for other shelter responses, was related to the safe location of houses. Much of the vulnerability of the housing stock was in fact due to the location, often in informal, steep, or generally hazard-prone areas (Source: Shelter Cluster Ecuador and MIDUVI).

KEY 'BUILD BACK SAFER' MESSAGES

Knowledge and implementation of hazard-resistant construction was low in Ecuador. Although the government scheme aimed to ensure the reconstruction of the majority of houses by qualified contractors, a significant number of affected people would not receive such assistance. In many of these cases, people started to rebuild immediately, repeating many of the same practices that led to previous construction weaknesses.

Starting from the observation that there were crucial and basic deficiencies in the use of construction materials and detailing, the Technical Working Group within the Shelter Sector decided to produce key messages, both for non-professionals and for local tradespeople, to develop Build Back Safer information and support an improved building culture in the affected areas[3]. These were produced within the working group and based on previous natural disaster responses, such as Typhoon Haiyan in the Philippines and the Nepal earthquakes[4], contextualized and expanded with the assistance of local engineers and construction experts. A guidance document was produced to explain how to use the key messages and a training of trainers was developed, to assist sector partners in delivering the messages to affected communities at a larger scale.

The key messages were disseminated through official channels, partner NGOs and the private sector, including over local media avenues, such as radio and newspapers. A challenge in the collaboration with the authorities around the production of these key messages was to name them "support for self-construction", given the government position not to support alternative construction channels. This severely hindered the validation and distribution process.

[3] All these documents, along with other resources, can be found on the Shelter Cluster Ecuador webpage, http://bit.ly/2k0hTR0

[4] See A.8 (Haiyan Key Messages: http://bit.ly/2iEFUwJ) and A.3 (Nepal Key Messages: http://bit.ly/28WMJ5s)

Most shelter options supported by the international community used locally available materials, supplemented by CGI roofing sheets or plastic sheeting.

Affected households received either emergency shelter solutions, mainly made of tarps and bamboo framing (left), or transitional shelters that would last longer (right). However, initially there were concerns that solutions seen as more "permanent" would have disqualified people from the government assistance.

LESSONS LEARNED

One of the main issues highlighted by this response was the need for the **humanitarian community to develop more flexible models and structures to work in middle-income countries,** wherein government capacity is higher than other crisis areas. The Sector should be adaptable and able to provide the appropriate assistance required by the host government and not simply operate with standardized approaches. The response mechanism needs to be ready for action, but flexible enough to be influenced by the context and adaptable. **The Sector should support the government directly** and include urban planning, hazard mapping and engineering expertise, along with relief, HLP, and recovery planning, in its activities. **The potential avenues of assistance need to be made clear** both to the government and existing in-country actors, who may not have an understanding of the humanitarian system and the potential added value it can bring.

It is necessary to establish **clear and consistent sectoral coordination under government leadership**, or at least under a co-leadership arrangement, and be complementary to existing response structures. The Shelter Sector in Ecuador operated well for five months with the co-leadership of one international agency and the ministry for housing (MIDUVI), however the relationship could have been strengthened by increasing collaboration from the outset, to clarify roles and responsibilities; **targeting other key ministries** that may have been able to assist in any bottlenecks and handover; and having more crossover with national disaster response mechanisms.

In relation to HLP, the Shelter Sector should continue to work together with the protection cluster and governments with the support of the international community, to **promote HLP studies as a means of prevention and disaster preparedness**. There is also a need to **build the capacity of local governments**, who were responsible for many territorial planning, urban planning and building regulations issues, but who were unable to play a strong role in this regard.

The Sector should also work closely with national and local authorities in order to ensure that policies and implementation modalities do not exclude affected populations due to, for instance, their tenure status. **Ensuring tenure security** (not necessarily formalisation) **needs to be a focus of all sheltering activities**.

Humanitarian organizations built transitional shelters made of local bamboo, often with the help of volunteers from local NGOs.

Although they took some time to complete, due to the collaborative nature of the process, the key messages were a largely successful part of the response. The fact that the **messages were produced directly in Spanish** was seen as a strength, and the accompanying guidance notes and subsequent trainings were a further positive step forward in making the messages both relevant and immediately usable.

The potential of the Shelter Sector is reflected in the following case study (A.40) that demonstrates flexibility, collaboration and a locally based approach, that ensured an appropriate and effective outcome. The international humanitarian actors provided technical and resource support to an existing organization working on the ground, acting within the local government structures. Each organization worked to their strengths to deliver a coordinated and well-rounded response that assisted families in the recovery process, gave advice where needed and strengthened community knowledge.

CASE STUDY

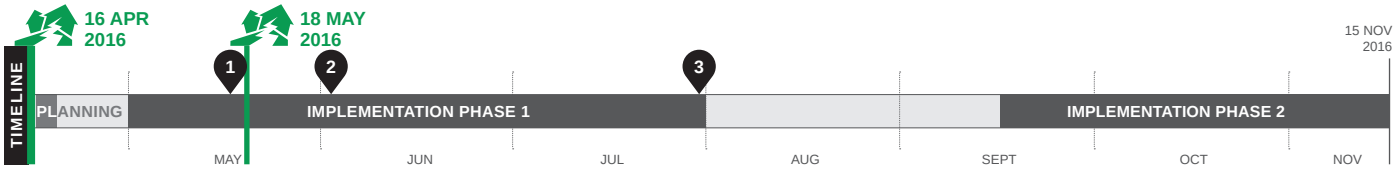
ECUADOR 2016 / EARTHQUAKE

KEYWORDS: Emergency shelter, NFI distribution, Capacity-building, Community participation, Partnerships

CRISIS	**Ecuador Earthquake, 16 April 2016.**
TOTAL HOUSES DAMAGED	**45,455** (Government figures as of December 2016).
TOTAL PEOPLE AFFECTED	**386,985** people (source: Government of Ecuador).
PROJECT LOCATIONS	**Selected parishes in Portoviejo, Manabí Province.**
BENEFICIARIES	**3,290** households (Approx. 16,450 people, with five persons per household).
PROJECT OUTPUTS	**3,290 Emergency Shelter Kits.** **220 Construction Materials Kits.** **2,100 Water filters.** **2,680 NFI kits** (Mosquito nets, Jerry cans, water filters, kitchen set, solar lamps).
SHELTER SIZE	**Approx. 24m²**
SHELTER DENSITY	**Approx. 4.8m²** per person.
MATERIALS COST PER HOUSEHOLD	Phase 1: **USD 71** (Not including labour: Households invested approximately USD 32). Phase 2: construction materials kit cost: **USD 340.**
PROJECT COST PER HOUSEHOLD	Approx. **USD 132** (Phase 1).
OUTCOME INDICATORS	**1/ Knowledge and skills: 75%** of surveyed beneficiaries agreed with the statement that "the shelter training provided was useful". **2/ Reduced Displacement: 85%** stated that they had built their shelter on their original plot. **90%** stated that the distribution of shelter items made it easier to stay on their plots. **3/ Reduced Stress and Anxiety: 70%** stated that by receiving shelter aid they could concentrate on meeting other critical needs (Source: Post Distribution Monitoring Report).

PROJECT SUMMARY

This project was the result of a collaborative effort between two international organizations (INGO) and a local NGO, to assist earthquake-affected families through the provision of emergency shelter kits and non-food items, coupled with technical support and trainings. Further construction materials were distributed for particularly vulnerable households in the second phase of the project.



1 17 May 2016: **Home distribution of shelter kits**

2 1 Jun 2016: **Start of materials distribution**

3 30 Jul 2016: **Completion of first phase distribution**

STRENGTHS

+ Excellent community ties of the local partner.
+ Well established relationships amongst project partners and complementarity of approaches.
+ Capacity-building components and community ownership.
+ Focus on one geographic location.

WEAKNESSES

- Potential delays due to limited staff available for the project.
- The integration of community volunteers was not very high.
- Mosquito nets were not included for all households.
- Implementation by local leaders was not always consistent with the training and advice given by project partners.

The project provided earthquake-affected families with emergency shelter kits and trainings at the community level, so that they could be better able to build shelters.

CONTEXT

For more information on the background and the shelter response, see overview A.39.

PROJECT GOALS AND PHASES

Through effective partnerships at global and national level, the project aimed at addressing the emergency shelter needs of people in targeted locations affected by the earthquake, minimizing displacement and paving the way for self-recovery strategies. This was achieved through a first phase distribution of shelter kits and NFIs (three months), and a second phase distribution of construction materials to selected vulnerable households (two months).

LOCATIONS AND BENEFICIARY SELECTION

The project areas were selected in coordination with national and local governments and shelter sector coordinators. The local partner had established links with the targeted communities and most agencies had focused their response on other areas. At the time of implementation, this project was the only visible shelter project in the area. Households were selected following government damage surveys (red = destroyed/uninhabitable, yellow = partially restricted use, green = safe). Houses categorized as red were all targeted. Households with specific vulnerabilities, such as female-headed households, those with members with disabilities, or with children under five years or elders, were selected for additional assistance in the second phase of the project and received extra materials and labour support.

PROJECT IMPLEMENTATION

The project was implemented through distributions and trainings at the community level, primarily by the local partner, with approximately 10 staff. INGO partners sent a total of six staff and provided remote support throughout. Firstly, **a training of trainers for the local organization staff and community representatives was conducted** by one INGO partner on the use of the shelter kits and distribution methods. Subsequently, the **local partner took care of the technical supervision** of trainings and distributions, while monitoring was undertaken by an INGO partner. **The trained community representatives acted as focal points** in each community, to enable beneficiaries to have clear guidance from within their own community, rather than from external agencies. This approach aimed at developing a sense of community ownership over the process of self-recovery. Distributions were carried out at community centres, the local community being informed well in advance of the date and time. Project partners ensured that there was a high level of community representation, with community members actually distributing many items themselves. **Beneficiaries were also trained, during the distributions,** on the use of the kits.

In the second phase (also implemented by the local partner), selected households were given additional construction materials funded by one INGO and trainings that complemented the distributions in phase one. **Demonstration shelters were built** to provide a reference to the communities. The second phase was designed to build on the first phase, to support households in their recovery efforts, and focused only on a part of the first caseload. Initial technical supervision of phase two was provided by one INGO and then passed on to the local partner.

COMMUNITY PARTICIPATION

The affected populations were considered as key partners in the project, being actively engaged by project partners during beneficiary selection and implementation, thanks to the training of trainers approach. In all cases, the partners worked within existing community structures to allow as much involvement and ownership as possible. This led to a **highly community-driven assistance model,** which was praised by project partners and sector coordinators, as households felt comfortable and supported along the process. It was also seen that the cascade training methodology led to high levels of uptake of best practices, especially in the use of shelter kits. In a monitoring visit, around 70% of the shelter kits distributed were seen in use 48 hours after distribution. Of these, around 95% were seen using techniques that had been taught to community members. Conversations with beneficiaries showed that they knew the focal points in their community and felt supported by community structures in the use of the shelter kits.

The project had a high level of community engagement and training. Community representatives would act as focal points to ensure a smooth implementation.

COORDINATION

Prior to this response, there had been good coordination between the two INGO partners at the global and regional levels. This had been initiated through Shelter Cluster mechanisms, and meant that both parties communicated and were familiar with their methods. The continuous support from sector coordinators also facilitated the implementation process. At the response level, coordination was passed on to the local organization, to encourage local solutions and capacity-building. The local organization also had good links with the municipal government, paving the way for a smooth process and good access in targeted areas.

MATERIALS SOURCING

The NFIs and shelter kits for phase one were all sourced internationally by one INGO partner and imported during the emergency phase. Stocks were sourced in this way so as to ensure swift delivery at scale, to the correct specifications, when there was not the time to complete full market surveys and procurement in country. As the kits were standard IFRC specification, procured from accredited manufacturers, the quality control was built-in and no issues were identified at the time of the project, nor in subsequent evaluations.

In phase two, materials – such as untreated bamboo and timber for framing – were locally sourced by the affected population. Bamboo was chosen as it was abundantly available, relatively cheap (when untreated) and locally accepted. Many of the affected communities seemed highly skilled in its use, being able to produce secure frames very quickly. Additionally, many households were salvaging timbers and other materials.

Remarkably, the emergency shelters funded by one INGO were built upon the kits initially provided by the other INGO, generating significant economies of scale.

TECHNICAL SOLUTIONS

In phase one, the use of locally available, low-tech, skills and materials was encouraged, and simple techniques were designed so that community members could easily understand and use them. The local partner representatives were trained in the use of the shelter kits, such as standardized fixing techniques for tarpaulins to timber, bamboo and rope. These techniques were in line with Shelter Cluster guidance.

In phase two, 220 extremely vulnerable families from two parishes received additional construction materials, to improve the quality of their temporary shelters. **According to the different needs and land typologies, two different kits were designed.** In Crucita, a coastal parish, the design considered the use of the shelter kit provided in advance and included bamboo structures and a concrete floor. The other type of materials kit was designed for Rio Chico, a parish affected by seasonal floods, and allowed the households to raise their shelters with a bamboo structure and wooden floors. In the future, this temporary shelter can be used as a storage unit.

In all of the cases, tarpaulins were used for walls and coverings. Families were instructed not to use permanent materials for their temporary shelters, as it would potentially disqualify them for future government support towards a permanent house, and add additional weight on the limited load-bearing structure.

MAIN CHALLENGES

TIMELINESS. Although initially some partners felt that the shelter kits had taken too long to be procured (approx. one month), a post distribution survey found that beneficiaries were satisfied. Most of the procurement challenges were overcome thanks to the local partner, who could act as a consignee to import the kits.

DEVELOPING THE PARTNERSHIP. Although it was seen as a key project strength, the development of the partnership between the two international and one local partners required time and input from all three parties. This challenge was mitigated through pre-existing agreements between the two INGO partners and the in-country relationship between one INGO and the local organization. Agreements and working methods were established in a timely manner, thanks to effective coordination at global, regional and field levels.

DEFINING A CASELOAD. In the initial phase, the three partners selected beneficiaries based on damage data compiled by the government. Once a caseload had been defined, further aftershocks caused some areas to be reassessed and some previously excluded households became eligible for assistance. This could not be covered by the first round of distributions, as it happened after the logistical mobilization of the kits. However, it was addressed with a second round of emergency assistance that mirrored the first. It was highly beneficial that the local partner was continuously active both at field and capital levels to understand the changing needs, and that the INGO partners continued to coordinate and had resources to enable the second round.

WIDER IMPACTS OF THE PROJECT

As shown in the Post Distribution Monitoring report, the project **helped communities in their self-recovery**, both through technical trainings and promotion of community ownership of the process. The project avoided displacement, as most beneficiaries were able to stay on their original plots, without leaving their communities and livelihoods. They also felt that, thanks to the shelter intervention, they were able to focus on other critical needs.

Additionally, INGO partners felt that the **project led to increased capacities**, both within the local organization and the communities, in terms of dealing with shelter issues in response to a natural disaster. Such capacities are both “hard” and “soft”, as communities now have clear systems and focal points to respond to a disaster. It was also felt that relationships between the communities and the local organization were strengthened by the project.

Shelter sector coordinators, who visited project areas and distributions, praised the project approach, especially for its community focus and capacity-building aspects. The success assessed by partners, communities and coordinators, has led one of the INGO partners to **consider replicating this model of assistance in other contexts.**

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Capacity of the local implementer, who had excellent community ties.

+ Well established relationships amongst project partners. The two INGO partners had good relationships at the regional and global levels, and had worked together before. These relationships had been created and fostered through Shelter Cluster mechanisms. The relationship between the two INGO partners is based on the **complementarity of approaches,** as one has a focus on emergency shelter, while the other has a more recovery-based focus, whilst the local organization had community ties and knowledge of the local context. The partnership hopes to enable good quality shelter programming throughout the post disaster phases, thanks to elements of continuity from the emergency phase through early recovery, as well as the continued dialogue and assistance between actors.

+ Capacity-building components and community ownership. The cascade-style training of trainers reinforced community recovery efforts, even though the items and trainings were provided by project partners. Particularly, the training of community leaders (as a network of local focal points to support families in the proper use of shelter kits) ensured the sustainability of the intervention.

+ Focus on one geographic location, rather than attempting to cover more areas than capacity allowed.

WEAKNESSES

+ The decision to use minimal staff for the project meant that project timescales were potentially lengthened.

+ The integration of community volunteers was not as high as was hoped, primarily due to a lack of monitoring capacity.

+ Mosquito nets should have been included since the start and for all beneficiaries, as many shelters had open gables to allow airflow, and the first round of distributions did not include mosquito nets for all households.

+ Implementation by local leaders was not always consistent with the training and advice given by project partners. This was mainly due to a lack of project staff at site level. It was agreed by project partners that greater levels of monitoring, immediately post distribution, would have enabled a more consistent implementation.

Shelter kits (and construction kits in phase 2) were distributed by the local partner (see materials list below), while supervision and programme design, monitoring and evaluation was done by the two INGO partners.

MATERIALS LIST			
Shelter Kit, http://bit.ly/2ohLMxl	1 kit per HH		USD 30
CONSTRUCTION MATERIAL KIT - TYPE 1			
Bamboo 12 yards	Pole	3	USD 320 per kit
Bamboo 8 yards	Pole	1	
Bamboo 7 yards	Pole	4	
Bamboo 4 yards	Pole	2	
Nails 2 lbs	Box	17	
Split Bamboo 3 yards	Pole	2	
Cement	Bag	13	
Sand	m^3	1.5	
Rubble	m^3	1.5	
Thread 3/8	Unit	4	
Screw	Pound	2	
CONSTRUCTION MATERIAL KIT - TYPE 2			
Bamboo 12 yards	Pole	10	USD 380 per kit
Bamboo 8 yards	Pole	1	
Bamboo 7 yards	Pole	6	
Bamboo 4 yards	Pole	2	
Nails 2 lbs	Box	2	
Split Bamboo 3 yards	Pole	17	
Wood Board	unit	23	
Cement	Bag	13	
Sand	m^3	1.5	
Rubble	m^3	2	
Thread 3/8	unit	4	
Screw	pound	2	

LEARNINGS

- **Training of trainers, directly targeting community representatives,** greatly enhances self-recovery.
- **It is important to foster ownership with a community-based approach and engage local leaders since the start.** In this project, they were responsible for different activities, supporting communities towards their own recovery.
- **Continued dialogue between INGO partners** at the regional and global levels, outside of times of calamity, will lead to increased coordination and partnerships at field level. This can be achieved through official coordination mechanisms, such as the Shelter Cluster and bilateral conversations.
- **Working alongside – and building the capacity of – local organizations** can be key to gaining sustainable access to affected communities and can lead to a longer-term presence, than if works are carried out by international actors alone.

OVERVIEW

EUROPE 2015-2016 / REFUGEE CRISIS

CRISIS	Migrations flows to Europe, 2015-2016
TOTAL ARRIVALS BY LAND AND SEA TO EUROPE[1]	**1,046,599** in 2015 **387,739** in 2016

SUMMARY OF THE RESPONSE

A massive influx of refugees and migrants through South-Eastern European countries resulted in an emergency in transit – as well as destination – countries between 2015 and 2016. However, migration towards Europe was not a new phenomenon. This overview focuses on the shelter coordination and response to this crisis in key locations, primarily Greece, the Balkans and Germany, where the majority of first arrivals to the EU, transit and final arrivals to destination were found.

COUNTRIES OF ARRIVAL IN EUROPE	NUMBER OF PEOPLE ARRIVING (1 Jan 2015 - 31 Dec 2016)[1]	NUMBER OF PEOPLE STRANDED (As of 31 Dec 2016)[2]
Italy	335,278	*Not available*
Greece	1,034,269	62,784
Bulgaria	47,136	5,560
Spain	17,091	*Not available*
COUNTRIES OF TRANSIT IN EUROPE	**NUMBER OF PEOPLE ARRIVING (1 Jan 2015 - 31 Dec 2016)[1]**	**NUMBER OF PEOPLE STRANDED (As of 31 Dec 2016)[2]**
FYROM*	478,004	137
Serbia	678,493	5,633
Hungary	430,690	460
Croatia	659,105	624
Slovenia	477,791	315

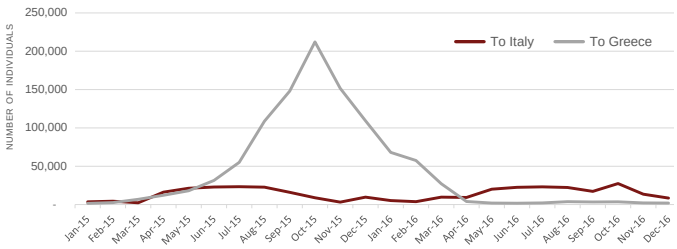
** the former Yugoslav Republic of Macedonia.*

Migrant Routes: Mediterranean 2016 (Source: IOM - http://migration.iom.int/europe/)

TIMELINE

2011: Arab Spring prompts start of increased migration from North and sub-Saharan Africa to Malta and Italy via the Central Mediterranean route. Start of conflict in the Syrian Arab Republic and first population movements into neighbouring countries (Turkey and Lebanon).
2012: Escalating flight of Syrian refugees into neighbouring countries (including Jordan, Iraq and Egypt).
Apr 2015: Start of "Balkan route" migration.
Jun 2015: UNHCR declares internal Level 2 Emergency for Greece, the former Yugoslav Republic of Macedonia and Serbia.
Aug 2015: Start of open borders in Austria and Germany.
Sep 2015: Closure of Hungary's borders; arrivals to Croatia and Slovenia increase
Oct 2015: Peak monthly arrivals to Greece by sea.
Mar 2016: Closure of the migration routes through the Balkans due to re-activation of Schengen border regimes. EU-Turkey deal made to relocate new arrivals.
Nov 2016: 543% increase in stranded migrants in Bulgaria since March 2016[3].

EASTERN AND CENTRAL MEDITERRANEAN - MONTHLY ARRIVALS TO GREECE AND ITALY (2015 - 2016)



[1] IOM, as of 31 December 2016 (http://migration.iom.int/europe). Data collated from national authorities, IOM and UNHCR.
[2] Stranded migrants are those who, for a reason beyond their control, have been unintentionally forced to stay in a country (European Migration Network).
[3] IOM, Mixed Migration Flows in the Mediterranean and Beyond: Compilation of Available Data and Information – No. 30, 1 December 2016.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Many new arrivals to Europe in 2015-16 passed through the Balkans. Often, people were registered at border crossing points (Berkasovo Bapska, Serbia, Oct 2015).

MIGRATION IN 2015

Migration departing from North Africa towards Europe increased since 2011. However, since 2015, attention was focused on the emergency situation caused by large population movements into the Balkans[4] and Northern / Western European countries (via Turkey and Greece). Compared to the 219,000 people who arrived in 2014[5], a 500% increase in total arrivals to Europe was seen in 2015. Ongoing and escalating conflicts were likely to account for the dramatic increase in numbers arriving to Greece, with 47% of arrivals coming from the Syrian Arab Republic, 24% from Afghanistan and 15% from Iraq. During the second part of 2015, arrivals to Greece by sea reached their peak. By the end of the year, 857,363 people arrived in Greece (compared to 153,842 to Italy). Arrivals did not decrease significantly over winter, despite harsh conditions at sea.

MIGRATION IN 2016

Arrivals to Italy in 2016 (total: 181,436[6]) increased 18% from 2015, mostly via the Central Mediterranean route. Migrants and refugees originate from a number of different countries in North Africa, sub-Saharan Africa and the Horn of Africa[7], with a small proportion from the Syrian Arab Republic (less than 1%)[8].

Greece saw a 79% decrease in cumulative arrivals[9], totalling 176,906 in 2016, inverting the trend from 2015. The reactivation of the standard Schengen border arrangements in March 2016 closed the borders of several transit countries, to stem the flow of people. Combined with an agreement between the European Union (EU) and Turkey in March 2016 to return migrants and asylum seekers to Turkey, this led to a significant decline in arrivals by sea to Greece.

As of December 2016, the total number of migrants and refugees stranded in Greece and the Balkans was 75,031. In Greece, all new arrivals were restricted to the islands, until asylum status (or safe relocation to Turkey) could be established.

Note: *It is impossible to adequately provide detailed information on the wide-ranging and varied responses across the region, given the geographic scope of this overview, alongside the political complexities and administrative variances of each country involved. Therefore, the main focus of this overview is the Greece-Balkan-Germany route, as it is more relevant to the context of the publication and the case studies that relate to it – i.e. the set up and evolution of (emergency) humanitarian shelter response – than the more established and longer-term responses in Italy, Malta and Spain, for example.*

COORDINATION AND RESPONSE

Initially, the authorities and humanitarian responders in Greece, the former Yugoslav Republic of Macedonia, Serbia, Hungary, Croatia and Slovenia were **addressing a dynamic situation of populations in transit.** This required temporary accommodation and mobile and lightweight assistance at strategic points, as people continued their journey northwards. Assistance often comprised distribution of NFIs, emergency shelter, establishment of collective shelters in existing buildings or in tents and Rubb Halls, and adaptation of buildings and sites to allow basic services and facilities to be provided in areas of transit.

As border closures and restrictions on movement came into force in early 2016, **longer-term assistance was required to adapt to more static populations** in numerous locations across Greece and countries on the Balkan route. For example, reception centres were consolidated and expanded, to allow the closure of other ad-hoc transit areas, and services and facilities in these sites were improved, through upgrades and rehabilitations, such as the installation of heating, insulation, water networks and sanitation.

[4] Use of the term "Balkans" relates to the geographic peninsula and does not differentiate between EU and non-EU countries. "Balkan route" refers to those countries through which migrants transited (or were attempting to transit), i.e. the former Yugoslav Republic of Macedonia, Serbia, Bulgaria, Croatia, Hungary and Slovenia.

[5] UNHCR, The Sea Route to Europe: The Mediterranean passage in the age of refugees, July 2015.

[6] IOM, as of 31 December 2016: http://migration.iom.int/europe.

[7] The majority originate from Nigeria, Eritrea and Gambia, Guinea, Sudan and Ivory Coast – UNHCR, Dec 2016.

[8] UNHCR, December 2016.

[9] Up to 31 December 2016. From IOM, Mixed Migration Flows in the Mediterranean and Beyond: Compilation of Available Data and Information – Reporting period 1 December 2016 – 11 January 2017.


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In Greece, many refugees were accommodated in tented camps. In summer, tents had to be shaded, also by building metal-framed structures (Elliniko, Athens).

Many refugee camps in Greece were either upgraded from tents or built from the start with containers (Left: Kara Tepe camp, Lesvos. Right: Eleonas, Athens).

GREECE

Emergency support needs in Greece remained high in 2016. Formal and informal settlements, including refugee camps, were negotiated and established, with other accommodation and shelter options being explored. There was a high level of technical capacity already present, as well as a desire from Greek civil society to be at the forefront of the response[10]. Pre-registration of arrivals occurs in Reception and Identification Centres (formerly called "hotspots") on the islands of Lesvos, Chios, Samos, Leros and Kos, rather than direct transferral to the mainland. Surveys indicate that people prefer to be transferred to alternative accommodation in urban centres, such as Athens or Thessaloniki. During the first-wave of arrivals, refugees and migrants with greater financial means attempted to leave Greece quickly, while more vulnerable populations had to remain, mainly in urban areas[11]. Those with financial resources chose to improve their shelter situation by finding alternative private accommodation, for instance. **In 2016, occupancy far outstripped capacity on the islands**[12] and, towards the end of the year, capacity to absorb arrivals became **limited also on the mainland.** Approximately 51,000 places were available in various forms of accommodation in December 2016, leaving a shortfall of 11,000 places.

In 2016, Greece therefore evolved from a transit country into a longer-term hosting location. The majority of sites on the mainland were government-built, emergency, tented settlements, intended for temporary use. They soon went over capacity, with limited services that did not meet minimum standards and were located away from urban centres[13], increasing dependency on multisector assistance. **While the government took on the primary duty of providing shelter and services to camps, gaps in service provision emerged** – particularly for persons with specific needs and vulnerabilities. At the time of writing, additional and expanded sites were being planned, with the evacuation of spontaneous settlements in public parks and squares foreseen.

By the end of 2016, 21,057 **reception places were created in Greece for relocation candidates** to other EU countries, when the capacity in 2015 was about 1,200[14]. During 2016, this programme was expanded to other people seeking asylum in Greece, prioritizing the most vulnerable and embracing other forms of accommodation than formal camps, including apartments, hotels and "matchmaking" refugees with host families. The provision of this type of accommodation included service delivery in compliance with applicable Greek laws and regulations. **Local NGOs and community-based organizations also engaged in alternative shelter support** to refugees and migrants. These organizations either rented a hotel, which provided the services, or a building and rehabilitated or adapted it, with services provided by the residents themselves, or the organization's volunteers.

The sector also started identifying **opportunities for mid- to long-term shelter solutions within the existing building stock,** including the use of public-private and market-based initiatives. For example, the use of holiday homes and apartments (approx. 30% of buildings in Athens are vacant), or renovations to older buildings. Another idea was the conversion of public and commercial buildings to residential accommodation, with expedited procedures to obtain permission for a change of use and negotiations over rent.

A Shelter-NFI Sector Working Group was established in March 2016 in Greece, to facilitate inter-agency coordination of response activities for refugees and migrants. The main activities were:

1) Coordinating with relevant government bodies and all other sectors.

2) Validating, promoting and monitoring of the use of technical guidance and minimum standards, across all shelter and NFI interventions.

3) Building local and national capacity to understand humanitarian needs with regard to shelter and NFIs.

4) Exploring appropriate shelter and site planning designs for longer-term solutions within sites.

5) Pursuing an integrated urban shelter strategy to promote alternatives to camps, by capitalizing on existing building stock.

At the regional field level, there were two hubs: Attica / Central Greece and Thessaloniki. Each of the five main reception islands had their own working group hub. **The Working Group developed a number of technical guidance documents,** including minimum standards and procedures on shelter shading structures, NFIs and distributions, heating solutions, site planning standards, shelter upgrading and communal kitchens.

By the end of 2016, at national level, the coordination structure was modified, to better reflect the operational needs of the refugees and migrants and to facilitate stronger communication with relevant governmental counterparts. Thus, Shelter merged with WASH, while NFI split to standalone as one working group. The intention for 2017 was for NFI, cash and food to merge as

[10] Greece Mainland Needs Assessment Report, NRC, March 2016.
[11] CRS, Refugee and Migrant Emergency in Europe: City of Athens Shelter Analysis, June 2016.
[12] NRC Rapid Assessment for out-of-camp housing and education, July 2016.
[13] CRS, Refugee and Migrant Emergency in Europe: City of Athens Shelter Analysis, June 2016.
[14] UNHCR Greece: Weekly Accommodation and Relocation Update 3 January 2017.

a “Basic Assistance” Working Group, while shelter and WASH would remain combined at all coordination levels[15].

THE BALKAN ROUTE

With the sealing of Hungary’s borders in September 2015, increasing numbers of migrants arrived in Croatia and Slovenia from Serbia. **Transit and reception centres started to be established at the multiple entry, transit and exit points.** Available facilities at these crossing points were put to temporary use as registration points and accommodation, but conditions were very basic, providing only protection against the elements, NFIs, food distribution and emergency medical services. As these camp-like sites were mostly not suitable for winter conditions, **alternative transit areas had to be developed** to provide registration and other services, such as medical assistance, psychosocial support, family reunification, food, separate showers, mother-baby centres and child friendly areas, alongside meeting other minimum standards, such as covered space and WASH. **Changing transport arrangements for incoming populations** (from train to buses) succeeded in reducing the need for such numerous and dispersed facilities. In urban centres, some of the migrant population were living in unofficial sites, such as abandoned buildings, or sleeping rough.

However, the number of people transiting through the Balkans was under-estimated, as many did not register. The majority aimed to travel through the former Yugoslav Republic of Macedonia and Serbia, onwards to Hungary, Croatia and Slovenia. Shelter needs in 2015 were for safe, temporary shelter along transit routes, particularly at border crossings, boat crossings and registration sites, where bottlenecks would form and people would remain stranded for significant periods of time. A major challenge in 2016 remained ensuring protection from the severe winter weather in the region, as well as the provision of more suitable overall conditions for longer-term accommodation and integration.

GERMANY

At the end of August 2015, Germany opened its doors to Syrian asylum seekers, no matter in which EU country they had set foot before. There were up to 60,000 new arrivals per week in September 2015 (figures decreased to 21,000 in January 2016 and plummeted to 700 in August 2016[16]), most of whom travelled through Austria and entered Germany in the state of Bavaria.

Once in Germany[17], populations on the move were received at reception centres at border towns, typically for only a few days before being relocated to mid-term accommodation. Before the opening of reception centres, first accommodation for newly arriving refugees and migrants was ad hoc, ranging from sports halls and unused buildings, but also including people sleeping in train stations, or even in the open.

In order to provide adequate shelter for almost one million refugees and migrants who arrived during 2015, a number of interventions were mobilized:

- Winterizing existing accommodation;
- Re-purposing of existing buildings as collective centres;
- Construction of Rubb Halls / large tents as collective centres;
- Erection of family-sized tents;
- Installation of infrastructure and communal facilities;

[15] 2017 Regional Refugee and Migrant Response Plan (RRMRP)
[16] German Federal Office for Migration and Refugees, http://www.bamf.de/EN
[17] This overview focuses on Germany, as it was the main destination country and because the following case study A.42 deals with the set-up and operation of a reception centre near the Austrian border. Other destination countries include Sweden, Austria, the Netherlands and Norway.

Along the Balkans route, migrants and refugees were assisted with transport to and between transit or registration centres (Croatia, October 2015).

These evolved into mid-term accommodation sites run by a number of organizations, in order to provide support during the asylum application process. Long-term accommodation for accepted asylum seekers was ideally seen as a general social housing scheme. The government emphasized integrating the refugees as soon as possible, instead of risking the creation of “refugee ghettos”. Therefore, long-neglected social housing programmes were reactivated, funded by the communes and the federal government. Since there had been a shortage of affordable housing in most of major German cities for years, the aim was to benefit both the refugees and the hosting communes.

LOOKING FORWARD / CHALLENGES

In early 2017, short-, mid- and long-term accommodation options in Greece, countries along the Balkan route and in destination countries were being explored, through a scaling-up of construction, upgrading and expansion of facilities and sites. However, the attainment of suitable, durable, solutions for those already in Europe and those that continued to arrive – both in terms of legal status and more immediate basic needs – remained a higher-level political issue, which usually takes time to resolve in each hosting country and within the EU.

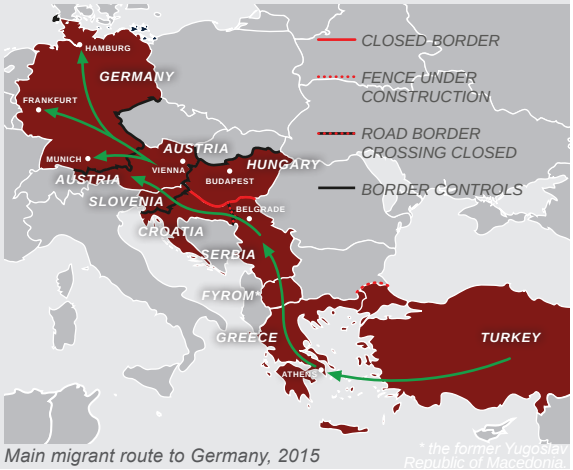
Advocacy for clear, coordinated and consistent long-term strategies to address the needs of migrants, refugees and host populations continued. However, the challenges faced across Europe were rising, as **intended temporary shelters became a longer-term** norm for many people. **Tensions** between some host communities and migrants, refugees and asylum seekers, **escalated in many countries** in Europe, occasionally resulting in violence and destruction of shelters and settlements. Frustration was also felt for the long registration waiting times and the deterioration of living conditions. While camp-like solutions often seemed to be preferred, sites varied greatly in service-provision, standards and conditions. Some governments were slow in assigning sites and expanding capacity in alternative locations, to enable a transition to mid-term accommodation, while asylum or relocation procedures are underway. In addition, **lack of coordination and resources** led to gaps in service provision, such as winterized accommodation and safe cooking provision.

CASE STUDY

GERMANY 2015-2016 / REFUGEE CRISIS

KEYWORDS: Emergency shelter, NFI distribution, Site planning, Infrastructure, Short-term reception centre

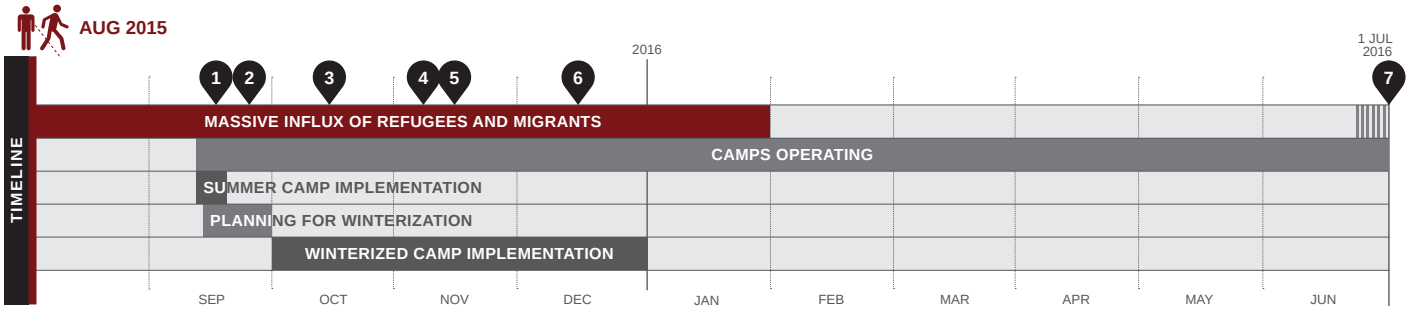
CRISIS	**European migrant and refugee crisis** (multiple countries of origin)
TOTAL PEOPLE AFFECTED	**1,047,162** total arrivals to Europe in 2015. **382,687** total arrivals to Europe in 2016. **476,649** Asylum Requests in Germany in 2015.
PROJECT LOCATIONS	**Feldkirchen and Erding, Bavaria, Germany.**
BENEFICIARIES	**170,000+** individuals (across both sites).
OUTPUTS	**Feldkirchen:** accommodation for up to **3,200** individuals. **Erding:** accommodation for up to **5,000** individuals.
SHELTER SIZE	Varies from **single-family tents** (18m²). to **pre-fabricated shared structures** (2,500m²).
SHELTER DENSITY	Varies from **3m² per person (family tent) to 8m² per person in larger halls.** Note: more than 90% of the people spent less than 24 hours in the facilities.



Main migrant route to Germany, 2015

PROJECT SUMMARY

Two short-term reception centres were set up in the state of Bavaria to provide temporary accommodation for thousands of migrants and refugees entering Germany at the peak of the migration crisis in 2015. One site was set up in the summer and then winterized in phases, while the other opened as a winterized camp after a longer construction period.



1. 18 Sep 2015: **Non-winterized accommodation for up to 3,000 people**
2. 25 Sept. 2015: **Ground preparation for collective structures**
3. 15 Oct 2015: **Start of set-up of four large, pre-fab, light-weight, collective hall structures**
4. Nov 2015: **Start of works for dismantling summer tents and ground preparation for semi-permanent winter tents. Installation of drainage and sanitation**
5. 15 Nov 2015: **Replacement of administration tents with modular winterized containers**
6. Dec 2015: **Start of works for dismantling collective halls and replacement with wooden structures, with higher snow-bearing capacity**
7. 1 Jul 2016: **Stand-by mode for both sites** (arrivals have ended)

STRENGTHS

+ Rapid involvement of local volunteers at scale.
+ Support and engagement of the armed forces.
+ Positive partnership with civil protection and armed forces.
+ Very fast, flexible and coordinated approach to set up the camp.
+ Quick availability of essential items thanks to the organization's network.

WEAKNESSES

- Lack of available space and stricter regulations, due to poor site location.
- Complex coordination structures, which diverted resources and energy
- Lack of experienced staff at field and HQ levels.

Two short-term accommodation sites for new arrivals were set up and upgraded in phases before the winter. Here, Feldkirchen in October (left) and December (right).

CONTEXT

See overview A.41 for more information on the migration/refugee crisis in Europe in 2015-2016.

ACCOMMODATION FOR ASYLUM SEEKERS

All asylum seekers in Germany were first received in the closest reception facilities of the Federal Land in question. Such a facility could be responsible for temporary, as well as longer-term, accommodation. Depending on the country of origin, asylum seekers could be accommodated in reception facilities for up to six months, or until their application was decided on. They could also be allocated to another facility during this period, under certain circumstances, for instance for family reunification[1].

New arrivals had to be distributed evenly across the different states and communes in Germany, based upon the size and capacity of each individual community. The government granted waivers to town- and country-planning codes, in order to accelerate the set-up of accommodation facilities for asylum seekers.

There were three accommodation types: 1) short-term, first reception centres, intended for registration and very short stay (up to three days); 2) mid-term, secondary reception centres (up to three months); and 3) long-term, collective centres (though individual apartments were the preferred option in the long run). Given the emergency situation, most short-term accommodations, such as schools and gymnasiums, were used for longer periods of time. While at first short-term centres received people both at day and night, once transport by trains and buses was established at border towns, the migrants were taken directly to mid-term reception centres all over the country, where they stayed until a decision was taken about their asylum application. Most people arrived at the short-term reception centres at night, when transport to other parts of the country was not operating.

[1] Federal Office for Migration and Refugees: Stages of the German Asylum Procedure, http://bit.ly/2jrU58D.

PROJECT GOALS

The organization was asked to provide **mass accommodation for short-term use** close to the Austrian border, where the majority of migrants and refugees entered. Two sites (Feldkirchen and Erding) were set up for this purpose. These first reception centres needed to cover basic needs, whilst at the same time the official government registration process was starting. **The project used a holistic approach,** aimed at providing warm and safe shelter, food, essential NFIs, family-member tracking and medical services to the newly arrived refugees and migrants, with priority to unaccompanied minors, sick and traumatized people. An official registration centre on site allowed the start of the legal process to apply for asylum, as well as providing information and counselling about the asylum processes in Germany and the EU.

PROJECT LOCATIONS

Different sites, belonging to the German army and municipalities in lower Bavaria, were assessed for a possible location to set up a camp for up to 5,000 people in a very short time frame. Feldkirchen, one of the two chosen sites, is located about 100km away from Passau (the main border-crossing point from Austria) and is outside the boundaries of a military base. The proximity to the base ensured access to infrastructure (electricity, water and sewerage grids), ready-to-use facilities such as gyms (in Feldkirchen) and hangars (in Erding), manpower provided by the federal army, as well as equipment and machinery for a quick set-up. Although the organization worked on both sites, this case study focuses primarily on Feldkirchen.

PROJECT IMPLEMENTATION

The camp in Feldkirchen had to be opened just after one week of construction, in order to release the pressure from the immediate border towns and to prevent big numbers of refugees heading to Munich, where the Oktoberfest was ongoing. It started as a summer-camp, using gymnasiums and family tents as accommodation facilities. Step by step, it was scaled up to a winterized camp, with works carried out during

The reception centres were upgraded/winterized, while in operation, through several steps between October and December (e.g., by adding a layer of gravel).

normal camp operations by temporarily reducing the capacity. The site in Erding opened already as a winterized camp, after a longer construction period.

The project was implemented in a joint effort of multiple partners, including the implementing organization at the national and local levels, the civil protection, the armed forces and relevant local authorities. Three gymnasiums could be used for collective centres immediately, with enough space around to set up hundreds of family tents.

Besides active support in the set-up, the armed forces (the Helfende Hände / helping-hands sector) were also used for the registration process. The civil protection's huge network of highly skilled volunteers was well equipped with heavy machinery and tools to be used in case of emergencies. Within one week, a camp to accommodate up to 3,000 people was set up.

In a second step, a better planned camp, with proper infrastructure and sufficient winterized accommodations, was to be built on the former airfield of the base. However, due to environmental protection issues, the preferred location was finally not available. The winterized accommodation facilities (3,200 in Feldkirchen, 5,000 in Erding) were set up on the same site, using a variety of different shelter interventions: re-purposing of existing buildings and construction of large tents as collective centres; deployment of family tents; installation of infrastructure and structures for communal facilities. At peak, Feldkirchen was accepting up to 25 buses (with approximately 1,400 new arrivals) per night.

All those who passed through the reception centres of Feldkirchen and Erding, moved to longer-term accommodation elsewhere in Germany through a series of steps, or tried to reach another European country to apply for asylum.

After June 2016, due the decrease in arrivals, the two sites were put in stand-by mode. Within 72 hours, Feldkirchen could accommodate up to 1,000 people, and after 14 days it could reach full capacity. Erding could be back to full capacity within a notice of 30 days.

COORDINATION

New arrivals to the state of Bavaria who could not be distributed to other states, or were caught by the border police, were sent by buses to Feldkirchen. The capacity of the camp was communicated on a daily basis to the refugee coordination centres in Passau and Munich, in order to decide how many refugees would be distributed between the different reception centres.

Within the camp, there were two complex layers of coordination for the project. Both daily camp management and longer term modifications of the camp had to be coordinated with a wide range of actors. Bi-weekly coordination meetings aimed to solve all issues as they arose, which was normal for a project under such extreme time pressure.

MAIN CHALLENGES

The major challenge was turning the summer camp into a winterized camp, because the works had to be conducted on the same site, while it was operating. Scaling-up was done by sectors, causing a temporary reduction of accommodation capacities. The sector that was to be scaled up had to be separated by fences from the main camp, the summer tents were removed and the ground was prepared, before the winterized structures could be installed in each sector. There was a significant drop in numbers of refugees in November and December 2015, which made this process easier.

Without the waivers to normal planning codes, granted by the government for the emergency situation, this project would not have been possible in the given time frame. Still, **it was challenging to implement such a project with authorities who were used to very clear laws and responsibilities**, which were not always applicable for the camp construction. Administrative levels and requirements changed during the set-up period, causing some inconsistencies. For example, several rows of winterized tents (that had already been installed) had to be moved to provide wider escape alleys in case of fire or panic, although the set-up had previously been agreed. Fire prevention was the most difficult and controversial part, due to different interpretations of safety. In Feldkirchen, for instance, bunk beds were not allowed in collective halls (due to fire risk), whilst there were no problems in Erding. Although at the national level there was consent to prioritize action over bureaucracy, at field level it was not always clear how flexible rules were. As a result, the project would sometimes make a brave step forward followed by two steps back.

WIDER IMPACTS OF THE PROJECT

There was **great interest in this project within the hosting community** and many volunteers supported the camp operations in different ways: with in-kind donations, during the welcome of new arrivals, or playing with the children. A local night club organized charity concerts to support the camp. The entrance fee was a pair of warm socks, shoes or other winter clothes, which were all urgently needed for the camp residents.

The camp also attracted local businesses. Soon, private taxis were waiting in front of the camp to take customers from the camp to the next train station, though this was not encouraged. Local suppliers also provided other services to run the camp, such as heating fuel, catering and laundry.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Involvement of local volunteers through the local branch was rapid and at scale. Volunteers were interviewed and deployed within a few weeks, according to their capacities and interests. Several people from the organization and its local branch were deployed just to coordinate the volunteers.

+ The armed forces were supportive and engaged throughout the process.

+ Positive partnership with civil protection and armed forces, due to the ad-hoc availability of skilled manpower and professional technical equipment.

+ Very fast and coordinated approach to set up the camp. All partners were strongly committed to provide the best support possible to the refugees. There was flexibility to start with a quick-and-dirty solution to provide urgently needed relief, and then to scale up, step by step.

+ Quick availability of huge numbers of essential items, like tents, field beds and blankets, was possible through combined donations of the organization's partner societies.

WEAKNESSES

- Lack of available space and strict regulations, due to poor site location. The site was situated between military barracks, a water protection area and the breeding ground of a protected bird, so there was no space for expansion or relocation during the winterization phase. Additionally, strict regulations were applied on handling fuel for heating and power generators, because of the direct proximity to the environmental protection area.

- Complex coordination structures to plan the winterized camp, with changes in levels of authorities, diverted resources and energy from daily activities.

- Lack of experienced staff at field, as well as Headquarters, levels caused stress and misunderstandings. Rapid deployment of experienced people, who could run such a camp 24/7, turned out to be very challenging. International partner societies stepped in, but staff still needed to work very long hours, and there was high turnover.

- Insufficient strategic approach to the recruitment of national staff in all positions, but in particular those with translation capacities.

- No real link to mid- or long-term accommodation, since no one knew where people would be hosted next.

The site in Erding between October (left) and December 2015 (right).

Accommodation options varied greatly in the two sites. From individual family tents, to large collective tents or field beds in gymnasiums.

LEARNINGS

- **Include an expert on environmental issues** in the assessment team tasked with choosing the site.
- **Have all relevant authorities on board from the beginning.** In this case, such a project was new to the authorities and the legal implications not always clear. The local fire brigade seemed to be one of the most important partners.
- **Include a shelter expert in the planning process** from the very beginning.
- **The multi sectoral approach was essential to the success of this project.** Shelter, food, medical screening and treatment (also important to protect others in mass accommodation), NFIs and restoring family links were all key components, which would not have worked if done independently.

OVERVIEW

UKRAINE 2014-2016 / CONFLICT

CRISIS	**Conflict, 2014-onwards**
PEOPLE AFFECTED[1]	**4.4 million** (2.6 million for Shelter-NFI)
PEOPLE IN NEED OF HUMANITARIAN ASSISTANCE[1]	**3.8 million** (0.6 million for Shelter-NFI)
PEOPLE SUPPORTED BY THE RESPONSE (as of November 2016)[2]	**20,526** houses repaired **109,937** individuals received emergency assistance **438,882** individuals received NFIs

SUMMARY OF THE RESPONSE

Political unrest in Eastern Ukraine led to a humanitarian crisis, since the start of hostilities in early 2014. After three years, shelter-NFI needs remain high for IDPs, non-displaced populations with damaged dwellings, host communities and returnees. Along with covering immediate needs, the Shelter-NFI Cluster has promoted preparedness and durable solutions, especially focusing on winterization activities.

1. Nov 2013: **Protests commence in Kyiv**; President Yanukovych flees in February 2014.
2. Mar 2014: **Crimea crisis erupts;** declaration of autonomous regions in Donetsk and Luhansk.
3. Apr 2014: **Armed groups take control of the eastern Donbas region.**
4. Jul 2014: **Shelter sector activated and strategy developed.**
5. Aug 2014: **Preliminary Response Plan launched.**
6. Dec 2014: **Shelter Cluster activated.**
7. Jan 2015: **Debaltsevo crisis – third wave of displacement.**
8. Feb 2015: **Humanitarian Response Plan (HRP) launched.**
9. Sep 2015: **First Winterization Guidelines produced focusing on Northern Donbass.**
10. Feb 2016: **Government suspends social payments to IDPs.**
11. Mar 2016: **Shelter-NFI Cluster rolls out Damage Database per address in Government Controlled Areas (GCAs).**
12. Apr 2016: **Subnational Cluster begins implementing a cooperation agreement with Donetsk and Luhansk authorities in GCAs to discuss transition options.**
13. Jul 2016: **Shelter Cluster Transition Plan is drafted.**
14. Aug 2016: **Second Winterization Guidelines produced focusing on North and South Donbass and on Non-Government Controlled Areas (NGCAs).**

CONTEXT

Eastern Ukraine experiences long, harsh, winters. Average temperatures drop below 0°C from the end of November to mid-March, with an average low of -10°C and -20°C in the colder areas. Rainfall is consistent throughout the year. Rural villages, especially those with already restricted access, are at risk of being cut off during periods of heavy snowfall.

Following the Government of Ukraine's decision to abandon talks that would bring the country closer to EU membership in 2013, political unrest led to a destabilizing humanitarian crisis. In March 2014, a **first wave of displacement** took place from Crimea, following its declaration as an Autonomous Republic, while violence escalated in Donbas region in the east, where it continued for two years. In 2016, shelling was concentrated in specific – rather than diffuse – areas.

The political unrest has affected households in preparing adequately for the winter. Homes damaged by shelling urgently needed to be repaired in time for winter, while the internally displaced and non-displaced alike struggled to meet basic needs, such as purchasing winter clothing and household items, or being able to pay for the rising costs of utilities.

[1] From Humanitarian Needs Overview (HNO) 2017.
[2] Pre-Conflict Housing in Ukraine: Real Estate Markets and Tenure Dynamics. Shelter Cluster Ukraine, November 2016.

A focus of the Shelter-NFI response in Ukraine has been preparing for the harsh winter conditions. This included the distribution of firewood in the affected areas.

SITUATION BEFORE THE CRISIS

After the process of mass privatization in the housing sector following 1991, access to adequate housing became limited and communal residential infrastructure and services – that had previously been maintained by the state – started decaying. The economic crisis of 2008 resulted in a reduction in foreign investment, leading to neglect of existing buildings and a halt of new construction. Inadequacies in social housing and housing policy failed to address the housing needs of low-income households (1.39 million people in 2013)[2].

SITUATION AFTER THE CRISIS

Just before the start of the conflict, 93.7% of the housing stock was privately owned, with 3.4% living in private-rental housing and 2.9% in communal housing. Individual houses outside major cities sustained shrapnel punctures to roofing, damaged windows, and in 3% of cases full destruction. With the escalation of hostilities in 2014, people fled the contact-line areas of Donetsk and Luhansk Oblasts (provinces), taking refuge in collective centres and apartments, or being hosted by relatives. Properties and income were left behind, with displaced families relying on their savings to meet basic needs. 93% of the houses that sustained damage in the Government-Controlled Areas (GCA) of Donetsk and Luhansk were privately owned, the extent of which was exacerbated by historical lack of maintenance and care[2]. 18,500 of these houses were in the GCA, while a similar scale of damage was estimated in the Non-Government Controlled Areas (NGCA)[3].

As the conflict has continued for three years, resources and coping mechanisms have been seriously depleted. The situation was compounded by the suspension of social payments to IDPs, making pensioners the primary breadwinners, for 38% of affected families in the GCA and 60% in the NGCA[4].

Returns were noted in 2016, both voluntary and involuntary (e.g. those forced to return home having depleted all their resources, or been evicted). Across the country, 59% of IDPs have stated a preference to return home because of their private property, highlighting the importance of private houses as a main source of capital[5]. Significant differences exist in the adequacy of shelter and access to basic items, services and utilities, between urban and rural contexts[6]. Groups with specific needs include IDPs, non-displaced populations with damaged dwellings, host communities, households experiencing multiple displacement, and returnees (sustainable return; formerly displaced, dwelling uncertain)[7].

SHELTER CLUSTER STRATEGY

The Shelter-NFI Cluster in Ukraine was established in December 2014, to respond to **urgent humanitarian needs** for shelter and NFIs during the sudden onset of the crisis, initially through unconditional cash grants. This has transitioned into **preparedness activities,** to enable vulnerable and affected households to better cope with protracted displacement, in often inadequate conditions – particularly in **dealing with the extreme winter,** as access to items, fuel and heating became increasingly restricted by dwindling household resources. Shelter actors have begun mainstreaming winterization preparedness into all repair works, prioritizing the creation of “one warm room”, before upgrading and insulating other areas of the house.

While continuing to coordinate the emergency and winterization response, the Shelter-NFI Cluster **promoted durable solutions** for IDPs and conflict-affected populations, through emergency assistance, transitional solutions, and the facilitation of longer-term shelter, until the minimum criteria for cluster deactivation would be met. This included a **transition of responsibility from the Cluster to national actors,** particularly the Oblasts of Donetsk and Luhansk, who have taken a primary role in the emergency response[8].

[3] Due to limited humanitarian access in the NGCA, the figures are estimated through various sources.
[4] HNO 2017.
[5] From IOM NMS Round 4, Sep 2016, cited in Pre-Conflict Housing in Ukraine: Real Estate Markets and Tenure Dynamics.
[6] Shelter-NFI Needs Assessment Report: Ukraine, Aug 2015, REACH / UNHCR.
[7] Shelter-NFI Cluster Strategy, June 2015.
[8] Draft Shelter Cluster Transitional Plan, July 2016.

TABLE 1 - WINTERIZATION ACTIVITIES*		
RESPONSE OPTION	**DESCRIPTION**	**VALUE / COST**
Winterization cash grant	Injection of a one-off, unconditional cash grant for utilities, NFI and clothes through bank transfer or vouchers	USD 100 per individual
Collective centre winterization	Basic repairs and NFI provision for collective centres sheltering people with specific needs (e.g. institutions, retirement homes, orphanages, accommodation for people with disabilities, etc.)	Up to USD 600 per individual
Solid fuel and heater	Distribution of heating items	USD 110 per household without heater; USD 200 per household with heater
NFI Clothing Set	In-kind provision of warm clothes, jackets, thermal underwear and shoes	USD 80-100 per person

* Source: Shelter-NFI Cluster Activity Matrix, HRP 2017.

SHELTER-NFI RESPONSES

83% of Shelter-NFI assistance has been provided in-kind. Monetized assistance in NGCA was not considered a viable option due to limited access to financing and markets for communities along the contact line. While **unconditional cash** was used prevalently in 2015, **restricted cash** has always been used as a modality for shelter repairs. Starting in 2016, as shelter partners moved into **heavy repairs and reconstruction works**, mixed modality (a combination of delivery of materials, provision of construction support and transfer of cash to finish repair works) was increasingly used by shelter partners. In 2016, closer links were developed with government authorities to coordinate the delivery of assistance with the coverage of heating and utility subsidies. A major focus of shelter and NFI activities have been in **preparing for and mitigating the effects of low temperatures** (*see table 1*). Other shelter activities, such as repairs, were an important feature of winterization activities, to achieve adequate shelter conditions and protection of vulnerable populations (*see table 2*). Other activities included the provision of **permanent social housing** for IDPs and vulnerable groups (in need of housing) who did not wish to return to areas of hot conflict, but lacked adequate accommodation. **Contingency plastic sheeting** was also provided.

The Cluster has **developed a series of tools** to support partners in the implementation of activities. These included the collection of a database of damaged houses in partnership with local authorities in the GCA; the development of winterization guidelines, drawing on lessons learned during the response in 2014-2015[9]; a referral database focusing on winterization, as well as other needs, to keep organizations updated[10]; and preliminary feasibility assessments for a profiling exercise, to identify durable solutions for the most vulnerable IDPs[11].

Interventions included housing repairs (Starohnativka, Dec 2015).

[9] Available at http://bit.ly/2juGgT2 and http://bit.ly/2kFoTRe.
[10] For more information on the referral system, visit http://bit.ly/2kj0qUp.
[11] More information can be found on the Profiling Technical Working Group page: http://bit.ly/2kj0HXr.

TABLE 2 – MAIN SHELTER AND NFI ACTIVITIES*		
RESPONSE OPTION	**DESCRIPTION**	**VALUE / COST**
Cash for rent or other shelter-linked monetized solutions	Securing adequate and to-standard shelter. As a response for potential eviction. Possibility to decommission Collective Centres.	USD 600-700 per year per household for rural and urban areas (this varied by city)
Acute emergency repairs	In areas where active conflict damaged houses or where conflict has restarted. Plastic sheeting, wooden battens for quick repairs of openings and roofs, cement and in some special cases sand.	USD 40-80
Light and medium repairs	Roofing materials and glazing to stabilize living conditions.	USD 400-500 for light repairs; Up to USD 1,000 for medium repairs
Structural (heavy) repairs	Partial reconstruction of one or several walls. Full concrete ring beam and retrofitting for the structure. Partial flooring and partial opening (warm room). Full roofing. Partial insulation. Basic sanitation and heating system.	Up to USD 4,000 per household of two persons; USD 500 per extra person
Essential utilities, network repairs and connections	Conditional on other works being implemented in the community, and repairs are complementary to other general activities.	USD 100-250 per household
Reconstruction	Reconstruction on existing foundations of a new, structurally sound small house. Average 10 to 12m^2 per person (gross surface area), insulated, with basic furniture (bed), heating system, and sanitation. May include possibility of future expansion.	USD 8,000 per household (two persons) plus USD 1,000 per extra person
NFI (general)	Essential household item provision, e.g. kitchen kit, hygiene kit (if not covered by WASH sector); bed and mattresses if needed.	USD 200 per household
NFI (bedding set)	In-kind provision of bed linen, pillowcase, blankets.	USD 16 per linen set; USD 8 per blanket

Some projects aimed at re-building completely destroyed houses (Sloviansk).

CHALLENGES

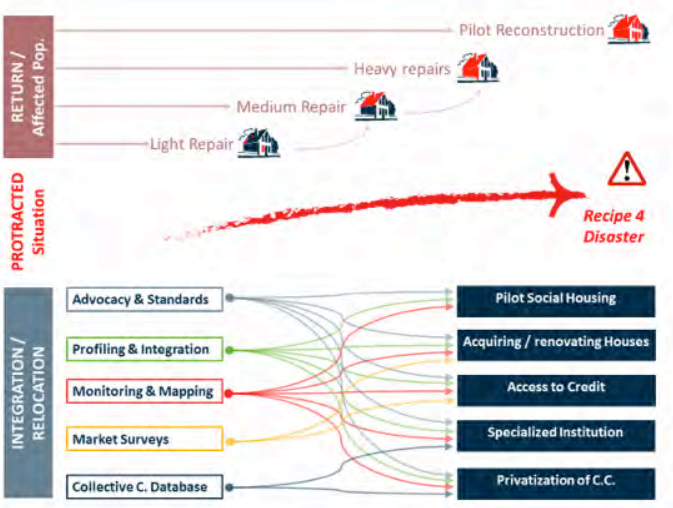
The lack of access in NGCA severely restricted humanitarian coverage. Regular liaison with local authorities and creating opportunities to work with local organizations on the ground remained essential. Advocacy efforts have been key to meet the humanitarian needs, though **poor information sharing** between stakeholders severely constrained the informing of good advocacy. **Lack of early recovery programming** destabilized the population and forced them into worsening humanitarian conditions, or secondary displacement. There was also a **lack of technical resources**, particularly in the NGCA. While communities close to the front line have not experienced shelling for over a year, traditional development donors would not fund any reconstruction or access-to-housing projects in these communities, due to the **continued and unpredictable instability**[12].

LOOKING FORWARD

- By the end of 2016, **short-term humanitarian needs of IDPs remained high,** as the conflict prolonged and resources depleted. The most vulnerable non-displaced populations, mostly residing near the contact line, required continuous support, due to ongoing damage to shelter and infrastructure, alongside access to markets for fuel and NFIs.
- **Self-ownership of housing** in Ukraine presented an opportunity for resilience and recovery, being an asset of economic stability.
- **Topping up acute and primary repairs** through larger-scale structural and reconstruction activities was an integrated part of the early recovery process, and included the revitalization of basic infrastructure. As part of this effort, the Shelter-NFI Cluster began **cooperating with the Education and Health Clusters,** in order to create a database of damage and repair for schools and hospitals.
- Given the neglect of common premises, infrastructure and utilities in residential buildings following privatization, it was proposed that programmes include social **programming, specialized institutions (such as elderly care facilities), or access to credit** to facilitate renting and acquisition of housing.
- In 2016, the Cluster initiated discussions with development donors, to **provide guidance on vulnerability profiling**, in order to come up with specific policies for better targeting of needs.
- **Compensation programming for damage and losses** might secure the rights of citizens who lost assets and family members.
- The **Housing, Land and Property Technical Working Group** was established, between the Protection and Shelter Clusters.
- **Recovery programming also had to consider the "ghost-town effect"** of settlements along the contact line to mitigate the likelihood of displacement or secondary displacement. These areas were characterized by damaged houses or lack of adequate housing, unemployment, low wages, lack of available transportation, lack of social services, poor road conditions, and lack of medical and educational services.
- **Next steps to foster peaceful co-existence** could include managing absorption capacity of the housing sector, developing social housing initiatives, supporting proper urban development, stimulating community support, and engaging various stakeholders (including the private sector, humanitarian actors and local authorities).

[12] Draft Shelter Cluster Transitional Plan, July 2016.

Multistorey buildings (top) and houses (bottom) in conflict zones sustained significant damage due to shrapnel punctures, and required urgent repairs.



This diagram was used to orientate actors in a conflict setting, and to come up with possible solutions to facilitate a longer-term path towards recovery.

SECTION B

OPINION PIECES

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CONTENTS

This section contains short discussion documents on various issues in shelter and settlements, written by individuals with a specific interest in each subject.

GBV MAINSTREAMING FOR GOOD SHELTER PROGRAMMING

Reducing GBV risks through better shelter programme design and implementation

By Amelia Rule and Jessica Izquierdo

Women often have to transport NFIs and shelter materials for long distances and through unsafe locations (Pariang refugee camp, South Sudan).

Shelter staff are frequently taken to remote locations and interact with crisis-affected people, often in their homes (Nigerian refugee woman in Niger).

WHY SHOULD SHELTER ACTORS WORRY ABOUT GENDER AND GBV?

Shelter programmes are based on the most fundamental principles of protection: a roof over one's head, clothing on one's body; and at a minimum, freedom from physical harm and violence. The settlement as a whole, as well as individual shelters or "homes", are often the one place where people seek wellbeing and safety. Shelter is critical in allowing dignity and recovery after a crisis. It must be habitable, provide physical safety and adequate space, as well as protection against the cold, damp, heat, rain, wind, and other climatic threats which impact health. In essence, shelter offers protection. However, it is not enough to build shelters: these – and settlements in which shelters are built – also need to provide protection from violence, including gender-based violence (GBV)[1]. While Shelter practitioners should not replace GBV and Protection specialists, good shelter programming must include mitigation measures throughout the project cycle to reduce GBV risks across their programmes, ultimately contributing to better shelter outcomes.

Case study A.16 gives an example of a shelter project that provided cash and NFIs to families in collective centres, to encourage return to their original houses. Poor knowledge and consideration of the family structure and cultural practices, such as polygamy, led to insufficient support and contributed to reported incidents of intimate partner violence.

ONE SIZE DOESN'T FIT ALL

GBV mainstreaming is part of an overall gender approach and is essentially about achieving better, more effective and impactful, shelter projects that proactively aim to do no harm. GBV mainstreaming is not an end in itself, but a strategy and process that aims at not overlooking issues that relate to gender and protection dynamics; which, if incorporated early in a response, are more likely to help staff to reduce vulnerabilities of affected populations, including women, girls, men and boys. As a minimum, projects should work with the gender norms in a society to make access to assistance more equitable (gender sensitive) and hopefully even change inequitable structures (gender transformative[2]). A focus on protection and gender-specific needs and capacity ensures better participation and more relevant shelter assistance, which meets individuals' needs, including improved privacy, safety and dignity.

In the Haiyan response, certain projects aimed to equally involve women in the reconstruction process, e.g. in the promotion of Build Back Safer messaging and vocational trainings on construction. Women also had a key voice in deciding the design of shelters, to ensure the inclusion of elements to guard their privacy and dignity, such as internal partitions for separate sleeping areas, opaque cladding and spaces for hygiene and sanitation activities. Ultimately, to mitigate risks of GBV.

Potential GBV risk-mitigation interventions in shelter programmes should always be informed by a gender and risk analysis, conducted at the start of the programme[3]. These can support shelter practitioners to identify risks before they unintentionally cause harm. For example, the involvement of women may inadvertently lead to a decrease in men's access or control of the recovery process, contributing to domestic, intimate partner violence, and other types of GBV[4], if a proper assessment of the gender dynamics and roles is not undertaken early on.

This highlights more than ever the importance of good assessments and risk analyses that consider cultural, religious

[1] "Gender-based violence (GBV) is an umbrella term for any harmful act that is perpetrated against a person's will and that is based on socially ascribed (i.e. gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. These acts can occur in public or in private." IASC 2015, Guidelines for Integrating Gender-Based Violence Interventions in Humanitarian Action: http://bit.ly/1MMWHBt, also at http://gbvguidelines.org/

[2] Gender and Shelter; Good Programming Guidelines, 2016, http://bit.ly/2iOIRqq.

[3] Gender Handbook in Humanitarian Action, IASC 2006, http://bit.ly/2iWPWu9.

[4] Good Shelter Programming, Tools to Reduce the Risk of GBV in Shelter Programmes, CARE UK, IOM 2016. Available at http://www.sheltercluster.org/gbv.

and economic practices, as well as the distribution of gender roles and existing power structures. The appropriate inclusion of gender and female participation in any project can have the potential not only to improve women's status in society, but also to decrease risks that can lead to GBV.

PROTECTION INSIDE AND OUTSIDE THE HOME

The starting point for any shelter programme is at the settlement level: the location where people will find shelter. Taking GBV risks into account at settlement level can help shelter practitioners to consider how shelter programmes will impact on issues such as overcrowding and site density, access to sanitation facilities, markets and emergency relief items.

An often overlooked type of GBV is the denial of resources, opportunities or services, which in the shelter context can be the denial of rightful access to housing, land, NFIs, safe shelter or livelihoods opportunities. To successfully ensure access to life saving services, shelter programmes must integrate protection and gender considerations prior to and during implementation. For example, considering GBV risks in an NFI distribution can allow shelter programme staff to better plan assessments and targeting, distribution locations, prioritization of individuals at distribution sites, onwards transportation of materials, feedback and complaints systems and staffing, to ensure safe access for vulnerable groups during distribution activities.

Case study A.5 shows an example of distribution points that were carefully chosen and procedures designed to ensure the most vulnerable groups – especially women and girls – had a priority line and a "safe passage", as well as support to transport the valuable items back home. The distribution was carried out by a gender-balanced team who was trained to detect and respond to incidents appropriately.[1]

[1] Gender and Shelter; Good Programming Guidelines, 2015, p.14-15.

GBV does not just occur outside the home. Once settlement approaches and location have been decided, the focus of shelter programmes moves toward the home. For many, the home is not a place of safety. Intimate partner violence and domestic violence often take place in private, behind closed doors and between family members. Providing suitable shelter designs and sleeping spaces for different family members can help to mitigate certain acts of GBV. For example, providing adequate covered space per person reduces risks associated with sharing spaces with non-family members[5].

In 2011, following findings from focus group discussions, a transitional shelter project in Haiti adapted shelters to include an additional door to the rear. Not only was it traditional to have two entrances but it also served as a secondary exit from the house if a family member needed to escape an act of violence[1]. Separately, some women also felt safer in homes with outward opening doors, as they felt it would be harder for someone to pry the door open rather than to kick it in.

[1] Lessons Learnt and Best Practice, IFRC Shelter programme in Haiti 2010-2012, p.74, http://bit.ly/2iONfFT

Good shelter programming which considers GBV will not only focus on practical construction aspects, but will also make sure that vulnerable families feel safe and secure in their communities and are not relying on negative coping mechanisms. If families cannot meet the costs of shelter (such as rent, bills, maintenance and repairs), then negative options such as early child marriage[6], trafficking of persons and transactional coping strategies can put vulnerable groups at risk of GBV. When designing shelter programmes, practitioners not only have the responsibility to consider the protection of all vulnerable groups when travelling to access water and shelter materials, but also to ensure safety within the home.

SHELTER ACTORS WORK WITH SURVIVORS

Project implementation frequently takes shelter staff to remote locations and directly into the homes of affected populations. Staff members may be the only humanitarian actors to meet with families and witness or hear about a case of GBV that may or may not be linked to shelter activities[7]. In these settings, referral pathways[8] and qualified GBV staff are not always easily accessible, emphasizing the responsibility of all humanitarian actors, including shelter practitioners, to know how to safely respond to GBV disclosures and how to facilitate access to available support services for GBV survivors.

A staff member was carrying out a shelter assessment in South Sudan, when a mother of a beneficiary disclosed that her daughter was being abused by a host family member. The shelter practitioner offered to take the daughter and mother to the health clinic, but the mother feared further reprisal. The staff member then reached out to colleagues to support the removal and relocation of the daughter and her family. However, in doing so, he compromised the confidentiality of the survivor, which resulted in further and more acute abuses.

The appropriate response to survivors of GBV will vary by context. However, all field staff should be trained in when and how to act on GBV disclosures, to minimize further negative impacts on survivors. This requires shelter actors to understand the concepts of confidentiality, consent, and child safeguarding, while also adhering to referral protocols in place to support survivors[9].

CONCLUSION

It is difficult to quantify the number of GBV incidents in any context, but it should always be assumed that GBV is occurring. Measuring the impact of shelter interventions on GBV mitigation can also be challenging. Despite this, ensuring privacy, dignity and a feeling of safety can greatly influence families' security and well-being, so that people are free to access lifesaving services. Therefore GBV integration should not be seen as an additional task to add to shelter practitioners' to do list; it can be understood as an integral approach to programming, which includes the key principles of risk analysis, participation, inclusion, consultation and engagement with the affected communities. Abiding by these principles ultimately contributes to the overall objective of good shelter programming and is vitally important in ensuring the rights of those individuals we aim to protect.

[5] Sphere Standards for Shelter, Chapter 4, http://bit.ly/2iOYe21.

[8] To Protect Her Honour: Child Marriage in Emergencies, http://bit.ly/1Ky3vkF.

[7] This is defined GBV disclosure.

[8] A referral pathway is a flexible mechanisms that safely links survivors to supportive and competent services.

[9] The GBV Constant Companion, a useful tool with practical step-by-step advice on how to react when faced with a disclosure of GBV, is available along with other resources at http://www.sheltercluster.org/gbv.

ENABLING POST-DISASTER SHELTER RECOVERY

Changing our standard approaches to risk and success

By Kate Crawford, Tom Newby and Robyn Baron

Shelter programmes which tend to prioritize structural safety over other objectives run the risk of missing or exacerbating other risks, such as loss of livelihoods, social exclusion or exploitation. Addressing structural concerns in isolation will not ensure that vulnerable people are safer than before the disaster.

For shelter practitioners in international organizations, working in natural disaster responses, there are strong pressures and incentives to build back "better" (or "smarter", or "safer"), and subsequently, to interpret "better" as a question of structural safety[1]. This often leads to hastily agreed approaches, isolated from host government and affected populations, that define and assess "risk" in terms of structural robustness, rather than other factors relevant to people's safety, dignity and wellbeing.

Structural safety is important: the collapse of unreinforced masonry and reinforced concrete structures, built without following building codes, has been the main cause of death in the major earthquakes of the last 60 years[2]. In contexts where housing of these types proliferates, the shelter sector should be asking deep questions about its role, the underlying systems which produce these homes, and where and how vulnerable people live in these systems.

Despite this, shelter programmes which disproportionately prioritize structural safety potentially miss or exacerbate risks which are more relevant to affected men, women, girls and boys, such as losing access to livelihoods, social exclusion or exploitation. Structural solutions in isolation will be insufficient to ensure vulnerable people are safer than they were pre-disaster. This is particularly true for marginalized groups, who do not have decision-making power (or ownership) over shelter structures, or fewer choices on where they are able to settle. Often, this applies disproportionately to women.

While there are notable examples of non-structural risks being addressed by shelter programming, such as the more frequent inclusion of housing, land and property rights interventions in programmes and increasingly integrated approaches, the measures of success of shelter programmes often continue to remain focused on the quality of buildings, rather than the quality of lives.

This article argues that, to address this, shelter practitioners need to rethink their role in defining what is "better", by revising how the shelter sector currently assesses "risk" and "success", in ways that transfer decision-making power in the hands of affected people, instead of largely being kept in the hands of professional shelter practitioners.

"RISK" AND "SUCCESS" IN THE SHELTER SECTOR

WHY PRIORITIZE SAFETY?

There are many factors which lead practitioners to prioritize structural strength in the delivery of shelter projects.

- **Shelter practitioners often bring assumptions** about (other people's) safety from their own countries and backgrounds, and do not understand or give sufficient importance to the risks and problems disaster-affected people live with.
- **Shelter funding draws scrutiny** because housing is often a private rather than a public good[3], so mechanisms for subsidizing and guaranteeing housing recovery are politically and economically controversial.
- **Shelter-related responsibilities are unclear**, because responsibilities for land, infrastructure and housing are often split across institutions. Structural strength is (often wrongly) perceived to be simpler and more easily con-

[1] Build Back Better analysis includes re-affirming post-disaster settlement and shelter principles of *Shelter After Disaster* (UNDRO, 1982).

[2] Spence, R., 2007. Saving lives in earthquakes: successes and failures in seismic protection since 1960. Bulletin of Earthquake Engineering 5, 139–251.

[3] Disaster Recovery Framework Guidance, http://bit.ly/2cIHF6Q.

trolled by INGOs, in comparison with other shelter-related vulnerabilities.

- **Resources involved in shelter construction per household are significant**, and agencies and donors prioritizing value-for-money want to ensure their investment will last.
- **Shelter structures, and failure of those structures, are highly visible.** Structural failure is also more easily linked to implementing agencies than, say, the inability of a household to pay rent or access essential services. For this reason, and the great focus implementing organizations put on the risk of brand damage and liability, they concentrate disproportionately on structural safety.
- **Shelter after a disaster is newsworthy,** understandably creating a window of opportunity and pressure to improve building practices[4], as indeed stated in Principle 8 of *Shelter After Disaster*[5].

Visibility, scrutiny, cost, misperceptions of risk and responsibility and the invisibility and complexity of other factors drive the international humanitarian system to expend great time and expertise addressing the structural strength of shelters, rather than other risks that might matter more to marginalized people.

MORE THAN JUST "STRUCTURAL SAFETY"

Often, "better" is interpreted as "safer" – i.e. buildings that better resist collapse. Measuring success on these narrow terms can be problematic, because the definition of "safer" is unclear or hard to check, but we could instead use broader criteria, such as:

- **Quantity, Speed and Coverage:** the sector's typical indicator is a count of the number and rate of shelters built by international organizations, with no perspective on shelters being built by other actors, or the rate of household formation and shelter construction before the disaster. Factors such as occupancy rate, post-occupancy satisfaction, maintainability and other longer-term outcomes, are rarely measured.
- **Choice and Quality:** after the 2005 earthquake in Pakistan[6], knowledge was cascaded through government structures and district engineers, and improvements in structural safety were, in part, achieved by recognizing and drawing on existing, local practices. Structural safety was prioritized, but in the context of what could realistically be achieved and was culturally appropriate.
- **Sustainability, Liveability and Longer Term:** a longitudinal study of reconstruction projects following the 2001 Gujarat earthquake[7] suggested that measures of "success" encompass the preferences and engagement of the people who will occupy the shelter. Where projects prioritized structural safety to the detriment of other requirements, and/or had neglected social capital and "longer-term considerations of comfort, adaptability and the environment", the results were a mixture of outcomes, ranging from vibrant communities to abandoned villages. Such findings were echoed in more extensive studies of projects in India over the last two decades[8]. Early evaluations of the shelter response of one organization after Typhoon Haiyan suggest high satisfaction with the liveability, likeability and appropriateness of the houses, but only incremental improvement in structural safety, compared to the pre-disaster housing[9].

WHAT SHELTER ACTORS OFTEN DON'T KNOW

Overall, the shelter sector risks doing harm, unless affected people play a central role in shelter-related decision-making. If "building back better" is to respond to community members' safety, dignity and survival needs, we need to acknowledge how poorly we understand the following:

- What the affected people do to make their homes meet their needs, outside the scope and timescales of our projects.
- Whether those who live in the building would feel and, indeed are, safer, just because a building is more structurally robust, or because they have recovered secure access to housing that is affordable, maintainable and close to social and economic networks.
- Whether we overall collectively act to increase risk by setting safety standards for individual buildings that are in reality slow, fiddly, costly, impossible to control and check and, if done badly, more dangerous than business-as-usual.
- Why projects work well in some contexts and not in others.

[4] Collapse of unreinforced masonry and non-engineered reinforced concrete buildings has been the primary cause of death in major earthquakes of the last 60 years. Spence (2007), http://bit.ly/2lUjybp.

[5] Shelter After Disaster, 2nd Edition, Davis et al, http://bit.ly/1KZcAcj.

[6] See case studies B.09-B.11 in *Shelter Projects 2008*.

[7] Sanderson et al (2012), NGO permanent housing 10 years after the Gujarat earthquake, http://bit.ly/2mq32QS.

[8] Post-disaster shelter in India: A study of the long-term outcomes of post-disaster shelter projects, CARE India, 2015, http://bit.ly/213Mk3H.

[9] CARE Haiyan shelter project evaluation, http://bit.ly/2msDLpH.

SUCCESSFUL POST-DISASTER HOUSING OUTCOME

=

[Durability	+	Sustainability]	x	People
Disaster resistant Repairable Strong		Location Carbon footprint Adaptable Right materials Ownership Extendable		Livable Likeable Feels safe Appropriate Culturally right

"Hypothesis" from David Sanderson & Anshu Sharma's study of Gujurat Project.

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The shelter sector risks doing more harm than good, unless affected people are more involved in the decision-making process.

"RISK" AND "SUCCESS" IN OTHER SECTORS

It is often argued that prioritizing structural safety should not apply lower standards for those already marginalized and at -risk, and we should not deny access to global scientific and engineering evidence on resisting hazards to those groups. However, shelter practitioners need to take a broader view of evidence and have a deeper understanding of standards.

Other sectors that seek to use technical expertise to systematically define "risk", make related programmatic decisions and assess "success", provide lessons the shelter sector can learn from. For example:

- **Role of evidence in standards:** Setting standards is a deliberation, not a calculation. In "health technology assessments" in the United Kingdom, there is a vast evidence base to support decisions on how to achieve the highest number of quantity and quality "human life years"[10] for a given budget, though the investment threshold itself is not based on "empirical research", but on the collective judgment of experts. "There is no known piece of work which tells you what the threshold should be"[11].
- **System standards:** The World Health Organization, amid fierce internal arguments about the potential injustice of lowering standards for the poor, shifted away from the objective of setting high, global, water-quality standards. Instead, a systemic approach was taken: to build community capacity to assess, find and fix the worst risks in their own water systems[12].

CONCLUSION

In practice, building and sharing technical evidence is valuable, but threshold-setting by technical experts often brings biases and arbitrary time horizons to the table, when defining "risks" and assessing needs in programme planning[13]. Structural engineers, for example, have a professional duty to follow rules[14] – set by others – so are compelled to focus on what is compliant, rather than what is deemed "safe enough".

Shelter practitioners designing and implementing "better" shelter responses, often interpret "safer" as compliant, model, shelter. This leaves them in danger of overlooking other, less evident, risks facing disaster-affected populations. While structural safety must not be neglected, the focus on other risks in shelter programmes must be re-balanced.

Shelter practice in recent years has made positive changes in the way it addresses broader safety issues, with a stronger integration of gender, HLP, GBV and other considerations, with settlements approaches, and with improved community engagement and accountability. However, there is a way still to go, as these are not always measured (or reported on) in ways that contribute to larger sectoral improvements.

Ultimately, shelter practitioners working in natural disaster response and recovery must **re-define measures of success, to support affected people in defining and prioritizing the risks that matter most to them**, supporting their safety, survival and resilience. Success must be measured in outcomes for disaster-affected people, not in outputs of shelters in compliance with externally set standards.

In existing debates about "duty of care" vs "informed choices", the former is often narrowly defined to be about structural safety. It is easy to fall into the trap of thinking that, if only people have sufficient understanding of structural design, it will change their understanding and prioritization of the risks they face. Rather than prioritizing and seeking to fully control risks that lie within their professional competence (to the detriment of recognizing other risks), shelter practitioners must enable informed choice, by providing affected people with the tools and knowledge they lack. Shelter practitioners must also learn **to trust the informed choices that people make, even if they do not understand or cannot relate to them.**


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In Corail, Haiti, a camp was built to engineering standards, though largely ignoring the surrounding area. Soon, it was accompanied by a massive, unmanaged, urban expansion on the adjacent land (see A.9 in Shelter Projects 2010).

[10] Such that a new drug or procedure costing less than a threshold of about GBP 25,000 per "life year" is approved.

[11] See Affordability and rationing, in *Select Committee on Health* – First Report, http://bit.ly/2n2PdoF.

[12] WHO (1997), Guidelines for Drinking Water Quality, 2nd Edition, Volume 3, Surveillance and control of community supplies.

[13] For example, arbitrary thresholds include: colour coding of hazardous zones on a map or decision points of the opening algorithm in Shelter After Disasters dictating the appropriate intervention for each technical "classification".

[14] The Institution of Structural Engineers, Code of Conduct and Guidance Notes, http://bit.ly/2mTQ242.


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Success must be measured in outcomes for disaster-affected people, not in outputs of shelters in compliance with externally set standards.

SCALE, COVERAGE, QUALITY AND IMPACT

in Shelter and Settlements projects

By Joseph Ashmore, Jim Kennedy and Charles Setchell

In most crises, those people receiving support in shelter and settlements (S&S) are a minority of the total with need. Questions of scale, coverage, quality, and impact in implementing S&S programmes thus become key in defining appropriate and responsive ("good") programming, and how best to use limited resources for timely support to populations in need.

Humanitarians working in any sector face the question of how to best use available funds, skills, and materials. For S&S programming, this can be a particularly challenging question, as needs are often great, and funds, skills, and materials in short supply. In agreeing an appropriate level of support, humanitarians need to be mindful of what the impacts will be on those who will be directly assisted, those who are able to support themselves, and what will happen to those whom they are not able to assist.

The different case studies in *Shelter Projects* can highlight these challenges, by showing the diversity of programming for the same crisis response. For example, there are seven case studies[1] after typhoon Haiyan in the Philippines, where organizations faced similar contexts and worked within government and Shelter Cluster guidance, but programme designs and responses differed, due to differing funding, capacities, agency mandates and available materials.

WHAT DO WE MEAN BY SCALE AND COVERAGE?

"Scale" refers to the number of people assisted by an intervention. In the case studies in this edition of *Shelter Projects*, assistance ranges from 484 households, to over half a million households. Whilst looking at absolute numbers provides an idea of scale, looking at the percentage of crisis-affected people supported (including host communities) provides an idea of "coverage". However, the definition of coverage depends upon whether we are referencing the proportion of people (or households) affected, in need, or to be targeted, as well as the timing of assessments, whilst assuming no duplication of effort.

[1] See A.24 and A.25 in *Shelter Projects 2013-2014*, and A.9 to A.13 in this edition.

WHAT DO WE MEAN BY QUALITY AND IMPACT?

By "quality ", we mean the timely, efficient, effective, and appropriate provision of assistance, i.e., how well project inputs are designed and implemented. By "impact", we mean how well project outputs result in positive outcomes and influence beneficial, longer-term, processes following assistance. For example, a project to distribute NFIs can be a simple "dump and run" operation, or can be based on detailed assessments, careful targeting, and viewed as a basis for future community engagement. Poorly designed and implemented projects (of even limited scope) can do harm, while well-planned and implemented projects, however modest, can have significant beneficial impacts on the lives of affected populations.

In addition, reduced funding availability may limit assistance to choices between NFI kits for each of thousands of households, or the construction of houses for a handful of households. There is a tradeoff between the level of support provided to individual households and the number of households which can be assisted. In this context, humanitarians make decisions on how to balance quality and household-level impacts of intervention, anticipated impact, and scale. The S&S sector does not yet have the metrics which exist in, say, the Health sector, to objectively measure interventions. While there has been a lot of work on evaluating the impacts of shelter projects, many decisions on project selection and methodology will continue to be based upon personal experience and resources, i.e., "best practice".

DIFFERING ROLES IN RESPONSE

Organizations have their own varied capacities, and project design should take into account how to maximize those capacities. For example, one agency may have experience in managing common NFI pipelines, whilst another may specialize in training. There may also be an institutional interest in certain types of projects. For some organizations, there may be an interest in designing the "perfect" response project, while for those working in national coordination or mak-

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Humanitarian shelter actors are constantly challenged to maximize the available funds, materials and skills. When deciding the appropriate level of support, there needs to be a balance between the impacts on those who will be directly assisted, those who have the capacity to help themselves, and those who will not be reached at all.

ing funding decisions, the focus might be ensuring equitability and coverage, or looking at how to leverage funding to create shifts in government policy[2].

One role of sector coordination is harnessing different agency capacities and avoiding situations whereby one agency provides a USD 20,000 house, next to another providing a USD 500 transitional shelter to households with similar needs; or, ensuring that entire regions are not overlooked. The common goal should be that all agencies maximize their available resources to support the most vulnerable individuals.

WHAT IS A REALISTIC MINIMUM?

S&S project managers need to decide a realistic minimum of implementable support per household, recalling Sphere Project guidance on support of "minimally adequate" covered living space[3]. Beyond the type of intervention, operational decisions need to balance whether to go for larger numbers of people in easier to reach locations, or focus on those in less accessible locations (or some other focus). People in hard-to-reach areas are often the most vulnerable, yet also among the most resilient, leaving agencies to determine who to target and where the largest cover and impact can be achieved. Decisions on targeting should be made on how vulnerability is defined, where people most in need of assistance are, and how S&S resources and capacities can best support them.

BROADER UNDERSTANDING OF ACCOUNTABILITY

When organizations decide to work in selected locations, they also decide not to work in other locations, cognisant that they cannot be held accountable to entire affected populations, and that most agency accountability frameworks relate only to the populations within project areas. Indeed in many cases, accountabilities of implementing agencies are taken to apply only to project beneficiaries. Practically, it is often impossible to fully understand the breadth of the needs, given limited time, scope and reach of assessments; the result being that decisions are often made with partial/imperfect information.

Coordinating agencies have a differing set of accountabilities. In the Cluster system, most lead agencies take on the responsibility of calling on partners to address critical gaps in humanitarian response. As a result, Cluster leads may need to push for lower levels of per capita assistance, to ensure that life-saving shelter needs are met, before shelter programmes can start to address a broader resilience agenda. They may also look at the broader national recovery agenda, where, for example in Nepal, large-scale government assistance has been planned[4]. In this sense, the coordination role needs to understand accountability as being to the entire affected population.

SETTLEMENTS AND COMMUNITY

To provide a strong framework for all shelter interventions, a settlements focus provides an excellent starting point of shelter strategy and operations. The choice of a specific location of intervention has significant short- and long-term implications for the quality and impacts of a project. Further, adopting a settlements-based approach increases the likelihood of local/national authority participation in key project decisions.

[2] See, for instance, two projects in the Philippines: A.13 compared to A.11.

[3] See, for instance, case study A.20 (Malawi), where tents were distributed as emergency shelter assistance to decongest overcrowded collective centres.

[4] See overview A.3 of the response to the Nepal earthquakes and case study A.4 on the set up and operation of the Shelter Cluster Nepal.

However, one of the recurring S&S sector challenges is that of scaling up community-based approaches in a timely fashion. How can S&S actors engage rapidly at the neighbourhood level, and encourage multisectoral response at scale? Operationally, the assessment and response at neighbourhood level is like a scaled-up household response – working at community, rather than household, level. However, this takes resources to achieve effectively. To date, successful multisectoral projects exist as examples for single neighbourhoods[5].

To help promote neighbourhood responses at scale, Shelter Clusters should create a settlements-based framework as part of the sector strategy that prioritizes neighbourhoods for intervention, based on assessment of neighbourhood needs, boundaries, and local and regional plans. Governments have a critical role in scaling up community-based S&S projects. Well-implemented projects can become models, but at the same time they must be designed to be financially and politically realistic enough to be replicable at scale – something which may only be demonstrable after work in the first "model" neighbourhood is substantially completed.

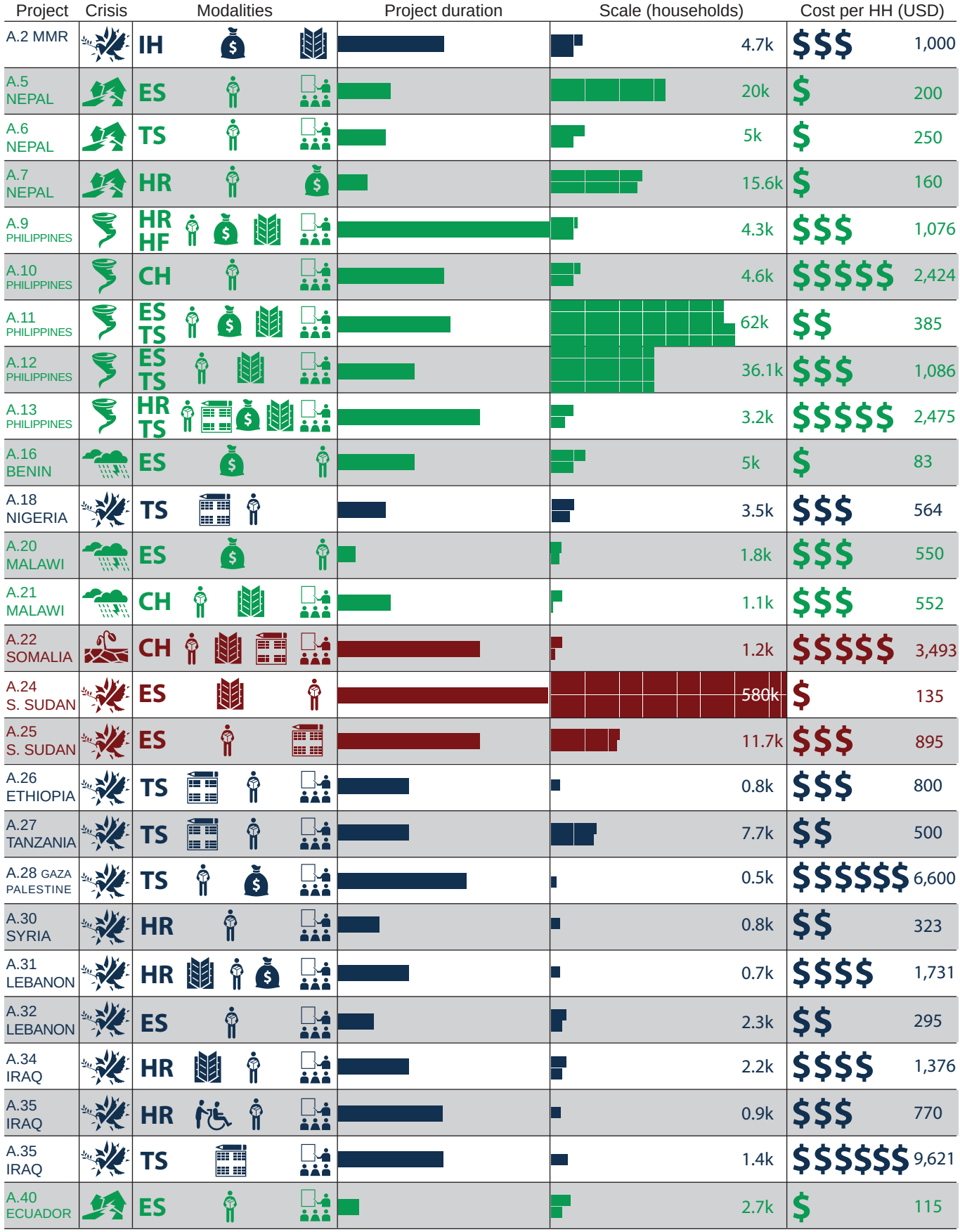
S&S PROGRAMMING AS A PROCESS

Accounting for the critical programmatic parameters of scale, coverage, quality, and impact, serves as the basis for promoting "good" S&S programming. However, there is no fixed rule on how to balance these parameters. Coordination forums can, for example, establish standards of intervention and strive for consistency in their implementation, while also promoting quality programming. No matter what intervention types an agency chooses, it is the actual implementation of the project and the levels of social engagement, wherein the quality and the impacts of a project lie. At whatever scale, and with whichever intervention, a shelter team decides to intervene, S&S programming is a process, and the success of interventions will depend on whether it meets the needs of those it seeks to support in a timely way, and whether it facilitates engagement of affected populations in longer-term processes, towards durable solutions, recovery and development.

[5] See, for example, case studies A.31 (Lebanon) and A.13 (Philippines).

Shelter programme managers have to define a realistic minimum of support, and find a balance between larger numbers of people assisted, in easily accessible locations, or a higher-impact support to a smaller number of people. Top: NFI distribution for IDPs; Bottom: urban neighbourhood, Maiduguri, Nigeria.

DURATION, SCALE AND COST OF CASE STUDIES IN *SHELTER PROJECTS 2015-2016*



ES = Emergency Sh.
TS = Transitional Sh.
HF = Host Families
RS = Rental Support
CH = Core Housing
HR = Housing Repair
IH = Individual House

= Cash-based assistance
= Site planning / infrastructure
= Distribution of NFI / tools / kits
= Guidelines / Communications
= Training / Capacity-building

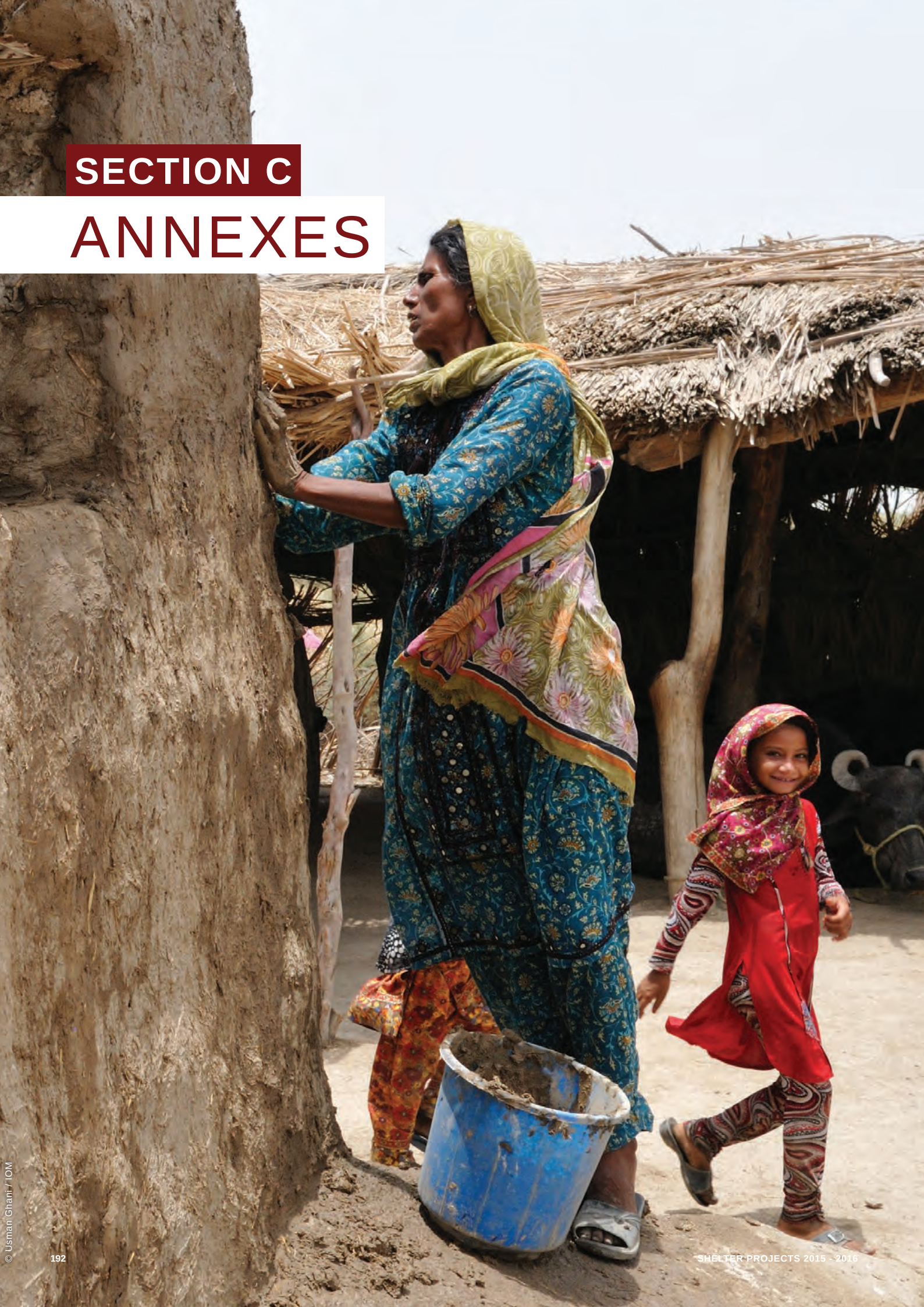
Project duration in months
= 12 months

Total households supported by the project
= 1,000 HH

Average project cost per household served / per unit (in USD, converted with exchange rate at the time of the project). In case different modalities of assistance were used, this is an average for the whole project.

SECTION C

ANNEXES



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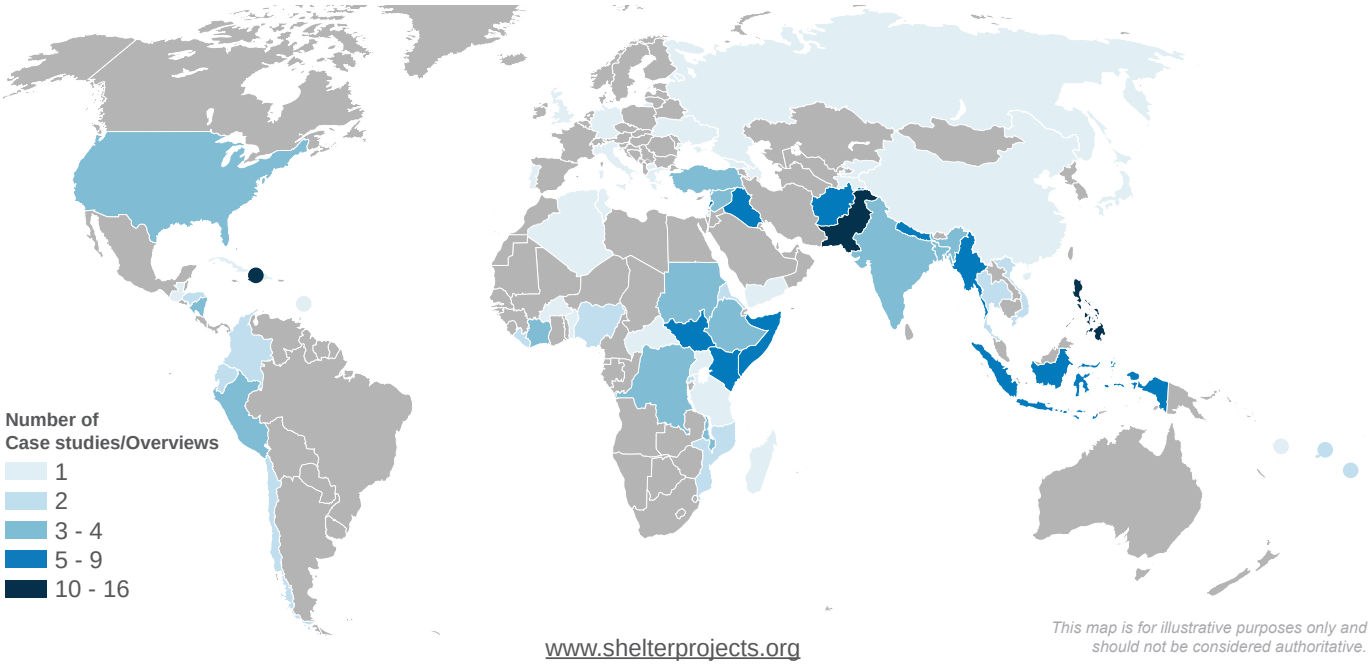
INDEX OF CASE STUDIES BY COUNTRY



www.shelterprojects.org

This map is for illustrative purposes only and should not be considered authoritative.

All the case studies, overviews and updates in this book and the past editions of *Shelter Projects* are available online, and they can be searched by country, year, article type, emergency type and publication, or through a free text search.

- Natural disaster
- Conflict
- Complex/multiple

OV Overview
CS Case Study
UP Update

CS	Afghanistan, 2012, Conflict	SP 2011-2012
UP	Afghanistan, 2009, Conflict	SP 2010
CS	Afghanistan, 2009, Conflict	SP 2009
CS	Afghanistan, 2002, Conflict	SP 2008
UP	Afghanistan, 2002, Conflict	SP 2009
CS	Algeria, 1980, Earthquake	SP 2009
CS	Azerbaijan, 1992, Conflict	SP 2008
OV	Bangladesh, 2009, Cyclone	SP 2009
OV	Bangladesh, 2007, Cyclone	SP 2009
CS	Bangladesh, 2007, Cyclone	SP 2009
CS	Bangladesh, 1975, Conflict	SP 2008
CS	Benin, 2010-11, Floods	SP 2015-2016
CS	Burkina Faso, 2012, Conflict	SP 2011-2012
CS	CAR, 2013, Conflict	SP 2013-2014
CS	Chile, 2014-16, Fire	SP 2015-2016
CS	Chile, 2010, Earthquake	SP 2010
CS	China, Sichuan, 2008, Earthquake	SP 2009
CS	Colombia, 2011, Floods	SP 2013-2014
CS	Colombia, 2010, Floods	SP 2011-2012
OV	Côte d'Ivoire, 2010-11, Conflict	SP 2011-2012
CS	Côte d'Ivoire, 2010-11, Conflict (2)	SP 2011-2012
CS	Cuba, 2012, Hurricane	SP 2013-2014
OV	Dominican Rep., 2012, Hurricane	SP 2013-2014
CS	DR Congo, 2008-16, Conflict	SP 2015-2016
CS	DR Congo, 2009, Conflict	SP 2009
UP	DR Congo, 2002, Volcano	SP 2011-2012
CS	DR Congo, 2002, Volcano	SP 2008
OV	Ecuador, 2016, Earthquake	SP 2015-2016
CS	Ecuador, 2016, Earthquake	SP 2015-2016
UP	Eritrea, 2004, Conflict	SP 2009
CS	Eritrea, 1998, Conflict	SP 2008
CS	Ethiopia, 2014-2016, Conflict	SP 2015-2016
CS	Ethiopia, 2011, Conflict	SP 2011-2012
CS	Ethiopia, 2012, Conflict	SP 2011-2012
OV	Europe Refugee Crisis, 2015-16	SP 2015-2016
OV	Fiji, 2016, Tropical Cyclone	SP 2015-2016
CS	Fiji, 2012, Tropical Cyclone	SP 2013-2014
CS	Gaza (Palestine), 2014-16, Conflict	SP 2015-2016
CS	Gaza (Palestine), 2009, Conflict	SP 2009
CS	Georgia, 2008, Conflict	SP 2009
CS	Germany, 2015-16, Refugees	SP 2015-2016
CS	Grenada, 2004, Hurricanes	SP 2010
CS	Guatemala, 1976, Earthquake	SP 2008
CS	Haiti, 2012, Hurricane	SP 2013-2014
OV	Haiti, 2010, Earthquake	SP 2011-2012
CS	Haiti, 2010, Earthquake (3)	SP 2011-2012
OV	Haiti, 2010, Earthquake	SP 2010
CS	Haiti, 2010, Earthquake (7)	SP 2010
CS	Haiti, 2008, Floods	SP 2009
CS	Haiti, 1982, Hurricane	SP 2009
CS	Honduras, 1998, Hurricane	SP 2008
CS	Honduras, 1974, Hurricane	SP 2009
OV	Hurricane Sandy, 2012,	SP 2013-2014
CS	India, 2001, Earthquake	SP 2008
CS	India, 1977, Cyclone (2)	SP 2009
CS	India, 1977, Cyclone	SP 2008
CS	India, 1971, Conflict	SP 2008
OV	Indonesia, 2009, Earthquake	SP 2010
CS	Indonesia, 2009, Earthquake (3)	SP 2010
OV	Indonesia, 2006, Earthquake	SP 2008
CS	Indonesia, 2006, Earthquake (2)	SP 2008
CS	Indonesia, 2004, Eq./Tsunami	SP 2008
CS	Ingushetia, 1999, Conflict	SP 2008
OV	Iraq, 2014-16, Conflict	SP 2015-2016
CS	Iraq, 2014-16, Conflict (3)	SP 2015-2016
CS	Iraq (KR-I), 2013, Conflict	SP 2013-2014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ACRONYMS

BBS Build Back Safer
BoQ Bill of Quantities
CBO Community Based Organization
CGI Corrugated Galzanized Iron
CSO Civil Society Organization
CCCM Camp Coordination and Camp Management
DRR Disaster Risk Reduction
GBV Gender-Based Violence
HH Household
HLP Housing, Land and Property
INGO International Non-Governmental Organization
MoU Memorandum of Understanding
M&E Monitoring and Evaluation
NFI Non-Food Item(s)
NGO Non-Governmental Organization
PDM Post-Distribution Monitoring
SOP Standard Operating Procedures
WASH Water, Sanitation and Hygiene

CONVERSION TABLES

These tables are included to help readers convert the measurements in the Bills of Quantities. The data on this page is all rounded to 4 significant figures. Penny sizes are rounded to the nearest millimeter (mm).

For equivalence tables in timber sizing, see UN OCHA / IFRC / CARE International publication:
"*Timber as a construction material in humanitarian operations"*

Length				
Imperial	1 inch (in)	1 foot (ft) = 12 inches	1 yard (yd) = 3 feet = 36 inches	1 mile = 1760 yd
Metric	25.4mm	304.8mm	0.9144 m	1.609 km

Area					
Imperial	1 square foot (sq. ft)	1 square yard (yd^2)	1 acre = 4,840 yd^2	30.25 yd^2	2.471 acres
Metric	0.0929 m^2	0.8361 m^2	4046.9 m^2	1 perch	1 hectare =10,000 m^2

Volume			
Imperial	1 cubic foot (ft^3)	1 cubic yard (yd^3)	
Metric	28.32 litres = 0.02832 m^3	0.7646m^3	
Other	1 gallon (UK) = 4.546 litres	1 liquid gallon (US) = 3.785 litres	1 dry gallon (US) = 4.405 litres

Weight				
Imperial	1 pound (lb)	1 ton (T) (UK: long ton)	Ton (US: net ton, short ton)	
Metric	0.4536 kg	1016 kg = 1.1016 MT	907.2 kg =0.9072 MT	
Other	1 stone = 16 lb.	1 lb = 16 ounces (Oz)	1 hundredweight (cwt.) (US) = 100 lb.	1 cwt. (UK) = 112 lb.

***Note**: There are several different imperial systems of weights. We quote the British imperial ton as in the Weights and Measures Act of 1824, and the United States customary system.*

Nails - "Penny Sizes"													
Imperial	Penny Size	2d	3d	4d	6d	8d	10d	16d	20d	40d	50d	60d	100d
	Inches	1	$1^1/_4$	$1^1/_2$	2	$2^1/_2$	3	$3^1/_2$	4	5	$5^1/_2$	6	10
Metric	Nearest length (mm)	25	32	38	51	54	76	89	102	127	140	152	254

FURTHER READING AND RESOURCES

In compiling this edition of *Shelter Projects*, we have drawn on key informant interviews and a variety of sources. Some of the published sources are listed below under General statistics and websites, whilst others were project documents.

Also included are a list of key shelter texts, which readers can refer to for many of the shelter-related issues raised by these case studies. Some of them are directly cited in the text. Visit www.shelterprojects.org for a full list of resources for download.

GENERAL STATISTICS

CRED, EM-DAT disaster database: Global database of world disasters. www.emdat.be

IFRC, World Disasters Report, 2016 / IFRC, World Disasters Report, 2015: Annual report providing a global overview of disaster trends. http://bit.ly/2aXaYzG

IFRC Reports: including Appeals, Operational updates, and Final, Mid-year and Annual reports. http://bit.ly/OCsTRK

IDMC/ NRC, Internal Displacement Global Overview of Trends and Developments in 2010
www.internal-displacement.org

UN OCHA, Sitreps: Situation reports on major responses. http://bit.ly/OCsTRK

UN OCHA Appeal documents: Financial appeals, action plans and reviews with narratives for OCHA coordinated responses. http://www.unocha.org/cap/

UNHCR, Global Trends 2015
http://www.unhcr.org/576408cd7.pdf

WEBSITES

www.sheltercluster.org
Home page of the Global Shelter Cluster - the coordination mechanism for shelter responses. Contains links to individual responses, including strategy documents.

www.sphereproject.org
Download the Sphere Handbook, find information on trainings and other activities from the Sphere Project. The Sphere Project aims to improve the quality of humanitarian assistance and the accountability of humanitarian actors to their constituents, donors and affected populations.

www.humanitarianlibrary.org
The Humanitarian Library is designed as a global clearing house for regional humanitarian knowledge. As a user-oriented resource, it is designed to be the first reference for both sharing and searching for field-relevant documents.

http://procurement.ifrc.org/catalogue/
IFRC/ICRC Emergency relief items catalogue: detailed specifications of all items commonly used by IFRC, ICRC, IOM and other organizations.

https://www.youtube.com/user/ShelterCluster
Global Shelter Cluster Youtube channel.

www.reliefweb.int
Up to date information on complex emergencies and natural disasters as well as an archive of information, field reports and situation reports from emergencies since 1996. OCHA situation reports (sitreps) and IFRC appeal documents and operations updates have been of particular use in compiling these case studies.

http://www.globaldtm.info/
The Displacement Tracking Matrix (DTM) is a system to track and monitor the displacement and population mobility. It is designed to regularly and systematically capture, process and disseminate information to provide a better understanding of the movements and evolving needs of displaced populations, whether on site or en route.

Cuny/Intertect collection: http://bit.ly/2oY4lFR
Digital collection of Frederick Cuny's working library, office files, press clippings, slides, photos and videos of Cuny and his team at the disaster relief/response firm, Intertect.

KEY SHELTER PUBLICATIONS

Camp Management Toolkit
The toolkit gives official guidelines on the setup and running of camps and settlements, both in emergencies and long-term situations. Available at: http://cmtoolkit.org/

Care International, Gender and Shelter: Good programming guidelines, 2016
Guidelines to provide practical guidance on how to integrate gender in the shelter sector, enabling shelter programmes to address the needs of affected communities more successfully. Available at: http://bit.ly/2nj3PAX

Corsellis and Vitale, Transitional Settlement: Displaced Populations, Oxfam publishing, 2005
Guidelines for the strategic planning and implementation of settlement responses for displaced populations.
Available at: http://bit.ly/2mUXhaq

CRATerre, IFRC, Assessing local building cultures for resilience & development: A practical guide for community-based assessment.
This guide is a tool for those working on habitat and community resilience, to improve the quality of their interventions. Available at: http://bit.ly/2ni6XNp

CRS, Pintakasi: A review of shelter/WASH delivery methods in post-disaster recovery interventions, 2016
A study to assess the efficiency, effectiveness and appropriateness of shelter and WASH assistance modalities in the Filipino context. Available at: http://bit.ly/2ofS7aW

CRS, Using Cash for Shelter, 2015
An analysis of CRS shelter programmes to understand when cash works, why it works, and what factors contribute to its success or failure. Available at: http://bit.ly/2nzsVhn

CRS, Extending Impact: Factors influencing households to adopt hazard-resistant construction practices in post-disaster settings, 2015
A study to understand what influences people's behaviour by analysing what prompts, guides or drives people to behave in a certain way, in relation to the use of hazard-resistant construction practices: Available at: http://bit.ly/2nixXwp

CRS, How-to Guide: Managing Post-Disaster (Re)-construction projects
A step-by-step management guide for the two main construction modalities; owner-driven and contractor-built construction projects. Available at: http://bit.ly/2nLlO66

Global Shelter Cluster, Selecting NFIs for shelter - 2008
Provides information, case studies and guidance on how to choose the best items to distribute to those affected by natural disaster or conflict. Available at: http://bit.ly/2oLAgZ9

Global Shelter Cluster, GBV in Shelter Programming
Set of documents which aim to provide tools to help shelter actors to mainstream GBV risk mitigation in their shelter programming. Available at: https://www.sheltercluster.org/gbv

IFRC, Owner Driven Housing Reconstruction Guidelines (ODHR), 2010
Guidance on the planning and implementation of assisted self help reconstruction projects.
Available at: http://bit.ly/2nbyEbf

IFRC, The IFRC shelter kit, 2010
A guide on the IFRC shelter kit and how to use it.
Available at: http://bit.ly/1tdEV3p

IFRC, Shelter Designs: Structural Reviews (2 publications)
A review of risks in shelter construction and detailed structural analysis of different post-disaster and transitional shelter designs that have been used in the field in large scale projects. Available at: http://bit.ly/2nVPLhr

IFRC, Participatory Approach for Safe Shelter Awareness
PASSA aims to raise the awareness of the 'everyday risks' faced by vulnerable populations, related to their built environment, and foster locally appropriate safe shelter and settlement practices. Available at: http://bit.ly/2lqQBUA

IFRC, Handicap International, CBM, All under One Roof.
A guideline for providing disability inclusive shelter and settlement solutions in emergencies. http://bit.ly/2ng7Xkn

IFRC, Oxfam GB, Plastic sheeting, 2007
A guide to the use and specification of plastic sheeting in humanitarian relief. An illustrated booklet on when and how to use plastic sheeting most effectively in emergencies. Available at: www.plastic-sheeting.org

UN OCHA, Tents - A guide to the use and logistics of tents in humanitarian relief, 2004
A booklet describing when and how to use tents, as well how to support those living in them to best adapt them to meet their needs. Available at: http://www.alnap.org/resource/8341

UN OCHA, IFRC, CARE International, Timber as a construction material in humanitarian operations, 2009
An illustrated booklet on how to source and use timber for the construction of basic structures.
Available at: http://bit.ly/2mUWUwy

MSF, Shelter Centre, Shade Nets: Use, deployment and procurement of shade net in humanitarian relief environments. Available at: http://bit.ly/2nzpUxq

Jha, A., Duyne Barenstein, J., Phelps, P., Pittet, D., Sena, S., Stronger Homes, Stronger Communities
A handbook developed to assist policy makers and project managers, engaged in large-scale post-disaster reconstruction programmes, make decisions about how to reconstruct housing and support communities after natural disasters.
Available at: http://bit.ly/2onN2AF

Maynard, V., Parker, E. and Twigg, J. (2017). The effectiveness and efficiency of interventions supporting shelter self-recovery following humanitarian crises: An evidence synthesis. Humanitarian Evidence Programme. Oxford: Oxfam GB. Available at: http://bit.ly/2nfUOHV

NRC, Shelter Centre, Urban Shelter Guidelines, 2010
General guidance for urban humanitarian response.
Available at: http://bit.ly/2nbyOzu

NRC/IFRC, Security of tenure in humanitarian shelter operations, 2013
A short report highlighting the regulatory barriers to the provision of short and medium term shelter solutions, presented in collaboration through several case studies.
Available at: http://bit.ly/2nMXmSs

UNDRO, (now UN OCHA), Davis, I., Shelter After Disaster, Guidelines for Assistance, 1982
Guidelines and description of shelter provision in all aspects of natural disasters (from preparedness to reconstruction).
Available at: http://bit.ly/2o9cfL8

Shelter Centre, UN, DfID, Shelter after disaster - Strategies for transitional settlement and reconstruction, 2010
A book containing information and guidance on how to agree strategies for reconstruction after natural disasters. Contains description of the types of shelter programmes that organizations can implement. Available at: http://bit.ly/2nbLOFu

Sphere Project, Sphere - Humanitarian charter and minimum standards in humanitarian response, 2011
Contains consensus standards agreed among major humanitarian organizations for key sectors, including shelter and settlement. It also contains actions, indicators and guidance notes as to whether standards have been achieved.
Available at: http://www.sphereproject.org/handbook/

UN HABITAT, IFRC, UNHCR, Shelter Projects
Case studies and overviews of humanitarian shelter and settlement responses. Five editions spanning 2008-2014.
Available at: www.shelterprojects.org

UNHCR, Handbook for Emergencies, 4th Edition, 2015
Handbook and tool containing guidance on the management and all key sectors in emergency operations
Available at: https://emergency.unhcr.org/

WWF and American Red Cross, Green Recovery and Reconstruction, 2010
The GRRT is a toolkit and training programme designed to increase awareness and knowledge of environmentally responsible disaster response approaches.
Available at http://envirodm.org/green-recovery

In 2015 and 2016, the total number of people displaced by crises in the world was higher than any other year in the last 25 years. In 2015, 65.3 million people were displaced due to conflict or violence, and there were 19.2 million new displacements due to natural disasters. With such large scale sheltering needs, there is also an imperative to ensure that the assistance that is delivered makes best use of often limited resources.

Spanning humanitarian responses from all over the world, *Shelter Projects 2015-2016* is the sixth in a series of compilations of shelter case studies, overviews of emergencies and opinion pieces. The projects represent responses to conflict, natural disasters and complex or multiple crises, demonstrating some of the implementation and response options available.

The book is intended to support learning by highlighting the strengths, weaknesses and some of the lessons that can be learned from different projects, which try to maximize emergency funds to safeguard the health, security and dignity of affected people, whilst – wherever possible – supporting longer-term shelter needs and sustainable recovery.

The target audience is humanitarian managers and shelter programme staff from local, national and international organizations at all levels of experience. *Shelter Projects* is also a useful resource for advocacy purposes, showcasing the work done by the sector, as well as for research and capacity-building activities.

All case studies and overviews contained in this book, as well as from all past editions, can be found online at:

www.shelterprojects.org

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Global Shelter Cluster
ShelterCluster.org
Coordinating Humanitarian Shelter