

SHELTER PROJECTS

2017-2018

CASE STUDIES OF HUMANITARIAN SHELTER AND SETTLEMENT RESPONSES



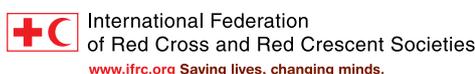
Global Shelter Cluster
ShelterCluster.org
Coordinating Humanitarian Shelter

SHELTER PROJECTS

2017-2018

CASE STUDIES OF HUMANITARIAN SHELTER AND SETTLEMENT RESPONSES

*Shelter Projects Working Group partners and supporting agencies for this edition
(full list of contributors in Acknowledgements):*



Global Shelter Cluster
ShelterCluster.org
Coordinating Humanitarian Shelter

Shelter Projects 2017–2018

Published in May 2019 by the International Organization for Migration (IOM), on behalf of the Global Shelter Cluster.

Available online from www.shelterprojects.org

Copyright for this book is retained by IFRC, IOM, UNHCR, and UN-Habitat. Reproduction for non-profitable objectives is encouraged.

Copyright for photographs and images remains with the photographers or entities whose names appear on each picture or caption. The Global Shelter Cluster and its members may use the pictures, if appropriately credited.

Suggested citation: Global Shelter Cluster (2019), *Shelter Projects 2017–2018*, www.shelterprojects.org

Printed in May 2019.

DISCLAIMER

The maps contained in this publication are for illustrative purposes only and should not be considered authoritative. Whilst every effort has been made to ensure the accuracy and completeness of the content of this booklet, no liability can be accepted for any errors or omissions contained within it.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the Global Shelter Cluster concerning the legal status of any country, territory, city or area, or of its authorities, or concerning delimitation of its frontiers or boundaries, or regarding its economic system or degree of development.

Approximate prices are given in US Dollars (USD), based on exchange rates around the time of the project.

This publication was issued without formal editing by IOM.

Copyright for front cover photo: © Abdullah Al Mashrif / IOM.

Bangladesh 2018, *Kutupalong-Balukhali Expansion settlement in Cox's Bazar district*.

Copyright for back cover photos:

© Corrie Butler / IFRC. Nigeria 2017, *Fatima and her daughter stand in front of their new home*;

© Olivia Headon / IOM. Bangladesh 2017, *A young woman carries a shelter kit she just received to her shelter. Her family will use it to improve their living conditions in one of the most overcrowded displacement camps in the world*;

© Eva Samalea / IOM. South Sudan 2018, *Construction of roofing structure for resilient shelters by construction committee and community leaders in Kolom, Abyei*;

© Olivia Headon / IOM. Ethiopia 2018, *A young girl peers into a makeshift shelter on the grounds of a church, which temporarily gave land to thousands of people displaced by fighting between two communities neighbouring each other in West Guji*.

Winners of the Shelter Projects Photo Competition for the categories: 1) Long-term impacts of shelter; 2) Gender, diversity and inclusion; 3) Environment and local building cultures; and 4) Security of tenure.

To see all the submissions, visit <https://www.sheltercluster.org/ShelterProjectsPhotoCompetition2018>

FOREWORD

Shelter Projects 2017–2018 has been written by practitioners for practitioners to help them understand what worked and what did not work in previous shelter responses. In a world where global humanitarian shelter needs greatly exceed the capacities and resources of agencies to support those people requiring assistance, there is a clear need to learn from the past so that we can better respond in the future.

Shelter Projects is written through a collaborative and consultative process. This edition began with an inception workshop where lessons from the development of past editions were reviewed. This process was followed by regional shelter fora during which practitioners, government representatives and academics reviewed past editions and agreed on how this edition could be improved. Over the course of two years, the Global Shelter Cluster Shelter Projects Working Group, composed of international shelter experts from several humanitarian organizations and institutions, met to discuss the approach and to compile and review cases studies.

Previous editions of *Shelter Projects* have a proven broad audience of people who are involved in humanitarian shelter programming. They have been used by humanitarian staff, from both relief and development agencies. This includes shelter specialists and generalist programme managers, in developing shelter projects and proposals and in reviewing what has previously been done in country or in similar contexts. They have been used for global advocacy on issues such as cash in shelter programming. They have been used to promote shelter programmatic approaches and prove that there is a precedent for government strategies at the highest ministerial levels. They have been used in discussions with civil protection agencies and local municipal authorities in preparedness and response, to show what can be done. They have been used with private sector organizations to explain what shelter is (as a process, not a product), and they have been used in humanitarian trainings, and by universities as core reference in courses and as a basis for further research.

Given this broad range of uses, and although readers may have very specific information needs, we would encourage you to browse through the publication to get an idea of the broad spectrum of types of shelter programmes that have been implemented. Case studies and overviews aim to showcase different response options and reflect on the internal strengths and shortcomings of each, as well as on the wider impacts of projects and the lessons that can be learned.

Although it can be read as a standalone document, and individual case studies can be read in isolation, *Shelter Projects* is intended to complement other publications, such as the Sphere Handbook and the State of Humanitarian Shelter and Settlements Report.

This is the seventh edition in the series of publications that started over ten years ago. It contains 31 new case studies and four overviews of responses, contributing to a total repository of over 230 project examples and response overviews, from programmes of 60 agencies in almost 80 countries overall. The case studies vary greatly in scale, cost, duration, response phase and project design. Although they are not statistically representative of all shelter responses, this growing body of knowledge represents a source of learning and reflects the highly contextual nature of individual shelter and settlements responses. Overall, and reinforced by more rigorous analysis and review process than previous editions, it reflects many years of experience of about 500 field practitioners who have contributed across the editions.

Shelter Projects is written with the understanding that the primary responders to all crises are the affected people themselves. Whilst case studies are written from the perspective of agencies that aim to assist, we hope that readers of the publication will recognize the central and active role of the people that the projects seek to assist.

**The Global Shelter Cluster
Shelter Projects Working Group,
April 2019.**



ACKNOWLEDGEMENTS

This project was coordinated and overseen by the Shelter Projects Working Group of the Global Shelter Cluster, including Amelia Rule (CARE International UK), Charles Parrack (Oxford Brookes), Chiara Jasna Vaccaro (DRC), David Evans (UN-Habitat), Jake Zarins (Habitat for Humanity), James Schell (IMPACT), Jim Kennedy (Independent), Joseph Ashmore (IOM), Loren Lockwood (CRS), Miguel Urquia (UNHCR), Misato Dilley (UN-Habitat), Mohamed Hilmi (InterAction), Sandra D'Urzo (IFRC) and Step Haiselden (CARE International UK).

Compiled and edited by IOM: Alberto Piccioli with support from Joseph Ashmore, Boshra Khoshnevis and Patricia Ocaña Alcober. Additional contributions from Richard Evans (UNHCR/IMPACT).

Layout: IOM, with support from UN-Habitat.

Shelter Projects 2017–2018 has been funded by the following contributors:

- Office of U.S. Foreign Disaster Assistance (USAID-OFDA);
- International Federation of the Red Cross and Red Crescent Societies (IFRC);
- International Organization for Migration (IOM);
- United Nations High Commissioner for Refugees (UNHCR).

The case studies have been provided from the programmes of the following organizations:

- Agency for Technical Cooperation and Development (ACTED);
- CARE International;
- Caritas Switzerland;
- Catholic Relief Services (CRS);
- Danish Refugee Council (DRC);
- Habitat for Humanity;
- Help Age;
- Help Refugees;
- International Committee of the Red Cross (ICRC);
- IFRC;
- IOM;
- Norwegian Refugee Council (NRC);
- Qatar Red Crescent Society (QRCS);
- Save the Children;
- Shelterbox;
- Swiss Red Cross;
- UNHCR;
- United Nations Human Settlements Programme (UN-Habitat).

The historical case study from Quetta was written by Daniel Haines (University of Bristol), with the support of the Global Challenges Research Fund and Arts & Humanities Research Council.

The case study meta-analysis was led by Charles Parrack (Oxford Brookes), Jim Kennedy (Independent) and Joseph Ashmore (IOM), and supported by Maximilian Duelli (Oxford Brookes) and Laura Klinkhammer (Aalto University).

The editors would like to express their gratitude to the following individuals, who contributed content to this edition:

Aaron Watts-Jones, Abdul Baseer Khan, Afsar Khan, Agnes Duku, Alex Angermeier, Aline Milev, Amber Christino, Amy Crisp, Ananda Sapkota, Anatole Bandu, Angela Osti, Anna Dixie, Annette Vondeling, Arwa Salih, Aziza Usoof, Baby Ilunga, Bishnu Gotame, Carolina Cordero-Scales, Cathrine Brun, Charles Campbell, Charmalee Jayasinghe, Chiara Jasna Vaccaro, Christopher Bosco Ojara, Clarine Lacroux, Damon Elsworth, Daniel Haines, David Ray, Davidson Julien, Elie Luutu, Eric Muhongya, Federico Rota, Fekadu Zeleke, Garth Smith, Gaurab Pradhan, George Abdalla, Ghaith Tarabein, Graham Eastmond, Grazia Paoleri, Hugo Cahueñas, Ibrahim Marte, Ir Kapako Ferdinand, Isabel Skrine, Ivan Karlsson, Jacobo Muelas, Jan-Willem Wegdam, Jean Martin Olego, Jeyda Yelakan, Jezeer Hameed, John Wain, Joseph Ashmore, Justin Saninve, Karen Green, Keat Bayak, Keisuke Kamiya, Khaled Diab, Kunhali Muttaje, Laura Cunial, Leeanne Marshall, Loren Lockwood, M.Aleem, Malcolm Shead, Mandy Zeckra, Marijana Rakic, Mario Flores, Marta Leboeiro Núñez, Massimo Russo, Maxine Alleyne-Esprit, Michele Young, Mohanad Ameen, Mohannad Mhimeed, Mouhamad Hasno, Muhammad Asar Ul Haq, Muhammed A. Ceyhunlu, Nadia Tithi, Nadine Yassin, Nestor Girukwishaka, Olam Amum, Olivia Long, Olivier Moles, Osama Alsheikhali, Pamela Stathakis, Patrick Oger, Phoebe Goodwin, Pirce Altinok, Projwol Raj Bajracharya, Rainer Gonzalez Palau, Raja Segaran, Ratan Kumar Podder, Richard Evans, Rikka Tupaz, Ronald Mayanja, Sami Derbali, Sanjana Shrestha, Sanjeeb Kumar Shakya, Seki Hirano, Siobhan Kennedy, Stephane Huot-Marchand, Suleyman Demir, Teri Smith, Thomas Whitworth, Tom Bamforth, Tom Robinson, Tonja Klanšek, Victoria Bannon, Vynliz Dailey, Wiam Azhak, Yadav Mainali, Yousef Hamdan, Yuban Malla.

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.

In particular, we wish to dedicate this book to past contributors to Shelter Projects who have tragically passed away: Graham Saunders, Guillaume Roux-Fouillet and Michael Ryan.

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

Foreword	iii	A.20 PHILIPPINES / 2015–2017 / Typhoon Haiyan	98
Acknowledgements	iv	A.21 PHILIPPINES / 2016–2018 / Typhoon Haiyan	103
Contents	v	A.22 PHILIPPINES / 2018 / Tropical Storm Kai-Tak	108
Introduction	vi	A.23 SRI LANKA / 2010–2017 / Conflict returns	112
		A.24 SRI LANKA / 2017 / Floods	117

A / CASE STUDIES AND OVERVIEWS

AFRICA

A.1 BURUNDI / 2017–2018 / Camp closure	2
A.2 DEM. REP. OF THE CONGO / 2018 / Conflict	7
A.3 KENYA / 2018 / Floods	12
A.4 NIGERIA / 2017–2018 / Conflict	17
A.5 SOMALIA / 2018 / Drought	22
A.6 SOUTH SUDAN / 2017–2018 / Overview	26
A.7 SOUTH SUDAN / 2017–2018 / Conflict	30
A.8 SOUTH SUDAN / 2017–2018 / Conflict	35
A.9 SOUTH SUDAN / 2018 / Conflict	39
A.10 UGANDA / 2017–2018 / South Sudan crisis	44

AMERICAS

A.11 DOMINICA / 2017–2018 / Hurricane Maria	49
A.12 ECUADOR / 2016–2018 / Earthquake	54

ASIA-PACIFIC

A.13 BANGLADESH / 2017–2018 / Overview	59
A.14 BANGLADESH / 2017–2018 / Rohingya crisis	67
A.15 BANGLADESH / 2017–2018 / Rohingya crisis	73
A.16 NEPAL / 2015–2018 / Recovery / Overview	78
A.17 NEPAL / 2015–2019 / Recovery Coordination	83
A.18 NEPAL / 2016–2017 / Earthquake recovery	87
A.19 NEPAL / 2017–2018 / Floods	92

EUROPE

A.25 FRANCE / 2015–2016 / Refugee crisis	122
--	-----

MENA REGION

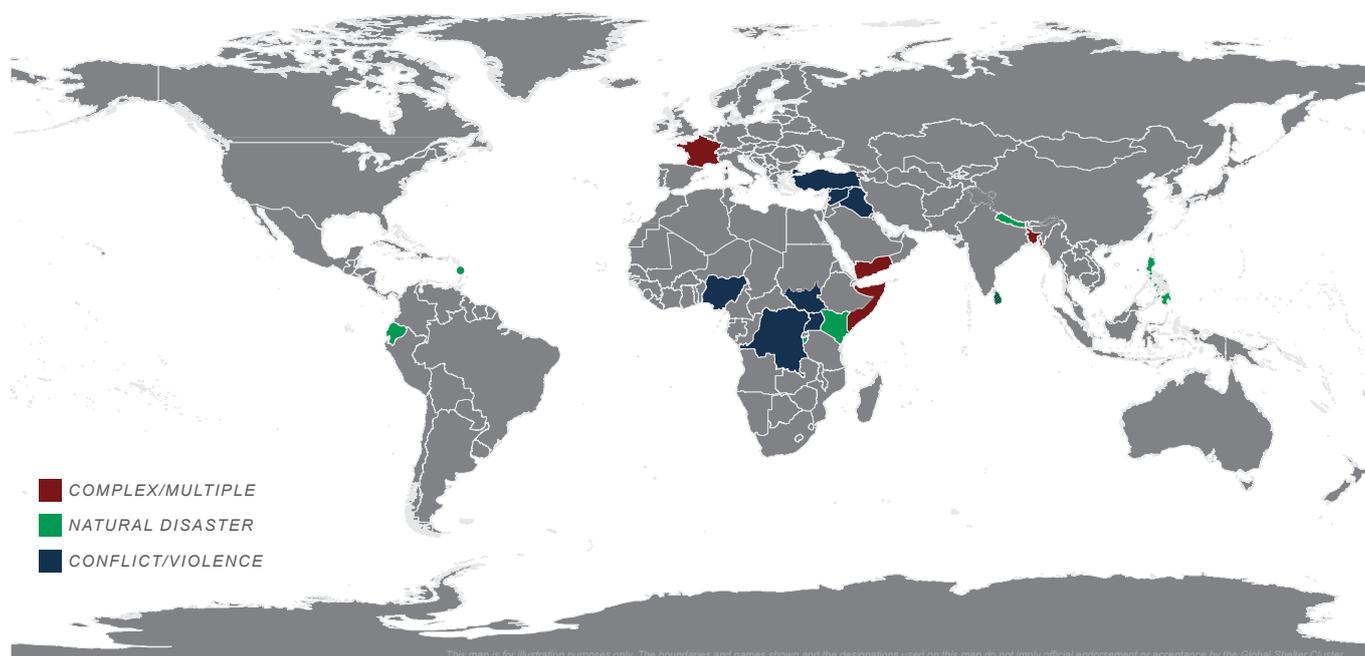
A.26 IRAQ / 2016–2017 / Conflict / Mosul operation	128
A.27 IRAQ / 2017–2018 / Conflict	134
A.28 SYRIAN ARAB REP. / 2015–2017 / Conflict	139
A.29 SYRIAN ARAB REP. / 2017–2018 / Conflict	145
A.30 SYRIAN ARAB REP. / 2017–2018 / Conflict	149
A.31 SYRIAN ARAB REP. / 2018 / Conflict	154
A.32 TURKEY / 2017–2018 / Syria crisis	158
A.33 YEMEN / 2017–2018 / Conflict / Overview	163

B / OTHER CASE STUDIES

B.1 INDIA / 1935 / Quetta earthquake	168
B.2 Humanitarian tarpaulin development	173

C / ANNEXES

C.1 List of case studies by country	178
C.2 Acronyms and conversion tables	180
C.3 Further reading and resources	181



INTRODUCTION



Women participating in a construction workshop shortly after Cyclone Pam in Vanuatu.



Upgraded shelters in the Protection of Civilians site in Wau, South Sudan.

ABOUT THIS BOOK

This edition of Shelter Projects contains 27 new case studies of the field implementation of humanitarian and recovery shelter responses, written by practitioners who have been involved in each of these. It also includes two case studies related to the coordination of shelter response and housing reconstruction, written by the coordination teams themselves. There are also some overviews of large responses during 2017–2018. These case studies and overviews are all included in **Section A**.

In **Section B** of this edition, there is also a historical case study of post-disaster recovery and a global project on the development of standard specifications and quality control systems. The historical view reminds us that many lessons and themes from past responses still apply today.

Section C includes the annexes and a small section on reference documents relevant for the sector and beyond, with the most recent publications highlighted.

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. In order to allow strengths and weaknesses of projects to be openly shared, **the case studies are not directly attributed to individual organizations**. Since projects are implemented in diverse and challenging conditions, case studies illustrate both good and bad practices. From each one, 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, advocate for following good practices and avoid “re-inventing the wheel”.

If you wish to find out more about the specific projects, please contact info@shelterprojects.org.

WARNING – PROJECTS ARE CONTEXT DRIVEN

Any shelter project should take into consideration the local context and needs of the affected population, which will differ in every 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 shelter project was **a) wholly completed or, if not, b) solid learning elements could be gained** from the project implementation by late 2018.
- Given the scale of shelter needs every year, **case studies must have had large-scale impacts**. Discontinued trials, pilot projects or design concepts were not included. A couple of exceptions to this are in the case of the Syria crisis, where small-scale projects have been published to showcase examples of remote management in a challenging environment (A.29–A.30).
- **Most of the project must be implemented within the first year following a natural disaster**, or over longer time frames for recovery processes. For conflict, chronic emergencies and return processes, longer time scales were considered. In this edition, there are also two projects about permanent housing reconstruction (A.18 and A.23).
- **Accurate project information is available** from staff or individuals involved in the implementation. In most cases, content is provided directly by project field staff and programme managers.
- **The case studies illustrate a diversity of approaches** to meet shelter and settlements needs, as providing shelter is more than simply designing architecturally impressive structures or constructing individual houses. In this edition, for example, one case study focuses on legal support to a shelter cluster to protect people with insecure tenure status during the response to an earthquake (A.12).

After a pre-selection based on the above criteria, **each case study was further 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 lessons to highlight and what aspects to expand upon, ultimately increasing the overall quality of each case study.



© Rikka Tupaz / IOM

Ongoing shelter construction in Wau, South Sudan. This site hosts internally displaced people fleeing conflict that started in late 2013. Shelter interventions in South Sudan mainly target sites of protracted displacement and, to a lesser extent, return areas.

GLOBAL OVERVIEW OF DISPLACEMENT

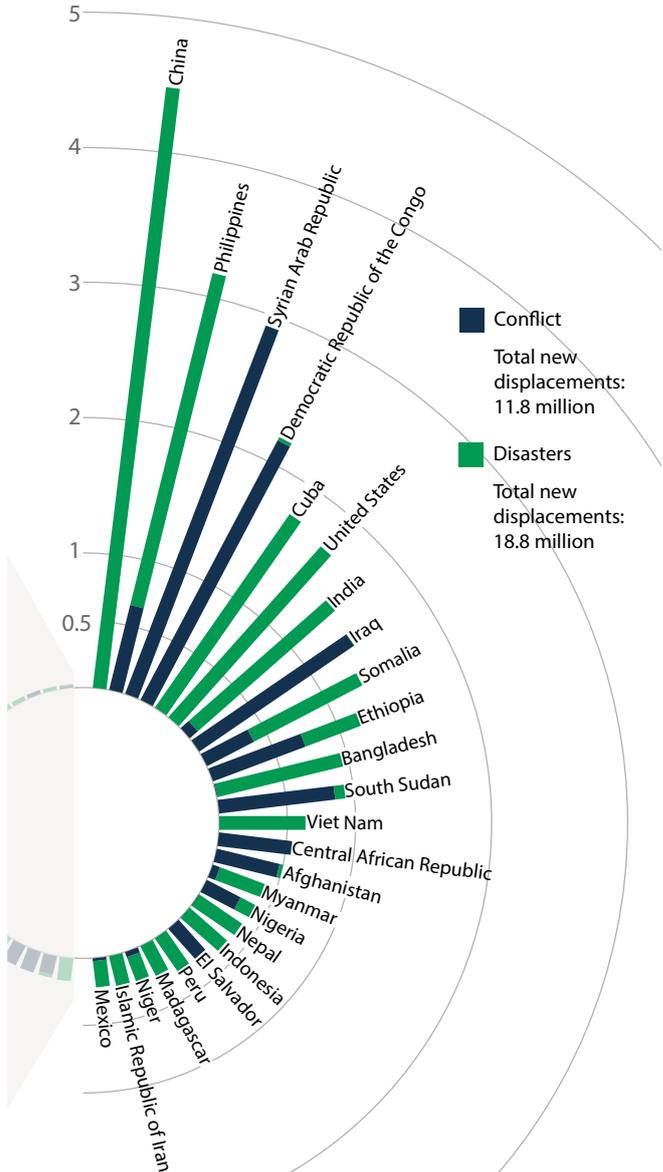
Over the course of 2017, 16.2 million people were newly displaced because of conflict or violence, of which 11.8 were internally displaced and 4.4 refugees or asylum seekers.¹ The number of new internally displaced persons (IDPs) due to conflict doubled from 2016 (6.9 million).²

During the same year, 18.8 million new internal displacements occurred due to natural disasters,³ with countries in Asia-Pacific and the Americas being disproportionately affected.

The diagram to the right shows the countries where new internal displacements were higher in 2017, by type of crisis. In some countries, large-scale displacement was caused both by natural disasters and by conflict and violence.

As of the end of 2017, a total of 68.5 million people were forcibly displaced due to conflict or violence.⁴ 25.4 million were refugees, 3.1 million asylum seekers and 40 million internally displaced. Of those internally displaced, 76 per cent were in only 10 countries.⁵

While global data for returnees and non-displaced people (such as affected host communities) was not available, projects in this book also include assistance to these groups.

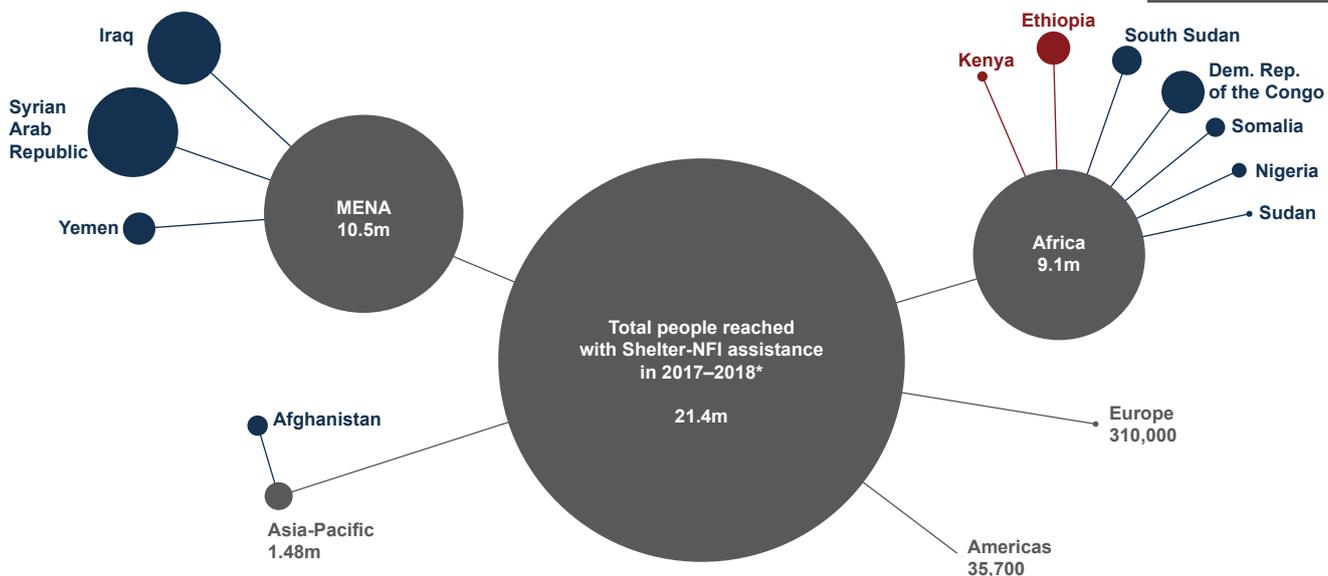


New internal displacements in 2017 in millions (source: IDMC, 2018).



© Olivia Headon / IOM

Rohingya refugees in Kutupalong-Balukhali Expansion site, shortly after the massive influx into Cox's Bazar district, Bangladesh, since 25 August 2017.



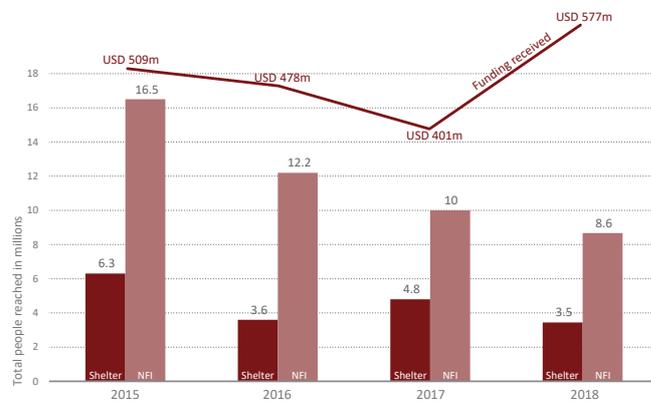
* Total people reached with Shelter-NFI support by region and country, in responses with a cluster or cluster-like mechanism in 2017–2018 (source: GSC).

SHELTER RESPONSES IN 2017 AND 2018

In 2017 and 2018, the Global Shelter Cluster (GSC) reported that 10.8 and 10.6 million people respectively had been reached in countries where a cluster or cluster-like coordination mechanism was active. This excludes, among others, refugee responses.¹⁰ These figures represent a reduction from the 18.1 and 13.1 million people reached in the previous two years (see chart to the right). In 2017, 4.8 million people were reached with shelter assistance and 10 million with non-food items (NFI). In 2018, only 3.5 million people were reached with shelter and 8.6 million with NFI.

The decrease in total achievements compared to 2015–2016 was mainly due to the sheer reduction of people reached with NFI in the Syrian Arab Republic and the fact that in 2017–2018 there were no disasters of the scale of the Nepal earthquake in 2015. However, shelter assistance in 2017 and 2018 in the Syrian Arab Republic actually reached more than twice the amount of people that in the previous two years, and the funding received also doubled, which explains the spike in the chart comparing 2015 through 2018 achievements (right).

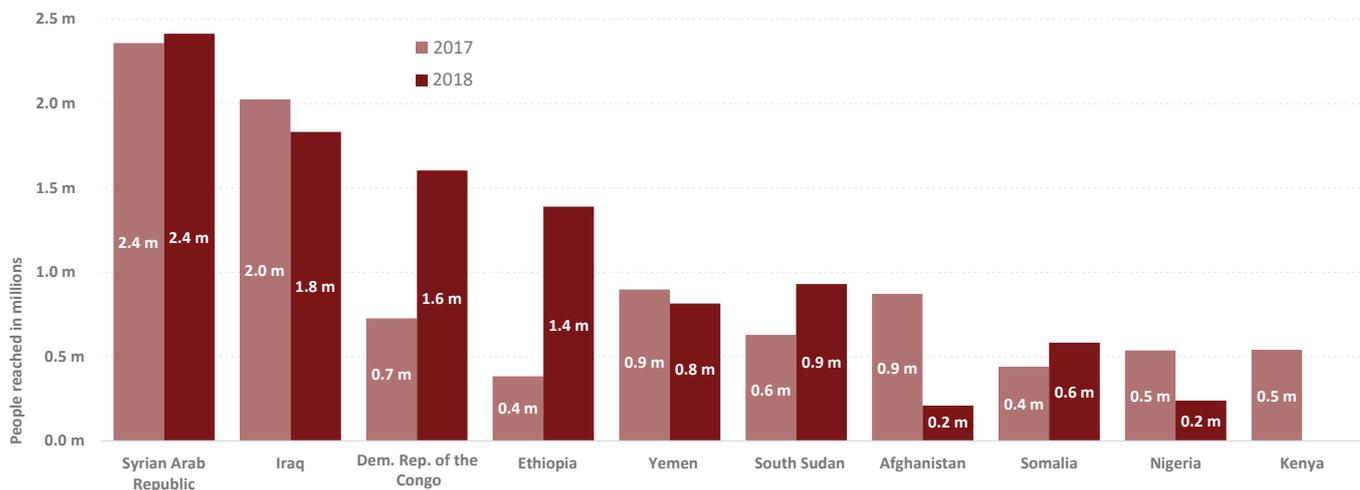
The major humanitarian Shelter-NFI responses in 2017–2018 were in the Syrian Arab Republic and Iraq, followed by the Democratic Republic of the Congo, Ethiopia, Yemen and South Sudan (see below). Although not in a formally activated cluster, the Shelter-NFI response to the Rohingya crisis in Bangladesh was also one of the largest in those years.



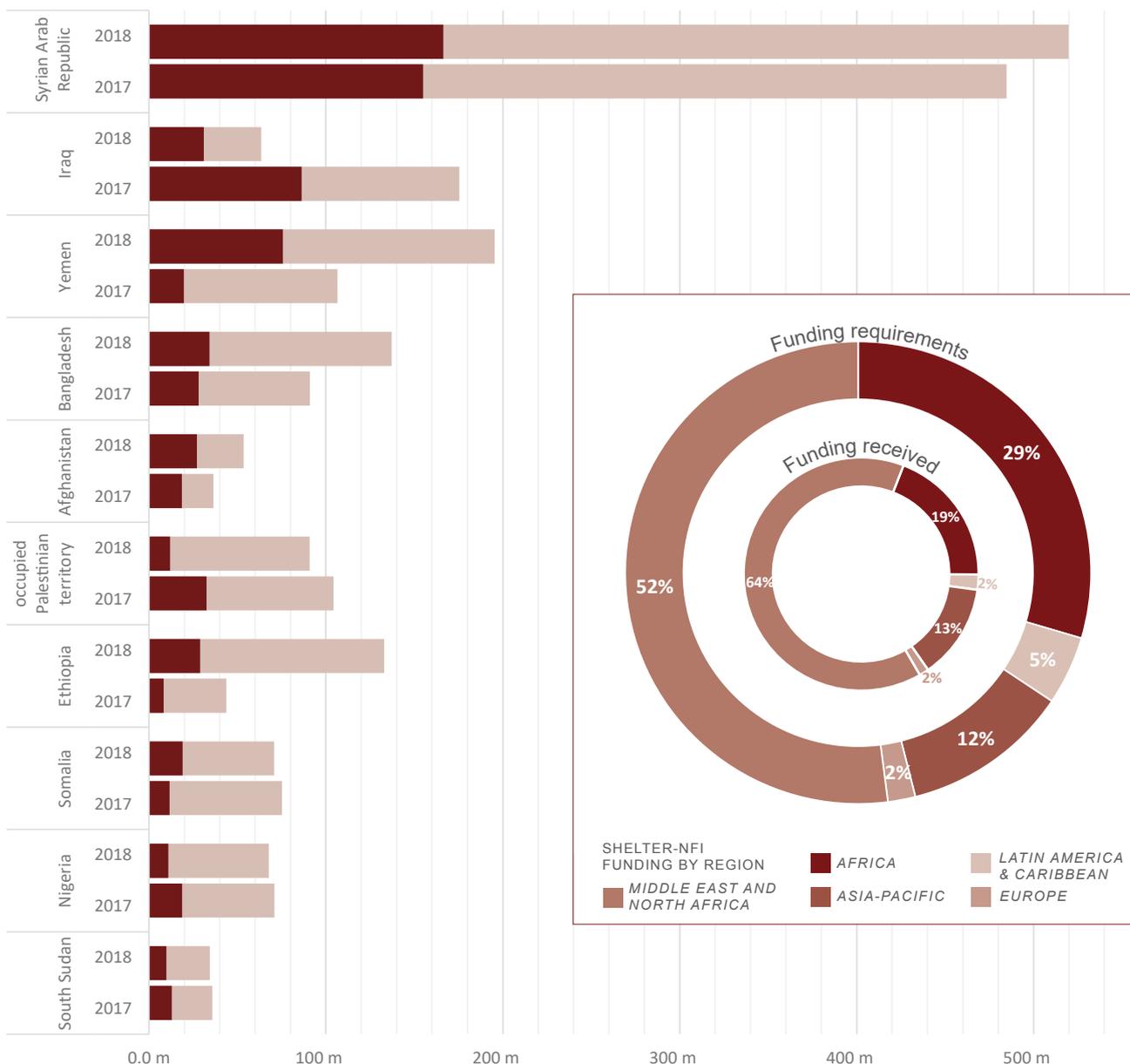
Total people reached with shelter and NFI support from 2015 to 2018, in responses where a cluster or cluster-like mechanism was active. The total funding received is also overlaid (source: GSC). While the total people reached decreased steadily from 2015, the funding in 2018 was higher mainly because of the large amount received for the response in the Syrian Arab Republic.

The vast majority of Shelter-NFI delivery was in response to crises related to conflict and violence, in some cases combined with additional damage and displacement caused by natural disasters.

As shown below, within the top ten Shelter-NFI responses in 2017–2018, most were in Africa and in the Middle East. This finding is also presented by the diagram at the top of the page, which shows the scale of Shelter-NFI responses by region.



Top ten responses by people reached in 2017–2018 with Shelter-NFI assistance in countries where a cluster or cluster-like mechanism was active (source: GSC).

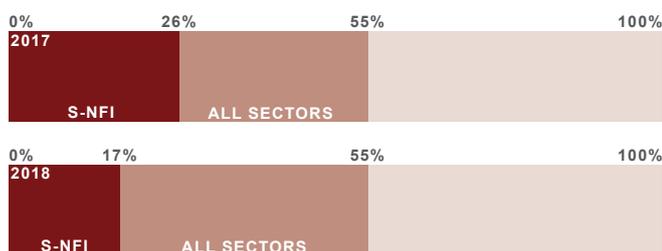


Top ten countries by funding received for Shelter-NFI in 2017 and 2018. The chart shows in darker colour the amount of funding received, while in lighter colour the total funds appealed. The pie chart on the right shows a distribution of funds received and requirements across regions (source: FTS).

FUNDING FOR SHELTER-NFI

Shelter-NFI remains one of the most underfunded sectors in humanitarian response. As per Global Shelter Cluster figures, between 2015–2018 the sector received less than 30 per cent of the required funding across all countries.¹¹

The charts in this page are based on funding reported on the Financial Tracking Service (FTS)¹² against appeals for Humanitarian Response Plans and Other Response Plans coordinated by the United Nations. This does not include Regional Refugee Response Plans.¹³



Average of Shelter-NFI funding coverage compared to all sectors coverage in 2017 and 2018. Shelter-NFI is significantly underfunded across countries.

The data shows that in 2017 and 2018 Shelter-NFI Clusters or Sectors received on average 26 per cent and 17 per cent of the funds required respectively, significantly less than the average funding coverage of all sectors, which was around 55 per cent for both years (see figure below-left).

The response in the Syrian Arab Republic was the largest recipient of funding, accounting for nearly 35 per cent of funds received for Shelter-NFI against appeals in 2017–2018. Iraq, Yemen and the Rohingya response in Bangladesh followed. The top ten countries are shown above.

Responses in the Middle East and North Africa (MENA) overall received over 64 per cent of funds for Shelter-NFI in 2017–2018, followed by those in Africa (19%) and Asia-Pacific (13%). Only five per cent of global funding for Shelter-NFI went to responses to natural disasters in Latin America and the Caribbean (LAC).

Looking at funding coverage, the MENA region had the highest rate, having received 33 per cent of funds requested, on average. Countries in Asia-Pacific received on average 30 per cent of funds required for Shelter-NFI, while African countries received 17 per cent and countries in LAC only 12 per cent.

DIVERSITY IN RESPONSES

The case studies in this book show many different shelter response modalities. These vary as a result of the differing contexts, phases of the response and organizational mandates and individual approaches. See the table on pages xii–xiii for a full summary of the assistance methods and settlement typologies of the projects in this book.

SUPPORT METHODS. Projects adopted a variety of support methods to deliver assistance. These include the distribution of household items or shelter materials, tools and kits (see for example A.3, A.15 and A.32), the use of conditional cash transfers or restricted vouchers (A.7–A.8, A.23–A.25 and A.27), and non-material forms of assistance, such as capacity-building (A.20–A.22), technical assistance (A.4 and A.18) and legal advice (A.1, A.12 and A.29). Two case studies also deal with settlement planning for displaced populations (A.14 and A.26).

SHELTER TYPES. Shelter options also varied, from tents (see A.22 and A.26) and emergency shelters (A.19 and A.25), to transitional or semi-permanent shelters (A.1, A.10 and A.24) to core houses (A.11 and A.20), to repair and rehabilitation of houses (A.4, A.27 and A.32). They also included rental support (A.1) and upgrade of collective centres (A.30–A.31).

TYPE OF CRISIS AND DISPLACEMENT. Eleven projects in this edition were implemented in support of internally displaced people due to conflict or violence (see case studies from Iraq, South Sudan and the Syrian Arab Republic). One was also in response to displacement caused by drought (A.5 in Somalia). Five case studies deal with refugee situations (including one on mixed flows of migrants and refugees – A.25), and three with supporting returnees after conflict-related displacement (for instance A.4). Ten projects were in response to natural disasters (floods, tropical cyclones and earthquakes) at different phases of the response: emergency (A.3, A.19, A.22 and A.24), transitional (A.1 and A.24), recovery (A.11 and A.20–A.21) and reconstruction (A.18). Some of these also involved support to people displaced by such disasters (for example A.1, A.19 and A.22).



Case studies show a wide range of shelter assistance options from the perspective of implementing agencies. However, in most crises, affected people are the first and primary responders.

LOCATIONS AND SETTLEMENT OPTIONS. People assisted by the projects in this edition found shelter and were reached in different types of locations. From a shelter perspective, the location and typology of settlement where people are can be considered amongst the main determinants in selecting appropriate response options.

Almost half of the projects in this book were implemented in communal displacement sites. These included planned and managed sites for large displaced populations fleeing conflict (see A.7–A.9 and A.26), spontaneous camps where people self-settled (A.5, A.14–A.15 and A.25), as well as collective facilities, which often included schools and other public buildings (A.22, A.30 and A.31).

Some projects were also conducted in support of populations in dispersed locations, such as people renting apartments (see A.29 and A.32) or staying with host families (A.2 and A.27). Whilst many displaced people after a crisis find shelter in dispersed locations, there are often more challenges associated with profiling these groups and delivering assistance, compared to those in communal sites.

Many case studies also assisted people who were not displaced but had their houses damaged or destroyed (see A.11, A.18–21, A.23 and A.27), or helped households to return to their homesites (A.1, A.4 and A.23).

Two projects provided shelters, infrastructure and services in new sites to support the resettlement of people who were living in camps (see A.1 and A.28), and two also supported dispersed resettlements from camps (A.1) or hazard-prone areas (A.19).

Projects were implemented in rural, peri-urban and urban environments. The definition of what is “urban” varies by country. In this edition, the case studies that focus more on responses in urban settings are in the Syrian Arab Republic (A.29 on rehabilitation of apartments and A.30 on collective centre upgrade) and Turkey (A.32, on house repair and rehabilitation).



The location and typology of settlement where affected people live are amongst the main factors in determining appropriate sheltering solutions.

SUMMARY TABLE OF SUPPORT METHODS USED BY THE PROJECTS DESCRIBED IN THE CASE STUDIES

Crisis	CASE STUDY	SUPPORT METHODS																
		Distribution				Cash-based												
		Household items	Shelter materials (incl. kits)	Tools / Fixings	WASH items (incl. kits)	Conditional cash transfer	Vouchers	Unconditional and unrestricted	Loans / Micro-credits, etc.	Advocacy / Legal assistance	Site / Settlement Planning	Infrastructure	Training / Capacity-building	Tech. assistance / Quality assurance	Structural assessment	Guidelines / mass communications	Site management	Debris / rubble removal
	A.1 / Burundi / 2017-2018 / Camps closure																	
	A.2 / Dem. Rep. of the Congo / 2018 / Conflict																	
	A.3 / Kenya / 2018 / Floods																	
	A.4 / Nigeria / 2017-2018 / Conflict																	
	A.5 / Somalia / 2017-2018 / Drought																	
	A.7 / South Sudan / 2017-2018 / Conflict																	
	A.8 / South Sudan / 2017-2018 / Conflict																	
	A.9 / South Sudan / 2018 / Conflict																	
	A.10 / Uganda / 2017-2018 / South Sudan crisis																	
	A.11 / Dominica / 2017-2018 / Hurricane Maria																	
	A.14 / Bangladesh / 2017-2018 / Rohingya crisis																	
	A.15 / Bangladesh / 2017-2018 / Rohingya crisis																	
	A.18 / Nepal / 2016-2017 / Earthquake																	
	A.19 / Nepal / 2017-2018 / Floods																	
	A.20 / Philippines / 2015-2017 / Typhoon Haiyan																	
	A.21 / Philippines / 2016-2018 / Typhoon Haiyan																	
	A.22 / Philippines / 2018 / Tropical Storm Kai-Tak																	
	A.23 / Sri Lanka / 2010-2017 / Conflict																	
	A.24 / Sri Lanka / 2017-2018 / Floods																	
	A.25 / France / 2015-2016 / Europe refugee crisis																	
	A.26 / Iraq / 2016-2017 / Conflict																	
	A.27 / Iraq / 2017-2018 / Conflict																	
	A.28 / Syrian Arab Republic / 2015-2017 / Conflict																	
	A.29 / Syrian Arab Republic / 2017-2018 / Conflict																	
	A.30 / Syrian Arab Republic / 2017-2018 / Conflict																	
	A.31 / Syrian Arab Republic / 2018 / Conflict																	
	A.32 / Turkey / 2017-2018 / Syria crisis																	

This table shows that shelter programmes are much more than material distributions, and include non-materials support methods, such as cash, legal assistance, capacity-building and site planning.

Explanation of the columns:

- Distribution: what kind of items or kits were provided (in-kind) to beneficiaries?

- Cash-based: what type of cash-based intervention was used? (Note: conditional cash includes cash for work. No projects used unconditional and unrestricted grants).

- Advocacy...Rubble removal: what other types of assistance were provided?

SUMMARY TABLE OF SHELTER ASSISTANCE TYPES AND SETTLEMENT OPTIONS IN THE CASE STUDIES

CASE STUDY	SHELTER ASSISTANCE TYPE								LOCATION			SETTLEMENT OPTION								
	Emergency shelter	Transitional / semi-permanent shelter	Host family support	Rental support	Core housing	Repair / retrofitting	Permanent houses	Collective centre upgrade	Rural	Peri-urban	Urban	Non-Displ. / Returns		Displaced, dispersed		Displaced, communal		Resettlement		
												Owner occupied	Rental	Informally occupied	Rental	Host families	Spontaneous (self-settled)	Collective centres	Planned site / settlement	Unplanned site / settlement
A.1 / Burundi																				
A.2 / Dem. Rep. of the Congo																				
A.3 / Kenya																				
A.4 / Nigeria																				
A.5 / Somalia																				
A.7 / South Sudan																				
A.8 / South Sudan																				
A.9 / South Sudan																				
A.10 / Uganda																				
A.11 / Dominica																				
A.14 / Bangladesh																				
A.15 / Bangladesh																				
A.18 / Nepal																				
A.19 / Nepal																				
A.20 / Philippines																				
A.21 / Philippines																				
A.22 / Philippines																				
A.23 / Sri Lanka																				
A.24 / Sri Lanka																				
A.25 / France																				
A.26 / Iraq																				
A.27 / Iraq																				
A.28 / Syrian Arab Republic																				
A.29 / Syrian Arab Republic																				
A.30 / Syrian Arab Republic																				
A.31 / Syrian Arab Republic																				
A.32 / Turkey																				

Projects provided or supported a variety of shelter assistance types implemented in diverse locations, based on the context and the phase of the response. In this edition, there are also examples of projects that built permanent houses.

Explanation of the columns:

- Shelter assistance types: what kind of shelter assistance was provided by the project? This ranges from emergency shelter to repair/retrofitting and rental support.

- Location: where was the project implemented? In a rural, peri-urban or urban area?

- Settlement option: what type of settlement were people assisted in (or assisted to return to)? Were people in camps or in return areas? Did the project support resettlement to a safe location? Were beneficiaries living in collective centres, or did they self-settle in dispersed locations?

CASE STUDY ANALYSIS AND RECURRING THEMES

For this edition of Shelter Projects, the 27 case studies dealing with the operational implementation of programmes were analysed by a core group of subject experts, with the support of master’s students in the data collection phase. For each case study, strengths and weaknesses were taken as unit of analysis and each assigned up to two themes at the intervention/output level and up to two themes at the outcome level.

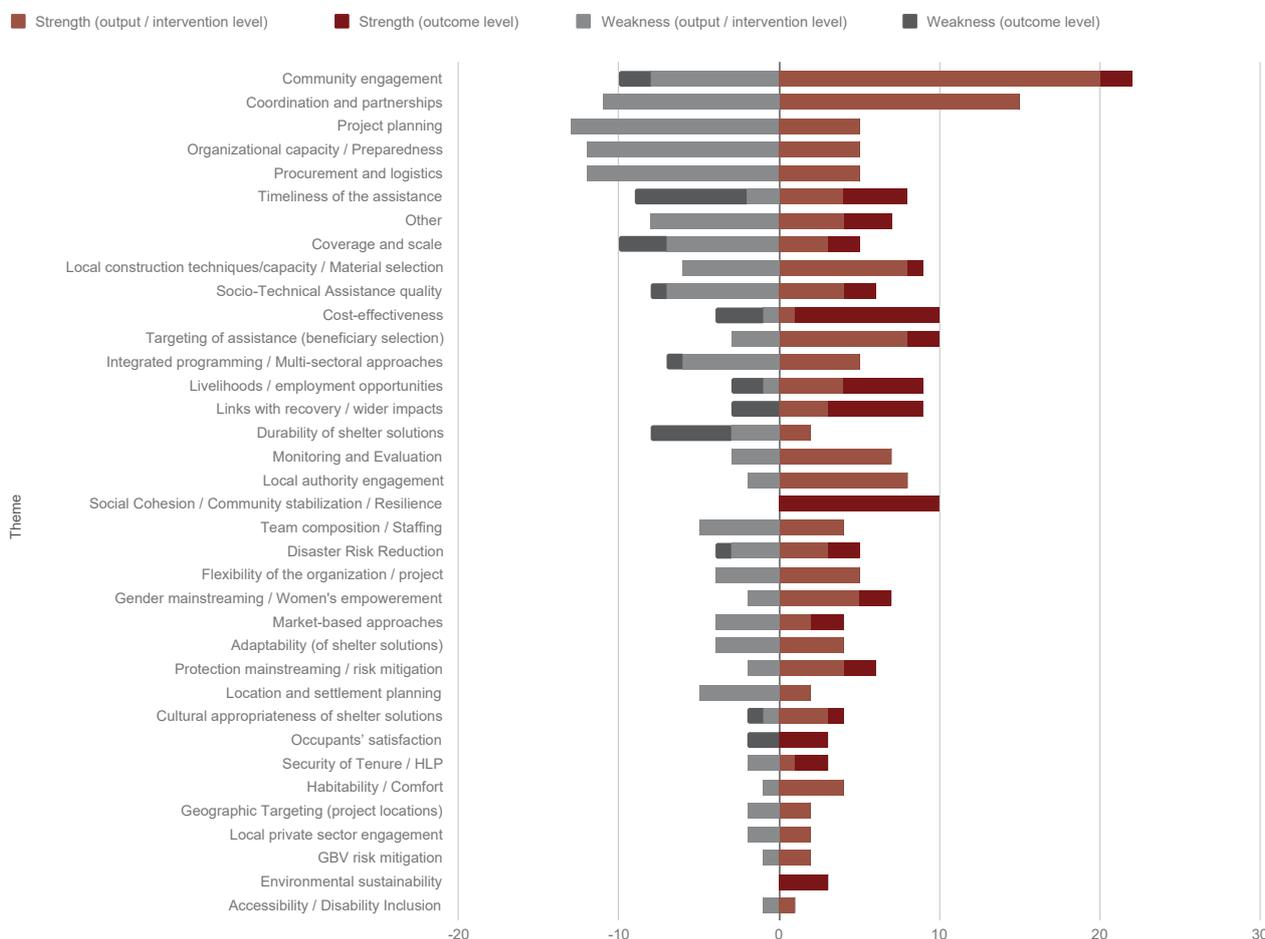
For example: *engaging the community in the project* (intervention/output) *led to stronger social cohesion* (outcome).

The 27 case studies included 263 strengths and weaknesses. These were assigned themes from a predetermined list. In the case study development and review phases, contributors were encouraged to discuss many of these themes in the data collection form, with some emerging more strongly than others in the strengths and weaknesses. The results of the classification were validated and then analysed to extract findings. These are presented below and in the table on pages xviii–xix.

It is recognized that case studies have inherent biases due to each author’s perspective, and strengths and weaknesses are mostly self-reported, while reality can be more nuanced. Case studies are also very diverse because of the varying nature of the context in which projects take place. However, by classifying the strengths and weaknesses of each project, some trends can be observed.

After the analysis, the most reported theme was *community engagement* (across 23 case studies). The next three most reported themes were *coordination and partnerships* (20 case studies), *project planning* (14 case studies), and *timeliness of the assistance* (16 case studies). *Community engagement* was reported as a clear project strength in 20 case studies and as a weakness only in 10 case studies. That is, in most case studies, authors felt that *community engagement* was the most desirable positive attribute that the project could claim for itself. *Coordination and partnerships* was more evenly split, as it was seen as a strength in just over 50 per cent of case studies and as a weakness in around 40 per cent

STRENGTHS AND WEAKNESSES REPORTED IN THE CASE STUDIES, BY THEME



SUMMARY OF FINDINGS FROM THE ANALYSIS

Top three strengths overall	Community engagement, coordination and partnerships, timeliness of the assistance
Top four weaknesses overall	Project planning, organizational capacity/preparedness, coordination and partnerships, procurement and logistics
Top three strengths in natural disaster responses	Community engagement, coordination and partnerships, monitoring and evaluation
Top two weaknesses in natural disaster responses	Procurement and logistics, Organizational capacity/preparedness
Top two strengths in conflict responses	Community engagement, livelihoods/employment opportunities
Top two weaknesses in conflict responses	Project planning, timeliness of the assistance
Top two strengths in complex/multiple responses	Coordination and partnerships, community engagement
Top weaknesses in complex/multiple responses	No clear data

of case studies. *Project planning* was reported as a weakness in half of the case studies and as a strength only in less than 20 per cent of case studies. *Timeliness of the assistance* was evenly split, reported as a strength in eight case studies and as a weakness in nine.

Community engagement was the most reported strength at the intervention/output level and, in half of these cases, the output was reported as leading to an outcome. The most common outcome, in over a third of the outcomes resulting from strong community engagement was *social cohesion, community stabilization and resilience*. *Timeliness of the assistance* was the next most common outcome from community engagement.

When considered by crisis type, *community engagement* was seen as only a strength in natural disaster case studies, and never a weakness, but in conflict and complex emergencies, community engagement (or lack of it) was reported equally as a project strength and a weakness.

The top three project outcome strengths were *cost-effectiveness, social cohesion* and *links with recovery*. The projects that reported *cost-effectiveness* as a positive outcome were very likely to report that this was related to local issues. In nearly half of the cases of strong cost-effectiveness this was reported as being due to either *local construction techniques/capacity/material selection* or *local private sector engagement*. *Social cohesion* was found to be related to *community engagement*, as described above. However, the concept of social cohesion in general is not consistently defined or measured, so it is hard to draw more general conclusions. For *links with recovery*, there was no discernible pattern and relationship with project outputs, as this theme was associated with many different intervention/output-level issues.

Timeliness and *durability* of shelter assistance were the most reported weaknesses at outcome level. There were no discernible patterns relating to project outputs.

Gender mainstreaming and women’s empowerment was only reported as an issue (mostly a strength) in conflict case studies. This is not to say it was not an issue in natural disasters, but could be due to the fact that responses in conflict settings are implemented with a stronger protection lens.

Three issues are reported much more frequently as a strength in conflict responses, compared to natural disaster responses: *livelihoods and employment opportunities, protection mainstreaming/risk mitigation* and *local construction techniques/capacity/material selection*.

In 11 case studies, other themes outside the predefined list were identified. While in most cases these only appeared once, *use of technology* was selected three times, and *information management* and *quality control* twice.



Transitional settlement for people affected by the volcanic eruption in Guatemala.

The most recurring themes found through the analysis described above, are briefly expanded below.

COMMUNITY ENGAGEMENT. Nearly all case studies reported strengths or weaknesses related to the engagement of beneficiaries or wider affected communities in the project. This varied from engagement in the targeting process (see A.20), to programme design (A.1), to implementation (such as construction, repair or distribution activities) or throughout the programme cycle (A.7). When reported as a weakness, it mainly had to do with lack of or limited communication with communities, including lack of feedback mechanisms, which in some instances led to tensions and implementation challenges (A.2, A.5, A.31). Effective feedback and complaints mechanisms were also reported as strengths (A.29), and the involvement of beneficiaries in project design led to the adaptation of modalities or assistance options based on people’s preference (for example A.30). As mentioned above, several case studies also highlighted a connection between the degree of beneficiary involvement and the sense of ownership this generated, with positive impacts on social cohesion and resilience of the affected communities (A.15, A.18, A.21, and A.23). A.10 reported how it is important to factor in sufficient time for participatory processes and focused specifically on the engagement of youth, and A.32 found that unplanned visits to project beneficiaries were often considered a nuisance. Two case studies that reported community engagement as an outcome-level strength, mentioned this was possible thanks to pre-existing links of the organization in the project sites (A.1) or thanks to the engagement of community-based organizations (A.5).

COORDINATION AND PARTNERSHIPS. Twenty case studies had a strength or weakness related to coordination, in its broad sense. This can include sector or inter-agency coordination, partnerships, coordination with national and local stakeholders, internal coordination between different teams, as well as inter-sector coordination. Several case studies highlight how successful partnerships with local organizations had positive impacts on the project thanks to the complementarity of capacities and the links with communities that local actors brought (see A.3, A.5, A.11, A.20 and A.24). Others highlight the benefits of inter-agency coordination, which improved targeting and sector standards quality (A.11), allowed to achieve coverage of needs at scale (A.15) or to develop harmonized approaches and guidelines (A.26 and A.30). Some case studies highlight how coordination with specific groups had enabling effects on the project, such as with peacekeeping forces (A.9), or the lack thereof had negative consequences, such as in the case of A.2 and 28 where poor communication with armed actors caused challenges, or in A.26 where coordination issues with WASH actors caused delays. Internal collaboration between teams is also cited as a strength or a weakness (A.1, A.26 and A.29). A.14 highlights several coordination challenges for site planning actors in responding to a unique crisis. In some cases, limited or no coordination is reported as a weakness (A.21 and A.31).

PROJECT PLANNING. The theme with most reported weaknesses is project planning, which includes a number of diverse issues dealing with programme design, work plans and resource allocation, amongst others. Some projects report challenges associated with poor planning around procurement of materials, including customs clearance (see A.1 and A.7), or around access and weather constraints (A.10 and A.28) or security (A.23). Many report issues with allocation of funds and targeting processes, for example that the assistance was not

sufficient to cover the needs due to lack of or poor allocation of resources (A.27, A.10, A.32, A.21 and A.23). A.18 and A.30 report issues with the sustainability of interventions beyond the project end, which can be connected to limited long-term planning. A.4 and A.32 highlight limitations with cash-based interventions that could have been avoided with better planning. Project planning was reported as a strength in relation to piloting and programme design choices (A.28 and A.27), or strategic decisions related to geographic targeting or coordination issues (A.1, A.14 and A.26).

TIMELINESS OF THE ASSISTANCE. Sixteen case studies reported strengths or weaknesses related to the timeliness of the project or the impact that other issues had on the schedule of activities, respectively. Some reasons behind the timely delivery of assistance were the pre-positioning of stocks and engagement of local authorities (see A.22), successful partnerships (A.24), or the engagement of the community (A.18). The speed of the response was reported as a strength in A.25 (where all vulnerable individuals in a site received shelter before the winter), in A.31 (where over 65,000 people fleeing a military offensive were assisted in collective centres in a span of 45 days), and in A.26 (where people fleeing operations in Mosul found shelter in two emergency sites rapidly set up in anticipation of the influx of IDPs). A.14 highlights how early decisions related to settlement planning and disaster risk reduction were key to shaping the response. Nine case studies report varying reasons behind delays in implementation, including related to procurement (A.1 and A.10), targeting (A.1 and A.32), selection of contractors or service providers (A.32 and A.4), as well as staff turnover (A.27). In two cases, delays were related to cash-based interventions (A.4 and A.7).

ORGANIZATIONAL CAPACITY/PREPAREDNESS. Similar to project planning, case studies mostly reported weaknesses related to organizational capacity, however these were caused or linked to varying issues. Some examples include lack of expertise in cash-based programmes (see A.2, A.4 and A.7), quality control (see A.22 and A.32), technical capacity at the field level (A.21) or more broadly lack of training and experience from the implementing organization (A.25). Recruitment challenges and slow support services were also amongst the issues identified (A.11, A.24, and A.25). The internal capacity and preparedness of the implementing organization was also reported as a strength in a few cases, for instance in relation to speed and quality of deployed personnel (A.11), stocks pre-positioning (A.21) or the agility of the team to act in a complex political environment where larger actors could not (A.25).

PROCUREMENT AND LOGISTICS. Challenges related to procurement of materials and logistics come up often across case studies. These include transport costs (see A.19 and A.20), quality and quantity of materials provided (A.15 and A.26), importation challenges (A.1 and A.3) and limited internal capacities or lengthy processes (A.20 and A.21). Weaknesses in market-based approaches were also reported, such as the lack of market assessments (A.28), the limited engagement of suppliers (A.18), or the issue of poor contracts with traders (A.8). Case study A.3 highlights the challenges in single-use plastics importation and the potential wider impacts for the sector.

COVERAGE AND SCALE. Fifteen case studies reported issues related to coverage (people reached against needs) and scale of the intervention. A.15 and A.31 are very large-scale projects that maximized resources to reach as many people as possible in a short time frame. While the former achieved the results with a highly coordinated approach, the latter reported that lack of coordination represented a weakness of the programme. A.28 was successful in scaling up, generating donor interest. A.25 managed to reach all the residents in a camp achieving full coverage using donations and volunteer-run teams. Limited scale of the project against the needs was however more often reported as a weakness, for instance due to high costs of selected modalities (see A.20 and A.18), lack of sufficient funds (A.10), loss of access to project locations (A.30) or targeting criteria (A.27).

LOCAL CONSTRUCTION TECHNIQUES/CAPACITY AND MATERIAL SELECTION. The choice of local materials and building techniques and the use of local skills and capacities (including labour) was a significant theme in 13 case studies. The issue of materials selection (both as a strength and a weakness) came up several times, for instance in A.28 on the use of adobe, or in A.26 where tents of limited quality and durability were used. Choosing local resources was often reported as contributing to cost-effectiveness (A.2 and A.18), supporting the local economy (A.29 and A.32), strengthening local capacities and fostering a sense of ownership (A.7), as well as having positive environmental impacts (A.28). The reuse of salvaged materials was also discussed in two case studies, as a strength in one (A.24) and a weakness in the other (A.22), where wrong assumptions over the use of reclaimed items after a storm meant that households did not have enough framing materials to carry out repairs. The lack of framing materials was also reported as a weakness in A.3.



Responses need to find a balance between scale, timeliness and impact. In Cox's Bazar the speed of the influx, the constraints of the settlements' terrain and the risks associated with the monsoon season, made this even more challenging.



Projects often highlighted the link between the use of local resources and capacities, and the cost-effectiveness of the intervention.

COST-EFFECTIVENESS. Thirteen case studies identified strengths of the interventions that led to cost-effectiveness or weaknesses that caused an increase in cost. As mentioned above, project cost-effectiveness was mainly associated with the use of local resources (see also the paragraph above) or engagement of local private sector (see A.7 and A.8). Case studies also reported effective coordination (A.24), technical assistance (A.21) and durability of the shelter solutions (A.8) as contributing factors to cost savings. On the other hand, the high cost of selected modalities (A.32 and A.20), lack of market assessments and poor site selection (A.28), as well as high transport costs (A.20) were reported as causes of excesses in costs. A.22 highlights how clear geographic targeting made the intervention cost-effective, and A.29 how the provision of solar panels had significant impacts on the reduction of household expenditures.

SOCIO-TECHNICAL ASSISTANCE QUALITY. Socio-technical assistance refers to the series of complementary, non-material support activities for people recovering from a crisis. It is not a one-off intervention and includes different components that should be tailored to the specific needs of crisis-affected populations. Case studies in this edition show some of these activities. For example, A.18 discusses the implementation of large-scale training of masons and door-to-door assistance to support reconstruction efforts after the Nepal earthquakes. A.15 places emphasis over the importance of training and continuous technical assistance for households implementing upgrades to their shelters in the largest refugee settlement in the world. A.21 highlights how technical assistance complementing material support enabled to maximize resources and reach more people, as well as ensured higher impact of disaster risk reduction techniques in the targeted communities, even beyond project beneficiaries. A.20 discusses the complementarity of cash-based assistance with training and technical support to achieve project objectives through an owner-driven approach. A.5 and A.22 discuss challenges and flaws in training approaches, while A.27 highlights how poor communication of structural issues and risks can have negative effects. Finally, A.8 discusses how shortcomings in community mobilization and choice of skills training had impacts on the low participation in the project or on the misuse of the material assistance provided.

TARGETING. Decisions over who to assist and where to intervene often have important repercussions over programmes' effectiveness, and the targeting process itself can be very time-consuming and challenging. Nine case studies discussed strengths in the targeting approach, while five highlighted some shortcomings. The latter had to do with lengthy processes in developing beneficiary lists (see A.1), tensions generated by the decision to use a targeted approach in displacement sites (A.5), or challenges in the selection of project locations (A.24 and A.32) and its repercussions over project implementation. A.29 highlights weaknesses in the targeting process, when intentions of beneficiary families were not properly assessed, leading to lower occupancy rate after project completion. It also shows how selection criteria (related to HLP due diligence processes) can exclude people in need of assistance. Case studies reporting the targeting process as a strength included A.2 (which used a scorecard approach), A.4 and A.20 (which managed to assist all the most vulnerable households in the targeted locations), and A.10 and A.32 that discuss the benefits of adopting an inclusive approach (targeting both refugees and host community members). Finally, A.30 and A.32 highlight how coordination with local authorities and humanitarian partners enabled effective targeting.



A training session on safe shelter and settlement practices in a refugee settlement in Cox's Bazar. The response had a strong focus on training and technical assistance to support refugees in preparing for the monsoon.

Some themes were included in the classification but were only reported very few times. These included *local private sector engagement* (4 case studies), *environmental sustainability* (3), *GBV risk mitigation* (2), and *accessibility / disability inclusion* (2). Although the total number of case studies analysed does not allow representative conclusions to be drawn for the whole sector, this finding may point to a need to further improve shelter and settlement programming in these areas.

Finally, although the case studies – and by consequence, the strengths and weaknesses – are written from the perspective of implementing agencies, they also show that affected people are active agents and not passive recipients of assistance.

NOTE ON TERMINOLOGY

There has been much debate around terminology used in the shelter sector. In particular, there have been issues in different definitions used for different phases of assistance. For example, the terms “emergency shelter”, “transitional shelter”, “temporary shelter”, “semi-permanent shelter” and “incremental shelter” have all been used to define both the types of shelters and the processes used. In this book we use the terms used in-country, which may vary. 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 response options 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 continue learning and, hopefully, implement better shelter projects in the future.

Contribute at www.shelterprojects.org

ENDNOTES

- ¹ United Nations High Commissioner for Refugees – UNHCR (2018) ‘Global Trends. Forced displacement in 2017.’
- ² Internal Displacement Monitoring Centre – IDMC (2018) ‘Global Report on Internal Displacement.’ At the time of writing, data on global displacement for 2018 was not yet available.
- ³ Ibid.
- ⁴ UNHCR Global trends 2017.
- ⁵ IDMC, Global Report on Internal Displacement 2018.
- ⁶ EM-DAT: The Emergency Events Database – Université catholique de Louvain (UCL) – CRED, D. Guha-Sapir – www.emdat.be, Brussels, Belgium.
- ⁷ IDMC, Global Report on Internal Displacement 2018.
- ⁸ UNHCR Global trends 2017.
- ⁹ Joint Response Plan for Rohingya Humanitarian Crisis (JRP).
- ¹⁰ Data for this section is taken from the Global Shelter Cluster dashboard available as of 12 April 2019 at www.sheltercluster.org.
- ¹¹ Ibid.
- ¹² Financial Tracking Service (FTS), <https://fts.unocha.org/>. As of 12 April 2019.
- ¹³ See all appeals on the Global Humanitarian Overview at <https://bit.ly/2wA0tiX>.

SUMMARY TABLE OF PROJECT STRENGTHS AND WEAKNESSES BY THEME

Crisis	CASE STUDY	THEMES															
		Accessibility / Disability Inclusion	Adaptability (of shelter solutions)	Community engagement	Coordination and partnerships	Cost-effectiveness	Coverage and scale	Cultural appropriateness	Disaster Risk Reduction	Durability of shelter solutions	Environmental sustainability	Flexibility of the organization / project	GBV risk mitigation	Gender mainstreaming	Geographic Targeting (project locations)	Habitability / Comfort	Integrated / Multi-sector programming
	A.1 / Burundi / 2017-2018 / Camps closure			S	SW					W							SW
	A.2 / Dem. Rep. of the Congo / 2018 / Conflict			SW	W	S					S		S				W
	A.3 / Kenya / 2018 / Floods				S		W				S						
	A.4 / Nigeria / 2017-2018 / Conflict		W	S												S	W
	A.5 / Somalia / 2017-2018 / Drought		S	SW	SW		W	SW									
	A.7 / South Sudan / 2017-2018 / Conflict	W		S		S	W					SW	S				
	A.8 / South Sudan / 2017-2018 / Conflict			SW		S				S			W			SW	
	A.9 / South Sudan / 2018 / Conflict			SW	SW												
	A.10 / Uganda / 2017-2018 / South Sudan crisis			SW	S	SW	W	S		W							
	A.11 / Dominica / 2017-2018 / Hurricane Maria			S	S				W	W	S						W
	A.14 / Bangladesh / 2017-2018 / Rohingya crisis			W	SW		W		S								
	A.15 / Bangladesh / 2017-2018 / Rohingya crisis		W	S	S		S	W	S	W							
	A.18 / Nepal / 2016-2017 / Earthquake			S	S	S	W		S								S
	A.19 / Nepal / 2017-2018 / Floods		W	S					S	S		W					W
	A.20 / Philippines / 2015-2017 / Typhoon Haiyan			S	S	W	W			S						S	S
	A.21 / Philippines / 2016-2018 / Typhoon Haiyan		SW	S	W	S	S		S			SW					
	A.22 / Philippines / 2018 / Tropical Storm Kai-Tak			S		S										S	
	A.23 / Sri Lanka / 2010-2017 / Conflict			S								W	S	S			
	A.24 / Sri Lanka / 2017-2018 / Floods			S	S	S					S	W			W		
	A.25 / France / 2015-2016 / Europe refugee crisis			S	S		S		W								
	A.26 / Iraq / 2016-2017 / Conflict				SW				W	W							W
	A.27 / Iraq / 2017-2018 / Conflict		S			W	W							S			SW
	A.28 / Syrian Arab Republic / 2015-2017 / Conflict		S		W	W	S				S			S			
	A.29 / Syrian Arab Republic / 2017-2018 / Conflict	S		S	W	S	W			W						S	
	A.30 / Syrian Arab Republic / 2017-2018 / Conflict			SW	S		W				S		W				
	A.31 / Syrian Arab Republic / 2018 / Conflict			W	W		S	S						S	S		S
	A.32 / Turkey / 2017-2018 / Syria crisis			W	SW	S			W	W		S			W		

This table shows the results from the analysis conducted on the 27 case studies dealing with shelter and settlement programme implementation in this edition. S = the case study reported one or more project strength(s) that was/were classified in the given theme during the analysis. W = the case study reported one or more project weakness(es) that was/were classified in the given theme during the analysis. SW = the case study included both a strength(s) and a weakness(es) for the given theme.

SUMMARY TABLE OF PROJECT STRENGTHS AND WEAKNESSES BY THEME (CONTINUED)

CASE STUDY	THEMES																		
	Links with recovery / wider impacts	Livelihoods / employment opportunities	Local authority engagement	Local techniques / capacity / material	Local private sector engagement	Location and settlement planning	Market-based approaches	Monitoring and Evaluation	Occupants' satisfaction	Organizational capacity / Preparedness	Procurement and logistics	Project planning	Protection mainstreaming / risk mitigation	Security of Tenure / HLP	Social Cohesion / Resilience	Socio-Technical Assistance quality	Targeting of assistance (beneficiary selection)	Team composition / Staffing	Timeliness of the assistance
A.1 / Burundi	SW		W						S	W	SW	S	W		S	W	S	W	
A.2 / Dem. Rep. of the Congo		S		S					W						S	S			
A.3 / Kenya				W			SW		W	SW									
A.4 / Nigeria	S	SW						S	W		W	S		S		S		W	
A.5 / Somalia			S				S						W		W	W			
A.7 / South Sudan				S	S	W		S	W		W							W	
A.8 / South Sudan	S	SW		S		SW		S		W				S	W				
A.9 / South Sudan					W					S						S			
A.10 / Uganda		S		S	W	S			W	W	W			S	W	S		W	
A.11 / Dominica			S						SW							S	S		
A.14 / Bangladesh						W					SW							S	
A.15 / Bangladesh				W						SW				S	W				
A.18 / Nepal	SW	SW	S	S		W	S		W	W				S	S			S	
A.19 / Nepal							S		W										
A.20 / Philippines				W			S		W						SW	S	W	S	
A.21 / Philippines	S								W	W	W			S	SW	S			
A.22 / Philippines	S		S	W				W	SW	SW					W			S	
A.23 / Sri Lanka	S		S								W	W	S	S					
A.24 / Sri Lanka			S	S			S		W								W	S	
A.25 / France					W				SW	S							SW	S	
A.26 / Iraq				W		SW				W	S							SW	
A.27 / Iraq		S				S					SW			S	W		SW	W	
A.28 / Syrian Arab Republic	S	S		SW	W	W			W	SW	W							W	
A.29 / Syrian Arab Republic		S	W	S			S					S	S			W		W	
A.30 / Syrian Arab Republic	W		S				W				W	SW		S	S	S			
A.31 / Syrian Arab Republic	S				S		W		SW		W	S						S	
A.32 / Turkey		S	S	S	W		S		W	W		W		S	S		S	W	W



SECTION A

**CASE STUDIES
& OVERVIEWS**

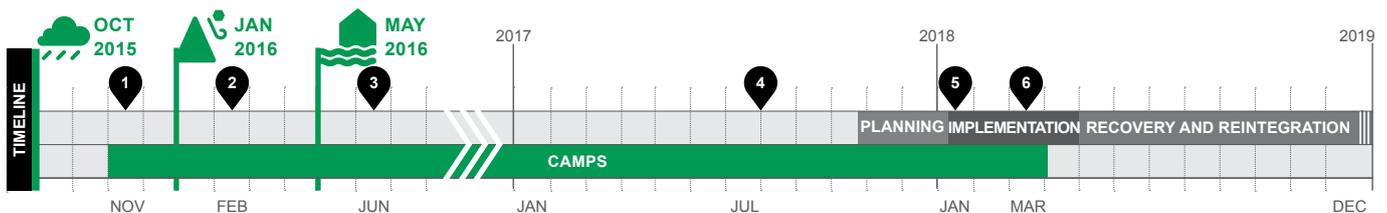


CASE STUDY

BURUNDI 2017–2018 / CAMPS CLOSURE

KEYWORDS: Camp decommissioning, Semi-permanent shelter, Rental support

CRISIS	El Niño and La Niña rains and floods, October 2015–March 2016	
TOTAL PEOPLE AFFECTED	5,068 households (30,408 individuals) as of Jan 2016 (UN OCHA, https://bit.ly/2FRG533)	
TOTAL PEOPLE DISPLACED	5,022 people in the targeted provinces	
PROJECT LOCATIONS	Provinces of Bujumbura Rural and Rumonge	
PROJECT BENEFICIARIES	767 IDP households (5,022 direct beneficiaries) 40 households plus 390 individuals from the host community	
PROJECT OUTPUTS	434 households assisted with rental support 334 semi-permanent shelters constructed Other outputs: provision of 727 NFI kits; 727 Hygiene kits; 434 Agriculture kits; 1,115 cash-for-work grants	
MATERIALS COST	USD 1,472 for the semi-permanent shelter, including latrine, kitchen and stone foundations USD 1,050 for the semi-permanent shelter alone USD 107 for the rental support for six months	
SHELTER SIZE	45m² (semi-permanent)	
SHELTER DENSITY	7.5m² per person	
PROJECT COST	USD 1,565 per household	
PROJECT SUMMARY		<p>The project decommissioned four camps for flood-affected, displaced persons and offered shelter support, NFI kits, transportation and re-integration assistance to the camps' inhabitants. More than 5,000 individuals were resettled in safe and dignified areas, although they remained in need of more secure and durable solutions. Those who could move to a safe piece of land received semi-permanent shelters and latrines, while those who could not were provided with rental support for six months.</p>



- 1 Nov 2015: IDP camp of Gitaza (Rumonge) established.
- 2 Feb 2016: IDP camp of Cashi (Rumonge) established.
- 3 Jun 2016: IDP camps of Mushasha I and Mushasha II (Bujumbura Rural) established.

- 4 Jul–Aug 2017: Return intention survey to evaluate options and the intention of the IDPs to return to their areas of origin.
- 5 Jan 2018: Partial destruction of Bujumbura camps due to floods.
- 6 Mar 2018: Decommissioning of the four camps completed.

STRENGTHS

- + The organization used its previous role in the camps strategically.
- + Including the admin and finance team in the cash transfer activities.
- + Close involvement of the families.
- + Integrated programming.
- + Diverse group of profiles from different units in the organization.

WEAKNESSES

- Poor communication and coordination both internally and externally.
- Access to the sites and establishing the beneficiary list took time.
- Not all IDPs could return due to lack of land titles.
- Time needed to deliver materials, safe plots of land and pass customs created delays.
- The project did not cover all the gaps (such as access to water).



The tents provided in the camps were intended to last about six months, but families lived there for two years, in battered tents like these at Cashi camp.

CONTEXT

Burundi is affected by adverse climate events and an unstable socio-political and security situation. It is located in an earthquake-prone zone, and natural hazards such as floods, landslides and intense storms often cause severe damage to land and lives, particularly in peri-urban and rural areas.

SITUATION BEFORE THE FLOODS

Close to Lake Tanganyika, communities depend on fishing and subsistence farming to make a living. These activities have encouraged the movement of people from the interior of the country to lakeside or hilly areas, where landslides are frequent during the rainy season. The most vulnerable people in Burundi often earn insufficient income to build flood-resistant houses or buy plots of land in lower-risk areas. Their houses are generally made of mud.

SITUATION AFTER THE FLOODS

In October 2015, floods and landslides triggered by torrential rains caused thousands of Burundians to lose their homes, livelihoods and, in some cases, their lives. Four emergency camps were set up by the lead organization and its national partner to assist those displaced by the disaster. More than 3,700 people were still there in July 2017, and the rest of the displaced population (about 1,300) moved intermittently between the sites and their communes of origin, often in search of improved shelter or due to seasonal labour migration. The camps were managed by the national partner organization.

The shelter kits initially provided were intended to last approximately six months, though families lived there for more than two years. Living conditions rapidly deteriorated; tents were in dire need of repair; rain poured in from holes in the roofs, creating a muddy sleeping area and leading to increased incidence of pneumonia and other illnesses. In January 2018, the camps of Mushasha I and II were partially destroyed by floods. Many inhabitants expressed their desire to leave and requested assistance for a more durable shelter solution.

NATIONAL SHELTER STRATEGY

The government and the international humanitarian community worked together to find a solution to close the sites and assist its residents. Activities were coordinated by the Durable Solutions Working Group, led by the Ministry of Social Affairs and co-led by UN agencies. In 2016, the government donated land in Kigwena to the inhabitants of Cashi and Gitaza camps. For those living in the camps of Mushasha I and Mushasha II, by the end of 2018 (two years after the floods) land had not been found yet. In the meantime, IDPs were supported by the organization through rental subsidies provided through this project, until a durable solution could be found.

PROJECT IMPLEMENTATION

The project provided different shelter and settlement assistance options, as described in the diagram in the next page. In most sites, it was directly implemented by the organization, with a team of eighteen national and four international staff. For Kigwena, the implementation was conducted by three organizations: two for shelter and latrine construction and one constructing water supply points.

DECOMMISSIONING PROCESS

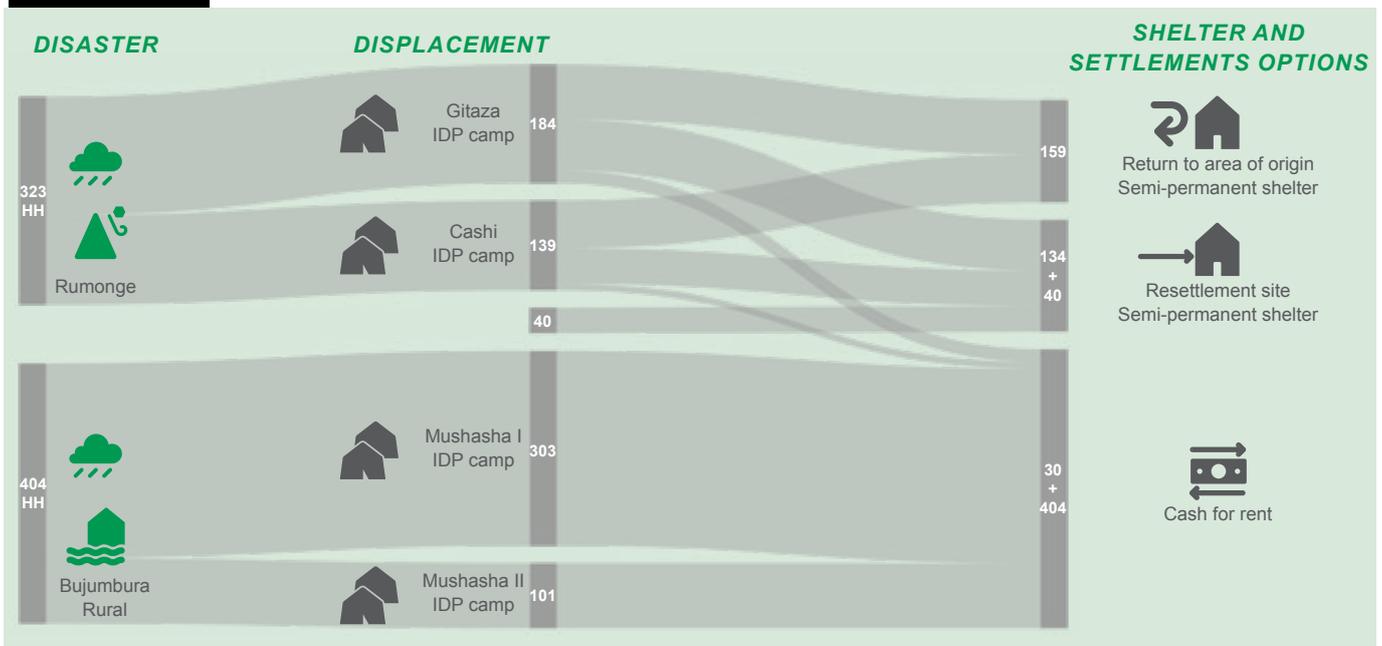
The decommissioning of all camps took place in March 2018. To achieve this, the following activities were carried out.

BENEFICIARY REGISTRATION. The initial list was provided by the Durable Solutions Working Group, acting as the link with local authorities and the leaders of the sites. This list, which included the type of shelter solution provided, was publicly approved and stamped by the Ministry.

COMMUNICATION WITH COMMUNITIES. Focus groups and communication activities were regularly carried out within the camps. The primary objective of these activities was to explain the project and obtain the information needed (including on type of assistance, dates of relocation, criteria for beneficiary selection and focal points in the camp), while also to listen to the needs and concerns of the camp residents. During



To facilitate the decommissioning process, the organization provided transport assistance and a cash-for-work grant for the dismantling and cleaning of tents and family plots in the camps.



Shelter and settlements options for decommissioning the four camps. All beneficiaries also received NFI kits.

these activities, women were encouraged to register as heads of household, participate in cash-for-work activities and be involved in choosing the most suitable shelter solution.

CASH-FOR-WORK ACTIVITIES. To generate income and involve them throughout the decommissioning process, all families were provided with a cash-for-work grant for the dismantling and cleaning of their tent and plot in the camp.

DISMANTLING OF INFRASTRUCTURE. A service provider was engaged to finalize the dismantling of the camp, taking care of health and pollution risks of WASH facilities.

TRANSPORT TO THE RELOCATION SITE. Additional transport assistance was provided for two sites:

- **A cash grant** was given to people returning to their places of origin, to help transport belongings.
- **Direct transportation** led by the Civil Protection of Burundi or IDPs from Gitaza and Cashi to the resettlement site, where they were met upon arrival by the organizations involved in construction.

SHELTER AND SETTLEMENT OPTIONS

A. SEMI-PERMANENT SHELTERS IN RESETTLEMENT SITE. Those in Cashi and Gitaza who did not own land were relocated to the government-issued land of Kigwena, where 174 improved semi-permanent shelters were built. These included latrines and kitchens (including 40 for the most vulnerable among the host community). Due to budget restrictions, the shelters were built using corrugated iron sheets on the roof and temporary walls made of tarpaulins. The host community actively participated in the construction, supported through a cash-for-work programme.

B. SEMI-PERMANENT SHELTER IN AREA OF ORIGIN. 159 semi-permanent shelters were built in the areas of origin of the population living in Cashi and Gitaza camps, across seven different hilly locations. Due to timing and the complexity of transport to the isolated hills, some of which are located three hours away from a major road, the stone foundation was removed and households received cash to transport the materials (the equivalent of USD 2.50 per trip from the camp to the new land). Each household built its own latrine with materials provided and a cash grant for digging.



© Marta Leboireiro



© Joseph Ashmore

The project supported return by providing shelters on a resettlement site on government-issued land in Kigwena (above left). When land tenure and safety allowed it, shelters were built in the area of origin of the IDPs (above right, in the hills of Rumonge).

C. RENTAL SUPPORT. For those who could not return or resettle, the organization provided rental grants of about USD 17 per month for six months, to rent a house in their areas of origin until a durable solution could be found. The organization visited the houses to be rented to ensure habitability and acted as witness to avoid fraud during contract signature. The transaction was done by a Burundian bank that paid 50 per cent of the rent to the landlord as an advance to secure the house (as contracts in Burundi request a minimum of three months in advance). The other 50 per cent was paid to the IDPs to safeguard them in case they had problems with the landlord, so that they could move to another house or use it for other needs.

All the inhabitants of Mushasha I and II received rental support, because the plots of land in Gatumba’s urban areas were in litigation. However, many IDPs were only living in the camps during the day, while staying with host families at night. The organization assisted all households linked to the camps with rental support to successfully decommission the camps.

For Cashi and Gitaza, rental support was provided for 30 households who could not relocate and whose plots of land were not deemed safe.

HLP AND DRR

In the Rumonge hills, beneficiaries were unable to provide property titles and safety of the land from risk of landslides needed to be ensured. To address these issues, a team of five workers (lawyers and engineers) from the organization, a technician from the Durable Solutions Working Group and the local authorities, hiked for two weeks in the hills to visit each plot of land and provide technical approval for construction and a community validation document of the property. This was approved by the Ministry as ensuring land ownership.

Of the 220 plots visited, 159 were validated; beneficiaries received a copy of the document to avoid future litigations, while other supporting documents were kept at the organization and the Ministry itself. Many plots were not validated because of the risk of landslides, due to the slope of the land or the proximity to a river. The households in this situation were included in the rental support and agricultural kit activities; the organization supported them in their search for a house to rent.



© Joseph Ashmore

The project decommissioned four camps for displaced persons in about four months. The sites were returned to the host communities who were able to use them as communal meeting spaces and playgrounds.

LINKS WITH RECOVERY

The project supported the reintegration of the IDPs in the host communities through cash-for-work programmes and distributing agricultural kits to those receiving rental assistance. Two quick-impact projects were also implemented, focusing on strengthening social cohesion by addressing community needs. These included construction of drainage canals to mitigate the impact of future floods, new water sources and infrastructure. For both projects, part of the works was done by contractors and part through cash for work. 80 workers were recruited, trained and closely monitored by the site engineers.

Additionally, a food-for-work programme encouraged the households that benefited from the semi-permanent shelters to make adobe bricks or earth compressed blocks made by a local youth association. This would enable the upgrading of shelters into more permanent houses.

MAIN CHALLENGES

Coordination posed a significant challenge, as each stakeholder involved had different goals, approaches and timelines. This created delays in the workplan, and additional staff and cars were needed to be present in various locations at the same time.

As the project was implemented at the beginning of the first wet season, rain prevented the construction of adobe bricks, which is why tarpaulins were eventually used for the walls.

WIDER IMPACTS OF THE PROJECT

Improved semi-permanent shelters were built for the first time in Burundi, proving to be a well-adapted solution during the rainy season. It was accepted by the community and the Shelter Sector partners.

Thanks to the Kigwena resettlement intervention, one community had access to clean water sources and better schools. This project removed the need for women and children to walk for three hours for water each day and improved the access to education.

The communities where the camps were settled recovered their public spaces and transformed them into football fields, playgrounds and community meeting spaces.



© Maria Leboireiro

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

WEAKNESSES

- **Communication and external coordination with various stakeholders could have been improved.** Each stakeholder had different needs in terms of timing, project approach and goals. **Internal coordination and handover** between staff within the organization could have been better organized, as certain critical information, such as beneficiary lists and surveys, was difficult to find and the incoming project manager had to extensively search for it.

- **Access to the sites and establishing the beneficiary list took time** due to the constant mobility of the households living in the area; more than two months were needed to reach an agreement with the local authorities on the final list.

- **The shelters could only be built where beneficiaries could ensure a land title.** For those whose land could not be validated, the organization provided rental support grants for six months, but this did not represent a durable solution.

- To ensure quality, tarpaulins and NFI kits were procured internationally. This **created some delays** and caused the original workplan to be adapted. This issue could have been identified during the project development phase and used as an argument to extend the four-month implementation period imposed by the donor. **The organization could have also improved planning** for the procurement of the items, as soon as the funding had been confirmed.

- **The project did not cover all the needs.** Improved hygiene and sanitation were achieved among some, but not all, beneficiaries. **Access to clean water** remained a challenge for a few beneficiaries due to distance to water sources. Additionally, as semi-permanent shelters were not intended to last beyond one or two years, **further support would be required to rebuild them as durable houses.**

STRENGTHS

+ **The organization strategically used its presence and role in the set-up of the camps** to inform the design of project activities. Access to previous evaluations provided a clear overview of the context and the needs, and camp set-up activities strengthened the capacity of the community to assist.

+ **Including the organization's administrative and finance team during cash transfer activities was helpful** to ensure transparency and accountability. **Transfers were made through a local bank and beneficiaries did not need to have a bank account** in order to participate. This solution provided anonymity to the beneficiaries and landlords, as well as improving security at the site and for project staff.

+ To help ensure community engagement and sustainability, **the organization closely involved the families** to select the site of their shelters and the type of assistance needed.

+ **Shelter activities were complemented** with WASH, counter-trafficking, health and reintegration programmes.

+ The programme benefited from **diverse profiles from different units in the organization**, including: engineers, lawyers, economists, psychologists and social workers, to provide comprehensive support.



Although not all beneficiaries received a durable shelter solution, the programme successfully decommissioned all the camps and included reintegration components that benefited entire communities.

LESSONS LEARNED

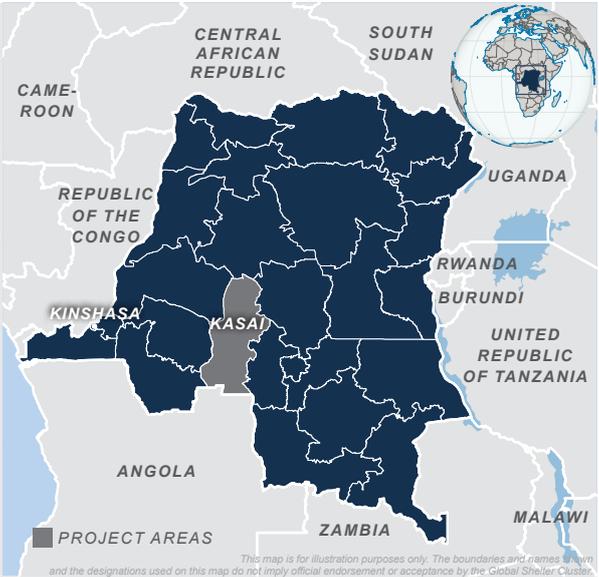
- **The programme should have been longer.** Providing rental support within a very tight timeframe reduces the intentionality and sustainability required for a long-term reintegration objective. In a four-month project, the results can be achieved but the quality of the intervention in terms of counselling, capacity-building and social cohesion is reduced.
- **To reinforce the coordination** between partners in the field, ensure that all have the same goals, priorities and deadlines, which must be agreed upon before collaboration begins. **More time and resources should be dedicated to improving coordination** in future projects when multiple stakeholders are involved, as this would save time during implementation and facilitate the interventions.
- **In situations where different types of assistance are provided, better comparison of the options** is required, to reduce real or perceived discrimination and to ensure the final outcomes for all beneficiaries are as similar as possible.
- **External factors affecting implementation should be carefully considered**, and possible delays discussed with the donor early on. For instance, construction should have happened during the dry season, allowing for lower costs and more durable shelter outcomes. **Longer-term options should also be discussed in advance, to ensure project sustainability** and to avoid leaving beneficiaries in precarious conditions after the assistance ends.

CASE STUDY

DEM. REP. OF THE CONGO 2018 / CONFLICT

KEYWORDS: Emergency shelter, NFI, Vulnerability scorecard, Local construction techniques

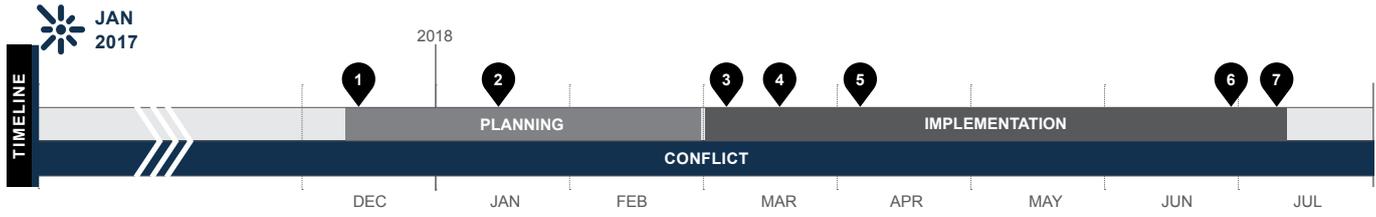
CRISIS	Kasai conflict, January 2017–onwards
PEOPLE IN NEED*	870,000 in Kasai province and 3.8 million in the whole of Kasai region, as of Dec 2017
PEOPLE WITH SHELTER NEEDS	83,740 in Kamuesha health zone. 4.7 million in the whole country*
PROJECT LOCATIONS	Two villages in Kamuesha health zone, Kasai province
PROJECT BENEFICIARIES	630 households (3,150 individuals, 60% female and 158 individuals with disabilities. Including 40% returnees and 10% host families)
PROJECT OUTPUTS	200 shelters built via conditional cash grants 630 NFI kits distributed 4 training sessions on shelter construction
SHELTER SIZE	20m²
SHELTER DENSITY	4m² per person on average
MATERIALS COST	USD 140 for the shelter USD 120 for the NFI kit
PROJECT COST	USD 360 per household (shelter + NFI kit) USD 164 per household (NFI kit only)



PROJECT SUMMARY

The project provided non-food items kits to 630 displaced, returnee and host community households and built 200 shelters for the most vulnerable amongst them using local designs and materials. Shelter solidarity committees were established to oversee the design and construction process, which was driven by the affected households themselves. Vulnerability scorecards were used to prioritize beneficiaries based on NFI and shelter materials conditions, combined with additional socioeconomic and vulnerability criteria, designed together with the community.

* Humanitarian Response Plan, 2018.



- 1 12 Dec 2017: Shelter-NFI needs assessment conducted by the organization in Kasai province.
- 2 13 Jan 2018: Assessment report presented to national Cluster and donor.
- 3 4 Mar 2018: Beneficiary selection process using scorecards.
- 4 15 Mar 2018: Four trainings on shelter construction conducted to a total of 100 people forming shelter committees. Community construction tools distributed to these committees.
- 5 4 Apr 2018: Shelter material collection completed. Construction begins through the shelter solidarity committees.
- 6 30 Jun 2018: Construction of the 200 shelters completed.
- 7 1–7 Jul 2018: Handover of shelters and distribution of NFI kits.



A total of 200 shelters were built for the most vulnerable in the communities thanks to the support of solidarity groups covering about 20 families each.

- STRENGTHS**
- + Use of local materials, house typology and construction techniques.
 - + Cash was injected into the local economy.
 - + High involvement of the community.
 - + Effective targeting process.
 - + Gender mainstreaming and women's empowerment.

- WEAKNESSES**
- The project mistakenly assumed that community members would help new arrivals.
 - Limited capacity and experience in cash-based interventions.
 - Communication challenges with armed actors and the communities.
 - Shelters were built without latrines.

CONTEXT IN KASAI

Against a background of insecurity and protracted displacement in the Democratic Republic of the Congo, tensions in 2016 over the recognition of traditional leaders led to an escalation of conflict between the national army and local militia in the Kasai region. About 1.4 million people were displaced in the first half of 2017 across the region. In October 2017, a six-month system-wide Level 3 emergency was declared to respond to the scale of the crisis in the country.¹

SHELTER NEEDS

Shelter and Non-Food Items (NFI) were identified amongst the key priorities in multisectoral assessments conducted in Kasai province. Despite the acute needs, the Shelter-NFI Cluster remained the most underfunded sector in the country in 2018 (less than 10% funded).² Only 36 per cent of the people were reached by March 2018 and very few humanitarian partners were implementing shelter activities.³

NATIONAL SHELTER STRATEGY

The shelter working group strategy in early 2018 centred around four main interventions:

- Collective centre upgrades (USD 50 per household);
- Emergency shelter kits for displacement sites (USD 120 per kit/household);
- Conditional cash support for families hosting IDPs who cannot return (USD 120);
- Materials distribution and/or conditional cash transfer to support return (max USD 450).⁴

The working group advocated for inclusive processes, focusing on capacity-building and owner-driven construction, as well as the use of local materials and housing typologies.

VULNERABILITY SCORECARDS

A scorecard approach was used in the country to target beneficiaries given the acute gaps between needs and available resources. Developed in 2007 within the NFI Cluster, the approach initially used a ranking from 0 (no need) to 5 (extreme vulnerability) based on set criteria. For shelter, the scorecard was developed in 2014. Criteria for each household were selected from drop-down lists in a spreadsheet that calculated the final scores.

Criteria were grouped into five categories:

- Humanitarian situation (see opposite table);
- Density / privacy within the shelter;
- Location (incl. tenure arrangement);
- Roof conditions; and
- General shelter conditions (incl. foundations and walls).

Depending on the conditions of each household, criteria were assigned a score representing the severity of the vulnerability. Scores for the criteria in a given category were then multiplied and weighed. The average amongst the five categories was taken to represent the shelter vulnerability of each household.

¹ 2017-2019 Humanitarian Response Plan: 2018 Update.

² Financial Tracking Service, 2018, <https://fts.unocha.org>.

³ NFI and Shelter Cluster Factsheet March 2018.

⁴ The strategy is available at <https://sheltercluster.org>.

EXAMPLE OF SCORES USED IN THE PROJECT WITHIN THE HUMANITARIAN SITUATION CATEGORY		
Criteria	Criteria options	Scores
Displacement status	Internally displaced / Refugee / Disaster-affected	1.00
	Returnee / Local non-displaced, host family	1.25
	Local non-displaced, not vulnerable	5.00
	Local non-displaced, vulnerable	2.50
Protection incident	GBV / Fire / Damaged and looting	0.50
	No violence	1.00
Special needs	Female headed / Child headed / Elderly / Disability / Chronic illness	0.50
	No special needs	1.00
Time factor	0–3 months without shelter / new displacement	1.00
	3+ months without shelter	1.25
	0–6 months with emergency shelter	7.00
	6–12 months with emergency shelter	1.50
	12+ months with shelter	1.25
	10+ CGI received / kit / transitional shelter	15.00
	Less than 10 CGI received / NFI kit	2.50

EXAMPLE: For a returnee household, with no incident of violence, no member with special needs, that has been for over three months without shelter, the score for the humanitarian situation category is calculated as follows:

$$5 / (1.25 \times 1.00 \times 1.00 \times 1.25) = 5 / 1.56 = 3.2$$

BENEFICIARY SELECTION

The organization applied additional vulnerability criteria to the Cluster scorecard. This reflected a focus on specific vulnerabilities, including safety, gender, age and disability related. A team of five enumerators was employed to conduct the initial assessments. In the target areas, the organization identified average scores of 4.8/5 for shelter and 3.8/5 for NFI. IDPs, returnees and host community members were all targeted.

The selection process was conducted in consultation with local community leaders and affected people to reduce tensions over the prioritization, including the definition of the selection criteria. Some issues did arise due to beneficiaries trying to register multiple times, or people who were not targeted claiming to be eligible. However, these issues were generally addressed by continuous communication with community leaders and the establishment of committees to address complaints, which were composed of local leaders, displaced and returnee community members, as well as field staff from the organization.

The scorecard approach was also used after project completion, to measure the impact of the intervention over the shelter vulnerabilities of beneficiaries. Scores decreased to around 2.5 for shelter and 2 for NFIs.

The scorecard methodology was revised in 2018 after this project ended, to adjust some of the criteria and adopt a scoring system from 1 to 20 to have a more nuanced disaggregation of the distinct levels of household shelter vulnerability.⁵

⁵ The revised methodology as of Nov 2018 is available at <https://sheltercluster.org>.



Shelters were cost-effective, as materials were locally available and labour was provided by the affected families themselves.

PROJECT IMPLEMENTATION

The project provided NFI and shelter support to 630 and 200 households respectively. It was implemented by a team of nine staff from an international organization, supported by 18 occasional workers for the distributions.

The shelter component was implemented using conditional cash grants distributed in three tranches using mobile money transfers. For those who did not own a phone, cards redeemable at any transfer shop were distributed. The first tranche (40%) was transferred after the completion of the foundations, the second (40%) after the walls were completed and the third (20%) once the roof was constructed. Following an owner-driven approach, selected households were responsible for the collection of materials and the construction of the shelters, with the support of a team of four engineers from the organization.

Shelter committees or “solidarity groups” were formed from the beneficiaries to oversee the process, each representing 18–20 households. Each committee was composed of five people (generally three women and two men) and was responsible for organizing the procurement, transport and storage of local building materials, supervising construction and supporting vulnerable households where needed. It was found that women were more engaged than men (even though housing construction is traditionally an activity conducted by men), which explained why more women were represented in the committees.

Four trainings on shelter construction were conducted by the organization at the start of the project, to provide the committee members and local community (100 individuals in total, including local authorities and village leaders) with the skills needed to build safe structures and support new arrivals and the wider community in the future. Construction tools were distributed to the committees after the trainings. The tools allowed people not directly targeted by the project to also conduct repairs to their damaged homes. Awareness sessions on health, environment and gender were also conducted in the targeted communities.

After the construction was completed and shelters handed over to the beneficiaries, distributions were organized for the household NFI kits to the larger group of 630 households.

COMMUNITY ENGAGEMENT

The solidarity groups were set up with the intention of supporting most vulnerable houses in the construction process and train new arrivals on the construction techniques learned. However, it was later found that only two per cent actually did help new arrivals. This was mainly due to other daily priorities such as collecting food or, to a lower extent, taking care of small businesses.

The committees nonetheless played a vital role in defining the shelter design, requesting for additional space, two separate rooms and a covered veranda for cooking in the front. The design had to be modified and presented to the national Cluster twice before the community agreed on the size and layout.

Women had a lead role in collecting local materials, such as sticks, ropes, palm leaves, soil, reeds, etc., while men often prepared the materials before construction. Both men and women shared the tasks of building or rehabilitating shelters.

Given the lack of experience of the organization in cash-based shelter interventions, as well as the novelty of the approach within the targeted communities, in the beginning there was confusion amongst beneficiaries as to how activities would be implemented. Continuous communication and the signing of an agreement between the organization staff and the beneficiaries, outlining roles and responsibilities, helped overcome these issues.



The selection process was effective thanks to the use of the Cluster scorecard approach and the involvement of the affected community. Along with the shelter intervention, the project provided NFI kits to 630 households.

SHELTER DESIGN

The shelter was designed based on local construction techniques and available materials, mainly a wattle and daub or mud-brick structure with thatched roof. On one hand, this allowed a smoother implementation, as target households had access to the local markets where the organization did not, and ensured that the cash was injected into the local economy. On the other, it also helped mitigate the risk of tensions with surrounding host communities, as the housing typology and size was very similar to the existing conditions in the area. The simple layout included a shaded veranda for cooking and storage, connected to a living area, and an additional sleeping space only accessible from the living room.

COORDINATION

Activities were coordinated with and monitored by the sub-national Shelter-NFI Working Group, which conducted several visits to the project sites. Collaboration with other humanitarian partners ensured harmonization and complementarity of the response. Coordination with local authorities was essential to guarantee security and access, as well as in the harmonization of needs assessments.



Communities actively participated in the design process. Thanks to their inputs, the shelters were expanded and a shaded veranda was added.

MATERIALS LIST FOR ONE SHELTER

Kit	Items	Total cost (USD)
Walls	Sticks and reeds	15.00
	Rope	
	Mud and mud mortar	
Frames	Sticks and reeds	5.00
	Rope	
	Bamboo	
Roof	Thatch or straw	5.00
	Palm leaves	
	Rope	15.00
	Plastic sheet	
Door and windows	Door, 86x90cm	52.00
	Windows, 40x40cm / 40x50cm	
	Hinges	
	Padlock and lock	
Shared community toolkit (two for each 20 households)	Measuring tape	48.00
	Handsaw	
	String	
	Mason square	
	Spade	
	Hoe	

MAIN CHALLENGES

Access was a major challenge during military operations, so adopting a people-driven approach improved implementation, as often the organization could not reach project locations.

Tensions between two target villages escalated after the killing of one village chief. The establishment of solidarity groups from the two communities and the training on construction helped reduce these tensions and re-establish dialogue between the neighbouring groups.

The presence of military forces and militia in the area also caused issues when prioritizing beneficiaries, as both armed groups had relatives in the target areas and requested assistance. It took significant efforts and several briefings with both groups to explain the humanitarian principles behind the intervention and be allowed to proceed with an impartial selection.

WIDER IMPACTS OF THE PROJECT

The training to the local community enabled to reach a wider group, also thanks to the distribution of construction tools. This, combined with the use of local materials and techniques, allowed others to replicate the interventions in the area.

The addition of a covered veranda to the design had the advantage of reducing indoor cooking practices, which reduced health and fire hazards. More households in the area also started to apply the veranda to their shelters.



Shelter solidarity committees were formed and trained to conduct construction activities. After the training, they were given construction tools to be shared.



Other members in the communities were observed replicating some of the features and techniques proposed in this project, such as the outdoor veranda for cooking.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Women had a leading role in collecting materials and during construction of shelters, challenging traditional social norms.

STRENGTHS

- + **The use of local materials, housing typology and construction techniques** – coupled with training – allowed to keep the costs low, minimize negative effects on the environment and ensure replicability.
- + **The injection of cash into the local communities** led to the creation of new businesses.
- + **High involvement of the community** and the selected households throughout the project (incl. selection and construction).
- + **Effective targeting** by combining the sector scorecard approach with additional vulnerability criteria defined together with the community.
- + **Gender mainstreaming.** Women were empowered in taking roles traditionally held by men, awareness raised on gender and reproductive health issues, and women and girls supported with distribution of hygiene kits.

WEAKNESSES

- **The project mistakenly assumed that community members would help new arrivals**, while findings showed that only two per cent actually did.
- **The organization had limited capacity and experience in implementing cash-based interventions**, which led to communication challenges and confusion with the communities at the start.
- **Several communication challenges** with armed actors and the communities themselves arose during the implementation. Although community briefings were conducted and a complaints system was set up, these issues could have been better addressed with clear communication from the outset.
- **Shelters were built without latrines**, as activities were not coordinated across sectors within the organization.

LESSONS LEARNED

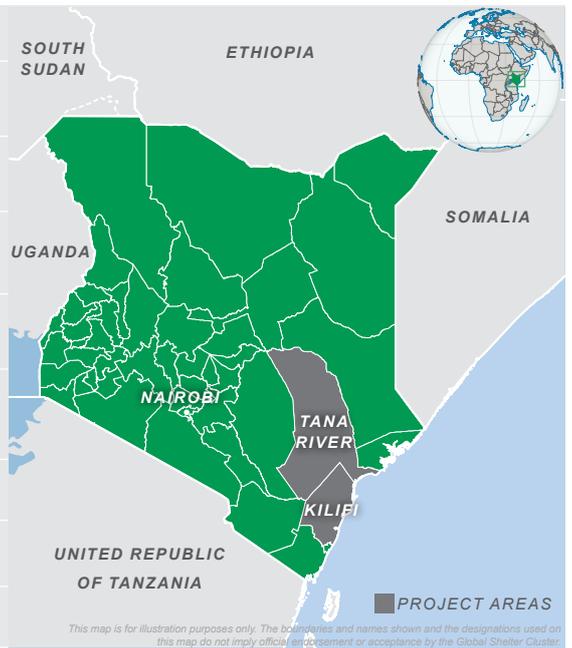
- The organization started working more closely with the solidarity groups to improve their role in supporting vulnerable households in future projects.
- Shelter-NFI and water and sanitation interventions should be implemented jointly.
- The use of owner-driven approaches, local materials and house designs allow for higher sustainability and cost-effectiveness, especially when people can access local markets.

CASE STUDY

KENYA 2018 / FLOODS

KEYWORDS: Shelter kit, Monitoring and Evaluation, Self-recovery

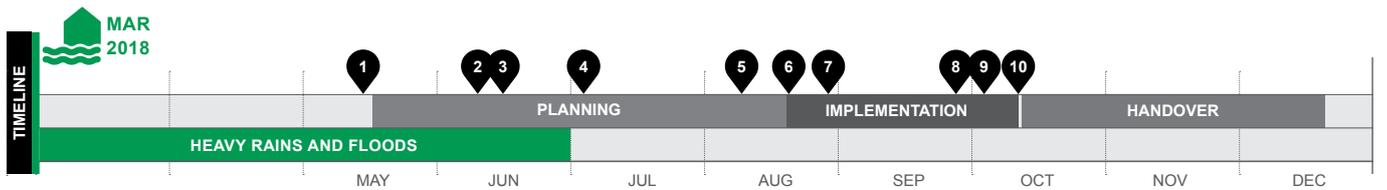
CRISIS	Floods, March–June 2018
TOTAL PEOPLE AFFECTED*	800,000 individuals
TOTAL PEOPLE DISPLACED*	300,000 individuals
TOTAL HOUSES DAMAGED**	Tana River: 7,685 destroyed, 3,842 damaged Kilifi: 639 destroyed, 377 damaged
PROJECT LOCATIONS	Tana River and Kilifi Counties
PROJECT BENEFICIARIES	2,000 households (13,073 individuals. Tana River: 1,353 households; Kilifi: 647 households)
PROJECT OUTPUTS	2,000 shelter kits and NFI kits , incl. training
SHELTER SIZE	Up to 24m² can be achieved with the kit
SHELTER DENSITY	4.1m² per person
MATERIALS COST	USD 155 per household
PROJECT COST	USD 284 per household



* Estimates as of 7 June 2018, UN OCHA Flash Update #6.
** Kenya Inter-Agency Rapid Assessment.

PROJECT SUMMARY

This emergency shelter project supported the recovery of 2,000 households displaced by flooding in Kenya by providing shelter, NFI kits and training. Although procurement challenges around the importation of single-use plastics delayed the delivery, the project still managed to achieve its goals in a timely manner. A monitoring and evaluation framework orientated around short-term outcomes was used to monitor the contribution of the project to self-recovery processes. The data gathered at distributions enabled the implementation team to learn and improve project delivery.



- 1 10 May 2018: Assessment team arrives in Nairobi.
- 2 13 Jun 2018: Partnership signed and aid requested to the Headquarters.
- 3 15 Jun 2018: Single-use plastic importation restrictions are identified. Team submits application to by-pass restrictions.
- 4 03 Jul 2018: Logistics team works with suppliers to repackage the aid to remove single-use plastic.
- 5 07 Aug 2018: First shipment clears customs.
- 6 15 Aug 2018: Distributions start in Kilifi.
- 7 27 Aug 2018: PDM starts in Kilifi.
- 8 27 Sep 2018: Distributions start in Tana River.
- 9 03 Oct 2018: PDM starts in Tana River.
- 10 10 Oct 2018: International staff and volunteers depart Kenya.

STRENGTHS

- + Successful partnership between international and local actors.
- + Short-term outcome indicators allowed to demonstrate the contribution to self-recovery goals during the project cycle.
- + PDM findings informed subsequent distributions.
- + Proactive response to importation challenges ensured timeliness of the intervention.

WEAKNESSES

- No baseline survey was undertaken.
- Lack of understanding of importation logistics led to initial delays.
- Polygamous families did not receive enough items.
- Failure to provide framing materials restricted the use of the shelter kits in some areas.



© ShelterBox

CONTEXT

Above average precipitation between March and May 2018, combined with the effects of a severe drought in 2017 and widespread deforestation, led to the worst flooding that Kenya had witnessed in 30 years. The floods caused damage to homes and infrastructure, submerged farmlands and triggered large-scale displacement, which severely disrupted livelihoods. Many of those displaced evacuated to informal camps and collective facilities (e.g. schools and churches), where incidence of viral diseases increased.

PROJECT APPROACH

Data indicated that there was a significant unmet need for emergency shelter assistance in the counties of Kilifi and Tana River which, due to variations in housing typology and regional socioeconomics, required different responses.

In Kilifi County, the government prohibited those living in flood-prone areas from returning to their homesite. Only 600 of the 1,800 households whose homes were considered uninhabitable returned. Some remained at the collective facilities until they identified an alternative solution. The project provided those with an uninhabitable house with a shelter kit, training and household non-food items. This package aimed to facilitate the construction of a temporary shelter whilst households waited to access a government-funded reconstruction grant. Eligibility for the emergency shelter assistance was contingent on households demonstrating land ownership.

In Tana River, many displaced households had no intention of returning for fear of further flooding. They were waiting to receive permission from the landowners of the camp sites (typically the government) to remain permanently. Here the government had also provided funds to support the construction of permanent housing, however not all households with a damaged or destroyed home qualified for the grant. The proposed project aimed to support 1,300 households that were not eligible, but had an uninhabitable home, to improve existing shelters or build a suitable temporary shelter while they constructed or repaired a more durable one.



Floods after a prolonged drought caused widespread damage and displacement.



In one location, the project provided shelter/NFI kits to support return, whilst in the other, the kits helped households set up temporary shelters in displacement sites.

IMPLEMENTATION TEAM

The implementing organization did not have a presence in Kenya. It first deployed an assessment team of two people, to then scale up to six (involving international staff and volunteers working on rotation). The project was implemented in partnership with a national NGO that provided assessment data, assisted with the importation and in-country logistics and supported post-distribution monitoring. The partner had access to a large team of community volunteers that supported project delivery.

TARGETING AND COMMUNITY PARTICIPATION

Beneficiary selection was coordinated by the implementing partner and involved the following four stages:

- **Needs assessments** were conducted by teams who surveyed households in the camps and gathered demographic data (including vulnerabilities). Teams then visited the properties to categorize the level of damage sustained, check if houses were close to the river, and assess if flooding was likely to repeat or if the mud prevented reconstruction.
- **The assessment data was verified by village councils.** If people had started reconstruction, they were removed from the list.
- **Meetings were conducted to involve the community** in the beneficiary selection. This included, for example, a discussion about how many shelter kits a polygamous family should receive.
- **A County Steering Group meeting** took place to approve the list of beneficiaries and conclude the process.

DISTRIBUTIONS AND TRAINING

Site selection for distributions was undertaken in coordination with local community leaders. The main considerations were security and accessibility, and steps were taken to limit the distance households were expected to travel.

Training on the effective use of the shelter and NFIs was provided to 40 community volunteers (20 from each of the target areas), who cascaded the training to recipient families at the distribution sites. The training plan also helped build the partner organization’s capacity to deliver emergency shelter in the region.



A cascade training approach was used to explain the use of the items to the families. It also helped strengthening the capacity of the local partner.

PLASTIC IMPORTATION CHALLENGES

This project used materials located in pre-positioning sites in Europe, Asia and the Middle East. A value-chain analysis of the supply chain highlighted notable delays. One of the more significant challenges related to restrictions on the importation of single-use plastics into Kenya. Whilst mechanisms for bypassing these restrictions existed, they proved difficult to navigate and the likelihood of exemption certificates being upheld was unknown. To avoid further delays, the organization worked with suppliers to remove all plastic packaging prior to shipment. Other items were procured locally. This reduced the efficiency and cost-effectiveness of the project. However, since prolonged inundation restricted access to homesites for several months, these issues did not significantly affect the outcomes of the project, which focused on supporting return or safe relocation. Additionally, beneficiary selection did not occur until the materials were in transit, ensuring that lists remained relevant.

MONITORING AND EVALUATION FRAMEWORK

The goal of the project was to support shelter self-recovery, in complementarity with other actors, including the government. Organizations seldom return to an affected community to identify how an emergency shelter project has contributed towards self-recovery, often because of resource constraints or pressures of the working environment. For an agency with no permanent presence in the country, measuring the impact of the project was even more challenging. As such, the organization developed a monitoring and evaluation framework that used short-term outcomes.

A short-term outcome is the change that occurs as a direct result of project outputs. Short-term outcomes are also viewed as preconditions for long-term change to be achieved. During

the assessment phase, team members identified what shelter-related short-term outcomes would adequately support the long-term recovery objectives. The outcomes were orientated around supporting return to homesites, aiding the construction of temporary shelters (or repair existing structures), and facilitating a return to normal household routines. Working backwards from the long-term objective to the planned outputs ensured that activities and inputs supported the achievement of the outcome goals.

POST-DISTRIBUTION MONITORING

At the centre of the framework was a robust post-distribution monitoring (PDM) plan conceived in two phases.

1. Exit surveys undertaken during the distribution were designed to ensure that the project was people-centred and that the training had been understood. These were also considered an opportunity to understand more about the intended use of the aid. The data gathered during the surveys informed subsequent distributions. For instance, the survey results led to a decision to relocate future distributions, to reduce the distance people had to travel. Similarly, the contents of the package were better communicated so that beneficiaries could decide whether they wished to attend a distribution. This system of monitoring ensured that each distribution was based on learning obtained from previous distributions.

2. Household interviews were undertaken at the homes of recipients 4 to 14 days after distribution and aimed to verify that the short-term outcomes had been realized. Enumerator observations were also used to verify that the training had been incorporated by the recipients. Focus groups, undertaken between two weeks and one month after distributions, provided further in-depth qualitative data and validated the relevance of the outcome goals.

MONITORING AND EVALUATION FRAMEWORK: GOAL, SHORT-TERM OUTCOMES AND INDICATORS

MONITORING AND EVALUATION FRAMEWORK: GOAL, SHORT-TERM OUTCOMES AND INDICATORS	RESULTS
OVERALL GOAL: Households (HHs) displaced by flooding are able to return to their home sites (new or old), repair homes or build a temporary structure through the supply of Shelter and NFI items	
ST Outcome 1: HHs have returned to their home site or an alternative suitable site	
Indicator 1.1: % of HHs who report that the shelter materials have supported their decision to return home/relocate	76%
ST Outcome 2: Increased personal safety through the provision of shelter materials and specific NFIs	
Indicator 2.1: % of HHs who report that they feel safer in the shelter at night as a result of portable solar lights	100%
Indicator 2.2: % of HHs who report that they feel safer outside the shelter at night as a result of portable solar lights	97%
ST Outcome 3: Increased physical protection from extreme heat, rain and cool weather, through the provision of shelter materials and NFIs	
Indicator 3.1: % of HHs who report that the shelter provides adequate protection from the rain	100%
Indicator 3.2: % of HHs who report that the shelter provides adequate thermal comfort during the day	21%
Indicator 3.3: % of HHs who report that the shelter provides adequate thermal comfort during the night	42%
ST Outcome 4: Increased access to filtered water through the provision of the water filter and water carriers	
Indicator 4.1: % of HHs who report that they are able to collect / store enough water as a result of the water carriers	36%
Indicator 4.2: % of HHs who state they are using the water filter	47%
ST Outcome 5: Protection from vector-borne disease	
Indicator 5.1: % HHs who state they are using the mosquito nets for the purpose they are intended	15%
ST Outcome 6: Stabilization of household/family routines through the provision of specific NFIs	
Indicator 6.1: % of HHs who report they are able to prepare meals using the kitchen sets	76%
Indicator 6.2: % of HHs that report being able to recommence livelihood activities through provision of tools	63%
Indicator 6.3: % of HHs that report being able to continue daily activities (inside and outside) through the supply of solar lights	92%
ST Outcome 7: Beneficiary HHs have the knowledge and skills to utilise the aid provided	
Indicator 7.1: % of HHs that confirm they have received training that was both useful and understandable	82%
Indicator 7.2: % of shelters observed using the fixings provided to secure tarpaulins correctly	52%

MONITORING AND EVALUATION RESULTS

PDM interviews undertaken in Kilifi County showed that 74 per cent of beneficiaries had moved to a new homesite within two weeks from the distributions. This statistic should be viewed alongside exit survey data which showed that, during distribution, 75 per cent had this intention. Of those respondents still living in camps, nearly all stated that they were in the process of helping family members relocate and intended to move in the coming days.

In Tana River, where land ownership was more complex, 60 per cent of beneficiaries were still living in camps after receiving the aid. However, this corresponds with 57 per cent of those interviewed during the exit survey who stated an intent to remain in the camps. Qualitative data obtained through focus groups suggested that this decision was driven by a perception that the area around the camp had a lower flood risk than their original homesite, and that livelihood opportunities were better due to the proximity to town.

All respondents who had constructed an emergency shelter agreed that this provided an adequate level of protection from rainfall. However, enumerators observed that 37 per cent of tarpaulins were loosely attached to structures, something that could affect the durability of the shelters.

A high proportion of beneficiaries felt that the shelters were too hot during the day. When asked why they had not built ventilation holes (an open gable end, window or additional doorway), respondents stated that they did not have these in their original homes, and that they had not considered that tarpaulins would cause overheating compared to traditional materials.

By comparing the results of the exit and household surveys, it was seen that the actual and the intended uses of the shelter items matched. PDM data affirmed that the emergency shelter project led to immediate improvements in the well-being of beneficiaries and supported their ongoing recovery intentions.

WIDER IMPACTS OF THE PROJECT

The issue relating to the importation of single-use plastics shed light on a challenge that is likely to gain prominence for humanitarian actors, especially in contexts where the importation of relief items is critical to a timely response. As a result of this experience, the organization started a dialogue with other agencies likely to be impacted by a global shift towards greater regulation around single-use plastics.



In one location, families were able to return to their homesites thanks to the kits. However, polygamous households did not receive enough items.

MATERIALS LIST		
Items	Qty	Unit cost (USD)
Shelter kit, http://bit.ly/2ohLMxI	1	57
Kitchen set	1	25
Solar Light	2	9.50
Water Carrier, 10l	2	1.70
Sleeping Mat	2	2.20
Water filter	1	37
Mosquito net	2	4.50



Most households confirmed that the training was useful and nearly half were observed using the appropriate techniques in their shelters. However, some families could not use the kits properly due to a lack of framing materials.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Survey findings informed subsequent distributions. While personal safety and protection from the rain were largely met, shelters performed poorly against the heat and the cold temperatures. Some items, such as mosquito nets, were seldom used as was expected.

STRENGTHS

- + **Successful partnership** between an international organization with the capacity to leverage global stocks of standardized quality, and a national one with access to community networks and an understanding of the context.
- + The project used **short-term outcome indicators** instead of output indicators as a means of measuring project success. By approaching monitoring and evaluation in this way, the project team could **demonstrate the contribution of this project to self-recovery goals during the project cycle**.
- + Post-distribution monitoring enabled the implementing team to **understand the strengths and weaknesses of the distribution and training approach**, informing subsequent distributions.
- + Although restrictions around the importation of single-use plastics complicated the supply-chain, **the organization and suppliers responded proactively** to remove all packaging from the aid prior to importation. This ensured that 2,000 households were **reached within a relevant timeframe**.

WEAKNESSES

- **No baseline survey was undertaken**. This limited the ability of the PDM to objectively verify that the intended change had occurred as a result of the delivery of outputs. Rather, the household survey captured the current state of the beneficiaries' living conditions after aid was received and compared this with what was known in general terms about quality of life prior to the distribution.
- **A lack of understanding around importation logistics** during the initial assessment phase led to supply-chain delays at a later stage, when information relating to restrictions on single-use plastics became apparent.
- **Polygamous families did not receive enough items for their household size**. This was due to the criteria used to assign the number of kits to households, which was based on the number of structures the household occupied prior to the floods.
- **The failure to provide framing materials restricted the use of the shelter kits** in areas where timber was not available at local markets, or household finances did not allow additional purchase. This led to concerns that the response would exacerbate unsustainable deforestation.

LESSONS LEARNED

- **Restrictions around the importation of single-use plastics** are unlikely to be limited to this context, forming part of a global trend to improve management of waste streams. Therefore, **it is critical that global supply-chains are adapted accordingly**, so that humanitarian aid can be imported in a timely manner when appropriate. This will require a response at the agency and supplier level. Additionally, the organization also started working to understand the internal barriers to **local procurement and cash distributions**, which are modalities that do not involve importation.
- The monitoring and evaluation framework was based on assumptions linking the achievement of short-term outcomes with self-recovery. **Without an impact evaluation, it is not possible to verify that the response logic held true in the long term**.

CASE STUDY

NIGERIA 2017–2018 / CONFLICT

KEYWORDS: Shelter repairs, Cash, Links with recovery, Security of tenure / HLP

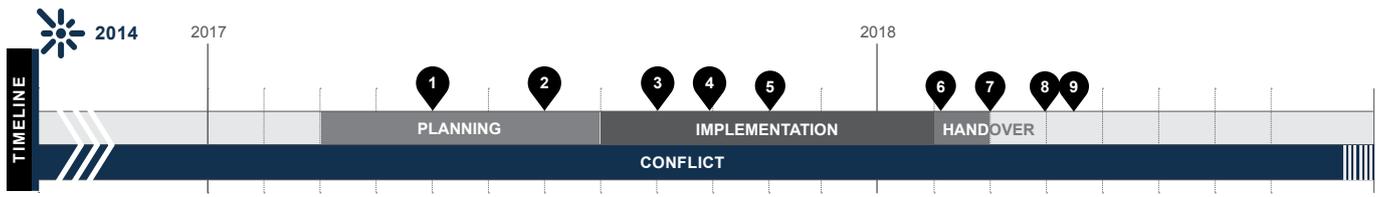
CRISIS	Conflict (Boko Haram conflict), 2014–onwards
TOTAL PEOPLE AFFECTED*	7.7 million affected; 1.6 million displaced; 1.3 million returnees; 2.1 million with shelter needs
PROJECT LOCATIONS	Hong and Gombi LGA in Adamawa State, Gwoza and Ngala LGA in Borno State
PROJECT BENEFICIARIES	900 households (5,683 individuals)
PROJECT OUTPUTS	900 damaged houses repaired 710 households receiving livelihoods assistance
OUTCOME INDICATOR	100% beneficiary satisfaction
SHELTER SIZE	24.5m² (two rooms of approx. 3.5x3.5m)
SHELTER DENSITY	3.8m² per person
MATERIALS COST	USD 538 (incl. cash grant)
PROJECT COST	USD 660 per household



PROJECT SUMMARY

Through a settlement-based approach, the project provided shelter repair support to affected households, as well as rehabilitation of community infrastructure, vocational training and livelihood assistance. The shelter component targeted 900 households with damaged houses in return areas, using a combination of in-kind distribution and cash grants. An individual scope of work was developed for each damaged house and technical supervision was provided during the rehabilitation, undertaken by the families themselves. The cash distribution was challenging due to high security risks and limited financial service providers.

* Figures as of December 2017. Nigeria Humanitarian Response Plan 2018.



- 1 01 Jun–31 Jul 2017: Development of context-specific assessment tool and adaptation of the tool suggested by the Sector.
- 2 01 Aug–30 Sep 2017: Shelter needs assessments in return areas.
- 3 01–30 Oct 2017: Cash feasibility assessments, focus group discussions, market assessments.
- 4 01–30 Nov 2017: Beneficiary identification and registration.
- 5 01 Dec 2017–15 Jan 2018: Development of scope of work for each household.
- 6 16 Jan–28 Feb 2018: Distribution of shelter repair kits.
- 7 01 Oct 2017–01 Mar 2018: Selection of Financial Service Provider and signing of agreement.
- 8 15 Mar–15 Apr 2018: Cash distribution.
- 9 01 Mar–31 May 2018: Post-distribution monitoring.

STRENGTHS

- + One-hundred per cent beneficiary satisfaction.
- + The most vulnerable groups were reached.
- + Families were able to rehabilitate their entire houses.
- + The shelter component was linked to livelihoods interventions.
- + The project enabled family reunification.

WEAKNESSES

- The cash was distributed late, leading to some people needing to take out loans.
- Distributing the cash in one instalment affected the conditionality of the grant.
- Differing levels of damage required a more flexible package.
- Preparatory stages took a long time.
- Livelihood activities were temporarily disturbed for some families.
- There were not enough materials to build or repair WASH facilities.



CONTEXT IN THE NORTH EAST

Since the onset of the conflict in north-east Nigeria in 2013, the region experienced a massive destruction of infrastructure, collapse of livelihoods, widespread displacement and brutal attacks on civilians. Threats of attacks by armed groups and military restrictions negatively impacted trade, livelihoods and markets, leaving many civilians dependent on humanitarian assistance. Since late 2016, humanitarian partners scaled up their activities. While major displacements continued to take place, some families started to return. As of December 2017, there were 1.3 million returnees and, in 2018, humanitarian actors increased their assistance in support of voluntary return.

SITUATION BEFORE THE CRISIS

Even prior to the crisis, northern Nigeria had very low development indicators. Compared to the wealthier southern states that benefit from oil production, the north is heavily dependent on agriculture and large parts of the population live in rural or peri-urban settings. Rural settings were dominated by self-settled villages with houses constructed with mud or mud bricks with thatched roofs. Peri-urban areas had more organized layouts, with houses mostly built with concrete blocks and corrugated galvanized iron roofing sheets.

SITUATION DURING THE CRISIS

Shelter needs were defined by the various waves of displacement, new arrivals and returns. Displaced populations residing in camps or camp-like settings and new arrivals from inaccessible areas lived in emergency or makeshift shelters, while returnees required transitional solutions. Nearly one quarter of assessed returnees in return areas lived in inadequate shelters, including partially damaged houses. The majority of returnee families experienced medium to heavy damage to their houses, with burnt roofs making most of them inhabitable. Many did not possess the necessary resources to rehabilitate their houses, as the crisis had impacted their income significantly.



The distribution team included psychosocial support staff to identify and assist vulnerable individuals.



The project rehabilitated damaged houses in return areas by providing materials and technical assistance.

NATIONAL SHELTER STRATEGY

The national shelter strategy in 2018 aimed to: 1) ensure sufficient, coordinated and adequate delivery of emergency shelter solutions to respond to immediate needs; 2) deliver re-inforced/transitional shelters and repair assistance; and 3) deliver flexible, coordinated, adequate and harmonized NFI kits.

Aligned with this strategy, the organization implemented different types of shelter interventions in the country, including construction of emergency and transitional shelters, distribution of emergency shelter kits, construction of transit shades and reception centres and reinforcement of emergency shelters in displacement sites.¹

WIDER PROGRAMME GOALS

To support returnees in re-establishing themselves in their areas of origin, the organization implemented a wider programme, which included livelihood activities and quick-impact community projects. This case study focuses on the shelter repair component, which distributed shelter repair kits and cash top-up grants, as recommended by the Sector.²

TARGETING

The organization conducted detailed shelter needs assessments in the most affected areas with the highest number of returnees.³ The Local Government Areas (LGAs) were selected based on the severity of destruction, the socio-economic impact of the crisis on livelihoods and the availability of other humanitarian actors.⁴

In the target areas, a stakeholder mapping was first conducted. Group discussions and key informant interviews were then held with the community members, local leaders, vendors and Financial Service Providers (FSPs). Secondary data analysis was conducted through the 4W matrix of the Sector, to identify the partners present in the locations, the types of assistance provided and the existing gaps.

¹ For another example of a shelter project implemented by the organization in the country, see case study A.18 in Shelter Projects 2015–2016.

² The kits contents are available at <https://bit.ly/2TnnbVw>.

³ The population data was taken from the Displacement Tracking Matrix (DTM), <http://www.globaldtm.info/nigeria/>.

⁴ The shelter needs assessment are available at <https://bit.ly/2HGwLLe> (Borno) and <https://bit.ly/2UtG9d9> (Adamawa).



Damage was categorized in four groups. 1) Bullet holes on the external walls but not penetrated inside; hairline cracks in very few walls; fall of small pieces of plaster only. 2) Doors and/or windows need to be replaced, damage to brickwork 10%. 3) Failure of structural elements, damage to walls 25%. 4) Completely damaged with bullet holes, serious failure of walls; partial structure failure of roof and floor.

The selection of beneficiaries in the LGAs was conducted in accordance to the level of damage to the houses (with categories 1–4, from light to heavy damage). Female-headed households, the elderly, persons with disabilities and mental illness were prioritized. The criteria for selection were communicated to the community.

PROJECT IMPLEMENTATION

The project was directly implemented by a team of 30 staff, with eight technical supervisors in the field and 22 enumerators, overseen from Maiduguri and Yola. The following main steps were taken.

PROCUREMENT. Materials were procured locally through competitive bidding and were delivered to the organization’s warehouse without delays.

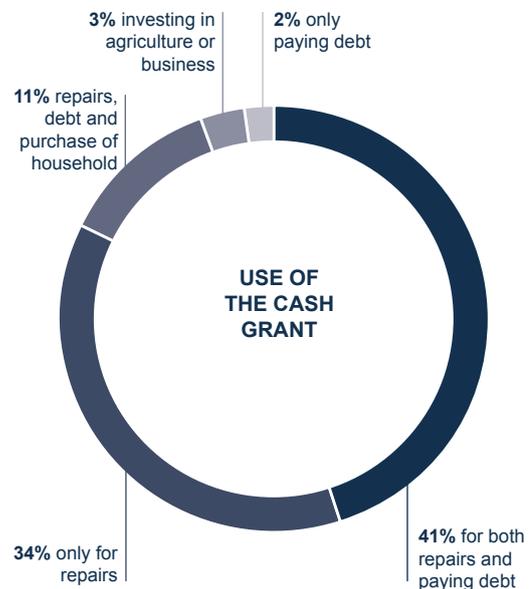
CASH FEASIBILITY ASSESSMENT. Since the damage level and materials used for each house differed, a cash grant was included in the kit, to give the households the flexibility of buying additional materials to complement the standard package, as well as to engage skilled labour for the rehabilitation works. A comprehensive assessment was carried out by shelter teams with the technical support from a cash advisor. Standard Operating Procedures for cash-based interventions were developed specific to the context. Due to the lack of mobile network infrastructure in the target areas, mobile money transfers were not an option. Cash-in-envelope was also discarded because of the security risks. Therefore, the transfer had to be done through an FSP.

SELECTION OF FSP. Initially, there was lack of interest from FSPs in operating in high-risk areas, and this led the organization to request for bids several times. Meetings were held with FSPs to explain the nature of the project, as most of them had not been involved in humanitarian cash transfers before. Since beneficiaries did not have bank accounts and there were no functioning banks or postal services in the target locations, the organization prioritized FSPs who had local agents in those areas. After a lengthy analysis and consultations with various FSPs, a prominent bank with registered agents in Borno and Adamawa State was selected.

SCOPE OF WORK. Technical supervisors were deployed to prepare a scope of work for each household, based on the assessed level of damage and the materials and the cash available.



The project included a cash grant which, due to delays, was only distributed towards the end of the implementation. Nonetheless, people were found to have spent their own savings on the repair works.



DISTRIBUTION OF MATERIALS. Distributions were carried out by a team of 11 staff, including one staff to assist with biometric verification of beneficiaries; three shelter staff to verify the kits provided and offer technical advice and sensitization on the usage of the kits; five site management staff facilitating the distribution, including crowd control and setting up of a complaints desk; two psychosocial support staff to identify vulnerable beneficiaries and ensure their safe and equitable access to assistance. Push-carts were also arranged to assist vulnerable families to carry the materials home.

CASH DISTRIBUTION. Due to the lengthy FSP selection process, the cash distribution did not take place along with the material distribution and could not be disbursed in two instalments, as originally planned. The cash was distributed in one instalment, during the last month of the project, by bank agents overseen by project staff.



For those who needed support, push carts were available to transport materials.

MONITORING AND EVALUATION. Regular monitoring visits were conducted by technical supervisors after the material distribution and continued until completion certificates were signed by both parties. Post-distribution monitoring was conducted to assess the usage of the materials and cash. Results showed that although the cash component came late in the project, beneficiaries still used their resources towards the intended project goals.

COMMUNITY ENGAGEMENT

Ahead of distributions, community mobilization activities were conducted providing information on dates and place of distribution, as well as entitlements of each household. Community consultations were also a key component of the cash feasibility assessments. This was done to explain project activities and to minimize the risk of any potential tensions among community members. Community leaders assisted during the distribution process to ensure it took place smoothly, as well as to fast track the process for any vulnerable household.

The families actively contributed to the rehabilitation works both in terms of labour (29%) and additional materials (21%). Carpenters and masons from the community assisted extremely vulnerable families in the construction works for free.

HOUSING, LAND AND PROPERTY

HLP issues were considered during the assessments and beneficiary identification, for instance the possibility of another group claiming the land or properties. In the selected LGAs, the majority of the houses were inhabited by the owners, and the community had strong intra-communal consensus on land tenure. If no ownership document was available, a written form of approval from the community leader and representatives was provided as proof of ownership, as a formal documentation process was not possible for most families.

The organization also consulted the LGA chairmen, who could ascertain whether a group of people was originally from their area. Despite tenure being disconnected from any formal system, the level of tenure security was considered “high enough” to allow for shelter rehabilitation to proceed.

In a different LGA that was not targeted, there was no consensus between the community as to the real owners of the houses and land. For this reason – and due to the limited time frame – it was impossible to proceed with implementation.

LINKS WITH RECOVERY

To support communities to recover more holistically, the shelter project was linked with several quick-impact livelihood activities in the same locations. These included the provision of short-term cash-for-work opportunities to rehabilitate community infrastructures (school, markets, roads, etc.). Vocational training was provided to the same communities on the trades that were most in demand, namely cap knitting, drink production and baking, and these were supplemented by a start-up business grant. The project also provided capacity-building and para-veterinary kits to a local group and distributed animal food to livestock owners in the same communities. A total of 710 households benefited from these activities.

HANDOVER PHASE

No formal handover was required. Each household had their own scope of work based on the type of damages, so they were aware of all the steps of the rehabilitation from the outset, as well as the expected achievements. The roving technical supervisors knew when the family completed the required rehabilitation works. Following this, a certificate of completion was duly signed by a technical supervisor and the head of household.

WIDER IMPACTS OF THE PROJECT

The needs assessment and post-distribution monitoring reports were widely shared with all partners engaged in shelter activities in the north-east, to disseminate the findings and lessons learned.

Efforts were also made at the Sector level to incorporate some of the recommendations from the post-distribution monitoring of this project, in order to slightly modify kit contents. After the project, the organization expanded both the materials and cash amount in the kit. It also started to look into expanding its cash-based interventions for shelter.

Finally, due to the success of this project, the Nigerian Humanitarian Fund – which usually supports emergency shelter kits and construction of emergency shelters – started funding similar projects in other locations. As the project included early recovery initiatives, other donors also showed interest.



Families were able to repair their entire house, in some cases even expanding the original size. This also supported family reunification.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- + **All of the surveyed beneficiaries reported being satisfied** with the assistance, as it had significantly improved the living conditions of their families. This was possible also thanks to their engagement throughout the process.
- + **The most vulnerable groups were reached** and the selection process was deemed fair and transparent by the beneficiaries.
- + **Families were able rehabilitate their entire houses** and some could even expand the original size of the house.
- + **The project was linked to livelihoods interventions** as part of a holistic approach to support communities' recovery and social cohesion.
- + **Some families were able to reunite** as a result of repairs to their homes.



Beyond shelter repairs, the project also included livelihood and community infrastructure rehabilitation components.

WEAKNESSES

- The cash disbursement took place several weeks after the material distribution. **This led to some of the beneficiaries needing to take out a loan** to rehabilitate their shelters, although they were able to pay them off when the cash was received.
- **Distributing the cash in one instalment affected the conditionality of the grant.** However, post-distribution monitoring showed that most families used their own resources towards the project goal.
- **A more tailored package** of repair kits and cash grants would have been useful to adapt to the level of damage and the type of materials (e.g. masonry vs mud houses).
- **Preparatory stages for this project took a long time,** as this was the first project of its kind for the organization in Nigeria, which impacted the actual implementation period.
- **The project temporarily disturbed livelihood activities** of some families, as the head of household had to carry out or supervise the rehabilitation works.
- **There were not enough materials to build or repair water and sanitation facilities.**



In some cases carpenters helped vulnerable members of their communities to rehabilitate their houses.

LESSONS LEARNED

- Following this project, **the kit contents and cash amount were adjusted** based on lessons learned and beneficiaries' feedback. Additional tools and one extra bundle of CGI for roofing were included. The cash grant was also increased by about 30 per cent (USD 28), to allow people to cover larger portions of their houses, and repair or rebuild water and sanitation facilities, as well.
- **Brick-making moulds** should be considered, as buildings in most of the targeted locations are made of mud bricks. In addition, **training on mud brick production** and providing start-up business capital to small traders of construction materials would ensure a better connection between the supply and demand of shelter materials in the local market.
- **Longer-term contracts should be given to financial service providers,** as the selection process took very long. The organization made efforts to allow for more flexible **agreements to avoid future delays in cash disbursements.**

CASE STUDY

SOMALIA 2017–2018 / DROUGHT

KEYWORDS: Shelter kits, NFI, Training, Post-distribution monitoring

CRISIS	2017 Drought	
TOTAL PEOPLE IN NEED*	6.2 million	
TOTAL PEOPLE DISPLACED*	2.1 million internally displaced. Over 240,000 in Somaliland and 99,000 in the targeted regions	
SHELTER NEEDS*	1.5 million individuals across Somalia	
PROJECT LOCATIONS	Bali Mataan (Woqooyi Galbeed region), Karsharka and Fadhigaab (Sanaag region)	
BENEFICIARIES	1,000 households	
PROJECT OUTPUTS	2,000 tarpaulins and NFI kits distributed	
MATERIALS COST	USD 265 per household	
PROJECT COST	USD 338 per household	
* Somalia Humanitarian Response Plan 2018 (December 2017).		

PROJECT SUMMARY

To support displaced nomadic pastoralists in the Somaliland region, the project provided lightweight, mobile, shelter and non-food items kits to 1,000 households. It was delivered through an implementing partner who engaged local development organizations with strong links to the targeted communities. The post-distribution monitoring revealed unintended outcomes highlighting the creative ability of the affected populations. It also showed how certain items in the toolkits were not appropriate.



- 1 18 Feb 2018: Shelter Kit and NFI training of trainers delivered to partner organization.
- 2 19–23 Feb 2018: Distribution at displacement sites conducted.
- 3 25–29 Mar 2018: Post-distribution monitoring surveys carried out.

STRENGTHS

- + Working with local development organizations ensured the active participation of affected communities.
- + Most beneficiaries achieved the intended outcomes.
- + Versatility of items such as tarpaulins and jerry cans.
- + Positive engagement between the implementing partner and the authorities.
- + The lightweight and portable solution was appropriate for nomadic populations.

WEAKNESSES

- Limited scale compared to the overall needs.
- Targeted assistance and poor communication could have caused conflicts.
- Not all of the aid was culturally appropriate.
- The project did not directly address land tenure issues.
- The training methodology needed improvement.



The project provided tarpaulins and household items to mobile populations, in collaboration with local partner organizations with strong links with the communities.

CONTEXT

Armed conflict, recurrent drought and flooding, food insecurity and famine repeatedly affected Somalia for decades. Since the end of the 2011 famine, about USD 4.5 billion was spent on emergency response. In 2017, Somalia faced low rainfall for the fourth consecutive time, while recovering from prolonged drought in the Somaliland region and protracted armed conflict across the country. Joint efforts by the Somali Government and local and international partners averted another famine, but the effects of the drought continued into 2018. Heavy rainfall in April–June 2018 led to flooding on large swathes of Somaliland, especially affecting most vulnerable communities.

NOMADIC POPULATIONS IN SOMALILAND

The majority of Somaliland's rural populations are nomadic pastoralists whose primary livelihood is livestock, such as cattle, goats and sheep – who roam from pasture to pasture with the seasons, seeking grazing land and water.

The traditional shelter of the herders is a dome-shaped, collapsible hut made from poles covered by hides, woven fibre mats, or sometimes cloth or tin. Easy to break down and re-assemble, the shelter is carried on a camel's back and set up by women once a new camp is made. Nomads have few possessions and each item has practical uses, such as for example cooking utensils, storage boxes, stools, woven mats and water bags.

EFFECTS OF THE DROUGHT

The drought resulted in successive poor crop harvests, substantial livestock losses (up to 85% in 2017) and large-scale displacement from rural to urban areas. Additionally, the drought and subsequent flooding forced pastoralists communities to move increasingly large distances to seek fresh food for their animals. The upsurge in displacement increased protection concerns and disease outbreaks and exacerbated existing vulnerabilities. Inter-communal tensions over access to water and grazing lands also increased.

Whilst food, health and water in 2018 were being provided by in-country agencies, a gap was identified in emergency shelter. Many displaced communities were living in overcrowded and ill-equipped shelters. These households lacked essential basic shelter items (e.g. tarpaulins and toolkits) and household items (including blankets, kitchen sets, water filters and carriers). Cholera outbreaks were on the rise due to lack of safe water and adequate sanitation.



Tarpaulins were well received as they were versatile and could be used for a variety of purposes. However, the tools and pegs provided were barely used, as these were not considered appropriate nor were familiar to the displaced populations. Subsequent projects replaced the tools with rope.

NATIONAL SHELTER STRATEGY

The government held an NGO consortium to coordinate partners operating in the region. Additionally, since late 2017 the Shelter Cluster gained traction and started holding monthly coordination meetings. Before that, links between sectors and technical guidance were lacking. This gap affected the project, as a more clearly defined list of emergency shelter items would have informed project development, ensuring greater synergies between implementing agencies.

The project aligned with the Shelter Cluster strategy in Somaliland for 2018, which was centred around three main objectives:

1. Protection of newly displaced people and returnees;
2. Improve the living conditions of people in protracted displacement; and
3. Contribute to durable solutions (integration or return).

PROJECT GOALS

The project aimed to increase the resilience of displaced populations to recurrent seasonal shocks, linking emergency response to more durable solutions. The organization identified that for nomadic pastoralist populations affected by drought and protracted conflict, a fixed and permanent shelter was not the best solution. Hence, the project was designed with movement at the centre. Items had to be lightweight, durable, adaptable and portable.

PROJECT IMPLEMENTATION

The project was led by an international organization largely working remotely and implemented by a partner organization. The international organization had three staff who provided project development, monitoring and implementation support, and conducted a field monitoring visit.

Tarpaulins, tools and non-food items were distributed alongside basic training in three displacement sites. All materials were internationally procured due to a lack of local availability. Beneficiaries were responsible for the reception of materials at centralized distribution points within the sites. A training of trainers was provided to the partner organization on how to fix the tarpaulins with the items provided in the shelter kit. Training was also provided on the individual NFIs provided, specially the water filters. The partner then carried out this same training with the respective local organizations that were responsible for the direct engagement with the affected communities. The local partners supervised the shelter erection process and provided technical support.



TARGETING

The selection process was conducted by the partner organization, in coordination with the Somaliland Commission for IDPs. The three sites were targeted based on levels of need and accessibility.

The most vulnerable drought-displaced households were targeted using clear selection criteria defined by the NGO consortium. The prioritized beneficiaries included large households (6+ Individuals), elderly and people with disability, newly arrived IDPs, large female-headed households and families headed by orphans with no external support. 1,000 households out of the 1,950 living in the sites were selected.

COMMUNITY ENGAGEMENT

The implementing partner used the connections of local development organizations with the affected communities within the target area. Community leadership structures within the displacement sites were consulted and directly informed the beneficiary selection process.

The post-distribution monitoring (PDM) highlighted that 88 per cent of respondents were informed by the community leaders prior to the distributions about what shelter and NFIs they would be receiving, although some stated that they were not asked if they needed items or not. In subsequent discussions with the implementing partner it was acknowledged that, for future projects, better communication with local organizations and community leaders would have been required.

In the early stages of the project, the partner organized an inception workshop to orientate its local partners on minimum standards for humanitarian action and distributions, to enable them to implement these concepts at grassroots level. The partner also conducted field demonstrations and linked the local organizations to other funding sources and capacity-building initiatives.

MAIN CHALLENGES

ACCESS TO REMOTE AREAS. Due to safety and security considerations (largely rural banditry), the project focused on displacement sites that were known to be accessible and where the implementing partner had other projects ongoing. This also complemented their WASH programmes in these sites.

TENSIONS DUE TO DISPARITY. During one of the distributions, many IDPs who were not part of the targeted caseload were frustrated and curious. While this had the potential to deteriorate, fortunately it did not – thanks to crowd-control measures implemented by the partner and the police outside the distribution site. To avoid disparity within communities, the project partners agreed that, going forward, distributions should use blanket coverage as much as possible. The complaint mechanism set up in the distribution site was reviewed and feedback incorporated into future projects. It was also agreed that distribution sites would be planned and arranged more appropriately for future distributions.

LAND TENURE. As the majority of the IDPs in Somaliland do not own the land on which they reside – especially those living nearby main districts – they often face threats of eviction from landowners. In one case, this resulted in the communities speaking out through the media and requesting the authorities to address this issue. While efforts were made to secure land tenure for the displaced, these could not support the majority of IDPs.

PDM FINDINGS

To fully understand how beneficiaries used the items and inform future projects, a survey was conducted by the implementing partner approximately 6–8 weeks after the distributions. It highlighted the following findings:

- Solar lights were voted the most useful item (72% of total votes), followed by tarpaulin (65%) and mosquito nets (56%). Beneficiaries reported that the solar lights made them feel safe at night and were satisfied with the number of lights they received, which allowed them to carry out different activities at the same time.
- The least useful items were found to be pegs (2%). Most of the beneficiaries stated that they did not use these at all.
- Fifty-eight per cent of respondents said that the toolkit facilitated construction and repair work. Out of the 42 per cent who reported it did not, some stated that they did not know what to use it for and did not have the necessary skills to use the tools. This suggested that the toolkit may not have been entirely culturally appropriate.
- Beneficiaries complained about the quality of the collapsible jerry cans, as these were not durable enough for the harsh environment.
- Although the water filters were well received, beneficiaries complained about their size and the waiting time to get clean water.
- Preferred items that were not included in the pre-determined kit included saucepans, flasks, big plates and spades.

Whilst the PDM results measured against the expected outcomes provided a good insight into the impact of the project, the unintended outcomes gave an additional level of understanding of how the items were used. For example, most beneficiaries used the tarpaulins as intended to set up new shelters (42%) and improve existing shelters (31%). However, tarpaulins were also used as water catchment to facilitate water storage (approx. 19%), or to provide a shaded area close to the shelters (4.5%). Very few respondents stated that they used the tarpaulins to help them earn money (0.5%), by supporting cultivation and construction work. With regard to supporting farming activities, it was witnessed that one beneficiary had placed a tarpaulin in the ground and had then backfilled it with soil to grow tomatoes, to ensure that water did not percolate through the dry soil.

WIDER IMPACTS

Based on the success of the project and the PDM findings, another project was conducted to target an additional 2,000 households and expand the geographical coverage. The main change was the removal of the toolkits, that were replaced with rope. The follow-up project was completed in November 2018 and resulted in planning for a further intervention with the same implementing partner for 2019. Despite the challenging operating environment, this proved that this response model was both effective and scalable.

Moreover, the size and profile of the project inadvertently reinvigorated the shelter coordination in the region, as the partner organization was supported and encouraged to coordinate with relevant bodies throughout.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ **Working with local development organizations** proved pivotal in mobilizing remote affected communities in rural Somaliland whom had received limited humanitarian support. This ensured the active participation of community leaders and affected families in constructing and improving their dwellings with the aid provided.

+ **Most beneficiaries used the aid items for their intended purpose**, achieving the intended outcomes (particularly the shelter related items). Where the PDM results identified that items were not used (e.g. the toolkits), it was agreed not to include them in the next project.

+ **Versatility of items** such as tarpaulins allowed beneficiaries to diversify the usage based on their respective needs. For example, some households used the tarpaulins and the portable storage facilities for water catchment.

+ **Positive and professional engagement between the implementing partner and the relevant authorities** helped facilitate project delivery in the selected areas.

+ The project managed to design a **lightweight and portable solution** that was appropriate for nomadic pastoralist populations, whose shelters needed to be transported for long distances.



The findings from the post-distribution monitoring provided a better understanding of the needs and traditional practices of the IDPs, informing the changes in items distributed in subsequent interventions.

WEAKNESSES

- **The project was able to support only a limited number of households** compared to the overall needs in Somaliland.

- **Targeted assistance and poor communication had the potential to cause conflicts** within the affected communities. Frustrations were observed at distribution sites between onlookers who were not part of the beneficiary list.

- **Not all of the aid was culturally appropriate** and, at times, was superfluous (e.g. handsaw and pegs), thereby reducing the effectiveness of the project. Better, coordinated shelter assessments would have ensured a more defined kit content. The PDM helped adapting it in subsequent project, where the toolkit was replaced by rope.

- **The project did not directly seek to address land tenure issues**, while it was known that IDPs faced real threats of eviction in some displacement sites.

- **The training of trainers methodology needed improvement.** Trainees were not identified timely before distributions and were not always trained thoroughly on the use of the items, so the cascade approach was not very successful and the messaging not very effective. Small focused training sessions with key community members would have been better. This would require more trainers.

CONTENTS OF THE KITS

Items	Units	Qty	Unit cost (USD)	Total cost (USD)
Tarpaulins (6x4m)	pcs	2	12.81	25.62
Toolkits	pcs	1	13.60	13.60
Blankets (high thermal)	pcs	5	5.52	27.60
Mosquito nets	pcs	2	3.11	6.22
Kitchen sets	set	1	26.27	26.27
Ground mats	pcs	2	4.99	9.98
Solar lights	pcs	2	9.85	19.70
Jerry can, 10l collapsible	pcs	2	1.63	3.26
Water filter	pcs	2	30.21	60.42
Box	box	1	24.75	24.75

LESSONS LEARNED

- **It is essential to have a clear rationale for deciding on targeted or blanket distribution** within a site. Where possible, blanket coverage of displacement sites would avoid equity issues between households and conflict over limited resources. This often means restricting the geographical coverage within the budget limitations. Improved community engagement would also help mitigate risks of tensions arising over disparities.
- **Increased understanding of the context, socio-cultural aspects and the link between emergency shelter, livelihoods and longer-term recovery processes is needed.** The learnings gained about shelter needs of IDPs and the traditional shelters of nomadic populations helped better tailor the shelter-NFI package in subsequent interventions. For example, the PDM identified that **the toolkits were not appropriate, while rope was preferred to repair and maintain traditional shelters.** Unexpected rainwater harvesting strategies were also adopted by some households by using tarpaulins and jerry cans. A longer-term impact evaluation (6–12 months after the project) would also help analyse sheltering outcomes and draw out more information about resilience strategies.
- **More technical training on distribution mechanics** with the implementing partner and the local organizations was needed to improve the planning and execution of the distributions carried out in terms of speed, safety and security. For example, more detailed site assessments need to be carried out by the implementing partner to help plan the layout of the site and, during the distribution itself, additional labour should be made available to help households requiring support to transport the items.

OVERVIEW

SOUTH SUDAN 2017–2018 / CONFLICT

CRISIS	South Sudan Civil War, December 2013–onwards
TOTAL PEOPLE AFFECTED*	7.1 million individuals, as of Dec 2018
TOTAL PEOPLE DISPLACED*	4.2 million individuals displaced: 2 million internally displaced and 2.2 million refugees in neighbouring countries Over 265,000 individuals settled in PoC sites**
TOTAL SHELTER NEEDS*	2 million individuals
TOTAL PEOPLE SUPPORTED*** 2017–2018	Over 1.65 million individuals (352,800 households) reached with NFIs 383,366 individuals (over 82,000 households) reached with shelter assistance

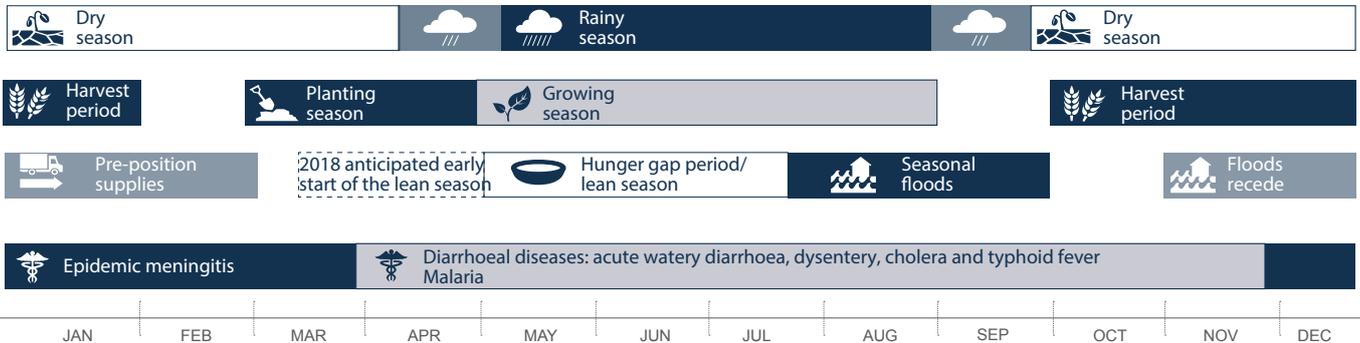


This map is for illustration purposes only. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the Global Shelter Cluster.

SUMMARY OF THE RESPONSE

More than three years from the beginning of the crisis, Shelter and NFI needs remained very high both for newly displaced populations and for those who had been displaced multiple times or were in protracted displacement. While in-kind distribution remained the main response modality, in 2017 and 2018 the Shelter-NFI response started to focus more on cash-based interventions and activities to support return in areas of sufficient stability.

CALENDAR OF SEASONAL EVENTS (SOURCE: HRP 2018)



In 2018, the PoC site in Bentiu remained the largest planned camp in South Sudan, hosting over 113,000 people fleeing conflict and violence.



A combination of static and mobile, rapid-response approaches were used by Shelter-NFI partners to address the diversity of needs and type of settings.

CASE STUDIES IN THIS EDITION

This edition includes four case studies related to the South Sudan crisis. Three of them were implemented in Protection of Civilians sites (PoCs), where only a minority of the displaced population resided. However, different needs and conditions required different response modalities. The fourth project was implemented in the context of the South Sudan refugee crisis in Uganda.

- A.7, on fuel-efficient stoves in Bentiu;
- A.8, on shelter upgrades through vouchers in Wau;
- A.9, on site rehabilitation and shelter construction in Malakal;
- A.10, on shelter construction for refugees in Uganda.

* Figures as of Dec 2018. South Sudan Humanitarian Response Plan 2019.
 ** DTM, April 2018. This number stabilized at around 200,000 in early 2019.
 *** This only includes assistance within South Sudan. Populations in PoCs and collective centres may have been reached more than once. Source: Shelter-NFI Cluster Dashboard, see <http://sheltersouthsudan.org/>.



Shelter construction, upgrade and site rehabilitation were common activities conducted in PoCs in 2017–2018.



Outside of PoCs and collective centres, the main response modality was the distribution of NFIs. Above, women wait at a distribution point in Jonglei state.

SITUATION IN 2017 AND 2018

For more background on the crisis, see overview A.23 in Shelter Projects 2015-2016.

Entering its fifth year in 2018, the conflict in South Sudan had become a protracted crisis. The conflict was characterized by systematic human rights violations and abuses, including the killing of civilians, arbitrary arrest, detention, torture, conflict-related sexual violence, and looting and destruction of civilian property. The worsening conflict combined with food insecurity, economic deterioration, disease outbreak and the destruction of already scarce essential community infrastructure, continued to exacerbate the humanitarian crisis. Livelihoods were destroyed and coping capacities severely eroded. The cost of living escalated, with inflation reaching 183 per cent in Juba.¹

Access constraints, general insecurity and violence against humanitarian personnel made it extremely challenging to deliver humanitarian assistance to those most in need. Security was also the most identified need by people affected by the crisis.

DISPLACEMENT AND SHELTER-NFI NEEDS

In terms of displacement, by the end of 2018 there were 4.2 million people who had been displaced since the conflict started in 2013.² These included two million internally displaced and 2.2 fleeing to neighbouring countries, in the fastest growing and largest refugee situation in the continent, which continued to overstretch the capacity of host countries. Most refugees were hosted in three countries: Uganda, Sudan and Ethiopia.³

In terms of shelter and non-food items (NFI) needs within the country, the Shelter-NFI Cluster estimated that around two million required assistance (including 300,000 refugees, mainly from Sudan). Women were disproportionately affected by the lack of shelter and NFIs. Needs were high for both newly displaced individuals who often fled leaving everything behind, and those in protracted displacement situations.

Generally, Shelter-NFI needs were higher outside of the PoC sites, such as with host families or pastoralists affected by weather-related events. However, access was more challenging. As of April 2018, there were around 265,000 people settled in PoC sites, about 13 per cent of the total displaced population in the country. By early 2019, the PoCs population was around 200,000, although movements in and out of the sites continued.

SHELTER-NFI CLUSTER STRATEGY

The strategic objective of the Shelter-NFI Cluster was to ensure that displaced people, returnees and host communities had inclusive access to appropriate shelter solutions, including essential NFI. The four objectives of the Cluster strategy in 2018 were:

1. Provide life-saving shelter and life-sustaining NFIs to the most vulnerable, newly displaced people;
2. Provide sustainable shelter and essential NFIs to the most vulnerable, protracted IDPs in PoCs, formal camps and collective centres;
3. Strengthen community coping mechanisms and cohesion of vulnerable and at-risk displaced communities;
4. Promote community participation in programme implementation and accountability to inform analysis and future response.⁴

The Cluster also promoted the proactive engagement of other clusters, especially CCCM and WASH, to improve efficiency and effectiveness, and avoid duplication.

Given the protracted nature of the crisis, multiple displacements and communities receiving aid several times, the Cluster took strategic steps towards resilience-based approaches since late 2016. Mainly using cash-based interventions (CBI), these approaches targeted areas of stability and capitalized on existing coping mechanisms and environments where more cost-effective and sustainable activities could be implemented. Piloting started in 2017, and Cluster budget requirements for CBI increased significantly in 2018 and 2019 (USD 4.3 million and USD 4.6 million respectively).⁵

SHELTER-NFI RESPONSE

The response during 2017 and 2018 continued to adopt a dual approach, with static interventions (the majority) and mobile teams (based in Juba) that could deploy to the field to scale up a response or increase access in hard-to-reach areas.

Activities were implemented in diverse settings:

- Return areas with relative stability, where IDPs started to go back after the peace agreement. Returns started to increase in 2018;
- Areas where active conflict was ongoing, which saw large-scale new displacement;
- Locations that became accessible, revealing high levels of needs to attend to;
- PoC sites, where IDPs continued to seek refuge.

RESPONSE OPTIONS MENU					
SETTLEMENT TYPOLOGY					
Dispersed settlement sites	Protection of Civilians sites	Collective centres	Host community	Mobile populations	Returns
In kind: loose items for new influx; human or natural induced crisis			In kind: loose items		
				In kind: survival kit	
In kind: stoves					In kind: stoves
					In kind: return package*
CBI: market assessments					
CBI: household items					
CBI: shelter rehabilitation / reinforcement / construction					
			CBI: rental subsidy for newly displaced		CBI: rental subsidy for new returnees
Transition	Shelter construction / rehabilitation / reinforcement				Shelter construction / rehabilitation
				Livestock shelter	
Transportation support to return sites					
Housing, Land and Property support					
Coordination and partnerships					
Advocacy					
Capacity-building (awareness on rights, legal procedures, skills training for stoves, NFI production or shelter construction)					

Protection mainstreaming, Gender mainstreaming, Disability inclusion, Complaints and feedback mechanisms, Environment, Community participation



IDPs lived in damaged buildings and with host communities.



Mobile teams delivered loose items and kits, including survival kits, to displaced populations outside communal displacement sites.



CBI for shelter upgrade was piloted in 2017 and scaled up in 2018. Interventions involved high community participation.



Distribution teams support people with reduced mobility to transport items home.

SHELTER-NFI DELIVERY BASED ON POPULATION TYPE (2017–2018)



The chart shows that the majority of interventions are distributions of NFIs, across population types and locations. Shelter assistance is provided mainly for people in protracted displacement. Figures represent individual beneficiaries reached (source: South Sudan Shelter-NFI Cluster Dashboard).

In terms of achievements, Cluster partners reached over 939,000 individuals in 2017 (827,000 with NFI and 162,000 with shelter) and over 854,000 in 2018 (810,000 with NFI and 221,000 with shelter).

Between 2017 and 2018, shelter and NFI partners reached nearly 46 per cent new IDPs, 45 per cent protracted IDPs, 6 per cent host community, and 3 per cent returnees. Shelter assistance was mainly targeting people in protracted displacement (over 81%).

Response options included in-kind distribution (of loose items or survival kits), CBI (cash or vouchers, coupled with market and protection risk assessments), and shelter construction assistance in locations where this was the best solution (such as PoCs, collective centres and safe return areas). Additionally, the Cluster and its members focused on transportation to return sites, Housing, Land and Property support, coordination, advocacy and capacity-building activities. The table on the previous page shows the diversity of response options based on phase of the response and settlement typology.⁶

Given the successful results of piloted CBI projects in 2017, the Cluster introduced CBI as a modality of response in the 2018 Humanitarian Response Plan. However, the majority of the interventions remained in-kind distributions of NFIs and emergency shelter items. Out of the total individuals assisted by Cluster partners in 2018, just over 103,000 individuals (12%) benefited from CBI in five locations.

In 2018, the Cluster also piloted a new tool on Accountability to Affected Populations (AAP).



The majority of shelter assistance was provided in locations of protracted displacement, such as the PoC in Wau.

PRIORITIES FOR 2019

In 2019, the overall priorities for the humanitarian response in South Sudan included responding to food insecurity, linking to durable solutions, adopting a gender-sensitive approach and mainstreaming protection across interventions. Agencies aimed to continue operating with a combination of static and mobile response approaches, expanding modalities and prioritizing CBI where possible. Increased community participation, involvement of local stakeholders and integrated multisectoral approaches were going to be prioritized.

In line with such priorities, the Shelter-NFI Cluster aimed to strengthen communities' self-reliance, increase assistance towards returnees, mainstream protection, and expand the AAP approach and CBI and market-based modalities, as well as skills transfer process. To gradually reduce financial requirements of partners, the Cluster promoted shelter rehabilitation through vouchers and unrestricted cash. To support return, the Cluster also started discussions to develop a multipurpose return package for IDPs moving out of displacement sites.

¹ South Sudan Humanitarian Response Plan (HRP) 2018 and 2019.
² South Sudan HRP 2019.
³ South Sudan Regional Refugee Response Plan 2019-2020.
⁴ South Sudan HRP 2018.
⁵ South Sudan HRP 2018 and 2019.
⁶ South Sudan Shelter-NFI Cluster Strategy 2019.



IDPs in PoCs had limited livelihood opportunities. Programmes often aimed to address this by providing income and transferring skills.



Through market-based approaches, local traders were engaged to provide materials needed for shelter upgrades.

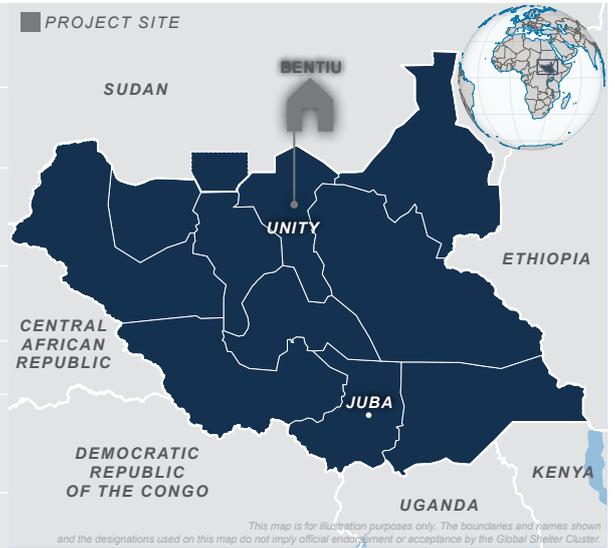
CASE STUDY

SOUTH SUDAN 2017–2018 / CONFLICT

KEYWORDS: Fuel-efficient stoves, Vouchers, Women’s empowerment, Private sector, Cost-effectiveness

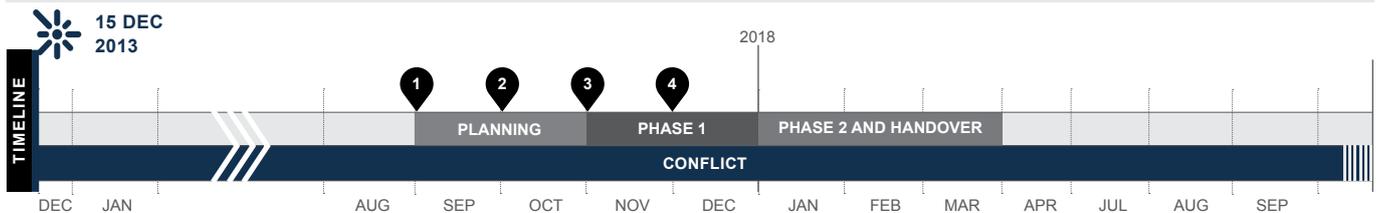
CRISIS	South Sudan Civil War, December 2013–onwards
TOTAL PEOPLE AFFECTED*	7 million individuals , as of Dec 2017
TOTAL PEOPLE DISPLACED	1.9 million individuals displaced* Over 265,000 individuals in PoC sites**
TOTAL PEOPLE WITH SHELTER NEEDS*	1,673,044 individuals in 2018
PROJECT LOCATION	Bentiu Protection of Civilians site, Unity state
PROJECT BENEFICIARIES	22,360 households (100,620 individuals) 4 local traders engaged
PROJECT OUTPUTS	11,180 fuel-efficient stoves built 1,280 participants of skills training USD 76,120 injected into the local economy
OUTCOME INDICATORS	98% usage rate of the new stove; 99% satisfaction rate; 1% of women go out to collect firewood daily (7% before the project); 0% of beneficiaries classify cooking-related fire risks as “high”; 99% state that the stove produces less smoke
MATERIALS COST	USD 6.7 per household (USD 5.2 cash for work, USD 1.5 stove materials)
PROJECT COST	USD 11.6 per household

* South Sudan Humanitarian Response Plan 2018; ** DTM, April 2018.



PROJECT SUMMARY

The project enabled the construction of fuel-efficient stoves in a camp through a voucher system. Beneficiaries (almost entirely women) used the vouchers to access stove construction materials procured by local traders and were responsible for constructing the stove. The organization provided cash-for-work grants upon successful completion of a fully functional stove, as well as skills trainings. Significant cost savings were achieved by procuring locally sourced materials from multiple local traders and transferring the supply chain management costs to them, including storage, transport and distribution.



- 1 Sep 2017: Community engagement plan developed and consortium of small-scale traders established.
- 2 Oct 2017: Baseline survey for the pilot phase.
- 3 Nov 2017: Completion of pilot phase, which activated the full roll-out of the FES project.

- 4 Dec 2017: Endline survey of the pilot, which informed project implementation.

STRENGTHS

- + High community involvement and women’s empowerment.
- + The project built on local capacities and the skills-transfer process was organic and self-sufficient.
- + The cash-based approach was cost-effective.
- + Local ownership was promoted.
- + Fewer women had to collect firewood on a frequent basis.
- + Reduced smoke pollution, improving health and well-being.

WEAKNESSES

- The project could have taken less time.
- The main construction material was not available on site.
- The project did not include people with special needs.
- Limited collaboration with GBV and Protection actors.



The project promoted local ownership by providing women with training to construct fuel-efficient stoves with local materials, which were accessed through a voucher system.

© Rikka Tupaz

CONTEXT OF BENTIU POC SITE

See overview A.23 in *Shelter Projects 2015-2016* and A.6 in this edition for more background information.

Almost five years after the beginning of the crisis, the number of internally displaced people (IDP) seeking shelter in the Protection of Civilians site (PoC) in Bentiu was estimated at 113,310 individuals.¹ Since December 2013, the site witnessed multiple influxes of new arrivals in connection with spikes in insecurity in surrounding areas. Due to protection concerns, many individuals, particularly men, had not left the site since they arrived over four years before. While some households chose to leave the site, specific threats and generalized insecurity meant that Bentiu remained a life-saving refuge for displaced populations.

COOKING PRACTICES IN SOUTH SUDAN

Due to gender roles, women in South Sudan are mainly responsible for meeting most household needs, including food preparation and fuel collection. Different stoves are used for different size pots, which allow women to prepare a variety of foods for their families to enhance nutrition. Charcoal is the most common source of fuel for these stoves. Women traditionally gather the firewood, while men make the charcoal. In more rural areas or in periods of displacement when no stoves are available, firewood can be the primary fuel source and women cook over polluting and inefficient “three-stone” fires. Women face several challenges in accessing cooking fuel. Firstly, by being forced to venture further and further away from their homes for prolonged periods of time, women are exposed to high risks of gender-based violence (GBV), while men rarely leave the PoC sites for fear of attacks by armed actors. Women also often have inadequate income to support procurement of alternative fuel sources.

IMPORTED STOVES

Households in Bentiu PoC prepared their daily meals on three-stone stoves, in very tight and poorly ventilated quarters, due to the overcrowded conditions of the site. Previous interventions were largely around distribution of technically advanced, fuel-efficient stoves from foreign suppliers. The organization conducted a comparative study of these imported models with locally made stoves. These included both manually produced and industrial products, generally of good

¹DTM Headcount, March 2018.

²UNFPA, Lessons learned on Fuel FES in South Sudan, 20 March 2017.



Women and girls in South Sudan often need to travel long distances to access firewood, which exposes them to safety risks. The project reduced their need to do so, by providing fuel efficient stoves.

quality and durability. However, in the site, imported stoves failed to generate long-term usage among the population, often ending up being sold on the local market, not used at all or left behind, as families move to other locations. This was due to the lack of community buy-in, as these models did not identify and build on solutions that were well adapted to the local context. Additionally, these imported models were relatively costly (from USD 22 to 38) and had high maintenance and repair costs.

PROJECT OBJECTIVE

The project aimed at improving the living conditions in the site through the use of community-made, fuel-efficient stoves, resulting in better fuel collection and meal preparation practices. In line with the Humanitarian Response Plan and Shelter-NFI Cluster strategy, the project focused on increasing the resilience and capacities of the affected populations by using a cash-based modality.

PROJECT IMPLEMENTATION

The project targeted over 11,000 households (almost 90% of the population in the site) and was implemented by a team of three staff. It consisted of four main components: stove design; training of trainers; procurement; and construction through a voucher system. It was preceded by a pilot phase and followed by a verification process that included the disbursement of a cash-for-work grant.

PILOT PHASE. Prior to full roll-out, a pilot phase was implemented to evaluate the feasibility, time, challenges and community buy-in, and to improve the project design. A baseline study, market analysis, stakeholder analysis and evaluation of the pilot phase were also conducted. This provided a background on the population’s challenges and capacity to contribute to the project and confirmed that a cash-based approach was feasible. Hence, a cash-for-work and community engagement plan were developed, cow dung was procured and a consortium of four, local, small-scale traders was established.

STOVE DESIGN AND SELECTION. The organization identified a stove model based on the results of the research study on fuel-efficient stoves and with careful consideration to local cooking practices and community preferences. The stove was built from locally available materials (mud and cow dung) and had a user-friendly design developed by the affected population themselves. It also reduced firewood consumption and improved users’ health through reducing smoke. A total of seven stoves, including the selected community-made design, together with imported and other local rudimentary stoves, were tested with a minimum of 15 families. The models were rotated



Communities in the site, including women’s groups, were engaged throughout the project.



Skills trainings on the construction of the stove were conducted in the site, starting with a training of trainers for construction assistants who then cascaded the training to 1,280 participants.

to a different family after three days, to ensure that average firewood consumption was not affected by household size or varying cooking techniques. Stoves were tested on insulation, firewood consumption, smoke reduction, local production and material availability. After the tests, focus group discussions on user preferences were conducted and each stove type was scored and ranked. The locally made stove scored highest.

COMMUNITY ENGAGEMENT. All information was communicated through the radio, community leadership, block leaders, door-to-door visits, posters and general meetings. Although the selected stove design was already familiar to the affected population, a community-led communication campaign was undertaken to further highlight the associated health and fuel-efficiency gains. As part of the monitoring and evaluation of the project, a complaints response mechanism was set up at the outset of the project. Information on criteria to qualify for a cash grant after completion of the stove was disseminated through block leaders and construction assistants.

SKILLS TRAINING. The organization trained ten construction assistants in each block within the site, who themselves then trained 1,280 participants (98% women). The training of trainers lasted for one day and participants were compensated with a grant of SSP 150 (USD 1.1) upon successful completion. After this training, the construction assistants were able to provide support, repair or even build the stove. This represented a potential source of livelihood for the future.

PROCUREMENT AND VOUCHER DISTRIBUTION. The construction of the stove required 5kg of mud and 5kg of cow dung. Beneficiaries were responsible for the procurement of mud that could be found near the site. The community leadership selected local traders outside of the site to procure, transport and distribute the cow dung. The delivery of materials to beneficiaries was organized through a voucher scheme consisting of the following steps:

- The organization distributed commodity vouchers to the beneficiaries;
- Traders brought the cow dung to a designated location, just outside of the site;
- Beneficiaries collected one bag of cow dung in exchange for the vouchers;
- Traders redeemed the vouchers with the organization.

CONSTRUCTION. Beneficiaries were responsible for the construction of the stove and the organization incentivized the process by providing each household with a cash-for-work grant worth SSP 700 (USD 5.2) upon completion of a fully functional stove. Once the cow dung was received, they only needed to procure mud by themselves and had three weeks to construct and finalize the stove. After that, the stoves would dry in about two weeks. The construction assistants provided support during the construction process.

STOVE RANKING TEST RESULTS

Type	Insulation	Firewood consumption	Smoke reduction	Local production	Material availability	Total
Wire stove (traditionally used in the PoC)	0	0	0	3	3	6
Iron stove (traditionally used in the PoC)	0	0	0	3	3	6
Metal stove (traditionally used in the PoC)	0	0	0	3	3	6
Jiko Kisasa (imported)	1	2	1	2	2	8
Kuni Okoa (imported)	1	3	2	0	0	6
Eco zoom 5000 (imported)	1	3	2	0	0	6
Rubkona Rocket (locally produced)	4	3	1	4	4	16

Each stove type was scored and ranked after the results of the testing were collected and focus group discussions on user preferences completed. The evaluation scale ranged from 0 to 5, with 0 indicating "very poor performance" and 5 indicating "excellent performance". The results are presented in the table above.

VERIFICATION PROCESS. As a condition to release the cash grant, stoves were verified according to the following criteria: i) the stove must be dry; ii) it must not have any significant cracks; iii) it must have a fuel entry point, air-inlet and fuel chamber; and iv) it must be constructed on a plain surface. The size of the stove may vary according to each household's unique preferences and needs.

REDEMPTION OF CASH-FOR-WORK VOUCHER. Upon verification of the stoves, project staff distributed a carbon-copy receipt to eligible heads of household that could be exchanged for SSP 700 at the designated cash distribution point. The redemption of these vouchers was done by staff checking unique pre-printed numbers (valid only for one day) off a tally sheet.

TARGETING

There were two beneficiary selection processes. For the stove construction, the project targeted almost 90 per cent of the total number of households in the site. In coordination with all concerned residents, a focal point was identified for each shelter that was responsible for interacting with the organization, constructing the stove and receiving the cash-for-work grant. A total of 11,180 focal persons were selected for 11,180 shelters. As most shelters were communal, residents had to agree on who within the shelter would receive the grant.

For the skills training, the construction assistants were selected in coordination with all relevant stakeholders within the site, including the women's committee, youth committee, block leaders and the chiefs' high committee. The process was guided by three key criteria:

- All geographical sections within the site should be equally represented. Each sector should be home to at least 15 per cent of the total number of training participants.
- Individuals whose livelihood opportunities could be negatively affected by a decrease of firewood consumption within the site should be given priority. Due to the gender dimension of fuel collection, at least 60 per cent of construction assistants should be female.
- Idle youth without access to any other income should be prioritized. At least 80 per cent of construction assistants should be between 18 and 25 years old.



MAIN CHALLENGES

RENT-SEEKING BEHAVIOUR FROM ARMED ACTORS. The local traders were being arbitrarily taxed by local authorities, so had to find more effective mechanisms to deliver materials, such as optimizing delivery times and reducing the accesses to the site, to also reduce the number of times they would get taxed.

UNFAMILIARITY WITH PARTICIPATORY APPROACHES. Initially, people would ask what they were going to receive, rather than how they could be involved. This was due to the negative impact that in-kind distributions had over time on their attitudes. It took the project team time to get the community fully involved.

CURRENCY FLUCTUATIONS. Due to the volatility of the South Sudanese Pound, the longer the project duration, the more chances of the value of the cash grant changing, as it was a fixed amount. For this reason, the team needed to ensure that the completion of the stove and the verification process were done on time.

CAPACITY OF THE ORGANIZATION TO IMPLEMENT. The organization did not have yet the programmatic expertise and operational capacities required to implement a cash-transfer programme smoothly. To address this, programme staff organized weekly meetings with finance and procurement staff to align the process with standard financial management rules and procedures. Efforts at improving communication between programme staff and support units proved highly successful. Payment of suppliers and cash distribution plans were established to allow for a certain flexibility as required on the ground (for example, delays in service delivery due to fluctuating stocks or vehicle breakdowns).

WIDER IMPACTS OF THE PROJECT

By adopting a community-led approach, the project sought to strengthen resilience and self-sufficiency, engaging in partnership with local leaders and entrepreneurs, as well as other stakeholders such as women and youth. The cash-based intervention promoted local ownership and sustainability, as the community was closely involved in all stages of the project cycle. The skills training provided participants with a livelihood skill that could become an income-generating activity beyond the site. This may serve to address humanitarian needs in the long term, by reducing underlying vulnerabilities, such as unemployment and scarcity of cooking fuel.



The project replaced inefficient three-stone stoves used in the camp (left) with fuel-efficient stoves made with local materials (right) through an people-driven process.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ **High community involvement** throughout the project. The project also had a **focus on women's empowerment** through their strong participation – specifically during stove design process, training and construction.

+ The project **built on local capacities by engaging local actors and conducting skills training**. As a result, 96 per cent of targeted households reported to be capable of building the stoves, 95 per cent that they could teach someone else the building skills, and 92 per cent that they would be able to maintain and repair their own stove. **The skills-transfer process was organic and self-sufficient**, only requiring the initial training for 20 selected women in the pilot area before rapidly spreading to cover 1,280 people in the site.

+ **The cash-based approach was cost-effective** as it engaged multiple local traders to provide locally available materials, resulting in cost reductions of 59 per cent compared to the distribution of imported stoves.

+ **Local ownership was promoted** by identifying a stove which was in line with traditional cooking practices and made of local materials. The majority of the women who participated in the project used the stove (98%) and were satisfied with it (99%). Satisfaction was mainly due to fuel efficiency, cooking quality, smoke reduction and ease of use. Preparation times were lower because the stove was well insulated, better preserving the heat.

+ **Fewer women had to collect firewood daily** after the project, reducing associated GBV and safety risks (only 1% of women interviewed, as opposed to 7% before the project).

+ **The stoves reduced smoke pollution**, with positive effects on people's health and well-being. This was thanks to their compact structure and the space between the cooking pot and the open flame.

WEAKNESSES

- **Internal delays prevented the project from finishing earlier**, due to several ongoing cash-based interventions and because the operational capacity and expertise of the organization in such projects was not yet fully in place.

- **The main construction material was not available on site**. Although cow dung was available in a nearby town, it was not readily available within the PoC. The project team could have researched how the community could access cow dung from the outside, if a market for cow dung was possible, or if there were available sources within the site itself.

- **The project did not have any special measures on inclusion of people with special needs**, such as those with physical disabilities or heightened vulnerabilities, or marginalized groups. This resulted in these groups being unable to participate in the project.

- As this project had a GBV risk mitigation component, **the project team could have collaborated more with GBV and Protection actors**. This could have enabled a better identification of special needs of vulnerable groups and their inclusion in the project. Tools could have been designed to assess GBV risks and mitigating factors, and joint monitoring could have better informed the organization about GBV risks and interventions that may have been overlooked.



Stoves were made of local materials and according to traditional cooking practices. Women participated in the design of the stoves and were trained on how to construct them.

LESSONS LEARNED

- **Start community sensitization** and solicit buy-in for the project **well in advance of implementation**, as cash is time-consuming, particularly when it involves beneficiary participation. Community involvement was ensured in all stages of the project cycle and was key to avoid increased tensions between various groups in the site and beyond.
- **The terms of engagement with traders need to be communicated continuously**, from the tendering to the selection stage, to address questions and issues, as well as to mitigate any potential tension. Although participation criteria and minimum capacities required were communicated to all traders who were vying for the position, ineligible traders still hoped to be selected and tensions between them started to rise until the selected traders were announced.
- **Understand potential challenges** in importing materials into a site and **make sure local traders understand all barriers they may face** (e.g. the issue of arbitrary taxation), before agreeing on terms of reference.
- **Ensure that transportation and other logistics are adequate and ensured by the trader**. This should be included in the terms of reference, with penalties in case these are not fulfilled.
- **Ensure a proper conflict analysis prior to project design and implementation**. Fighting occurred on a regular basis in the site and it was often related to tensions within the trader community. Project staff decided to engage with outside traders as a precautionary measure, following consultations with community leadership in the site.

CASE STUDY **SOUTH SUDAN 2017–2018 / CONFLICT (IDP)**

KEYWORDS: Shelter upgrades, Voucher fairs, Cash for work, Community engagement

CRISIS	South Sudan Civil War, December 2013–onwards	
TOTAL PEOPLE AFFECTED*	7 million individuals, as of Dec 2017	
TOTAL PEOPLE DISPLACED*	1.9 million individuals displaced (over 265,000 individuals settled in PoC sites)**	
TOTAL PEOPLE WITH SHELTER NEEDS*	1,673,044 individuals in 2018	
PROJECT LOCATION	Wau PoC site, Western Bahr el Ghazal state	
PROJECT BENEFICIARIES	5,362 households (22,579 individuals)	
PROJECT OUTPUTS	804 communal shelters upgraded/maintained (624 and 180 respectively)	MATERIALS COST
	300 individuals trained 3,012 households received cash for work	USD 50 for upgrades per shelter partition (USD 24 per household) USD 21 for maintenance per shelter partition (USD 13 per household)
OUTCOME INDICATORS	92% of beneficiaries said their shelter needs were addressed, with an 84% satisfaction rate	PROJECT COST
SHELTER SIZE	Communal shelters of 75m ² (15m by 5m), comprising five partitions of 15m ² each	SHELTER DENSITY
		2.6m ² per person

* Figures as of December 2017. South Sudan HRP 2018.
** DTM, April 2018.

PROJECT SUMMARY

The project upgraded 804 communal shelters in the Wau Protection of Civilians (PoC) site as part of a large-scale rehabilitation, by using local materials to protect tarpaulins. All procurement was local and a consortium of small-scale traders within the site was established. Materials were distributed through voucher fairs and the beneficiaries were responsible for installing the upgrades themselves. The project also included skills training on bamboo thatched walls and a cash-for-work grant.



- 1 Nov 2017: Baseline, market assessment and analysis completed.
- 2 Dec 2017: Community consultation and registration of beneficiaries completed. Terms of engagement signed with local traders.
- 3 Jan 2018: Beneficiary registration, identification of local traders and completion of first phase of shelter upgrades.
- 4 Jan 2018: First round of voucher distribution, 10 market days organized and verification of first phase of shelter upgrades completed.



View of zone C in Wau PoC with shelters upgrades realized on 176 communal shelters between January and March 2017.

STRENGTHS

- + Engagement of beneficiaries strengthened their self-sufficiency.
- + Local procurement through multiple small traders led to savings.
- + Increased economic activity in the local market.
- + Shelter lifespan was increased, reducing maintenance costs.
- + High beneficiary satisfaction.

WEAKNESSES

- Low community interest in the skill-development component.
- The gender roles and responsibilities were not properly assessed.
- Limited covered living space.
- Contracts did not include applicable penalty clauses.
- Some materials were not properly used.



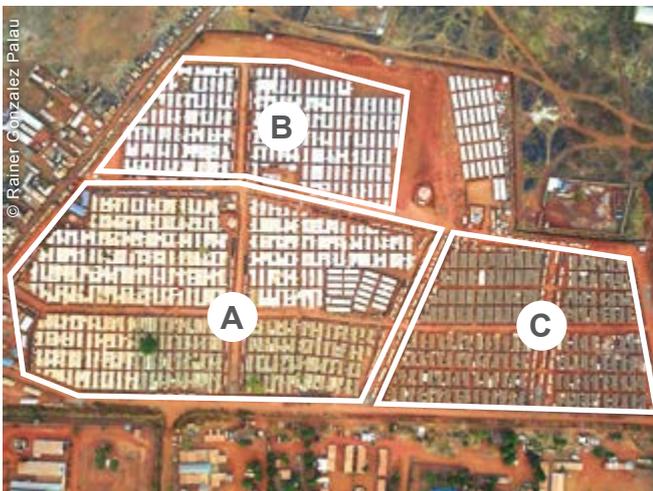
One of the upgrades consisted of adding a layer of dry elephant grass to rooftops to increase protection from the elements, improve ventilation and lower inside temperatures.

CONTEXT IN WAU

See overview A.23 in *Shelter Projects 2015-2016* and A.6 in this edition for more background information.

The Protection of Civilians site (PoC) in Wau was established in June 2016 after intense fighting in the country's north-western region prompted tens of thousands to flee their homes in search of refuge near the existing UN Mission base in Wau town. By the end of 2016, more than 30,000 people were living on less than 100,000 square meters of land in what was the most congested PoC site in South Sudan. Following conflict in Wau town and periphery in April 2017, the site experienced a large IDP influx of up to 18,000 persons, significantly worsening living conditions. An intention survey carried out in November 2017, indicated that two thirds of interviewees intended to remain in their current displacement site because of access to security. Whilst some households left the site, the security environment did not improve significantly in Wau and high levels of congestion were likely to persist. By March 2018, the PoC site hosted 22,579 IDPs, while a further 12,796 IDPs sought shelter at five collective sites in Wau Town.

Due to the extreme density of the site, IDPs occupied communal shelters hosting five households each, as per the design approved by the Shelter-NFI Cluster. The shelters were covered in plastic sheeting and organized in blocks, further grouped in three zones.



Following the success of the shelter upgrade pilot in Zone C, the organization replicated the project in Zone A of the site by upgrading 375 newly constructed communal shelter.

PROJECT GOALS

Fitting into the resilience-based approaches of the Shelter-NFI Cluster, mainly built around cash-based interventions, the project goal was to improve the living conditions of IDPs through the provision of shelter upgrades, using a participatory approach and local solutions. It also included multisectoral activities, such as protection, food security and livelihoods.

PILOT PHASE

From January to March 2017, the organization conducted a cash-based pilot project in zone C, to upgrade communal shelters improving the lifespan of plastic sheets used for roofs and walls from three to six months. Following the success of the pilot, the organization replicated the project in zones A and B from December 2017 to March 2018, as part of a large-scale rehabilitation of the site.

PROJECT IMPLEMENTATION

The project was implemented by a team of 11 staff: one operation officer, two project assistants, four enumerators (gender-balanced) and four supervisors. The team was coordinated from Juba and had the support of the camp management unit of the organization.

The upgrades consisted of adding a layer of dry elephant grass – found naturally in surrounding areas – to rooftops to increase protection from the elements, improve ventilation and lower inside temperatures. Further, bamboo-thatched walls and doors were installed around the shelter exterior, increasing privacy and further extending the durability of shelters.

All materials required for the upgrades were delivered through voucher fairs. Materials were procured locally through small-scale traders residing within the site – many of whom were struggling to maintain business due to the crisis. The beneficiaries themselves undertook all labour associated with installing the upgrades and were incentivized by a cash-for-work programme.

SKILLS TRAINING. The project involved a three-day skills training for 300 individuals on how to construct bamboo-thatched walls and doors for shelters. The team selected participants (50% women) from within the whole site and worked closely with community leaders, block leaders, women and youth committees to ensure equal representation of participants. Training participants were identified from each block. At the end of the training, each participant was provided with a training completion certificate and a grant of USD 9.

VOUCHER DISTRIBUTION. Commodity vouchers were designed for both phases of upgrades and were restricted to the specific type of material and quantity needed. The vouchers were used not only as legal tender for the exchange of upgrade materials during the market fairs, but also to act as proof of registration for eligible participants. It was through the vouchers that the traders kept track of the households they served and the project team verified the traders' claims before redeeming the vouchers.

The process below was followed:

- To keep track of each household's address, a system of numbering shelters and partitions within each shelter was established;
- The targeted beneficiaries were registered by linking the serial number of the voucher to a specific name and their address within the PoC. This was done by means of making house-calls on the voucher distribution day;

- The serial number and address were noted by project staff on each voucher before the distribution;
- All traders were provided with a specific vendor identification number which they noted on each received voucher;
- Project staff then used the beneficiary name, serial number and address along with the vendor ID to verify the list of served beneficiaries as per traders. Each voucher was attached to the list as a receipt;
- Traders were only reimbursed after the verification exercise, which started as soon as the vouchers had expired and were handed over by the traders.

VOUCHER FAIRS AND INSTALLATION. From each shelter, one household was elected to be responsible for receiving shelter materials and completing the required work. A designated space was prepared in the market where traders lined up the materials and beneficiaries brought their vouchers in exchange for these materials. Upon reception of the elephant grass and bamboo-thatched walls in two different phases, beneficiaries were responsible for their installation, with the technical guidance of supervisors from the project team.

MATERIALS LIST FOR UPGRADES OF ONE SHELTER				
Items	Units	Qty	Unit cost (USD)	Total cost (USD)
Elephant grass (bundles Ø30-40 cm)	bundles	50	1.53	76.50
Rubber rope (20 strings per bundle/50cm length)	bundles	10	1.36	13.60
Bamboo (300 cm x Ø3-5 cm), 10 pcs per bundle	bundles	4	6.40	25.60
Thatch bamboo for walls (170x200cm)	pcs	10	5.10	51.00
Thatch bamboo for door (170x100cm)	pcs	10	2.97	29.70
Thatch bamboo for side walls (10.5m ²)	pcs	2	26.00	52.00

VERIFICATION AND CASH-FOR-WORK. Project staff supervised the upgrades and ensured these were completed in a satisfactory manner before approving the beneficiary to move on to the next phase of the voucher distribution. In case the upgrade was incomplete or inadequate, the staff provided feedback and instruction as to what had to be done before the next visit. To guide the verification process, the staff made use of a simple monitoring checklist, designed to ensure quick and consistent assessments. Upon successful completion and verification, beneficiaries were given a cash grant worth USD 5 to supplement household income.

COMMUNITY ENGAGEMENT. The community played a central role in almost all aspects of programme implementation, proving a crucial partner in the process of selecting traders, responding to feedback and complaints and organizing the skills trainings. Project staff initiated a comprehensive sensitization campaign at the outset, starting by presenting the project to the community leadership in the site. Community consultations were designed to encourage the population to actively participate in the project design and implementation. As a result of such consultations, it was decided to engage the women and youth committees in identifying both participants and trainers for the bamboo thatch skills trainings.

The chiefs' committee assisted in verifying the selected traders, by providing documentation confirming their legitimate right to conduct business within the PoC. The block leaders were tasked with going door-to-door in their respective blocks to explain the nature of the project to the community.

MAIN CHALLENGES

LOW PARTICIPATION. Although women installed bamboo thatched walls, they did not participate actively in elephant grass installation on the roof, mainly because in the local culture this task was conducted by men. Men's participation was comparatively low all throughout shelter upgrades, primarily because of lack of willingness and sense of ownership. Although regular follow-ups and sensitization activities were conducted, the levels of participation did not improve.

LIMITED SPACE TO SET UP A MARKET. Due to limited space within the site, initially the organization could not establish a marketplace within the PoC, which would have reduced the distance between market and targeted shelters. Later, the market was placed inside the gates.

DELAY IN MATERIALS SUPPLY. Regular follow-up meetings and visits were conducted with the traders and, as a last resort, transportation support was provided by the organization to ensure the timely delivery of supplies.

MISUSE OF MATERIALS BY THE COMMUNITY. Women took part of elephant grass intended for the roof and used it to cook. Although shelter supervisors conducted regular field visits to ensure the proper use of materials, more mobilization would have been required. Nevertheless, the materials distributed were enough to complete the works even in such cases.

WIDER IMPACTS OF THE PROJECT

The project was highly participatory and built on local capacities. Through active engagement with traditional and informal leadership structures, business leaders and women and youth groups, the project transferred expertise and knowledge to improve people's living conditions and equip the community with new skills. Allowing the community to assume increased responsibility in this process served to restore dignity and strengthen their self-sufficiency. 11 out of 15 traders engaged in the project were able to expand their business, primarily in selling a variety of items such as seeds, shoes and timber (four traders), or expanding their shelter material business (three traders). Traders also found the process of cooperating with other traders useful and beneficial and they were planning to collectively open a multi-purpose shop in the town soon.



Project staff supervised the upgrades and ensured these were completed well before approving households to move on to the next phase.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



People on the site lived in communal shelters. The project upgraded the walls and roofs to extend their lifespan by protecting the plastic sheets.

STRENGTHS

+ **Active engagement of beneficiaries** in improving their living conditions contributed to the restoration of dignity and strengthened community self-sufficiency.

+ **Procurement of locally available materials involving multiple small-scale local traders** through a cash-based modality, which was 40 per cent cheaper compared to in-kind distribution.

+ **Increased economic activity in the local market**, creating employment opportunities and stimulating entrepreneurship within and outside the site. As a result of the project, 73 per cent of traders expanded their business or ventured into new lucrative areas.

+ **The lifespan of shelters was increased from 3–6 to 12–18 months**, thus maintenance was reduced to once rather than twice a year. This represents a USD 433 savings per communal shelter, or approx. USD 87 per household.

+ **High beneficiary satisfaction** (84% versus 52% before the project) measured through seven metrics (quality and shelter type 94%; comfort 92%; privacy 82%; environment for children to study 67%; sense of security 86%; weather impacts / heat in the shelter 77%; social interaction within the shelter 91%).

WEAKNESSES

- **Low community interest and participation in the skill-development component** of the project. Firstly, this was due to limited community mobilization for the specific component. Secondly, people did not see much use of the skill and trade beyond the shelter upgrade activities within the camp.

- **The gender roles and responsibilities were not properly assessed, leading to low male participation** in the shelter upgrade and the need to hire labourers. This was mainly because the project was conducted during the dry season and men were engaged in other remunerated activities outside the site.

- **The project could not address the issue of insufficient covered living space of the communal shelter solution**, which was due to the high influx of population within the enclosed perimeter of the site.

- **Contracts did not include applicable penalty clauses** to be imposed on the traders in the event of any delays and substandard quality.

- **Some materials were not properly used.** More mobilization should have been carried out with the community to ensure proper use of the assistance.



The project engaged local traders and trained beneficiaries on the upgrades, which included the addition of grass to rooftops and bamboo-thatched walls.

LESSONS LEARNED

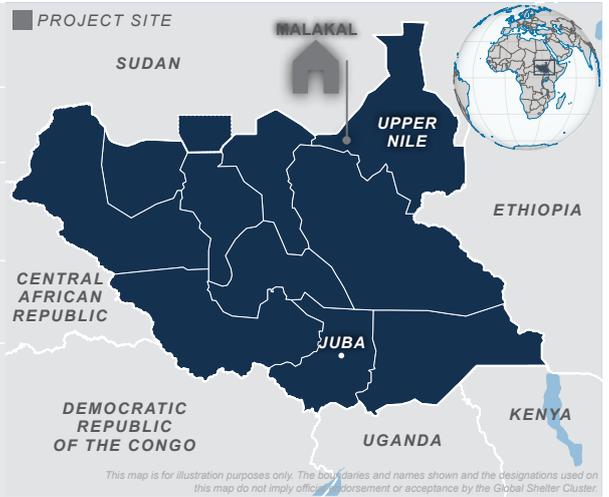
- **In-depth analysis should be conducted for the gender role and responsibilities** in different ethnic groups of the community and should be incorporated in the project. For future interventions, the organization aimed to address the above issues of participation by developing a calendar with the community, to understand their gender roles and seasonal activities throughout the year.
- Detailed studies should be carried out – after training needs assessment have been conducted – to **identify skills and trades that are appropriate to the local contexts**, specifically the trades that generate livelihoods and those which can be useful outside camp settings, such as carpentry, masonry, welding, etc.

CASE STUDY

SOUTH SUDAN 2018 / CONFLICT (IDP)

KEYWORDS: Site planning, Site rehabilitation, Shelter construction, Coordination, Community engagement

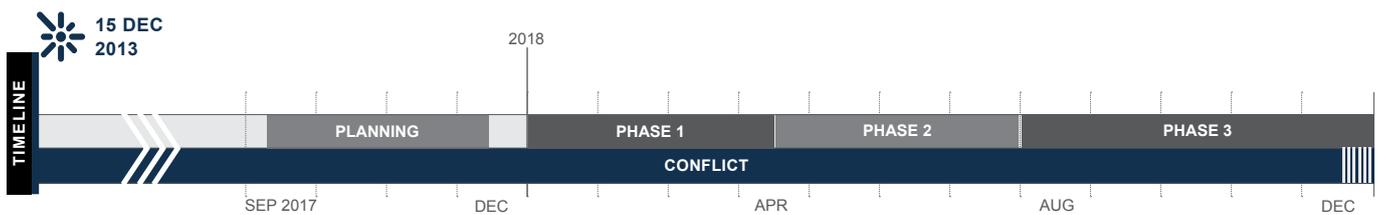
CRISIS	South Sudan Civil War, December 2013–onwards
TOTAL PEOPLE AFFECTED*	7 million individuals , as of Dec 2017
TOTAL PEOPLE DISPLACED*	1.9 million individuals displaced (over 265,000 individuals settled in PoC sites)**
PROJECT LOCATION	Malakal Protection of Civilian (PoC) site, Upper Nile state
PROJECT BENEFICIARIES	1,242 households (3,856 individuals) received shelter support Over 5,200 households (29,000 individuals) benefiting from site reconfiguration and infrastructure upgrade
PROJECT OUTPUTS	959 individual shelters built (238 blocks) 64 carpenters trained on shelter construction 206 heads of households trained on shelter maintenance Site works: clearing and grading, drainage and roads improved, culverts installed
SHELTER SIZE	13.5m² (4.5x3m)
SHELTER DENSITY	3.4m² per person on average
MATERIALS COST	USD 201 per shelter (USD 804 per block, including labour)
PROJECT COST	USD 280 per household



PROJECT SUMMARY

As part of the wider rehabilitation of the whole site, the project targeted a sector in the Malakal Protection of Civilians site to reconfigure its layout and address issues of overcrowding, security, flood risk and poor distribution of services. One organization was in charge of the site planning and development, while another led the community mobilization, site management and shelter components. Robust emergency shelters according to Cluster-agreed designs were provided to the residents of the reconfigured sector of the site, through a highly consultative process.

* Figures as of December 2017. South Sudan HRP 2018.
** DTM, April 2018.



Sep–Dec 2017. Planning phase: **Community discussions** conducted prior to start of activities.

Jan–Apr 2018. Phase 1: **Community mobilization, demonstration of prototype and community consultations** informing project design.

Apr–Jul 2018. Phase 2: **Demolition, relocation to transit site, site planning, shelter construction** in sector 4.

Aug–Dec 2018. Phase 3: **Intention survey, consultation and sensitization of the community** in other sectors about the reconfiguration.

STRENGTHS

- + Procurement challenges were anticipated and delays avoided.
- + Community participation throughout the project.
- + Equitable and effective shelter allocation process.
- + Good coordination and collaboration with all stakeholders.
- + Effective collaboration with peacekeeping forces.



The project rehabilitated a sector of the Malakal PoC through a phased approach.

WEAKNESSES

- Community resistance and disagreements were not anticipated.
- Initial gaps in coordination between partners.
- The small transit site limited the pace and efficiency of the project.



The conditions in the Malakal PoC were particularly grim, especially after the new population influxes in 2017 and during the rainy season.



Before rehabilitation, the site offered very poor shelter conditions and was overcrowded, with related fire and safety risks for its residents.

CONTEXT

For more background information, see overview A.23 in *Shelter Projects 2015-2016*, and A.6 in this edition.

Over three years into the conflict, fighting intensified in the first half of 2017, causing further displacement across the country.

SITUATION IN MALAKAL

Malakal is amongst the largest towns in South Sudan and had a thriving market before the conflict. Since late 2013 when the conflict started, the town experienced heavy fighting that caused large-scale damage and displacement. Many people sought refuge in the Protection of Civilians (PoC) site within the peacekeeping base.

As it was never intended to become a long-term settlement, the site conditions soon became very dire, particularly during the rainy season. Four years after its establishment, and because of new population influxes in 2017, the site required rehabilitation due to uneven distribution of common facilities and infrastructure, as well as disorganized location and density of shelter areas.

The main issues in the PoC included congestion and overcrowding, encroachment of roads, lack of privacy for families sharing communal shelters, as well as the overall deterioration of shelters. Recurrent flooding affected the site, due to collapse of drainage and lack of tertiary drainage. The environment also contributed to increasing risks to safety and security, including gender-based violence.

SITE REHABILITATION PROGRAMME

Site planning and development activities in South Sudan were coordinated under the Camp Coordination and Camp Management (CCCM) Cluster. In line with the CCCM and Shelter-NFI Cluster strategies, and building on the experiences of the PoCs in Bentiu and Wau, two organizations and the CCCM Cluster led the rehabilitation process of the Malakal PoC between 2017 and 2018, with the support of the peacekeeping mission.

Organization A – which was in charge of site management in the site since 2014 – led the community mobilization and shelter construction components, while Organization B was the overall lead of site planning and site development across the site. This case study focuses on the reconfiguration process of sector 4.

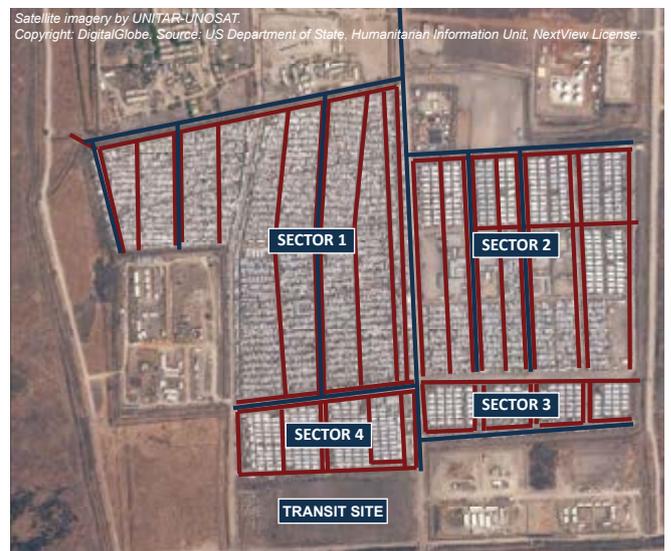
PLANNING PHASE

Standard Operating Procedures were developed to guide the process, an inclusive community consultation and sensitization plan was created, and community specialized committees established to support the communication with site residents on the reconfiguration. Mass communication campaigns were conducted to ensure the population at large was informed.

Two prototype shelters were constructed for exhibition, allowing for dialogue with community members and helping to further refine the design in a participatory manner.



A transit site was established next to sector 4 and used to gradually move people and clear areas of the old site. Due to its small size, the speed of the relocation and rehabilitation process was slow.



Map showing the drainages (in dark red) and roads (in dark blue) rehabilitated as part of the site upgrade. This case study focuses on sector 4 of the site.

SHELTER DESIGN

The objectives of the new shelter design were to increase the minimum covered living space, improve privacy and dignity for users and provide a more robust and durable solution, compared to the existing communal shelters. New shelters were taller than the old ones, to enable better ventilation and had roof overhangs to provide shading for outdoor activities.

Organization A initially designed a 9m² shelter in consultation with the Shelter Cluster, for an average household of three members. However, the shelter design was later revised to accommodate the increased number of people arriving in the PoC and the average household size. The shelters were arranged in blocks, with each individual unit measuring 3x4.5m. Household sizes ranged from three to eight persons, with an average of five. Shelters were designed for up to four people, so for larger families two shelters were allocated, with the option to remove the internal partition if desired. For polygamous families, shelter allocation was based on the number of wives and children.

The involvement of IDP committees was essential in the process of shelter allocation. For example, the organization initially planned to move some of the households to other sectors in the site, due to the large population in sector 4. In order not to separate families from the same groups, community representatives suggested to allocate one shelter for households of up to five members, even if this meant that they would have less living space.

BENEFICIARY REGISTRATION

Once Organization B completed the site plan and collected biometric data of residents in sector 4, Organization A conducted the beneficiary registration process. This was sensitive, as one of the potential risks was that residents from other sectors would claim shelters in the reconfigured sector. Households were mapped to ensure relatives and people from the same group would be resettled together, as well as to identify and prioritize vulnerable individuals and consider specific protection needs in the allocation process. Conducting the allocation in the design stage also aimed at involving beneficiaries earlier on, as they would be responsible for the construction of their shelters.

A complaints desk was established jointly by site management and protection actors, to assist people with special needs and those who had not been registered.

REHABILITATION PROCESS

Organization A established a transit site with 459 tents and storage spaces in an empty area adjacent to sector 4. In coordination with WASH partners, it upgraded the existing latrines and bathing facilities, and built four communal spaces and kitchens.

The rehabilitation was phased, starting with residents in the most congested blocks, who were first moved into the transit site. The site management team supported the verification and relocation of individuals from their shelters to the transit site and deployed additional personnel to manage it.

Site management staff carried out regular sensitization and awareness campaigns on the maintenance of available services at the transit site.

During the rehabilitation, the organization coordinated the monitoring, identification and demolition of unauthorized structures along the WASH corridors to create more space for facilities, and maintain road infrastructure to facilitate service delivery. A total of 83 shelters were dismantled.

In blocks where people had already moved, old shelters were dismantled and the site cleared, mainly through community mobilization. Organization B conducted the initial earthworks, including grading and levelling, decommissioned the old drainage and excavated the new channels and roads according to the site plan. Soil was sourced from a nearby quarry and transported on site for backfilling, grading and compacting of the ground for the blocks. Finally, tertiary drainage around shelter blocks was excavated.

Once the space was rehabilitated, levelled and shelters were built, IDPs were allocated to newly constructed shelters.

Close coordination with the protection team sought to ensure that persons with specific needs were prioritized in the shelter reallocation and that their position in the new layout was close to services and WASH facilities.



After residents of a block had moved to the transit site, old shelters were dismantled and the area cleared.



New shelters were built by local community members after ground levelling.

SHELTER CONSTRUCTION AND TRAINING

New shelters in each rehabilitated blocks were built involving site residents. Local carpenters were trained on shelter construction and maintenance, and were responsible for plot demarcation and sizing of materials to ensure speed and efficiency. Fifty-four community members were trained in demarcation, set-out, shelter construction and maintenance. These then trained their assistants on-the-job. Shelters were built through cash for work in blocks of four to six units, aiming to maximize available space for infrastructure and services.

The organization also conducted training to households within each block on shelter maintenance and site management, with a focus on avoiding construction of unauthorized structures and on fire safety.

This process ensured residents could participate in the construction and, even more importantly, in the care and maintenance phase, as well as earning an income in the process.

MATERIALS AND SUPPLY

The phased relocation approach allowed for a phased procurement of materials and easy storage, which minimized damage and loss of assets.

The shelters were made of timber and plastic sheeting for walling and roofing. Almost all materials were sourced outside Malakal, due to the unavailability in the local market and to protect the already dilapidated physical environment from further deterioration.

Initially, Organization A had considered acquiring most materials from the Shelter-NFI pipeline. However, the pipeline could only provide plastic sheeting used for the partitions, so the organization engaged certified suppliers authorized by the government to harvest poles in surrounding counties and monitor the transport to the site.

Materials were transported through the Logistics Cluster, which meant that the delivery was relatively slow, as it relied on their schedule and priorities. Most materials were stored off site, while three containers were moved to the site to pre-position items during the phased construction.

Organization A procured two timber cutting machines and constructed a workshop on site. Shelter staff trained five carpenters in the PoC on general operation of the saw machines, as well as on how to size the timbers at different angles, and trained casual workers on how to protect timber against termites. Timbers were cut in the required lengths as per the design and bundled as kits for each block.

Organization B took care of the mobilization of site clearing equipment and the procurement of culverts.

COORDINATION

The site management team, with the support of the CCCM Cluster, acted as a bridge between service providers and site residents to ensure gaps could be reported and service delivery was efficient. In this capacity, Organization A maintained essential communal infrastructure such as footbridges, communication centres, community halls and recreational areas.

It also supported the dissemination of information products from partners, to create awareness on services available to mitigate and address protection risks within the PoC. This campaign was then expanded to the host community through outreach teams and the delivery of leaflets on Protection from Sexual Exploitation and Abuse (PSEA) and referral pathways.

The organization established and circulated a quarterly community meeting calendar amongst all partners, to ensure that meetings with various groups were properly coordinated, and to promote participation. Moreover, to respond to community engagement challenges in the early phases, the organization facilitated bi-weekly meetings between agencies and camp leadership structures to share updates, coordinate aid delivery and ensure that assistance reached the most vulnerable.

MAIN CHALLENGES

ACCESS AND LOGISTICS. Shipping of materials was delayed due to insecurity around Malakal, and heavy rains affected the site development works. One machine broke down, but was fixed using the standby mechanics who were employed for regular repairs.

UNDERSTANDING OF TECHNICAL STANDARDS. Initially, community leaders struggled to understand the standards used for site layout, width of roads, drainage and distance from shelters to latrines. Using prototypes and demonstrations on the ground helped explain these concepts to the community and solve any disagreement.

COMMUNITY RESISTANCE. Several hurdles with community youth occurred during the rehabilitation process. These included disagreements over the occupancy rate and number of shelters per block, which led to the stopping of demarcation works, and over a pay rise due to currency inflation, which caused workers to go on strike. Prolonged negotiations and a re-calculation of the pay rate solved these issues. In one instance, violence against project staff required the mediation of peacekeepers and the redesign of the proposed block layout.

PROTECTION AND COMMUNITY ENGAGEMENT

As part of a separate PSEA initiative, Organization A – together with another agency – conducted awareness sessions for men and women separately, trained community committees and set up a Community-Based Complaint Mechanism across the site.

Community-led protection structures were supported with incentives and involved in decision-making on key initiatives. Beneficiaries were consulted on the reconfiguration plan through focus group discussions with youth, elderly and women's group, as well as by involving community leaders.

The organization also promoted participation of 50 per cent men and women in camp leadership structures, and ensured age, gender and area of origin were equally represented in community committees.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Priority activities in the rehabilitation included backfilling, ground levelling, reconstruction of drainage and rehabilitation of secondary roads, as well as reorganization of the space to improve access to services.

STRENGTHS

- + **Procurement delays were anticipated and alternative materials stocked as contingency** (e.g. bamboos to replace timbers). To overcome transport delays from the logistics base to the site, additional storage space and vehicles were secured to pre-position items on site.
- + **Participation and engagement of the community** at all stages of the project.
- + **Equitable and effective shelter allocation process.** This was possible thanks to the collaboration of site management, protection and registration teams from the two organizations.
- + **Good coordination and collaboration with all stakeholders,** both at inter-cluster level and between the two implementing organizations.
- + **Effective collaboration with peacekeeping forces** proved instrumental in overcoming issues with the community and providing logistical support when needed, also thanks to the joint monitoring visits conducted with the two implementing organizations.



The new shelters were taller and larger to provide better ventilation and privacy.

WEAKNESSES

- **The extent of initial resistance and demands from community members were not sufficiently anticipated,** despite the strong community engagement component.
- **Initial gaps in coordination between partners** meant that communities were often unilaterally engaged and schedules not aligned. To help coordinated resources and activities, a common plan, a calendar for community mobilization activities and regular operational meetings were set up.
- **The small size of the transit site** limited the number of households that could be relocated and impacted on the intervention capacity. The transit site could only accommodate one block of households at a time, thus relocation, site development and shelter construction were limited to the size of the vacated block.

MATERIALS LIST FOR FOR A STANDARD BLOCK				
Items	Units	Qty	Unit cost (USD)	Total cost (USD)
2x4" Hardwood timbers	pcs	58	4.9	284.20
2x2" Hardwood timbers, 4m long	pcs	40	2.79	111.60
4x5m plastic sheet	pcs	13	13.5	175.50
Bamboo	bundles	11	10	110.00
Binding wire	kg	4	1.6	6.40
Nails 4", 3" and 2"	kg	12	1.4	16.80
Rubber washer	packet	2	5	10.00
Nylon ropes (30 m/roll)	roll	4	5	20.00
Labour for construction	crew	1	65	65.00
Transportation, loading and offloading	lump sum	1	5	5.00
Grand total per block				804.50
Average cost per individual shelter				201.13

LESSONS LEARNED

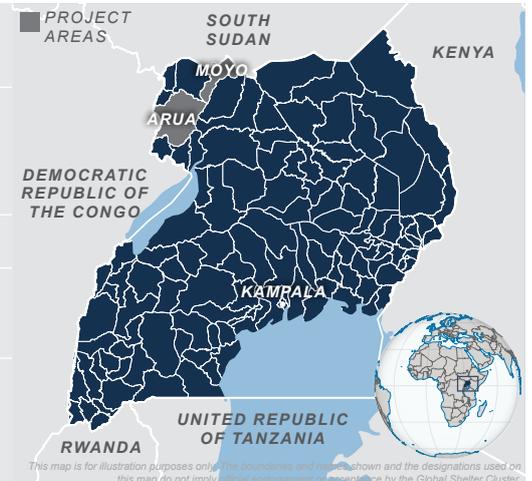
- **Managing community expectations.** Shelter prototypes should display the same size of blocks and exact types of materials as will be used for the actual construction, as any deviation will be a cause for disagreement and contention.
- **Continuous engagement of the IDP committees** was vital to the reconfiguration process. Some of the suggestions made by community representatives – including around the shelter allocation by household size – contributed to the project's success.
- **Holding meetings outside the targeted sector of the site** provided a more conducive environment to address issues, especially after the incident that involved violence against staff.

CASE STUDY

UGANDA 2017–2018 / SOUTH SUDAN CRISIS

KEYWORDS: Shelter construction, Community engagement, Local techniques / capacity, GBV risk mitigation

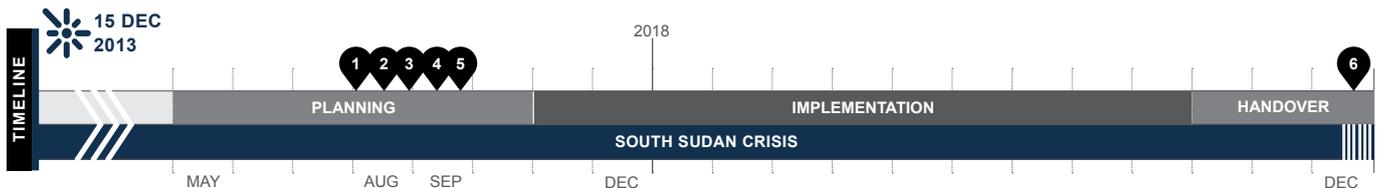
CRISIS	South Sudan Civil War (refugees in Uganda), December 2013–onwards
TOTAL NUMBER OF REFUGEES*	1.06 million South Sudanese refugees in Uganda 2.48 million total South Sudanese refugees in six neighbouring asylum countries
PROJECT LOCATION	Rhino and Palorinya settlements (Arua and Moyo districts)
REFUGEES IN PROJECT LOCATIONS	181,657 individuals as of 30 Jun 2017 (the vast majority from South Sudan)
NEEDS IN PROJECT LOCATIONS	Rhino (July 2017): Shelter needs: 27% of profiled households 14,861 people with special needs identified Palorinya (May 2016): 4,010 people with special needs
PROJECT BENEFICIARIES	1,020 households with persons with special needs
PROJECT OUTPUTS	1,020 semi-permanent shelters and latrines 870 youth participated in cash-for-work activities
SHELTER SIZE	25.4m² (Rhino) and 17.6m² (Palorinya)
SHELTER DENSITY	5.1m² per person (Rhino) and 3.5m² (Palorinya)
MATERIALS COST PER HOUSEHOLD	USD 1,676 (Rhino) and USD 913 (Palorinya)
PROJECT COST PER HOUSEHOLD	USD 1,884 (Rhino) and USD 1,146 (Palorinya)



PROJECT SUMMARY

Two organizations working in two different refugee settlements built 1,020 semi-permanent shelters and latrines for South Sudanese refugees. The project targeted households with vulnerable individuals, such as elderly people, survivors of gender-based violence, and people with disabilities. Two different shelters were constructed using traditional techniques and locally available materials. Both refugee and host community youth were actively engaged through a cash-for-work component.

* Figures as of 31 Oct 2017. South Sudan Regional Refugee Response Plan 2018.



- 1 Aug 2017: The number of South Sudanese refugees in Uganda surpasses one million after steady growth since the start of the conflict.
- 2 Aug 2017: The organization requests additional funds to include a shelter component to the emergency response.
- 3 Aug 2017: Project planning and shelter designs completed. Selection of the most vulnerable households in the settlements.
- 4 Sep 2017: Project start. Community mobilization and presentation of project objectives. The government and host communities approve and hand over land for brick production and construction work.
- 5 Sep 2017: Selection of non-skilled and skilled youth. Start of brick making and testing. Construction of a prototype and collection of the beneficiaries' feedback.
- 6 Dec 2018: 1,020 semi-permanent shelters completed.



The project provided semi-permanent shelters and latrines to refugees.

STRENGTHS

- + Effective coordination improved efficiency.
- + Use of local materials and building cultures.
- + Engagement of youth.
- + Income opportunities and market revitalization.
- + The community supported the most vulnerable in the construction.
- + Including host communities strengthened peaceful coexistence.

WEAKNESSES

- Procurement and logistical delays.
- Allocation of insufficient funds limited project targets.
- Continuous staff turnover.
- Plans should have considered access and weather constraints.
- Issues of quality and engagement in the rendering process.
- Time for planning and community engagement was not considered.



In Rhino the organization built larger, two-room shelters with CGI roofing.



In Palorinya, a partner organization constructed smaller traditional shelters.

BACKGROUND

For more background information, see overview A.23 in *Shelter Projects 2015-2016* and A.6 in this edition.

More than three years since the beginning of the South Sudan crisis, Uganda hosted over one million South Sudanese refugees. Approximately 87 per cent of them were women, children and youth, many of whom fled across the border alone and arrived weak and malnourished.

SITUATION BEFORE THE CRISIS

Prior to the conflict, most of the settlements that later hosted refugees were rural, underdeveloped, and marked by high rates of poverty. Existing infrastructure (such as schools, health centres and roads) was damaged due to seasonal weather patterns, conflict or neglect.

SITUATION IN 2017

Between January and October 2017, due to renewed hostilities in South Sudan, nearly 348,000 refugees arrived to Uganda. Most refugee settlements were located next to small villages, quite isolated and far from towns and markets.

NATIONAL SHELTER STRATEGY

The Uganda refugee policy discouraged camps and promoted the integration of refugee settlements within the host communities, granting refugees the right to livelihoods, education, freedom of movement, access to documentation and land for agricultural use.

Up to 2016, the shelter response consisted mainly of distribution of emergency shelter items supported by cash-for-work activities. Shelter sizes and designs varied between agencies and projects. Minimal support was provided to households for the construction and maintenance of these shelters. While effective in the short term, this model was not adapted to the protracted nature of the displacement. Emergency shelter solutions did not take into consideration the wide range of family sizes and required regular maintenance due to wear and tear. After six months of use, emergency shelters no longer protected occupants from the elements, requiring additional materials and repairs, which had significant cost implications.

By the end of 2016, the Shelter Working Group developed a new eight-year strategy and asked partners to stop upgrading emergency shelters. Instead, the strategy proposed to build larger semi-permanent shelters with local materials, with a lifespan of three to five years, especially targeting vulnerable households arrived between 2016 and early 2017.¹

Following the government's refugee strategy,² the organization and a partner chose to target both the host community and the refugees in their shelter interventions. They also collaborated with the district local government authorities to incorporate the needs of refugees in their District Development Plan and the ongoing implementation of local services.

TARGETING

The initial beneficiary list was prepared by community mobilization teams through assessments specifically designed to identify people with special needs. Multi-stakeholder committees composed of representatives from the government and the sector lead agency provided additional inputs and validated the lists.

In addition to prioritizing new arrivals, vulnerability criteria were used, such as youth at risk, single women, elderly and persons with serious health conditions, disabilities or physical protection needs.

PROJECT IMPLEMENTATION

TEAM AND APPROACH. Between the two partners, 40 staff were involved in implementing shelter activities in two different locations. Staff members from one of the organizations' office in Tanzania went on an exchange mission to Uganda to share the experience and lessons learned from a similar project. Instead of using contractors, the two partners trained and employed youth from the host and refugee communities to construct semi-permanent shelters and latrines for vulnerable households using a cash-for-work modality.

Land for shelter and agricultural use was allocated by the government and two different shelter prototypes were approved and built in each district. Before early 2018 there was no sector-level agreed design.

Throughout the project, the two organizations conducted extensive community mobilization activities, including hazard mapping and village planning.

ENGAGEMENT OF YOUTH. A sensitization campaign was carried out in the project locations to identify young people interested in construction work and brick production. Several meetings were carried out with refugee and host community members to discuss the goals and benefits of the project. Refugee welfare committees (established settlement leadership structures) played a key role in the mobilization of youth and registration of beneficiaries.

¹ UNHCR, 2018–2025 Uganda Shelter Strategy.

² The Refugee and Host Population Empowerment (ReHOPE) Strategy.

Local youth were divided into teams, based on an assessment of their basic skills. The teams specialized in different tasks, such as brick production and carpentry. Youth groups were composed of at least 10 people, including minimum two women, a mason and a carpenter and evenly represented both refugee and host community members. The organization ensured there was a mix of skills in the groups, to promote informal learning. Each group was placed under the leadership of a skilled foreman. Young people with no prior basic construction or carpentry skills were mentored by masons and carpenters through on-the-job trainings. The teams were paid through cash for work according to the number of shelters constructed.

The advantage of using cash-for-work groups led by foremen selected by the organization was that local people benefited from employment opportunities more than through the traditional contractor-led approach. Contractors typically bring in people from their own villages, whereas the foremen had to first select people from the area where shelters were being constructed. Other workers could be brought in only if there were not enough skilled labourers in the target village.

RENDERING PHASE. Refugees contributed labour to finish their shelters by rendering the raw bricks with mud. In some cases, when people were physically unable to smear the walls, they received help from family members. Where family ties were lacking, in a few locations others provided support due to their common background or previous ties. When the extra support could not be granted, project staff assisted households in the rendering.

COORDINATION

The two partner organizations already had a well-established relationship with the district local authorities, line ministries and police in the targeted areas. During implementation, all work plans and updates were shared with district authorities and operational partners. Monthly coordination meetings with all the stakeholders -- co-chaired by the government and sector lead agency -- improved project performance and identified gaps in the implementation of activities between the local government and the implementing partners.

MAIN CHALLENGES

ACCESS CONSTRAINTS. Poor road networks in the settlements hindered the delivery of materials, equipment and tools, as some plots of land were inaccessible to heavy trucks, resulting in the need to use alternative equipment. For the future, the organization considered coupling shelter interventions with minimal road improvement projects.

ADMIN AND MANAGEMENT ISSUES. It was more challenging to manage multiple different contracts with foremen and construction groups for each stage, as opposed to hiring a single large contractor. This also made monitoring of construction quality more complex, so the payments were disbursed only based on shelters built. Additionally, in some cases the agreements with foremen had to be terminated, because they either did not hire local community members or charged a percentage of the workers' earnings.

GBV RISK REDUCTION

The project targeted people who, due to their vulnerability, were at higher risk of exposure to gender-based violence (GBV), which was one of the most prevailing protection issues in the refugee settlements. Linked to gender inequalities rooted in the culture, forms of GBV included child marriage, domestic violence, and emotional and psychological abuse. Long distances to service points, idleness among the youth and community at large, poor vigilance among the community and insufficient lighting in the settlements all contributed to GBV risks.

Before the start of this project, the organization established GBV taskforces throughout the settlement to facilitate the reporting of GBV cases and had dedicated case workers to build trust and help overcome the stigma associated with sexual assault. Community watch groups were also formed in seven villages and gender trainings provided to the welfare committees. Lastly, the organization in collaboration with the sector lead agency started the roll-out of a community mobilization approach, which aimed to stimulate reflection on social norms and challenge power imbalances within refugee communities.

To encourage participation in the project, activities were scheduled at appropriate times, women were actively sought out and minimum quotas of women were respected in the construction groups.



Shelters were built with locally available materials through the engagement of local youth groups who were divided in different teams based on their skills.



Mud bricks were mainly sourced from the local community, and partly through MoUs with landowners. Timber frames were prepared in workshops within the settlement.

DESIGNS AND TECHNICAL SOLUTIONS

Shelter and latrines were built using local typologies and materials, and following national and international standards. One organization built rectangular shelters with corrugated iron roofing, two rooms and lockable doors. The other adopted a traditional typology, which included the use of three layers of grass for the roofing, and 12 support poles to bear the axial load of the roof. The two-room design was preferred, as it allowed greater privacy and flexibility in living arrangements. However, beneficiaries often did not like having two doors in the same room, as this supposedly made it harder to control theft and reduced the wall space to use for storage.

The shelter and latrine designs were adjusted depending on the nature of the soil and the water table. Foundations were either made of burnt bricks or reinforced concrete, and walls were made of unburnt bricks.

In the project areas, latrines were usually raised with untreated poles cast on mud and wattle (highly prone to termite attack). Instead, to reinforce the foundations and plinth, the footing was cast in concrete and walls used cement-sand mortar for the first layers. Latrines used concrete slabs cast in situ and reinforced with iron bars, and ventilation pipes.

MATERIALS AND SUPPLY

Through the cash-for-work scheme, local youth produced unburnt bricks, which were more environmentally friendly than burnt bricks. Timber and other manufactured materials were sourced through suppliers.

As most of the good-quality soils were used for cultivation, service contracts were signed with landowners who, in exchange for a small financial compensation, provided land for a specific period. Contracts specified that landowners were responsible for backfilling any holes before being paid.

However, since the bricks produced were not enough, the organization decided to purchase bricks directly from the local community at a 30 per cent higher rate than in its moulding sites (where contracts had been signed). Brick moulders set up small sites either on their own land or through private agreements with landowners. Most bricks in Rhino were provided in this way rather than through service contracts. However, the latter provided greater control over labour conditions and environmental impact, as well as eased the administrative burden (as less contracts were involved).

During the rainy season, plastic sheets were used to protect walls and bricks. During the dry season, water trucking was introduced to supplement the water fetched by women locally, in order to ensure the work could progress as scheduled.

Hardware materials, such as nails, iron sheets, iron bars and cement, were sourced in bulk from national manufacturers to reduce costs. Bids were advertised on local platforms, in public areas, newspapers and local radios, and were then received and analysed by a procurement committee. The project also supported the economic empowerment of women, who were culturally responsible of cutting the grass and sold it to suppliers of their choice.

On the other hand, the fact that suppliers bought grass and bamboo poles from the community contributed to deforestation. It also had the potential to fuel tensions between hosts and refugees due to the increased pressure on natural resources near settlements and the impact on the availability of grazing area for livestock. To prevent conflicts around land and resource utilization, the refugee welfare committees and the government organized meetings and community dialogues on the subject.

WIDER IMPACTS

As materials were local, transport costs were reduced and cash was injected into the local economy. This provided some economic compensation to the host community.

The participation of refugees helped foster a sense of ownership, and the involvement of youth through cash for work created or strengthened their skills, laying the foundations for future livelihood opportunities. Trained youth could then be employed for maintenance or repair works and future projects, and some stated that they would apply the skills when returning to their home country. Owing to the income they earned, youth opened businesses and were able to achieve better household dietary diversity.

Furthermore, brick moulding significantly increased in the settlement since the start of the project, attracting buyers from afar. This contributed to reducing deforestation, as host communities started using more bricks rather than timber.

MATERIALS AND LABOUR FOR A SHELTER IN RHINO			
Items	Units	Qty	Total cost (USD)
Mud bricks production	Pcs	4,000	88.39
Water supply	Litres	15,000	207.17
Transportation of bricks	trips	4	138.11
Damp Proof Course	Lm	37	20.44
Pre painted roof sheet 30G	Pcs	19	236.17
Ridge cap	Pcs	5	20.44
Water gutters	Pcs	5	20.44
Roofing nails	Kg	7	14.50
Assorted wire nails	Kg	12	23.20
Rubber washers	Pcs	150	20.72
Hanging clips for gutters	Pcs	10	9.67
Timber trusses, rafters and purlins	Pcs	25	82.87
Fascia board	Pcs	8	50.83
Doors – timber & iron sheet	Pcs	2	44.20
Windows – timber & iron sheet	Pcs	3	49.72
Welded mesh	Pcs	1	14.36
Pad bolts	Pcs	3	6.63
Hinges	Pcs	10	12.43
Tower bolts	Pcs	5	6.91
Labour (lump sum)	LS	1	222.09

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



The project involved host community households via cash for work, which helped foster integration and allowed refugees to access more land for livelihoods.



The project engaged local youth throughout the construction process. In some cases, the rendering phase presented some challenges for the beneficiaries.

STRENGTHS

+ **Effective coordination between all actors** which improved efficiency, saved resources and time. Notably, this led to greater inclusion of the most vulnerable people, thanks to referral mechanisms and the use of common tools and vulnerability criteria.

+ **Local materials** were chosen to ensure their availability and make repair and maintenance more affordable. Environmental impact and costs were also contained, thanks to the reduced need for processing and transport. **The shelters were designed respecting the local building cultures** and incorporating communities' feedback, which contributed to promoting their cultural heritage.

+ **The project built on existing community strengths and resources** via the involvement of youth from both refugee and host populations.

+ **The project provided income opportunities** to local youth, injected cash in the local markets and contributed to the revitalization of brick making in the target areas.

+ **Community members provided labour** to build shelters for those households who did not have the capacity to do so themselves.

+ **The inclusion of host community members as beneficiaries** of the cash-for-work component strengthened peaceful coexistence with the refugees and more access to land, which in turn also increased livelihood opportunities.

WEAKNESSES

- **The procurement and logistical procedures took longer than expected**, leading to the extension of the project. This was due to a combination of factors, such as having to deal with multiple foremen rather than with a single large contractor.

- **The funds budgeted for shelters and latrines were insufficient.** As a result, the project was only able to support a limited number of people compared to the needs.

- **Staff turnover** led to a constant and costly cycle of recruitment and ongoing training of staff.

- **Access and weather constraints were not well anticipated** (e.g. the onset of the rainy season), leading to challenges related to staff mobility, brick production and the timely completion of construction works. Better plans should have been made before the wet season and should have been flexible enough to adapt to different circumstances.

- **Some beneficiaries struggled with the rendering process** given that the houses were often much taller than the traditional typology. The render itself at times was badly mixed, as the earth varied in quality, mainly leaving the mud bricks exposed to weathering. A small number of people did not see the benefit of rendering and expressed that agencies should be responsible, which showed the ongoing need for community engagement.

- **The initial work plan was not realistic.** It did not adequately factor-in the six months needed for preparatory work and community engagement.

LESSONS LEARNED

- **Joint monitoring** with shelter working group partners can help to address issues of quality and value for money, and can support with identifying solutions to various challenges.
- Although only based on anecdotal evidence, **involving the refugee welfare committees** in project activities – especially in the establishment of the youth groups – **enabled the voices of the wider community to be integrated in the project.** Their involvement was also a way to further legitimize and recognize their role and work in the communities.
- **The community mobilization approach can be greatly strengthened.** It is essential to have continuous inputs from protection and community mobilization teams, both in order to support appropriately the workers' groups and ensure that the training element is well implemented, but also to ensure that the most vulnerable fully benefit from the interventions.

CASE STUDY

DOMINICA 2017–2018 / HURRICANE MARIA

KEYWORDS: Roof repairs, Core housing, Training, Migrant labour

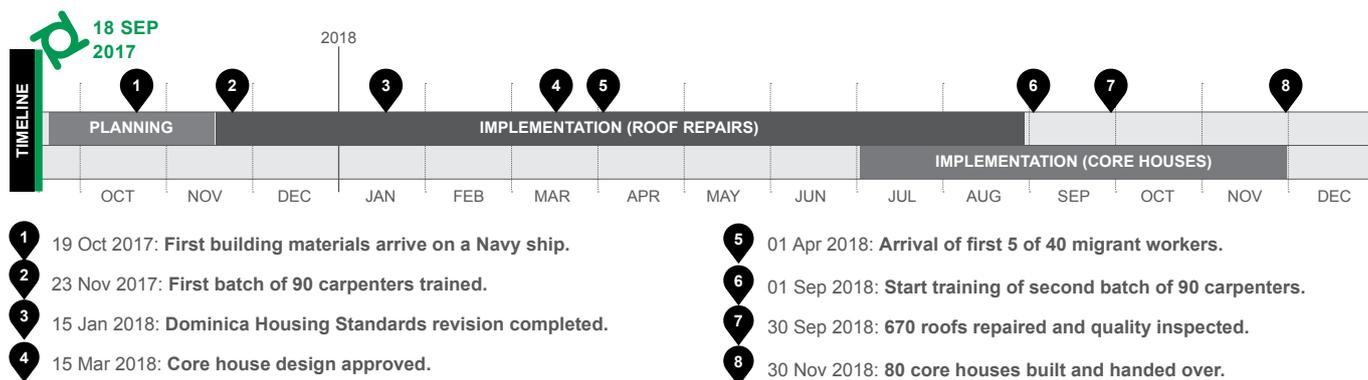
CRISIS	Hurricane Maria, 18 September 2017
TOTAL PEOPLE AFFECTED*	57,000 (approx. 80% of the total population)
TOTAL HOUSES DAMAGED**	23,488 houses , either moderately (7,255), highly (10,272) or completely (5,961)
SHELTER NEEDS***	13,039 households (38,117 individuals)
PROJECT LOCATIONS	12 locations in north-east and north-west of Dominica
PROJECT BENEFICIARIES	750 households (2,250 individuals)
PROJECT OUTPUTS	670 roofs repaired 80 core houses built 180 individuals trained in basic carpentry 40 migrant workers trained and employed
SHELTER SIZE	Roofs: 35m² on average // Core houses: 18.5m²
SHELTER DENSITY	Roofs: 11.6m² per person on average Core houses: 6.2m² per person
MATERIALS COST	Roofs: USD 3,700 (2,550 for materials; 1,150 for labour) Core houses: USD 6,182
PROJECT COST	USD 4,666 per household

* Dominica Flash Appeal, Sep to Dec 2017. This figure is for the recovery needs.
 ** Building Damage Assessment.
 *** Shelter Sector estimate, assuming 50% of the affected households could support themselves.



PROJECT SUMMARY

The project repaired 670 roofs and constructed 80 core houses in compliance with Dominica housing standards, for households affected by the large-scale damage caused by Hurricane Maria. The island has a shortage of skilled construction workers and labourers compared to the magnitude of destruction and recurring hurricane seasons. Thus, the programme used circular migration of 40 skilled workers from the region and extensive training of local labourers.



STRENGTHS

- + Project flexibility allowed for continuous adaptation to challenges, changing needs and regulations.
- + Organizational capacity and timeliness in deploying a programme team.
- + The selection of beneficiaries was quick and effective.
- + The response was well coordinated with other actors.
- + Well-identified and managed partnerships and inter-agency collaboration.

WEAKNESSES

- Slow and insufficient admin, finance, monitoring and human resources systems.
- The project did not include retrofitting nor WASH and livelihoods.
- Field staff needed more debriefing and psychosocial support.
- Personal protection equipment should have been enforced more strictly during construction.
- Lack of capacity to develop tailored project- and information-management systems.
- The project did not include necessary structural reinforcements.

CONTEXT

Dominica is an English-speaking nation with 71,000 inhabitants in the Caribbean. The economy is driven by tourism, agriculture and a “citizenship by investment” programme. Many Dominicans migrated to the US, UK and Canada over decades to seek better economic opportunities.

The island is located on seven active volcanoes, on a fault line and in the heart of the Atlantic Hurricane zone, and has been affected by numerous storms throughout its history. Before 2017, the most recent was Tropical Storm Erika in 2015, which caused serious infrastructural damage and loss of life.

SITUATION AFTER HURRICANE MARIA

On 18 September 2017, Category 5 Hurricane Maria devastated the entire island, severely affecting houses, telecommunications, power grid, water and sanitation systems, infrastructure, agriculture and livelihoods. Over 80 per cent of the population was affected, over 90 per cent of buildings and 98 per cent of roofs were damaged. The hurricane also heavily affected all schools, government buildings and collective centres. Food, water, electricity, tarpaulins and building repair materials were the most urgent needs until markets and basic services could be restored.

NATIONAL SHELTER STRATEGY

Despite the scale of the damage, the government focused much of the reconstruction efforts on permanent houses and durable repairs, even when this meant extending the time people had to be displaced or living in damaged houses. The national housing standards were upgraded – mainly increasing the thickness of roof purlins and rafters – and released four months after the disaster.

The Shelter Working Group, consisting of 10 active organizations, worked closely with the government in developing the response strategy. This consisted of three phases:

- **Emergency** (1–2 months), mainly focusing on distribution of plastic sheets, tents and non-food items (NFIs);
- **Early recovery** (2–12 months), targeting 50 per cent of affected households depending on the level of damage. Assistance options included transitional shelter, financial support, collective centre support or roof repairs and – for severely damaged houses – structural repairs. The other 50 per cent of those affected was targeted with technical advice and communication materials;

- **Recovery** (12+ months), consisting of permanent housing solutions for those with a completely destroyed house.

One year after the hurricane, 500 households had received transitional shelters and 2,000 roof repairs (approx. 20% of the targets for early recovery, excluding those who self-recovered), while in the relief phase over 30,000 plastic sheets were distributed. At the time of writing, funding for a large proportion of the targets for permanent housing had been received, but activities had not yet started.

PROJECT COMPONENTS

Based on assessments and donor preference, the organization prioritized the repair of damaged roofs and – for the most vulnerable households with a completely destroyed home – the construction of one-room core houses. These activities were part of a wider programme which also included emergency distributions of NFIs and collective centre upgrades.

ROOF REPAIRS. Roof repairs were provided to 670 households. **An underestimation of the structural damage** in initial assessments, combined with the emphasis on the building code and a shortage of building materials in the region, led to a high increase in the cost of repairs, forcing a reduction in the number of beneficiaries. **For 25 per cent of the targets, “interim solutions” were provided** following a widely adopted approach by the Sector, which highlighted different options for assistance depending on the structural conditions (code compliant or non-compliant) and the safety of the location. For non-compliant (but repairable) houses, the organization implemented the repairs instructing households to further strengthen their structure according to the building code.

CORE HOUSES. Given the small average family size in Dominica, the organization initially proposed to build 225 12m² timber transitional shelters. However, these did not meet the Dominica building code, which prescribed a minimum floor space of 18.5m² including a kitchen, bathroom and connection to sewage or septic tank. **The design had to be adapted into a larger core house** with an already approved studio layout and optimized materials. The donors agreed to a reduction to 80 beneficiaries.

Because the material markets were seriously damaged and labour was in short supply, to meet project deadlines **the organization implemented the construction activities directly**, employing building teams and hiring non-certified contractors, taking on additional liabilities. At a later stage, more effort was placed on the training of local carpenters.



The project repaired 670 roofs in compliance with an improved building code after the hurricane.



For vulnerable households with a completely destroyed house, core houses were built according to a locally approved studio design. Due to its cost, targets had to be adjusted.

GEOGRAPHIC TARGETING

In the relief phase the organization – together with five other partners – earmarked 69 communities (42%) for housing repair assistance. The division of responsibilities was done during the emergency NFI distributions, based on which the organization identified 12 target communities on the west and east coasts of the island. All partners then continued working in the same communities for the shelter interventions, to maintain the links already established.

OFFICE SET-UP AND PROJECT TEAM

The organization did not have an office in Dominica and there were no local partners with experience in emergency relief and construction. To set up the main office in the capital and three support centres in the affected region, everything had to be done from scratch, including registration, opening a bank account, and hiring more than 100 workers within six months.

During office set-up, shortages of cash for operational expenses meant that several of the trained carpenters were lost to other organizations. Before a bank account was opened, a money transfer service was used for operational costs. The risk of exposure was very high, with staff members carrying large sums of cash, and storing and accounting for large reserves in the office. Months of cash transactions also created expectations from suppliers and staff. As a result, there was some resistance when payments by cheque were introduced.

The project team consisted of 25 staff including a team leader, an admin/logistics department (10 people), a construction department (10 people) and a community engagement department (4 people).

BENEFICIARY SELECTION

Vulnerability criteria were developed by the Ministry of Social Services and included poverty level, specific vulnerabilities such as disability, illness or pregnancy, family size and single-headed households. The level of damage and the household’s recovery capacity (including loss of livelihoods) were also factors in the selection.

Beneficiary selection committees were established in all targeted communities. These were composed of village council representatives, social workers, nurses and other community representatives – such as teachers and religious leaders – to ensure greater accountability.

The village councils provided the base lists and the committees had the role of identifying vulnerable households who were not on the list, as well as prioritizing households based on the agreed criteria. As most base lists were incomplete, the organization conducted community meetings, set up a hotline and used the local council offices as registration points. However, especially in larger communities, the selection process took months and was not free from challenges. For instance, the committees were not always aware of all cases and there was room for manipulating the lists based on personalities.

For the core houses, the team had become more experienced and developed a system to weigh vulnerabilities. Qualitative information was still provided by the committees and verified by the organization.

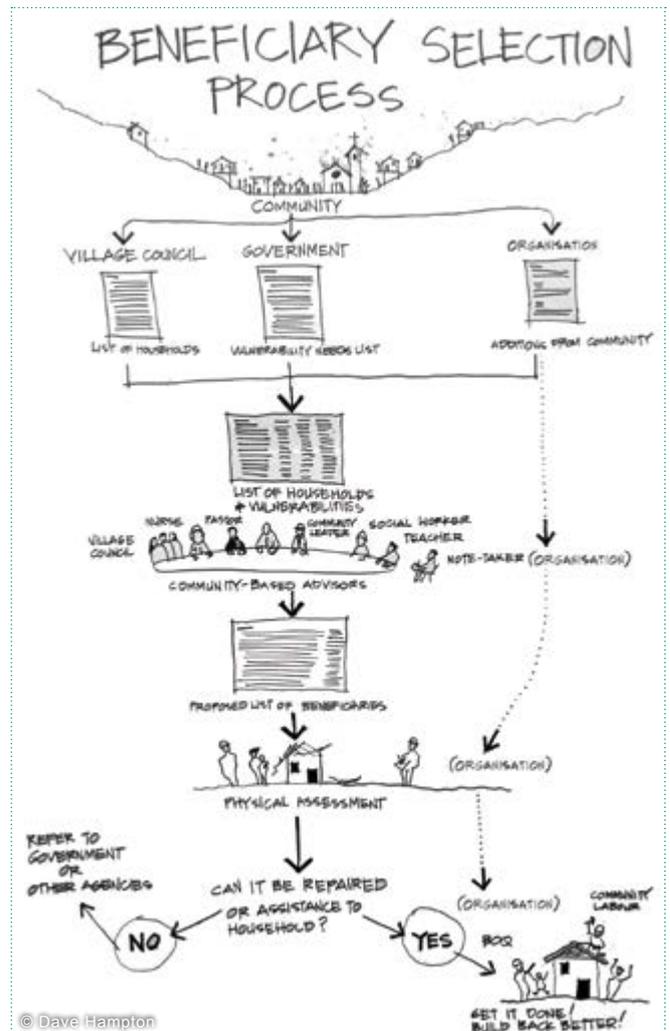
Damage assessments were conducted for all the households on the proposed list before taking a final decision on whether to conduct the interventions or refer the case to the government or other agencies.

REGISTRATION CHALLENGES

Dominica does not have a complete citizen registry, no complete address system nor cadastre. In addition, many people left the island after the hurricane. Therefore, community household lists often had to be built from scratch. The Building Damage Assessment conducted after the hurricane was not linked to individual households and the geographic coordinates were not widely shared. Eight months after the disaster, the organization – together with the government – developed a consolidated database of potential beneficiaries, including their conditions and the status of recovery interventions by Sector partners, to avoid duplication and gaps in assistance. The database was also intended to notify the government on the completion of activities by international partners and alert the need for further intervention or inspection.

LABOUR AND TRAINING

Initially, the organization had planned to train 200 skilled workers and 1,500 unskilled individuals to work in community construction teams. However, at the start of the project it became clear that **very few construction workers were available in the island**, compared to the scale of the damage. This was either due to labour migration before the hurricane, or because Hurricane Irma had affected other neighbouring islands with higher salary levels two weeks prior to Maria, attracting many workers from Dominica. Additionally, contractors had lost much of their equipment in the disaster. All this contributed to competition and price inflation, forcing the organization to double salaries compared to before the hurricane, to remain competitive (from USD 89 to 185 per team per day).



In the second month of the project, **the organization trained 90 local carpenters** in two-day sessions on Build Back Safer techniques aligned with the national building code. Due to the shortage of labour, **many of the trainees started to work for themselves or with other agencies**, and the organization still faced shortage of labourers.

The organization, together with an international partner, **recruited 40 skilled labourers from other countries in the region**, who arrived six months after the Hurricane. This was possible thanks to the free flow of labour between members of the Organization of East Caribbean States. Migrant workers received an induction in their place of origin and the organization covered transportation, accommodation, food and an allowance. After nine months, the organization started a second batch of trainings in collaboration with the same partner. 90 local workers were taught basic carpentry skills (one week class workshop and one week practical) and the 25 per cent most talented were added to building teams replacing the migrant workers that had to go home.

COORDINATION AND PARTNERSHIPS

Activities were coordinated with national and local governments, disaster management committees and humanitarian partners, to harmonize intervention modalities, agree selection criteria and maximize the available resources. The organization led the Shelter Working Group, hosted regular meetings and emphasized the role of training and awareness-raising on code-compliant construction techniques.

Inter-agency collaboration proved essential for the success of the project on several aspects. This included the deployment of shelter and information management capacity, the reception of in-kind donations, the recruitment and training of migrant labour, as well as the mobilization of volunteers.



Community meetings were held on weekends and after working hours to present the project goals and process to the targeted communities.



A model was used to explain safe roof repair interventions.

COMMUNITY ENGAGEMENT

The organization conducted **introductory outdoor community meetings** after working hours and on weekends to present project objectives and explain the activities and beneficiary selection process. These meetings were promoted on popular **radio stations and via mobile public announcement systems** (loudspeakers) driven through the communities. The latter proved helpful since the hurricane had left the island with very limited power and radio transmission. Posters were also installed in all villages. The meetings began with **help desks** where staff wearing name tags provided one-on-one sessions to answer any questions and register potential beneficiaries. This helped introduce the project staff to the communities and make them more approachable. Copies of frequently asked questions were then distributed. The hotline number was shared and emphasized at meetings as a tool for two-way communication with the organization.

Printed copies of the Dominica Building Guidelines were distributed to the communities, along with demonstrations through a roof model.

Radio and social media became increasingly effective as communications and other utility services returned to normal, after several months from the hurricane.

MATERIALS AND SUPPLY

Materials and tools were sourced outside the island, making orders through local suppliers and using any available material in the interim. Suppliers were often forced to use non-traditional sources from as far as Australia, due to the extremely high demand caused by the hurricanes' devastation in the region.

Direct sourcing proved challenging as the technical terms and specifications were sometimes lost in translation, and suppliers often failed to meet quality standards and deliver the agreed quantities at the suitable times. As a result, suppliers were asked to send samples before orders were placed, which further increased the lead time.

NEXT STEPS

After the project ended, the organization continued to support the affected population with owner-driven housing support programmes and the development of technical and administrative capacities of local contractors.

MATERIALS LIST FOR AVERAGE ROOF REPAIR			
Items	Qty	Unit cost (USD)	Total cost (USD)
10' galvanized ridge capping	3	25	75
10' x 33", #24 regular CGI	20	35	700
Expansion bolt 8"	6	3	18
Metal straps, ties, angle bracket	80	1.2	96
Nails 2.5" + 3" + 4" + 5" (lbs)	30	1.6	48
Galvanized roofing screws 3"	800	0.15	120
Purlin Screws 4"	300	0.4	120
Treated timber 2"x 4"x 10'	33	12	396
Treated timber 2"x 6"x 20'	22	20	440
Treated timber 2"x 8"x 16"	2	25	50
Treated timber 4"x 4"x 16"	4	35	140
Plywood 0.5" T1-11 siding	6	40	240
Labour days (average)	16.5	70	1,155

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Forty migrant labourers were employed to work on the project thanks to a partnership with another organization that supported their recruitment and training.



Even though roofs were repaired to code, structural improvements were not considered, nor were water, sanitation and livelihood components.

STRENGTHS

- + **The project flexibility and a motivated, agile team** enabled the organization to continuously adapt to the needs, revise the plans based on challenges and changing regulations, and meet the (extended) timelines.
- + **Organizational capacity and timeliness.** The organization invested a considerable amount of internal funds into the deployment of an experienced team from the headquarters and other countries. After three weeks, a core programme management team was in place for the whole project duration.
- + **The selection of beneficiaries was quick and effective.** Kick-off events in the communities were followed by a thorough selection process by the village councils with support of the organization. A feedback mechanism with dedicated full-time officers was in place.
- + **The response was well coordinated with other actors,** including the government, in terms of geographical division of the country, universal beneficiary selection criteria and alignment of the construction standards and messages.
- + **Well-identified and managed partnerships** and inter-agency collaboration were essential for the success of the project. Among other things, coordinated efforts allowed to bring in and train foreign workers.

LESSONS LEARNED

- **The labour and material markets should be better assessed** before the development of project plans. For instance, materials and labour costs doubled, leading to significant reductions in the number of people that could be reached. Additional procurement and logistics capacity was also needed.
- **The organization should be better prepared for the administrative side of the establishment of a new country operation** in a disaster-affected location. For instance, pre-positioning and installation of IT and office equipment, registration, bank accounts, internet, and cash transfer systems.
- In the preparedness phase, **governments should be supported with the review and development of building codes,** including standardized specifications of materials.
- **Larger-scale focus on training might have reduced the scope for workers to leave the project.** This was recognized at a later stage, but was constrained by the limited capacity of the organization in the first months after the disaster.

WEAKNESSES

- **Administrative, finance, monitoring and human resources systems could not keep up** with the scale-up of the organization. This led to inconsistent or improvised administration and reporting, and delayed contracts. The organization was unable to mobilize sufficient support from other offices to fill this in, mainly due to funding restrictions.
- **The project only conducted roof repairs** and, to some extent, core houses. Retrofitting was not allowed by most donors and projects lacked WASH and livelihoods components.
- **Field staff, who were all new, needed more regular debriefing and psychosocial support.** They were often overwhelmed by the suffering of their community members, many of whom had multiple vulnerabilities.
- **The use of personal protection equipment** on construction sites should have been enforced more strictly.
- The office lacked access to internet and did not have a database for the first six months. **The organization also lacked the capacity to develop tailored project- and information-management systems** for its interventions and the Sector. Investment should be made in capacity for such “of-line” systems and training for information-management skills of national staff.
- **The project scope and budget did not include structural reinforcements** needed by many of the damaged houses to support a code-compliant roof.

CASE STUDY

ECUADOR 2016–2018 / EARTHQUAKE

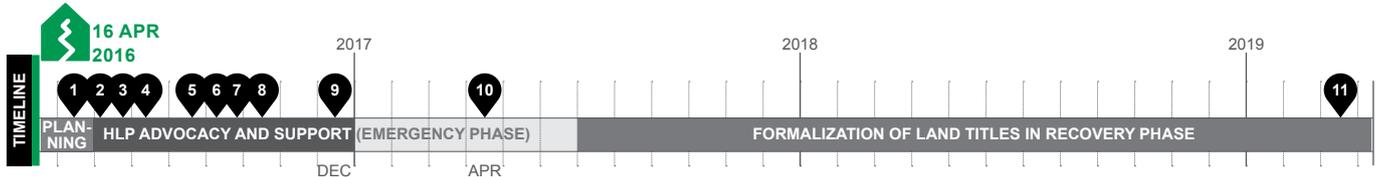
KEYWORDS: Advocacy, Security of tenure, HLP Rights, Coordination, Local authorities engagement

CRISIS	Ecuador Earthquake, 16 April 2016
TOTAL PEOPLE AFFECTED	386,985 individuals (on government register)
TOTAL HOUSES DAMAGED	45,455 houses damaged or of restricted use
PROJECT LOCATIONS	Across the affected provinces of Manabí and Esmeraldas, plus concentrated activities in Pedernales and Jama municipalities
PROJECT BENEFICIARIES	Over 30,000 households were able to access reconstruction grants Over 5,000 households who received assistance from humanitarian partners were not disqualified from government subsidies
PROJECT OUTPUTS	Advocacy with the government and legal assistance to the Shelter Cluster, enabling affected people to receive shelter and housing support Around 420 families received land titles from the local authorities, as of March 2019



PROJECT SUMMARY

Housing Land and Property (HLP) rights were a primary area of concern during the humanitarian response to the earthquake in Ecuador in 2016. In recognition of this, the Protection and Shelter Clusters collaborated to set up an HLP Working Group in the early stages of the response. This group was able to identify potential barriers to assistance and managed to actively influence public policy in order to ensure that the humanitarian response and reconstruction process did not exclude the most vulnerable populations.



- 1 May 2016: The government releases its reconstruction plan. The HLP Working Group is set up jointly between the Shelter and Protection Clusters.
- 2 Jun 2016: First advocacy statement released.
- 3 Jun 2016: Adoption of Ministerial Agreement allowing those without legal titles to access reconstruction subsidies.
- 4 5 Jul 2016: HLP concept note published.
- 5 18 Jul 2016: Proposal of activities for regularization of land in rural zone released.
- 6 4 Aug 2016: Comments shared on the government housing recovery regulation for earthquake-affected communities.
- 7 Aug 2016: General guidelines and protocols for relocation processes distributed.
- 8 9 Sep 2016: Paper on the vulnerability criteria for the prioritization of assistance released.
- 9 Dec 2016: Regional training workshop conducted with representatives of humanitarian organizations, central and local government, and civil society.
- 10 Apr 2017: First legal land title delivered.
- 11 Mar 2019: Around 420 land titles delivered.

STRENGTHS

- + Wide impacts of the project which influenced government regulations.
- + Good collaboration between international and local actors.
- + Effective partnership between the Shelter and Protection Clusters.
- + Advocacy as a powerful tool in humanitarian response.
- + Dedicated HLP support for the shelter response.

WEAKNESSES

- Lack of buy-in and visibility of the project.
- The project could not address all land issues nor support all cases.
- Limited sustainability of the actions in the long term.
- Timeliness of the group's activation and involvement of local stakeholders.



Advocacy through the Shelter Cluster helped families receiving temporary shelter support not to be disqualified from government assistance.

LAND TENURE CONTEXT

For more information on the shelter response to the 2016 earthquake, see overview A.39 in Shelter Projects 2015–2016.

Problems associated with land tenure in Ecuador had existed for many years. A high proportion of the population in both rural and urban areas did not have access to formally recognized land titles. In urban areas, poor land-use planning had resulted in an increase of inadequate and informal settlements. In rural areas, the Law on Rural Lands and Ancestral Territories of March 2016 – which aimed to guarantee more land rights to rural communities – was still pending adoption, meaning these communities had limited legal protections.

SITUATION AFTER THE 2016 EARTHQUAKE

In the impact zone of the 2016 earthquake, several types of tenure were observed, including communal ownership rights. Based on information collected by agencies responding in the area, it was estimated that only between 20–30 per cent of people had formal land titles. In addition to this, even in places where land records were in place, these were lost or destroyed due to the earthquake itself.

GOVERNMENT RECONSTRUCTION PLAN

The government's reconstruction plan was released by the Ministry of Housing and Urban Development in early May, to provide housing repair and reconstruction support through financial assistance in the affected provinces. This incentive programme, when first offered by the government, only extended to legally recognized owners of land, who could provide proof of property ownership through a title registered at the property public office.

This approach would have excluded many vulnerable people, including entire villages. Many communities in rural areas affected by the earthquake found themselves in a bureaucratic limbo, waiting for the passing of the Law on Rural Lands and Ancestral Territories.

Even if people were not wishing to access the government assistance packages, rebuilding without legal security would have put them at risk in the future. Shelter actors that were intending to support the most vulnerable affected groups were also informed that any emergency or transitional assistance could exclude beneficiaries from future government subsidies.

There was a very real need to establish minimum legal evidentiary standards and mechanisms to provide security of tenure to affected communities, as well as minimum technical standards that allowed building in the affected area with sufficient legal certainty.



Many families in the affected areas did not have proof of land ownership. Rebuilding without legal certainty would have put them at risk.

THE HLP WORKING GROUP

The Shelter and Protection Clusters, recognizing the potential challenges in ensuring assistance to affected people, collaborated to establish the Housing, Land and Property (HLP) Working Group at the national level in late May 2016. The group was led by a national organization that had been working in collaboration with national authorities to strengthen disaster-related legislation since 2012. Although this work had mostly been focused on the facilitation of international disaster assistance, the establishment of the group allowed the organization to build on its previous experience.

The working group was initially made up of interested organizations from the two Clusters, including four international actors and other local organizations. Many of these actors had backgrounds in, or at least understanding of international disaster relief and humanitarian law. The group also made contacts with local organizations focused on human rights and environmental law, as well as with those working in property law from academic institutions.

At the local level, the lead organization hired a lawyer to support the local government, and HLP was placed on the agenda of subnational Cluster meetings.

EARLY RESEARCH AND ADVOCACY WORK

The early work of the group was to understand the HLP issues on the ground in the affected areas, along with the potential impacts and unintended consequences of response activities from government or humanitarian actors. This was done by a combination of desk research and interviews in the field with authorities and affected people, including a survey and collection of documents supporting land possession.

The group also undertook research into existing national legal frameworks, to have solid and informed advocacy to the government. It also relied on extensive research of past international experiences in response, such as Chile, Philippines and Haiti, which could help to inform the group's activities, guidance and advocacy positions for the Shelter sector.

The inclusion of local actors and links to local networks were extremely important to help triangulate information, give guidance on important points of law, and also to offer assistance in researching and reviewing the reports and recommendations that were sent to the authorities.

During the initial research by the group, Shelter and Protection actors were still supporting the government to deliver emergency assistance. Relief distributions of emergency shelter kits and tools – plus technical assistance – were being implemented, as these were seen as very temporary solutions.

Two months after the earthquake, the group developed a concept note to analyse possible legal strategies to support the affected populations and complement the Shelter Cluster strategy. This note, endorsed by the Deputy Minister of Housing, detailed HLP considerations in national legislation and in international experience, with the intention of influencing the post-earthquake reconstruction strategies at the national level. For instance, these included recommendations to the national government to implement regularization processes as part of the reconstruction; recommendations to local government to adopt general regularizations for neighbourhoods by municipal decrees; and suggesting conflict resolution mechanisms, such as mediation, in case of land disputes.

GUIDANCE AND TRAINING

The group worked with Cluster partners to continue developing guidance and advocating on issues such as relocation processes and vulnerability prioritization, to support the humanitarian response. Between July and September 2016, guidance notes on relocation, HLP principles and potential HLP issues were compiled and shared.¹

The group worked closely with national and municipal governments in the affected areas, identifying priority areas and affected groups, building awareness of HLP rights of affected persons and highlighting potential vulnerabilities.

The group also trained staff from NGOs, local and national authorities on HLP issues. This, in turn, supported communities themselves in understanding their HLP rights and responsibilities. As of October 2016, a total of 250 legal officials and 40 humanitarian actors had received training.

PROJECT OUTCOMES

The ongoing advocacy and collaborative approach with the authorities resulted in the government developing a regulation (adopted in June 2016) to recognize different forms of tenure as appropriate or relevant to the context. As an example, people who had occupied land for many years and did not possess legally recognized titles, but could nonetheless prove their link to the land, were granted tenure through “right of use”. This new regulation granted a grace period of three months after receiving the permanent housing grant from the government, to provide all required documents. The government was also responsible for supporting families to obtain such documents.

The HLP Working Group also supported the Shelter Cluster in clarifying permissions from the government to allow Cluster partners to provide temporary shelter (without negatively impacting the future prospects of the recipients), as well as to be accepted as providers of permanent housing in rural areas. This enabled the construction of 3,559 temporary shelters and the repair of 1,774 houses.

DIRECT SUPPORT TO AFFECTED COMMUNITIES

The HLP Working Group provided direct support to communities to help them understand their rights and fulfil the administrative procedures required to establish security of tenure.

In the emergency phase, this was mainly through workshops and engagement at municipal level. As a direct result, many affected people became eligible to receive humanitarian assistance.

In the recovery phase, funding was also offered to affected people to help them pay the fees required for the legalization of land title processes, such as notary expenses and payments for the municipal governments.

Supporting the legalization process and jointly advocating to local governments resulted in the lead organization delivering the first legal title to an affected family almost one year after the earthquake. By March 2019, 420 families had benefited from the land legalization process, as part of the recovery programme of the organization. However, other actors did not conduct regularization projects.

¹ These are available on the group’s page, at <https://bit.ly/2Few3rU>.



In the recovery phase, the lead organization of the HLP group provided support to families to access land titles.

MATCHING SHELTER AND HLP SUPPORT

All these activities supported the Cluster strategy and partners’ interventions, and helped as well to protect the rights of affected people in the wider reconstruction process from an early stage.

The HLP support to the Shelter Cluster varied on what was required by the shelter actors at the time and was a multi-step process, informed by how the response was progressing.

SHELTER PHASE	TYPE OF HLP SUPPORT
Emergency shelter	Awareness raising and clarification of national laws
Transitional shelter solutions / access to government grants	Training and stronger advocacy at various levels, e.g. to influence change in regulations
Permanent housing solutions	Funding and technical assistance to secure land titles

LA PROPIEDAD Y LA POSESIÓN
MANUALES INFORMATIVOS: VIVIENDA, TIERRA Y PROPIEDAD

¿Quién es el poseedor?
Se llama poseedor a la persona que tiene el bien o cosa en su poder, es decir, que tiene el bien bajo su control.

¿Cómo se adquiere o transmite la posesión?
La posesión se adquiere por la entrega/recepción del bien. Esta entrega se puede realizar en base a dos situaciones:

1. Puede adquirirse por acuerdo o contrato: a través de un contrato de alquiler o arrendamiento, una persona puede convertirse en poseedora de una cosa.
2. Puede adquirirse sin que haya acuerdo o contrato: La posesión se transfiere al tomar u ocupar un bien o cosa. Por ejemplo: La ocupación de un terreno, apoderándose de éste.

Booklets were produced on key HLP concepts to inform communities of their HLP rights and responsibilities.

MAIN CHALLENGES

Influencing government systems and processes took time, but it was important to have sustainable systemic effects around HLP issues and identify opportunities. This link was made easier through the engagement of the Shelter Cluster co-lead (Vice Minister of Housing). Other links were also possible through local networks, including academia.

The complexity of existing land titles meant that any on-going land occupation was difficult to understand and prove. For example, in one case, a complete neighbourhood was occupied by indigenous descendants, but they did not have land titles through many generations. To address this, the local government adopted a municipal ordinance which allowed the regularization of the complete neighbourhood, which included more than 400 families.

Communication and collaboration between humanitarian actors and lawyers was also challenging, as all had their own mandates and ways of working. To mitigate these challenges, the group worked with lawyers with a human rights background and lawyers from the local and national governments. The group’s coordinator participated in the meetings of the Shelter and Protection Clusters and vice versa. These meetings were very useful for identifying shared priorities and common solutions.

WIDER IMPACTS OF THE GROUP

The advocacy of the HLP Working Group resulted in many improvements to the shelter response in Ecuador and to people’s tenure security generally. The new government regulation not only improved the prospects for affected communities in this response, but also for future crises.

The experience of the group was shared at several international fora, at global meetings of the Protection and Shelter Clusters, as well as at a regional workshop in Ecuador. This not only enabled the group to share lessons, but also contributed to building capacity of humanitarian practitioners in this field. It also put greater focus on HLP preparedness, as well as the inclusion of more advocacy components in shelter programmes and beyond.

The workshop also served to institutionalize the lessons learned and tools developed in Ecuador for future use in other countries in Latin America.

This project inspired an initiative to develop HLP country profiles to help identify both potential vulnerabilities and in-country linkages before a crisis happens. This type of resource can be used to inform sector preparedness workshops, contingency planning with government, ongoing academic curricula and also build relationships in country.

EXIT AND NEXT STEPS

The group did not have any formal handover process, mainly because activities continued as part of the lead organization’s programming. The other agencies left the group one after the other in 2017. This caused issues of sustainability of the project due to limited funding and uptake from national government, municipalities and other actors.

At the time of writing, the lead organization – in partnership with a local university – was planning a new project to influence public policy around land issues after disasters. As exit activities, the organization also planned to implement HLP workshops for community leaders.



As a direct outcome of this project, 420 land titles were distributed to earthquake-affected households. Support was provided in the form of funding and technical assistance in the process of land tenure regularization.



The project highlighted the need to advocate to national governments to include regulations and protections for people affected by disasters, and allow humanitarian actors to assist those without legal land titles.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



The project combined research and advocacy in the early phases, with direct support to communities to access secure land tenure in the recovery phase.

Initially, receiving transitional shelters could have disqualified households from government reconstruction subsidies. This was avoided through advocacy.

STRENGTHS

+ **The group's work had a wide effect** as it influenced government regulations impacting many earthquake-affected people, as well as any future responses to disasters in the country.

+ **Good collaboration** between international humanitarian organizations, local actors and national and local government meant that these actors shared an understanding of HLP issues and agreed on relatively quick policy changes to assist affected populations.

+ **Effective partnership** between the Shelter and Protection Clusters to achieve overall goals of assisting those most in need.

+ **Awareness of the importance of advocacy in humanitarian response.** Even when shelter actors were unable to implement activities, they could advocate for the rights of the affected populations through the HLP Working Group.

+ **It was extremely beneficial to have a dedicated group** working from the beginning on HLP issues alongside the Shelter Cluster to support coordination and advocacy activities, as well as helping shelter actors in the response and recovery phases.

WEAKNESSES

- **Lack of wider buy-in and visibility of the project.** Although it was a joint Cluster initiative, many NGOs were not part of the HLP Working Group, which relied on a core team of committed individuals who already understood and recognized the importance of the issues. The group could have worked harder on broader outreach and stronger advocacy messaging about the importance of tenure-related issues and subsequent vulnerabilities, through both the Shelter and Protection Clusters. However, due to the sensitive nature of HLP issues, outreach and advocacy should always be done carefully, especially with national governments.

- Even though tenure security was strengthened for many people, **there were still a number of land conflicts that were both difficult to understand and to support**, which the group was not able to assist.

- **The project could not be sustained in the long term** to continue supporting the granting of permanent titles. Most agencies responses lasted one year maximum (with many leaving earlier), while land related processes can take a long time. There was no plan to continue assisting the more difficult cases going forward. **The early closure of the Clusters** also impacted the ability to assist many affected families to achieve long-term outcomes.

- **The activation of the group could have been timelier**, and the involvement of academia and local legal practitioners should have been sought from the outset.

LESSONS LEARNED

- **Shelter response, advocacy and coordination activities after a disaster should include a focus on tenure security**, to avoid inadvertently doing harm or potentially excluding large vulnerable groups from post-disaster assistance. The 2018 edition of Sphere was updated to provide clear guidance on how to address this issue.
- **Local academia, legal offices and central and local authorities should be involved as early as possible**, not only humanitarian organizations and NGOs. This requires a multi-level approach that ensures national buy-in from the ministries involved in determining assistance packages and policies, local government understanding for those implementing the policies and assessing affected populations, and local practitioner awareness to guide on contextual issues. Involving these multiple levels of national actors early **would have sped up the work of the group**, providing useful support to response partners before plans had progressed too much. It would have ensured some groups were not excluded from initial assistance packages based on tenure status and **would have helped the response to be fully grounded in the local realities**.
- **Preparedness is essential.** A greater understanding of the context and the HLP issues affecting local communities helps moving quickly and anticipating challenges during a response to a disaster. Local organizations should be active before crises in supporting communities and local authorities in understanding HLP rights and potential issues. Going forward, the project showed **the importance of building strong relationships, frameworks and tools** in the preparedness phase.
- **HLP data collection.** The group should have provided inputs to initial joint needs assessments to capture data related to HLP issues and get a more comprehensive baseline to work from. If this type of information cannot be gathered through needs assessments, other sources could be explored, including engaging law school students in data collection.

OVERVIEW BANGLADESH 2017–2018 / ROHINGYA CRISIS

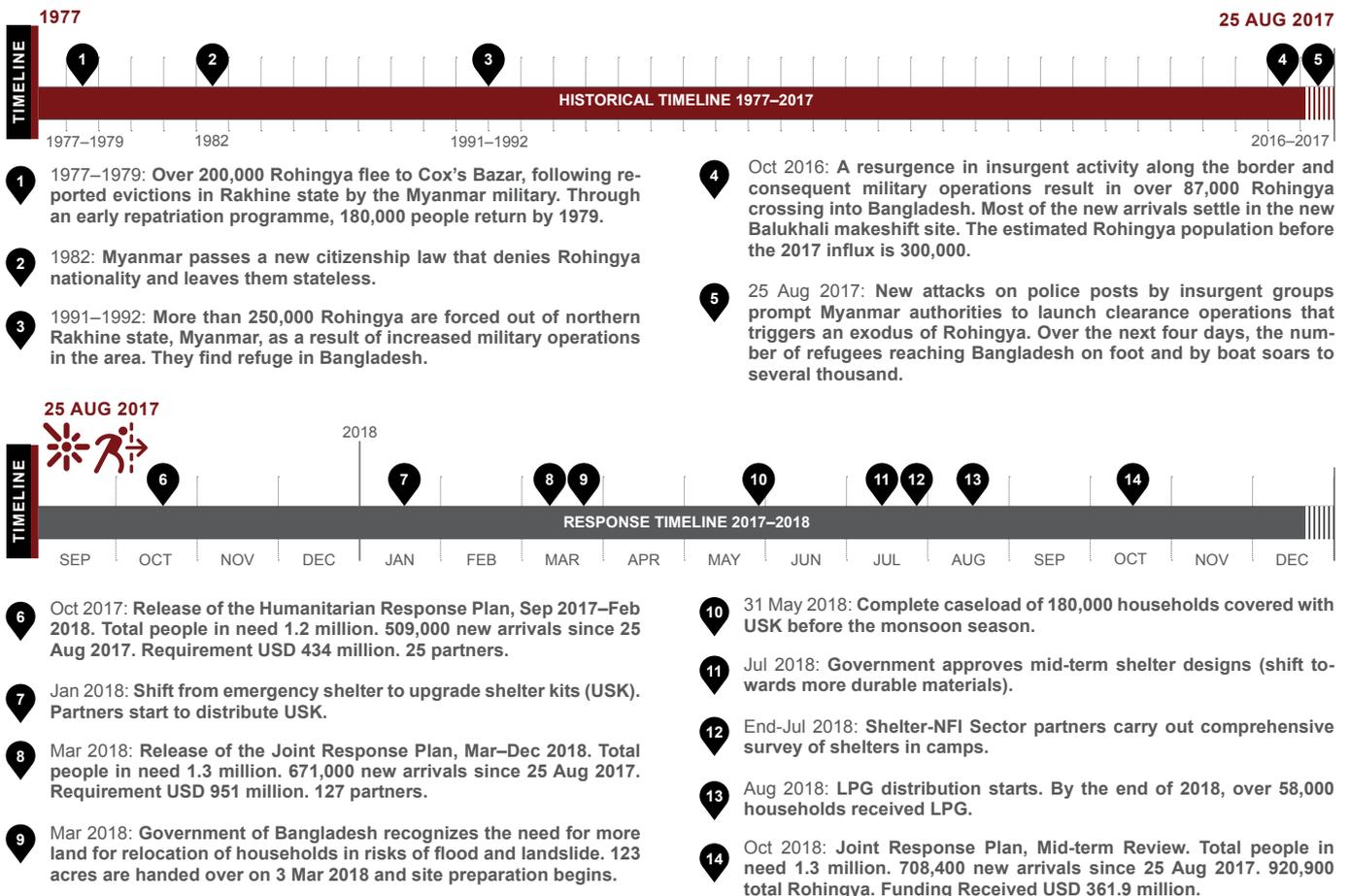
CRISIS	Rohingya Refugee Crisis, Cox's Bazar, 25 August 2017–onwards
TOTAL PEOPLE AFFECTED*	260,000 households (1.3 million individuals)
TOTAL PEOPLE DISPLACED*	184,200 households (920,900 total Rohingya Refugees in Cox's Bazar)
TOTAL SHELTER NEEDS*	189,600 households (948,000 individuals)
RESPONSE LOCATIONS	Ukhiya and Teknaf sub-districts, Cox's Bazar district
PEOPLE SUPPORTED*	180,000 households (900,000 individuals).
RESPONSE ACHIEVEMENTS*	<p>180,000 households received Emergency Shelter Kits</p> <p>180,000 households received Upgrade Shelter Kits</p> <p>144,000 households received Tie Down Kits</p> <p>11,000 households received LPG stoves and cylinders</p> <p>145,000 solar lights // 48,000 solar torches distributed</p>



* As of 31 Aug 2018. Joint Response Plan, Mid-term Review, Mar–Dec 2018. Figures include host communities.

SUMMARY OF THE RESPONSE

The humanitarian response to the massive refugee influx from Myanmar to Bangladesh was the largest single operation of 2017. For the Shelter Sector it was particularly challenging, due to the site conditions, congestion, limited shelter options and the extreme weather patterns. The Sector provided in-kind and technical assistance through different phases and an incremental approach to improve living conditions and safety within the settlements. In coordination with the Site Management Sector, the response also focused on site improvements and larger infrastructure works, as well as preparedness activities ahead of the monsoon season.



CONTEXT

The Rohingya, who numbered around one million in Myanmar at the start of 2017, are one of the many ethnic minorities in the country. Rohingya represent the largest percentage of Muslims in Myanmar, with the majority living in Rakhine state.

Migration between what is now Myanmar and Bangladesh started in the XIX century, although the first significant refugee influx took place in 1978, when an estimated 200,000 Rohingyas took shelter in Cox’s Bazar district and, over the next two years, gradually returned home. This mass displacement set the pattern for the next 40 years, as instability in Myanmar pushed tens of thousands to seek safety in the peninsula.¹

Some of the Rohingya who arrived in 1991 and 1992 remained in two registered camps. The government registration of Rohingya population stopped in 1992 and, since then, newly arrived Rohingya – referred to as “undocumented Myanmar nationals” – have been living in makeshift settlements or with host communities. Until 2017, the registered camps were home to only around 32,000 registered refugees, while another estimated 268,000 resided outside of these camps.²

BACKGROUND TO THE CRISIS

Prior to 2017, international and local partners supported the Rohingya refugees in the two official camps as well as in the makeshift camps requiring support. Agencies had limited capacity and funding to improve the shelter and infrastructure and raise the profile of the Rohingya displacement. Constructed from bamboo and in some cases mud and timber, the typical refugee shelter needed constant maintenance and a timely replacement schedule. Space issues meant that recognized standards were never met, and conditions dropped further in the makeshift camps.

On 25 August 2017, insurgents attacked army and police posts in Rakhine, resulting in widespread violence and mass displacement of civilians. In the following hours and days, Rohingya began to flee across the border to Cox’s Bazar. By 20 September, more than 420,000 people were estimated to have crossed into Bangladesh. This mass influx compounded the existing challenges around the provision of assistance to the Rohingya who were already in Bangladesh.

Despite Governmental agreements between Myanmar and Bangladesh, there were no formal return processes in 2017 or 2018. The international community did not support the return, as the safe and dignified conditions for this process had not yet been met.



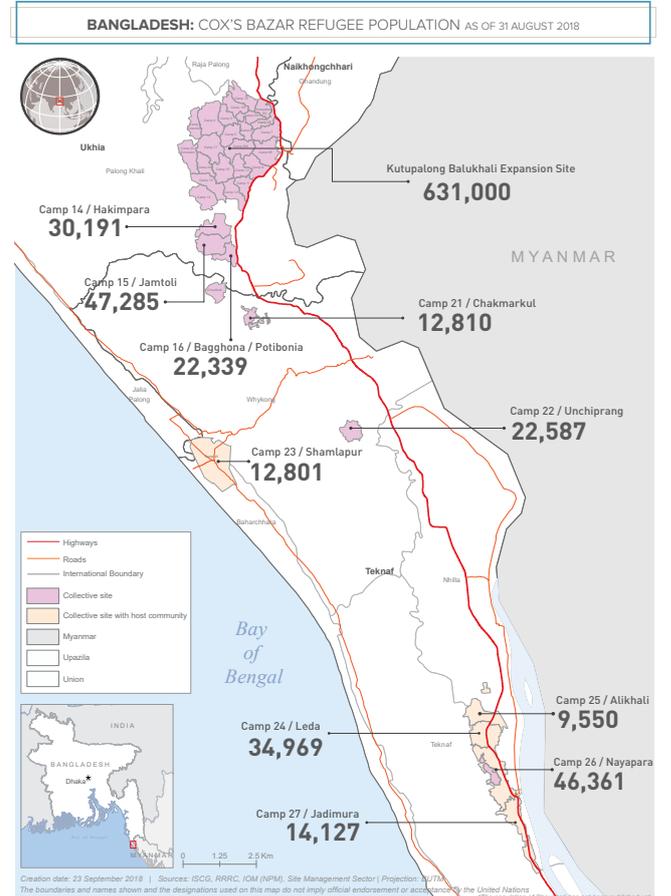
Rohingya had been living for years in the same area, but the scale of the 2017 influx was unprecedented. The site was mainly inhospitable, with steep, sandy hills and low-lying, flood-prone areas unsuitable for habitation.



Thousands of refugees arrived daily at the Bangladeshi border after attacks to their villages in August 2017.



Access through the settlements was extremely challenging, mainly due to the harsh landscape and the scale of the influx.



Refugees mainly settled in and around existing settlements. Map: ISCG.

SITUATION AFTER THE 2017 INFLUX

Those fleeing put an immense strain on infrastructure, services and the host population. Pre-existing settlements and camps (particularly Kutupalong and Balukhali) expanded with the new influx, while new spontaneous settlements also formed and continued to grow in the following weeks. Significant numbers of new arrivals were being absorbed into the local host community.³

The speed and scale of the influx resulted in a critical humanitarian emergency. August in Cox’s Bazar is very wet and humid and so adequate shelter and essential NFIs were a priority. The refugees arrived with very few possessions. In many cases, they used most of their savings on transportation and constructing a shelter, often out of sticks from small trees and bushes foraged from the surrounding hills, locally harvested bamboo and thin, unsuitable plastic sheeting.⁴ These were also supplemented by distributions from uncoordinated humanitarian actors. Initially settling in vacant plots, these hastily erected shelters were inadequate and offered little protection from the rain.

As more refugees arrived, overcrowding forced new arrivals to seek space in land that had not yet been gazetted by the Government of Bangladesh. Prior to the influx, the area around Kutupalong and Balukhali was characterized by undulating hills covered in sparse vegetation. Between these unstable sand hills are low lying basins which drain the whole area. The little vegetation was stripped for shelter materials and fuel and unplanned terracing for shelters cut, increasing risks of landslide and flooding. Due to the complex water catchment area and the lack of data on how the new terrain would react, these events were largely unpredictable.⁵



Bridges were erected by refugees and later upgraded to allow better accessibility across the site. Footpaths, stairs and roads all had to be created from scratch.



The site was completely transformed in just a few months. Less than a year before this picture was taken, this area was a natural reserve.

THE HARSH REALITY

Rarely has a combination of factors come together to create such an inhospitable living space for a displaced population. The lack of resources, no access, massive influx, a harsh landscape prone to weather-induced disasters, combined with a very vulnerable population, created probably the most challenging scenario Shelter and Settlement actors have dealt with.

The location, terrain and space available for the population was fundamentally unsuitable for habitation. Shelter interventions could not meet minimum standards and despite best efforts, were not able to properly withstand the weather conditions. During the first 17 months of the operation, despite no standards or guidelines being met, the response provided many lessons to be learnt.



Access in and around the site was extremely challenging. When it rained, steps became impassable and perilous. Improved access became a priority in early 2018, in preparation for the monsoon rains.



Drones allowed to better grasp the scale of the settlements and helped in the planning process. The unsettled green areas to the right were soon occupied.

© Muse Mohammed / IDI

© P. Hübner / UNHCR/SDC

© P. Hübner / UNHCR/SDC

© P. Hübner / UNHCR/SDC

© Philipp Hübner / UNHCR/SDC



Refugees often used upgrade materials to build over old makeshift shelters.

SHELTER-NFI SECTOR STRATEGY

The immediate response from Shelter-NFI partners was to distribute bamboo, plastic sheets, rope and blankets. Stocks held as part of the regular programming were quickly exhausted and substituted by poor-quality, locally procured materials. Tarpaulins were replaced by thin and fragile black plastic.

With the arrival of more actors and materials, including airlifts, the Sector formulated its strategy.

PHASE 1 – EMERGENCY. Emergency shelter for survival and dignity. In the first months, the assistance was standardized through Emergency Shelter Kits (ESKs) – bamboo, shelter-grade plastic sheeting and rope. However, due to pipeline issues, many arrivals did not receive the bamboo. As the demand outstripped the supply, those who had already settled rarely received an ESK. After this phase, the standard of most of the shelters remained very basic.

PHASE 2 – UPGRADE. Shelter upgrades and localized site improvements in preparation for the upcoming monsoon and cyclone seasons. Upgrade Shelter Kits (USKs) contained bamboo poles, rope, shelter-grade plastic sheeting, tools and technical assistance.⁶ Quantity of materials were ascertained through piloting. These sizeable kits were a logistical challenge to get into the camp due to poor access. Another challenge was the availability of bamboo, especially during the start of the monsoon season,⁷ when bamboo cutting stops.

Full implementation of Phase 2 did not start until November, when partners scaled-up, pipelines filled and access improved. With limited resources and time, coupled with the limited land available for most households to expand, it was recognized that an incremental approach would be needed.



Makeshift shelters before the implementation of the upgrade phase of the shelter response were small, often fragile and highly vulnerable to weather hazards.



In phase 3, the Shelter Sector started to implement more durable solutions, such as Mid-Term Shelters.

It was imperative that the USKs were accompanied with technical assistance, training and information materials to ensure positive impact. The Sector Technical Working Group developed key messages in English, Bangla and Burmese and disseminated them through booklets and posters to be used in trainings.⁸

Although the USK was designed to carry out simple shelter upgrades, the quantity of bamboo was sufficient to construct a more traditional shelter and so communities would often collaborate and build over the top of the long row house structures. Communities mainly worked together to ensure upgrade was universal.

The USK target of 180,000 households set in JRP was achieved by the end of May 2018.

PHASE 3 – POST-MONSOON SEASON. This phase represented an incremental move towards the provision of more durable and dignified shelter solutions. Shelter designs and delivery modalities were developed based on analysis of the impact of the monsoon and resistance against the elements, durability of bamboo and the August 2018 shelter survey (including beneficiaries' preferences). The main modalities were Transitional Shelter Assistance and Mid-Term Shelters.



Shelter upgrades and localized site improvements (such as footpaths, stairs and drainage channels) were conducted in phase 2 to make living environments more adequate and protect households from the upcoming monsoon season.

SITE DEVELOPMENT STRATEGY

The site and population density did not allow to apply traditional site planning approaches, and so control of the physical environment and site improvement and development became an immediate priority. In the coordination architecture, these activities fell under the Site Management as well as the Shelter-NFI Sectors.⁹

The site development and improvement strategy focused on small-scale site improvements, site macro-planning, and infrastructure and engineering works, aiming to improve access and living conditions in refugee sites and adjacent host communities, and reduce vulnerability to natural hazards.

To support partners and refugees to conduct site improvements around their plots or groups of shelters, the Sector developed a neighbourhood toolkit and a catalogue of interventions, in collaboration with the Site Management Sector.¹⁰

DISASTER RISK MANAGEMENT

Disaster Risk Management and emergency preparedness activities were mainstreamed throughout the activities of site management support agencies, site improvement and site development partners. DRR techniques were also considered in shelter construction and heavily relied on the experiences of the local humanitarian and emergency network, particularly around post-disaster and cyclone resilient sheltering.

ENERGY AND ENVIRONMENT

The Sector, through the Energy and Environment Working Group, was successful in advocating for the use and roll-out of LPG. Over 11,000 households received LPG stoves and cylinders by the end of 2018. In 2019, partners were upscaling the LPG distributions to reach the entire target population by the end of the year. This fuel source limits the smoke in the shelters, conflicts with the host community related to the collection of firewood, as well as provides environmental benefits (reforestation).

Additionally, in 2018 partners started planting vetiver grass on the bare slopes of the settlements, to protect the hilly terrain from soil erosion, thanks to the plant's deep roots and the stiff, dense foliage that help reduce water run-off. Planting was conducted through cash for work involving refugees and host community members alike. By July 2018, over 500,000m² of land were covered.

NEEDS OF HOST POPULATION

In the first few months of the response, while the immediate needs of the Rohingya were being addressed, little attention was paid to the host community. There was little, if any, understanding or research about the impact of the massive influx on the already vulnerable host population. However, in the 2019 JRP all sectors articulated their strategy to assist the host population.



Site improvements were mainly conducted through cash for work and included slope protection by terracing (above-left) and vetiver plantation (above-right).



Millions of pieces of bamboo were needed for the shelter response, as well as the construction of community facilities, bridges and other site improvements. Bamboo was mainly transported by river from the Chittagong Hill Tracts area.

BAMBOO

Two-months after the initial influx, it became apparent that the only viable construction material was bamboo. Bamboo was economically viable, available and was familiar to the Rohingya. It was used as a shelter material, for communal buildings and infrastructure and access projects (bridges, steps, pathways).

In recognition of this, the Shelter-NFI Sector commissioned a study to understand the capacity of markets to supply bamboo for the response. The study confirmed that without a reliable and high-quality bamboo supply, the construction needs of the biggest refugee camp in the world could not be met.

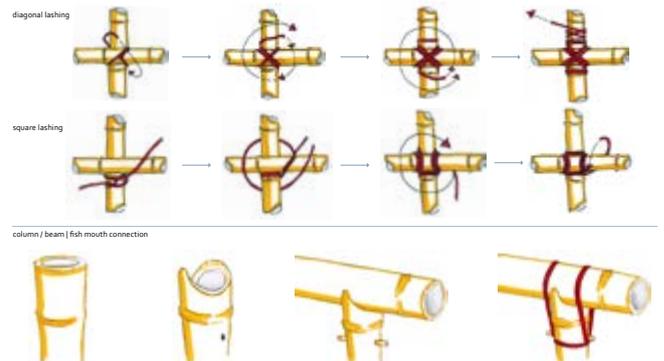
Through the shelter kits, about 23 million pieces of bamboo were distributed, without considering the massive amounts used for communal buildings and infrastructure.

After the emergency phase, the focus was on strengthening and increasing the durability of existing shelters, which were built with untreated bamboo in direct contact with the ground, creating the perfect conditions for pests and rot, which will result in failure in heavy winds and rains.

By the end of 2018, significant steps were taken to address these issues. A technical note and report were developed on the durability and treatment of bamboo in Cox's Bazar, technical specifications for bamboo treatment were agreed, and Sector partners achieved a better understanding of the whole bamboo supply chain and key recommendations for sourcing, procurement, handling, treatment and design.¹¹

ties | connections

have strong ties and connections in your shelter



To support training activities, the Sector developed key messages and illustrations on shelter upgrades, such as bamboo ties and connections.

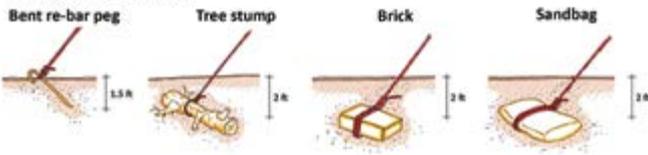
TIE DOWN KITS

In early 2018, attention turned to the impending monsoon and cyclone season and how the shelters constructed by the Rohingya themselves could be improved. Along with the USKs, it was agreed in April 2018 to supply Tie Down Kits (TDKs) to all households in an attempt to enhance the shelter's capacity to withstand high winds.

TDKs were viewed as a stop-gap measure to provide additional resources and technical information to help households prepare for strong wind and cyclone events.

Using a community-led design philosophy, the Sector endorsed two versions of kits, both based on the premise of using rope to literally tie down the shelter and anchor it to the ground. One option used steel pegs driven into the ground to counteract the lift forces, while the other relied on the weight of filled sandbags. Both options worked successfully, however post-distribution monitoring suggested that in several cases metal pegs were placed perpendicular to the ground rather than at the angle, decreasing their relevance. The sand bags were not buried as suggested and their lifespan was shorter than the one of the metal pegs. As of 31 August 2018, nearly 80 per cent of the households in need had received TDKs.

TIE-DOWN OPTIONS



The Site Management Engineering Project was instrumental in conducting large earthworks to modify the challenging landscape.



In the third phase of the response, Mid-Term Shelters were built on plots already prepared by site development partners.

MAIN CHALLENGES IN THE RESPONSE

There are few responses in recent history that faced so many challenges resulting from a unique combination of factors. The speed of the influx was unprecedented and with little warning, catching all existing agencies off-guard, especially as existing resources had been stretched over the monsoon season. Existing shelters already needed repair and rehabilitation due to Cyclone Mora in May 2017.

Access to the sites was challenging, with movement restricted to foot for most parts. As the rains continued into September, earthworks and road construction could not start. Although challenges with procurement, supply and quality of bamboo were identified early, the limited local shelter options amplified the need for a fast shelter response.

Perhaps the biggest challenge – apart from the lack of available land – was the site itself; unsuitable for any large-scale settlement without massive investment in earthworks and drainage, which once the refugees had settled became more and more difficult. The camps and sites remain congested, causing serious impact on the physical and psychological well-being of the refugees, especially of children, women, and people with disabilities.

All shelters and site improvements had to be robust enough to cope with potential significant monsoon rains and cyclones. This was further exacerbated by government restriction on durable solutions and construction materials.

SITE MANAGEMENT ENGINEERING PROJECT

In late 2017, construction of temporary vehicle access roads began across the fast-expanding makeshift settlement around Kutupalong and Balukhali. Early in 2018, some actors began engaging in small-scale site improvements; stairs, bamboo bridges and pedestrian pathways. A gap emerged in maintenance of the heavy infrastructure. The roads, primary drainage systems and slopes became an increasing concern, which led to three agencies joining to create an engineering project named SMEP.

In addition to the direct maintenance, repair and upgrade of infrastructure, SMEP was asked to prepare land for shelters identified at high-risk of landslide and flooding. With a limited window of opportunity, SMEP mobilized 100 heavy machines and more than 5,000 labourers to prepare about 390 acres of safe land for critical relocations.

Crucially, SMEP activities included the creation of fourteen operating bases across the Cox's Bazar district. Materials, labour, equipment and machines were pre-positioned to undertake inspection, repair and maintenance of critical infrastructure. The SMEP repair fleet grew to about 650 daily workers and 30 machines. Wherever possible teams carried out preventative work, however activities were largely responsive through the 2018 monsoon. Teams worked day and night to prevent collapse of slopes lining the main road being constructed by the army.

Activities of SMEP significantly reduced the potentially devastating impact of the monsoon. The outcome of this investment was unhindered access on the camp roads through the monsoon. Success was based on coordination and collaboration between partners; something that is too often lacking in many operations.

LOOKING FORWARD

As the rains faded and access improved towards the end of 2018, there was the opportunity to build on the lessons learnt over the last 15 months and implement Phase 3 of the shelter strategy. The better weather should allow a consolidation of the site improvement and development works to ensure the sites become more resilient to cope with the next monsoon and cyclone seasons. With site planning being scaled up, there was an opportunity to build more durable shelters, which follow minimum Sphere standards.

Data suggested that the weather in 2018 was mild, however history foretells us that at any time a catastrophic weather pattern could wreak havoc on the site and lead to significant loss of life. To ensure the robustness of shelter, the majority of bamboo used would need to be replaced within the following 20 months and new bamboo would have to be placed out of the ground.¹² As a base for more durable shelter, bamboo should also be treated. At the scale it was needed, this presented a major challenge.

One of the responsibilities of shelter partners was also to ensure the healthy and safe living space. Improving living conditions (increase in shelter size, privacy and ventilation) would need to go hand in hand with increased community-led and owner-driven approaches, as well as possibility of choice linked with marked-based shelter solutions.

While shelters may not withstand the cyclonic winds, the Shelter-NFI and Education Sectors were cooperating in developing learning centres that can also function as cyclone shelters.

TAPPING INTO ROHINGYA RESILIENCE

Reflections of a shelter officer in December 2017

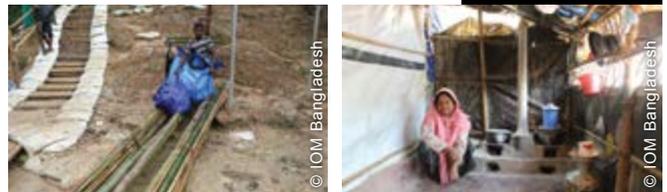
“Every site visit revealed a new example of the resilience of the Rohingya. Access was extremely challenging, but we soon realized that if we dropped a truck full of bamboo next to a stream, the next day there would be a footbridge built without any guidance or input from our team.

Without detailed maps we would navigate by landmarks – prominent houses, a sequence of steps, a particularly steep slope – and so we would monitor the development of the houses. The majority were using their own materials – bought, loaned or swapped between their own community. Nothing was wasted and there was no lack of technical skills. It became apparent that our role as shelter officers was not to build anything – it was just to bring the materials in and let them rebuild their lives.

In one particular area, the people had transformed a pile of bamboo, tarp and rope into a community. Trees and gardens had been planted, a shop opened, drainage cut down the street, innovative sliding doors installed, intricate weaving to improve ventilation.

Families made the most of what they had and always had a friendly wave or gesture towards us, as we struggled to comprehend the scale of the crisis.

The experience reinforced my belief that solutions are found within a displaced community and that our role as international agencies is merely to support and learn.”



To upgrade over 180,000 shelters, the Sector relied on the strong capacities of the refugee community. Materials and kits soon became homes.

LESSONS LEARNED

1. The Rohingya community has a strong capacity to construct their shelters. Shelter actors, aiming to improve their living conditions, have the role to deliver assistance following minimum standards and best practice. This includes the provision of materials, training and technical support to increase knowledge of DRR elements, as was the case in the USK approach.
2. Basic environmental considerations should be factored in the emergency response as early as possible.
3. Community-led approaches to shelter and settlement can foster social cohesion and enhance longer-term impact.
4. Coordination between sectors and integrated programming (at the agency level) is crucial to ensure impactful assistance.
5. Tap and connect immediately with the local or host country humanitarian and emergency response network. These resources can be used to provide immediate experience, technical staff and designs that can be adapted. In Bangladesh, the Shelter Cluster had been operational for many years, however their expertise was not leveraged during the first crucial months of the operation. Once the contacts were made, Bangladesh's experience of DRR proved invaluable and certainly saved lives.

ENDNOTES

- ¹ UNHCR 2018, Culture, context and mental health of Rohingya refugees, <https://bit.ly/2HDiF2M>. And ACAPS/NPM 2017, Rohingya influx since 1978.
- ² Joint Response Plan 2018.
- ³ Inter-Sector Coordination Group (ISCG), 21 Sep 2017.
- ⁴ Ibid.
- ⁵ ISCG contingency plan 2018.
- ⁶ See case study A.15 in this edition for an example of this phase.
- ⁷ Typically May/June to September/October.
- ⁸ First produced in late 2017, the IEC materials were revised and expanded for phase 3. <https://bit.ly/2SapiQ6>.
- ⁹ See case study A.14 for a discussion of early site planning approaches.
- ¹⁰ The catalogue is available at <https://bit.ly/2G9rRv7>.
- ¹¹ Humanitarian Bamboo Project: Inception Report Sept 2018. The use of Bamboo in the Rohingya camps in Cox's Bazar, <https://bit.ly/2DcMnh7>.
- ¹² Ibid.



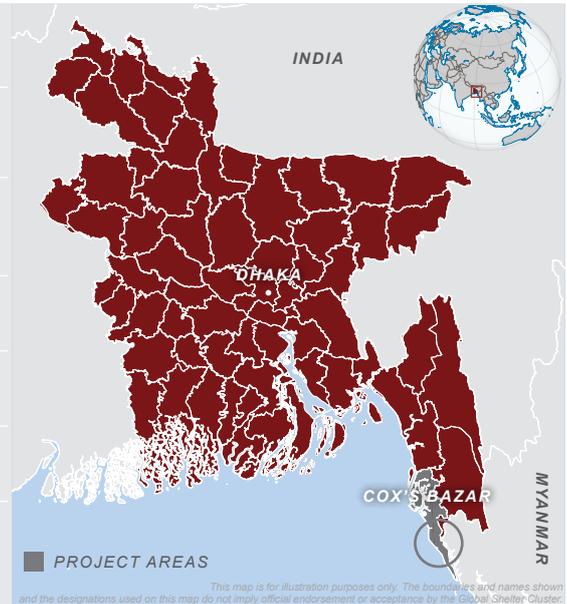
Looking forward, partners could build on the lessons learned to improve living conditions and safety in the largest refugee settlement in the world.



CASE STUDY BANGLADESH 2017–2018 / ROHINGYA CRISIS

KEYWORDS: Site planning, Coordination, Disaster Risk Reduction

CRISIS	Rohingya Refugee Crisis, Cox's Bazar, 25 August 2017–onwards
TOTAL PEOPLE AFFECTED*	260,000 households (1.3 million individuals), incl. host community
TOTAL PEOPLE DISPLACED*	134,200 households (671,000 new arrivals) 120,480 households (602,400 refugees) in KBE
PROJECT LOCATION	Kutupalong-Balukhali Expansion (KBE) Site, Cox's Bazar
PROJECT BENEFICIARIES	Over 120,000 households (600,000 individuals).
PROJECT OUTPUTS	Site planning for the KBE site
SITE DENSITIES**	10–20m² per person in fully developed areas



* Figures as of 25 Feb 2018. Joint Response Plan (JRP) for Rohingya Humanitarian Crisis.
** Typical planning figures are between 45m² and 60m² per person depending on the context. In exceptional circumstances, 35m² per person is acceptable.

PROJECT SUMMARY

In less than two months, over 400,000 refugees self-settled around existing refugee settlements in Cox's Bazar. This case study highlights the challenges site planners faced in the first six months working in this context. More refugees continued to arrive, secondary displacement increased, and agencies requested additional land to provide infrastructure and basic services. The case study chronicles the first attempts to map and understand the spontaneous settlements, identify additional land and design the first planned resettlement areas, to prepare for and mitigate the effects of the imminent monsoon season.

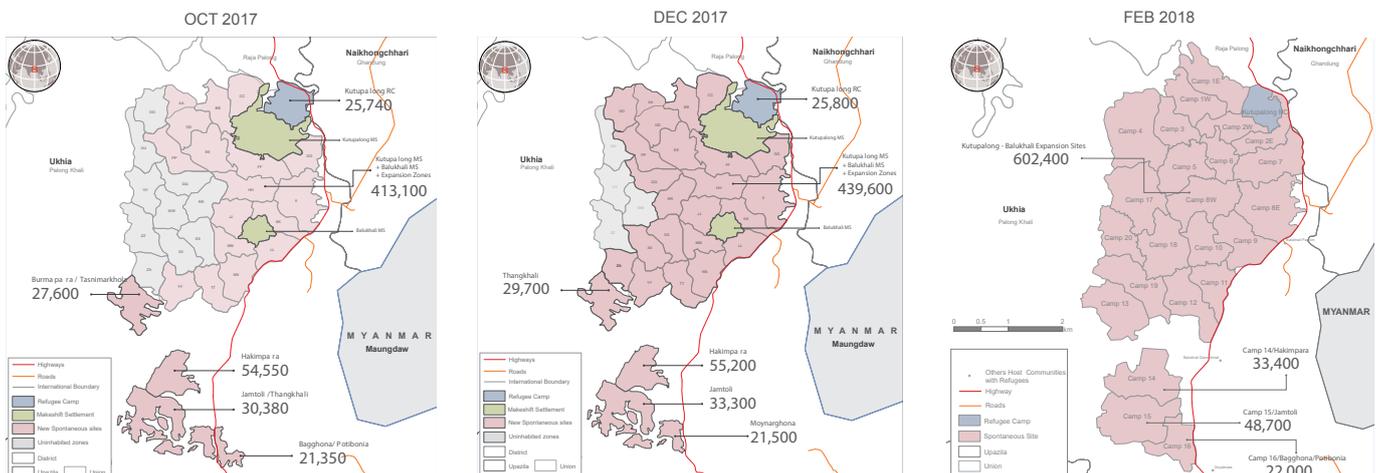


STRENGTHS

- + Early decisions were key to shaping the response.
- + Drones helped understand the site and terrain, and communicate to the government.
- + Disaster risk prevention specialists were brought in early.
- + Good inter-agency collaboration.

WEAKNESSES

- Site planners struggled to find an efficient technical forum.
- Resources were spread unequally across the entire site.
- Lack of an agreed zoning system caused confusion.
- The Macro Settlement Development Plan was not adopted.
- Refugees were not engaged in site planning early on.



After 25 August 2017, new refugee arrivals settled around existing settlements along the border with Myanmar. In six months, over 600,000 refugees were living in the Kutupalong-Balukhali Expansion site, occupying the whole expansion zone allocated by the government of Bangladesh (maps: ISCG).

BACKGROUND AND CONTEXT

For information on the 2017 influx and the Shelter-NFI response, see overview A.13.

Before the 2017 influx, no site planning, basic layout or erection of emergency shelters had started in the areas around the existing Rohingya settlements.¹

Starting in late August, in less than two months, over 400,000 refugees arrived in and around these settlements. One year later, the whole area was regarded as the largest refugee camp in the world, hosting 631,000 refugees.² The massive influx dispersed into the existing settlements and host communities along the border, with the majority heading to the largest existing refugee camp of Kutupalong and the make-shift settlement of Balukhali.

Given the scale and speed of the influx, actors on the ground focused on providing life-saving assistance for the most vulnerable and let others self-settle. As a result, when site planning teams from the lead agencies started to draw up the first plans, they were faced with an unregulated and organically growing camp. Refugees were leading the decision-making on where to settle, where to pave new footpaths and bridges, and how to provide shelter for their families.

The hilly site was prone to flooding and landslides, and this was exacerbated as the need to rapidly settle the refugees further destabilized the slopes, removed natural drainage and infiltration capacities, and increased the chances of intense flooding. This became particularly relevant with the approaching monsoon season.

This case study focuses on activities and decisions made in the first six months of the emergency. It includes the very first attempts by site planners to understand the extension of the Kutupalong-Balukhali Expansion (KBE) areas and the start of a formal process of site planning. This period can be broken down into four distinct phases, ending in February 2018 as works began to prepare the site for the monsoon.

PHASE 1 – UNDERSTANDING THE CONTEXT

In the first weeks, the rains and lack of road infrastructure made movement within the KBE site extremely difficult and time consuming. There were no maps of the expansion and no formal roads.

¹ Prior to August 2017, there were over 100,000 Rohingya refugees living in the KBE area. The existing sites were planned, to a certain extent.

² As of 31 Aug 2018. JRP Mid-term Review.

Understanding the scale of the camp was difficult, as new arrivals were pushing the boundaries further north and south at alarming speed, with the most significant expansion to the west towards the national forest reserve. A breakdown of the area to enable better inter-agency coordination prompted the creation of the first “zones”.

Combining these maps with early population figures paved the way for the first estimates of densities and, more importantly, forecast potential population capacities. The maps also revealed the urgent need to improve access. The “Army Road” was commissioned, following the western border of the first expansion zone at the time. Another key decision taken was the rapid creation of the Transit Site alongside the existing “highway” and close to the Kutupalong Registered Camp.

The focus of this phase was on settling the new arrivals and assisting the most vulnerable with their immediate needs. A lack of staff and partners called for flexibility in roles and, as a result, site planners were drawn into other duties and field assignments, such as assisting with urgent relocations. In hindsight, it would have been better if site planners had focused more on the bigger picture, without getting too involved in field operations.

The majority of settlements grow organically and are shaped by the physical environment and the locations of key infrastructural elements. So, decisions made during the first few months of the emergency have ramifications for years. It is important to be balanced when evaluating the urgency of decisions and the growth of settlements whilst understanding their long-term impact.



© Richard Evans / UNHCR

Prior to the establishment of the transit centre, refugees self-settled on improvised plots using whatever material they could find, as agencies did not have time to plan in advance of people settling.



© Philipp Hübner / UNHCR/SDC

ZONE OO IN OCT 2017 BEFORE THE EXPANSION

PHASE 2 – THE BASICS

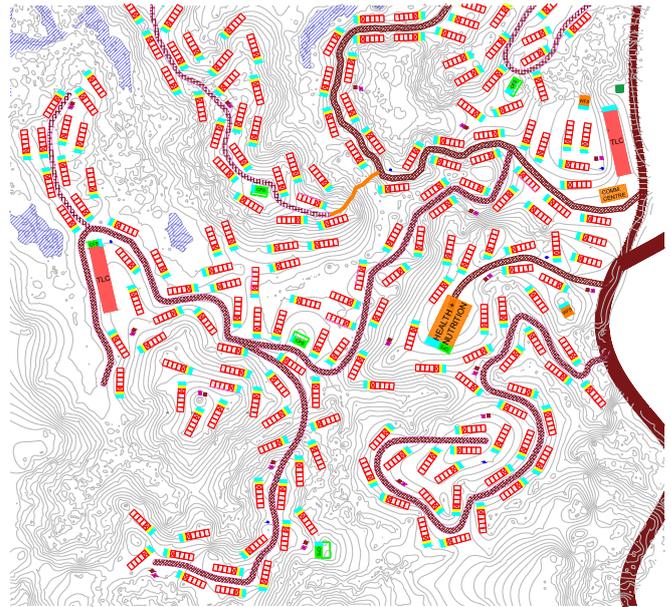
Following the production of the first maps, density calculations and an open channel of communication with the government, an additional 1,000 acres of land was released to the humanitarian community to accommodate the new arrivals and reduce population densities around the existing sites. The issuing of the new land enabled site planners to prepare in advance of refugees settling. For the first time in two months, land was surveyed and formal site plans were drawn up using international humanitarian standards and following contextualized best practice. However, it was still a race against time, as the unsustainable densities in existing settled areas were forcing refugees to spontaneously expand into the new land.

One of the very first areas in the expansion (labelled OO) was largely designed before refugees settled. Crucial land was reserved for schools, clinics and community buildings, while areas prone to landslides and flooding were demarcated as unsuitable for shelters.

As the understanding of the topography, geology and drainage patterns improved, the original zonal maps became more detailed. General consensus within the humanitarian community led to the use of the same base map, employing the notation of AA, BB, CC, etc., dividing the camp into zones ranging in size from 45 to 150 acres, each corresponding to approximately 20,000 refugees.³ This sub-division was widely adopted by the Inter Sector Coordination Group (ISCG) and partners on the ground, yet, it was crucially not adopted by the Government’s Office of the Refugee Relief and Repatriation Commission (RRRC), the Army and the refugees themselves, who were all using different zoning systems. There was a significant failure to communicate and coordinate between stakeholders, resulting in confusion and delays as key groups could not “talk the same language”.

This phase was chaotic, with new actors and funds coming in, and activities being geared up. With the needs outweighing the resources, an efficient and coordinated response was needed. However, spatial communication issues (due to lack of maps and agreed notation) rendered coordination challenging. Agencies were unable to effectively follow-up on cases and track resources, and time was lost in the field as assessments could not be compared, because the exact locations could not be specified. GPS was not commonly used by agencies and geo-referenced data reporting was not standardized. This led to duplication, such as distribution in the same areas.

³Based on average population of AA–NN in October 2017.



Site planners started to draw the first plans following minimum agreed standards in October 2017, and some of the expansion zones were prepared in advance of refugees settling (Plan: Phoebe Goodwin / UNHCR).



In the initial phase of site planning in the field, drones were used to identify prime land for communal facilities, that was demarcated by teams on the ground.



© Richard Evans / UNHCR



© Richard Evans / UNHCR

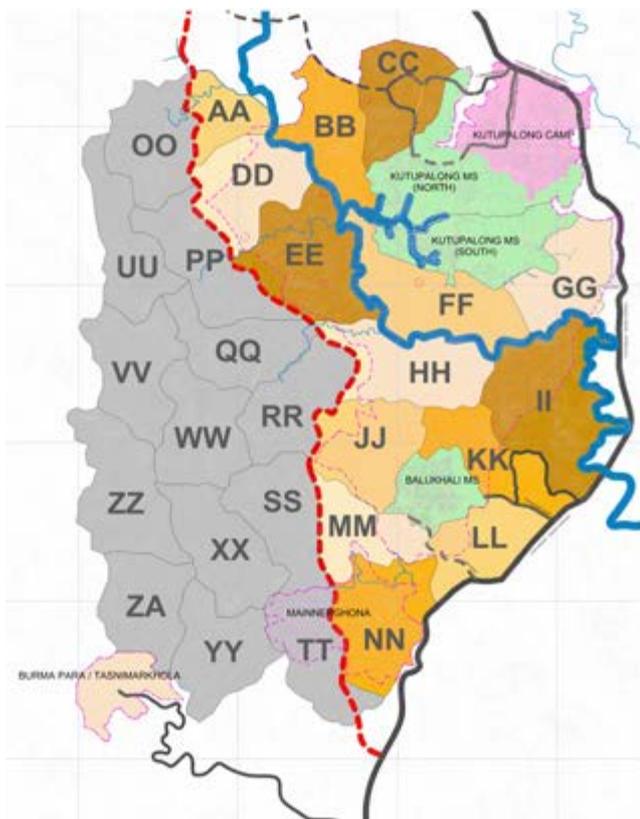
Access to the site was challenging and agencies fenced the west side of the zone to prevent uncontrolled expansion towards the natural reserve area.



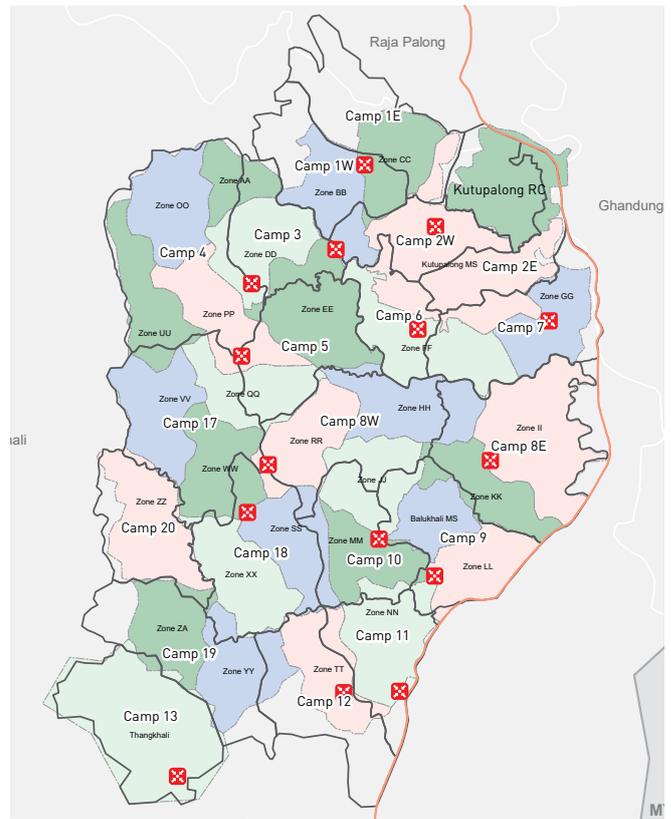
© Philipp Hübner / UNHCR/ISDC



Drone image of zone OO after refugees settled, in February 2018. Densities were lower here than in other parts of the site, and services were relatively well distributed. However, this also meant that assistance was not evenly spread throughout the site, as other areas remained very dense and lacked services (Source: NPM, 14 Feb 2018).



The army road was opened along what used to be the western border of the KBE site at the time it was designed, before the further expansion in the grey zones. The humanitarian community used the notation AA–ZZ for about four months, to divide zones of comparable size (Source: ISCG, 30 Sep 2017).



The government, humanitarians and refugees were all using different zoning systems, which created confusion and caused coordination challenges. To address this, the Site Management Sector conducted a lengthy exercise to adopt a joint approach between the government’s “camp” system and the international community’s zones (Source: ISCG, 12 Feb 2018).

PHASE 3 – EXPANSION AND MSDP

The groundbreaking work undertaken in zone OO was now replicated by all parties involved in site planning, to varying degrees. The use of drones facilitated the collection and sharing of geo-referenced, visual information. Standard Operating Procedures for partners to engage with the site planners were created. For the first time, sectors took an active role in the site to ensure that there was land allocated for their ambitious and often unrealistic funding proposals. This hectic period was a “land-grab” by agencies who planted flags, marked out land and constructed facilities without due diligence or understanding the specifics of the site. Resources were concentrated on green-field areas where construction was seen as an easy win, rather than attempting to negotiate land for services in areas already settled. In a notable example from one area of the expansion zone, there was no space for shelters as all land was reserved for community buildings.

This prompted the development of a Macro Settlement Development Plan (MSDP), with the aim to compile and analyse all data into a single geo-spatially referenced “live” document that would zoom out from an isolated zonal plan perspective to a holistic macro scale across the whole site. The MSDP was intended to be a live planning and advocacy tool to allow decision makers to plan for the future, striving for an equitable distribution of and access to relevant services and infrastructure. Using a series of themes, including health, WASH, roads and bridges, infrastructure and environment, it was designed to have government ownership and to act as single repository for all the site planners to feed into.

The MSDP demonstrated that, in a matter of weeks, the whole KBE site would exceed planning densities and so additional land would be needed, especially if decongestion of the areas surrounding the original camp was to be attempted. Densities of less than 10m² per person were creating conditions comparable to the worst urban slums in Dhaka and, due to poor access to life-saving services in many areas, the Health Sector’s warnings were becoming more and more vociferous.

Although well-conceived, the MSDP largely failed to fulfil its potential due to issues of coordination and ownership. The ad-hoc and untested coordination platform was unable to grasp the need for this tool and lift it above the confusion of inter-sectoral coordination. If the MSDP had gained traction, it would have enabled improved planning for the location of key facilities and infrastructure, which have a direct impact on long-term development of the settlement.

PHASE 4 – PLANNING FOR THE MONSOON

By the end of 2017, the last of the new arrivals settled and the MSDP was updated with new themes. Planning was shifting away from the immediate allocation of land and provision of life-saving services to the medium and long-term perspectives. Exposure to the situation of the camp and a familiarity with the landscape resulted in an intergovernmental organization specialized in disaster preparedness being commissioned to undertake a landslide risk analysis of the main KBE site. Flood risk analysis was conducted by the lead agencies working on site planning.

It immediately became apparent that the monsoon rains starting in May/June, coupled with the annual cyclone seasons, could trigger a second wave of displacement, with resulting landslides and flooding potentially causing significant damage and loss of life. As the initial results of the analysis were released, coordinated actions were taken to mitigate against the natural hazards.

The unique nature of the context has underlined the importance of site planning for the long-term safety of the refugees. It has highlighted the need to strengthen the role of site planners and elevate their voices within the coordination platform, as informed and early decisions will improve coordination and, in the long run, significantly improve the lives of those affected by displacement.



Without an agreed site plan or camp management structure in place, new arrivals started to level ground for shelter and self-settle.

© Philipp Hübner / UNHCR/SDC



© P. Hübner / UNHCR/SDC



© P. Hübner / UNHCR/SDC

The additional 1,000 acres were quickly occupied in the span of a few months. Given the scale of the site, a macro-settlement approach was needed to identify the strategic location of facilities and plan for the future growth, infrastructure and likely scenarios.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

WEAKNESSES

- Partly due to the confusion created by the unorthodox co-ordination structure used in the Rohingya response, partly due to the unfavourable location and terrain, **site planning teams struggled to find an efficient technical forum** and “be heard” by the Inter Sector Coordination Group. Various bolt-on technical working groups were formed to try and bring those involved in site planning together. **These working groups often lacked focus and output due to unclear terms of reference**, as there was no precedent.
- Although one zone was planned in advance and more focus put on ensuring minimum standards there, this meant that **resources were spread unequally across the entire site**.
- **A lack of agreed naming and zoning system resulted in confusion**, wasted resources and delayed further key processes, such as a unified address system.
- **The Macro Settlement Development Plan largely failed**, as it was not adopted by the inter-sectoral coordination body.
- **Refugees were not engaged in site planning decisions early on**. This was partly due to the localized site management structure lagging behind the growth of the settlement, and the government camp officers being involved only in 2018.

STRENGTHS

- + **Early decisions were key to shaping the response**, such as the building of the “Army Road” bisecting the camp and the development of the transit centre on private land.
- + **The use of drones proved vital** to not only understand the scale of the sites and the terrain, but also to communicate to the government and international community the need for intervention.
- + Recognizing that – with the coming of the monsoon season – the refugee crisis could morph into a physical disaster, **specialists in disaster risk prevention were brought in early** to advise and contribute to the planning.
- + **The lead site planning and site development agencies worked jointly** to formulate contextualized standards, develop the macro settlement development plan and conduct hazard mapping within the site.



Major infrastructure (such as the Army road and culverts) was needed to convert a forest land into a liveable settlement.

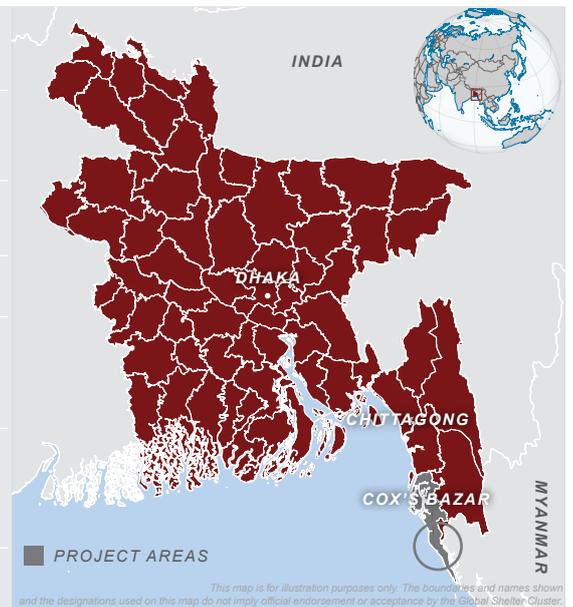
LESSONS LEARNED

- **Demarcation and sub-zones need to be agreed and finalized by all parties as soon as possible.** This process should start immediately, with authorities (military, line ministries, etc.) taking leadership and ownership of the decisions, then trickling down through the humanitarian structure. There is a need to quickly understand the communities’ pre-existing structures, as adoption will be quicker if actions are aligned to such social systems. There is often no time or perceived need for wider consultation. A single body of site planners should be given authority and trust, with a clear timeline for finalization. Delays will cause significant interruptions in service delivery. There must be a wider roll-out to communities and actual physical demarcations on the ground, so that refugees can orient and base themselves within appropriate spatial parameters, leading to location addresses.
- **Macro settlement development planning must start immediately.** A unit within the site planning department should start looking at the macro scale of settlement development from the outset. It is important to identify where and how refugee settlements can integrate with host communities and share/enhance existing infrastructure and services. This responsibility must be clearly entrusted to a lead agency who has the skill-set, unless the host government has shown willingness and capacity to take on such a task. The role of the government is crucial, especially when requiring additional land. But the planning will lose relevance unless it keeps pace with the speed of the emergency and humanitarian agencies’ demands for land (e.g. hospital, logistic hubs, etc.).
- **Site planners must plan for a variety of possible scenarios, to understand what the site will “look like” 3, 6, 12, 24, 48 months into the future.** Site planners have a role to help interpret the topography, geomorphology, geography, natural hazards and the subtle interplay between the physical site and its socioeconomic development. They can also foresee the spatial impacts of population growth within refugee settlements. Key site planning interventions conducted early could allow for positive expansion and diversification of livelihood opportunities for refugees, increasing their independence and self-dignity. Site planners should have the authority to raise such issues to senior management, so they can be heard with equal value to other sectoral or organizational priorities.
- **Bold decisions must be taken early and with “no-regrets” philosophy.** Decisions related to densities or to where key services are provided will have long-term ramifications and impacts, affecting the residents for years to come. When relocations are part of a well formulated site plan that allows for longevity and natural growth, short-term disadvantages are largely rewarded with the significant improvement of refugees’ living conditions. The longer people reside in an unsafe or inappropriate location, the more resistant they are to secondary displacement.

CASE STUDY BANGLADESH 2017–2018 / ROHINGYA CRISIS

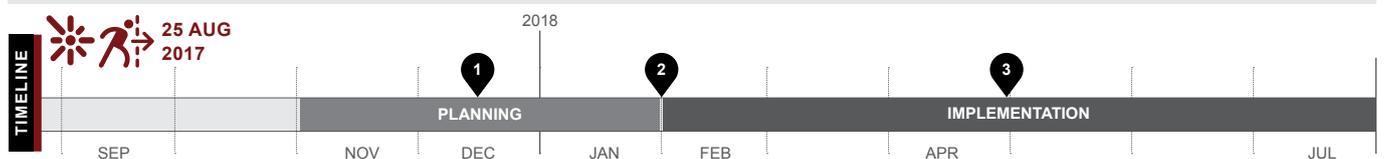
KEYWORDS: Shelter upgrades, Training, Coordination, Scale and coverage, Common pipeline

CRISIS	Rohingya Refugee Crisis, Cox's Bazar, 25 August 2017–onwards
TOTAL PEOPLE AFFECTED*	260,000 households (1.3 million individuals), including host community
TOTAL PEOPLE DISPLACED*	134,200 households (671,000 new arrivals)
SHELTER NEEDS*	180,000 households (900,000 individuals)
PROJECT LOCATIONS	Kutupalong-Balukhali Expansion site in Ukchia sub-district; Unchirang, Shamlapur, Leda and Alikhali sites in Teknaf sub-district – Cox's Bazar district
BENEFICIARIES	43,789 households (208,237 individuals). These included 3,777 female-headed HH, 370 youth-headed HH and 291 HH with persons with disabilities
PROJECT OUTPUTS	43,789 households received Upgrade Shelter Kits (USKs), were trained and upgraded their shelters and surrounding site conditions 52,987 additional USKs procured and distributed by Sector partners through the common pipeline 304 staff trained with Shelter-DRR Training of Trainers 106 Rohingya carpenters trained on carpentry
SHELTER SIZE**	14m² on average. This programme aimed to reinforce/upgrade existing shelters, not build a new shelter
SHELTER DENSITY**	3.4m² per person on average
MATERIALS COST	USD 155 per household (incl. USD 103 for materials, USD 12 for tools, USD 40 for support costs)
PROJECT COST	USD 208 per household



PROJECT SUMMARY

This project provided shelter upgrade kits, training and technical assistance to help recently arrived refugees in Cox's Bazar reduce their shelter vulnerability to potential heavy rains and winds. It was part of the second phase of the shelter response, following the emergency distributions after the massive influx in 2017. To meet the scale of needs, resources were carefully allocated to provide shelter materials, tools and technical assistance, and mobilize the community for shelter upgrade and localized site improvements. The organization also provided coordination services and established a common pipeline, which contributed to reaching the Sector target of 180,000 households before the monsoon season.



- 1 Dec 2017: Emergency phase distributions completed.
- 2 29 Jan–4 Feb 2018: First ToT and distribution of USK conducted.
- 3 30 Apr 2018: First incident due to monsoon weather reported (327 existing shelters damaged).

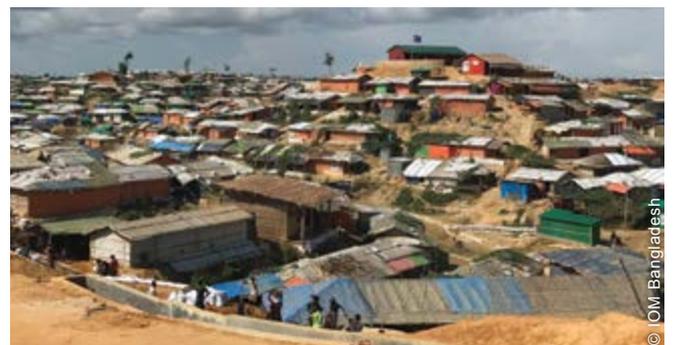
* Figures as of 25 Feb 2018. 2018 Joint Response Plan (JRP) for Rohingya Humanitarian Crisis, <https://bit.ly/2pKNJmb>.
 ** Shelter/NFI Sector Cox's Bazar, Shelter Survey, August 2018, available at <https://bit.ly/2BBWXrh>.

STRENGTHS

- + Coordinated approach allowed to reach Sector targets.
- + People-driven shelter upgrading at scale.
- + The project fostered a sense of ownership over the shelters.
- + Effective resource allocation in the short timeframe.

WEAKNESSES

- Insufficient quantities of materials in the kit.
- Limited durability of untreated bamboo.
- Bracing was not favoured by beneficiaries.
- Local languages should have been used more in trainings and IEC.



CONTEXT

For information on the 2017 influx and the Shelter-NFI response, see overview A.13.

The Cox's Bazar district is affected by numerous hazards on an annual basis, such as tidal surge, landslides, flash flooding and cyclones. Heavy rain can commence in April and last through October. Cyclones make landfall in Bangladesh almost every year. There are two cyclone seasons; May–August and October–November.

SITUATION BEFORE THE CRISIS

For decades before 2017, multiple movements of Rohingya from Myanmar to Cox's Bazar occurred. Upon times of influx, ad hoc emergency shelters were built, typically with bamboo and plastic sheeting, leading to commonly reported issues of leaking roofs, lack of privacy and overcrowding.¹

SITUATION AFTER THE 2017 INFLUX

By the end of December 2017, the Shelter-NFI Sector had carried out comprehensive distributions of acute emergency shelter kits (primarily tarpaulins and rope) and non-food items. The refugees had constructed their own shelters with these items and other materials either gathered or procured on the local market. Continuous new arrivals settled in spontaneous sites over a hilly terrain prone to flood and landslides, increasing the need for humanitarian assistance. Additionally, with the rainy season fast approaching, there was a sense of urgency to continue strengthening preparedness measures and raising awareness among the refugee population regarding potential storms, landslide and flood risks.

As the quality of most emergency shelters after the first phase of the response was very basic, the Sector moved to a second phase focusing on shelter upgrades and localized site improvements, in preparation for the upcoming monsoon and cyclone seasons.

¹ACAPS/NPM 2017, Review: Rohingya influx since 1978, <https://bit.ly/2NgsGmH>.

COORDINATION AND COMMON PIPELINE

The implementing organization led the Shelter-NFI Sector with dedicated staff and support from a national NGO. Project staff contributed to joint efforts led by the Sector coordination team and participated in inter-agency assessments to better understand the needs of the new arrivals in terms of shelter and site improvements; and what had already been done by refugees who arrived in 2016 and earlier.

Based on field observation and best practice identified in the sites, the organization also supported the Sector's technical working groups in developing the Upgrade Shelter Kit (USK), providing complementary Information, Education and Communication (IEC) materials, and technical guidance for localized site improvements. Disaster Risk Reduction (DRR) messages were also developed within these materials and the subsequent trainings, which were rolled out by a dedicated training officer who provided support to all Sector partners.

One of the most impactful processes led by the organization in support of the Sector was the establishment of a common pipeline for the USK materials and for some selected NFIs. This was a central repository of Shelter-NFI supplies managed by the organization to procure, store and distribute materials for 96,776 kits to 18 Sector partners, with the coordination team providing oversight.

Project staff also provided assistance and human resources with two key market surveys looking at the impact of the crises on the local bamboo market and how cash could be used in shelter and NFI interventions.²

PROJECT GOALS

In the short time leading up to the monsoon season, the organization focused its efforts on training on shelter-DRR and the distribution of USKs, aimed at lessening the shelter vulnerability to potential strong rains and winds, as well as informing the refugees about the risks of other natural hazards.

²The report is available at <https://bit.ly/2DSohIC>.



The project assisted over 43,000 households directly and managed a common pipeline to reach an additional 53,000 with shelter upgrade kits before the monsoon season.

TARGETING

As the entire refugee population – and primarily the new influx – had high shelter-related vulnerabilities, the Shelter-NFI Sector decided to do blanket distribution to all the 900,000 individuals or 180,000 households in need prior to the monsoon season. The procurement and distribution of 180,000 USKs were assigned across Sector partners, with the lead agencies and other large international organizations taking on the bulk of the work. The organization was responsible to cover at least 40,000 households in eight sites and to procure additional 60,000 kits for the common pipeline, to be accessed by Sector partners. A few other organizations used their own resources to cover the remaining caseload.

IMPLEMENTATION AND TRAINING APPROACH

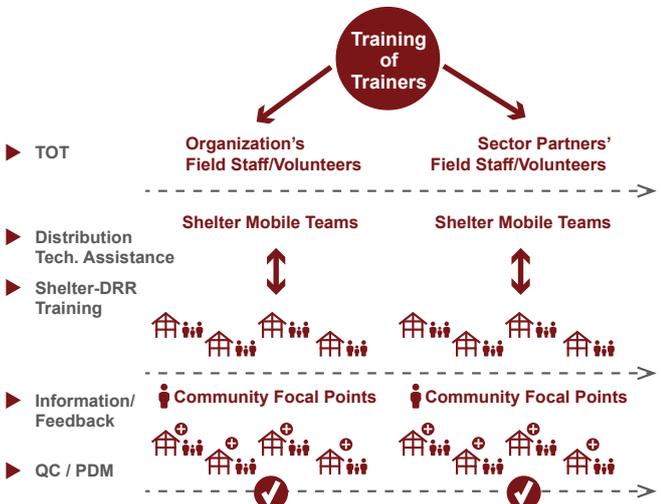
To implement the project at scale in the limited timeframe, the organization established a team of 8 international staff, 12 national staff and 160 field assistants. In order to ensure an effective knowledge transfer and implementation of upgrades at the household level, the trainings were conducted using a cascade approach.

A series of **Trainings of Trainers (ToTs)** was conducted for shelter field staff and community mobilizers (from both the organization and partners) on shelter-DRR knowledge and facilitation skills. ToTs covered key messages on strengthening roofs, walls, foundations and drainage around the shelter via demonstrations and practical examples, to enable participants to learn by doing.

Trained trainers and community mobilizers carried out **hands-on awareness sessions** to show beneficiaries how to use the items in the kits and how to apply simple DRR measures to conduct shelter upgrades and localized site improvements. These sessions were followed by the distributions on the same day.

Over 100 Rohingya carpenters were identified and trained on shelter-DRR key messages and were then mobilized across the refugee communities. Their role was essential in the awareness sessions and in showing technical interventions to households during the upgrades.

The organization also identified **community representatives** who acted as information sources and communication focal points between the refugees and the organization, so that updated information, feedback and continuous technical advice could be provided.



A cascade training approach was used to reach the ambitious targets in the short timeline, coupled with continuous technical assistance.

For vulnerable individuals, the organization provided support for transportation, site preparation and shelter set-up through cash for work.

TIME CONSTRAINTS

To upgrade 40,000 existing shelters before the monsoon season commenced in less than four months, the key components of this project – namely community mobilization and household trainings – were planned balancing the need for quality and the time constraints. Training participants were limited to maximum 25 households per session, with a duration of two hours per session. By conducting several ToTs, multiple training teams were deployed and delivered trainings in each site simultaneously.

PROCUREMENT AND LOGISTICS

Given the scale and urgency of the response, the procurement and logistics for the kits, maintaining the common pipeline and ensuring quality control were extremely challenging.

Shelter-grade tarpaulins were procured via various sources, including the organization’s regional stockpile, international procurement and in-kind donations. Emergency procurement procedures were used to shorten lead times and additional logistics staff were brought in to support the process.

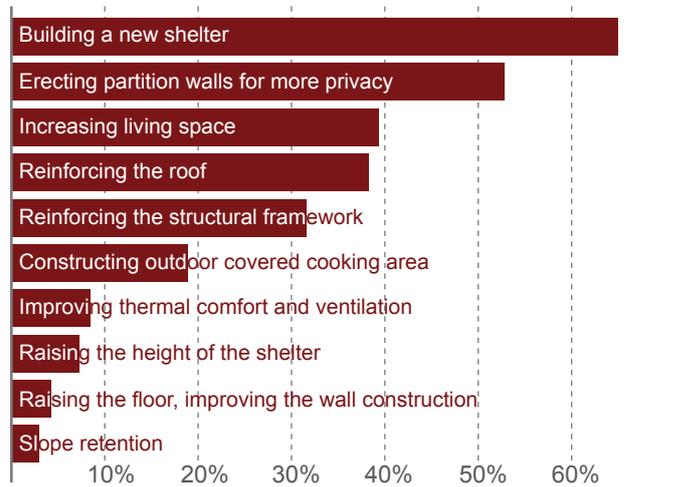
Bamboo procurement was particularly challenging. A specialist was deployed to address bamboo supply chain issues and travelled to assess several suppliers with confirmed stocks.

Two large logistics hubs were set up close to the refugee settlements. From these, trucks were arranged to deliver the kits to main distribution points within the sites.



The procurement and logistics for the bamboo required for 100,000 kits needed a large dedicated team and the application of expedited procedures. Because of time constraints, bamboo was untreated and often harvested hurriedly.

USE OF THE ITEMS IN THE KIT



This chart shows how USK items were utilized according to the respondents of the shelter survey, who were asked what their top three uses of the kits were.

IMPACT OF TRAINING AND TECHNICAL ASSISTANCE

Post-distribution monitoring indicated that over 99 per cent of the shelters had some sort of improvement after receiving the materials and training. Yet this finding is not surprising given the poor shelter conditions prior to the distributions and the total lack of shelter materials in the settlements. Further, the Sector shelter survey showed that training and technical assistance were well received by refugees, with 99 per cent of those who received it considering it useful or very useful. 97 per cent of the surveyed households also stated that they would like to receive either more training or more technical assistance. During focus group discussions, respondents identified three main learning elements from the training: tie down of the roof, anchoring and improvement of foundations, and making strong connections. On the other hand, bracing was considered less relevant.³

³ Shelter survey, August 2018.



By involving refugees throughout the implementation, the project helped generating a sense of ownership over the shelters and their surrounding environment.



To reach over 43,000 households in about four months, resources were well allocated with a combination of in-kind and technical assistance. Hands-on sessions with maximum 25 participants were conducted for refugees on the day of the distribution. The training was generally welcome and allowed over 99 per cent of beneficiaries to make improvements to their shelters.

WIDER IMPACTS

The coordinated response with Sector partners enabled to achieve full coverage at scale. By setting up the common pipeline, developing IEC materials and offering ToTs in coordination with the Shelter-NFI Sector, this project contributed to achieving shelter upgrades for over 180,000 households as a joint Sector-wide effort.

The communication, mobilization and training components of this project promoted a sense of ownership towards refugees' own shelters and the surrounding environment, facilitating further maintenance and upgrade works even after project completion. DRR and technical skills learnt in the training were also used in other interventions, such as the improvement of mosques and community buildings.



Although the training and technical assistance were well received, many refugees thought the materials in the kits were not enough and generally did not consider bracing as relevant.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

WEAKNESSES

- **Insufficient quantities of materials.** Under the guidance of the Sector's technical working group, the kit composition was optimized for upgrading existing shelters and not for building a whole new shelter. Quantities of materials were agreed considering the resource limitations among Sector partners and realistic procurement lead times. However, there were complaints from beneficiaries and Sector partners that the USK contents were not enough.

- **Limited durability of untreated bamboo.** Bamboo can be a durable construction material if selected and treated properly. Due to the time pressure, various types of bamboo were procured, often harvested too early and untreated. Further, bamboo posts were inserted directly into the ground, exposing the bamboo to mold and termite attacks. It was recognized that the assistance provided under this project would not be a durable option, requiring a further phase of shelter assistance.

- **Bracing was not favoured by beneficiaries.** Thanks to the training and technical assistance, most of the key messages on shelter-DRR techniques were implemented by the refugees, except for bracing. This was mainly due to cultural preference and the limited number of available bamboos, as well as the limited covered space (as bracing reduces internal space if bamboos are installed inside the shelter frame).

- **Language in trainings and information materials.** The ToTs were conducted in a mix of English and Bangla. For a better understanding of the contents, Bangla should have been used in most of the ToT curriculum. Additionally, IEC materials should have been produced with two languages together – Rohingya language for refugees and Bangla for staff.

CONTENTS OF THE UPGRADE SHELTER KIT

Items	Qty	Unit cost (BDT)	Unit cost (USD)	Total cost (USD)
Shelter Materials				
Tarpaulin (4x6m)	2	2,014	24.00	48.00
Bamboo (large)	4	300	3.58	14.30
Bamboo (small)	60	40	0.48	28.61
Sand bag (polyprop.)	30	20	0.24	7.15
Tie wire	1	40	0.48	0.48
Rope (thick), 25m	1	120	1.43	1.43
Rope (thin), 30m	1	72	0.85	0.85
Nails, 3', 0.25kg	1	45	0.54	0.54

STRENGTHS

+ **Coordinated approach.** The project was well coordinated under the Shelter-NFI Sector, which as a whole was able to deliver standardized assistance to over 180,000 households within the planned timeframe.

+ **People-driven shelter upgrading at scale.** The project primarily aimed at facilitating learning and knowledge exchange towards refugee populations to enable shelter upgrade for a very large population. Through a people-centred approach, the three main components of the project (training, community mobilization and distribution) were interwoven, complementing each other.

+ Thanks to the high involvement of the refugees, **the project fostered a sense of ownership over the shelters.**

+ **Effective resource allocation.** In light of the short project timeline and the scale of needs to be covered before the monsoon season, available resources were well allocated. Materials in the USK were maximized in terms of viable procurement lead time, and as many field staff as possible were hired and trained to achieve the targets of training and community mobilization.

Items	Qty	Unit cost (BDT)	Unit cost (USD)	Total cost (USD)
Household Toolkit (1 kit for 5 HH)				
Claw hammer	2	150	1.79	3.58
Hand saw	2	120	1.43	2.86
Pliers	2	180	2.15	4.29
Machete	2	220	2.62	5.24
Shovel	2	200	2.38	4.77
Hoe	2	300	3.58	7.15
Digging post	2	340	4.05	8.10
Bamboo Basket	5	120	1.43	7.15
Neighbourhood Toolkit (1 kit for 100 HH)				
Wheelbarrow	2	2,850	33.97	67.94
Sand bag (polyprop.)	500	20	0.24	119.19
Shovel	5	200	2.38	11.92
Hoe	5	300	3.58	17.88
Digging post	5	340	4.05	20.26
Bamboo basket	10	120	1.43	14.30
Steel pan	10	250	2.98	29.80

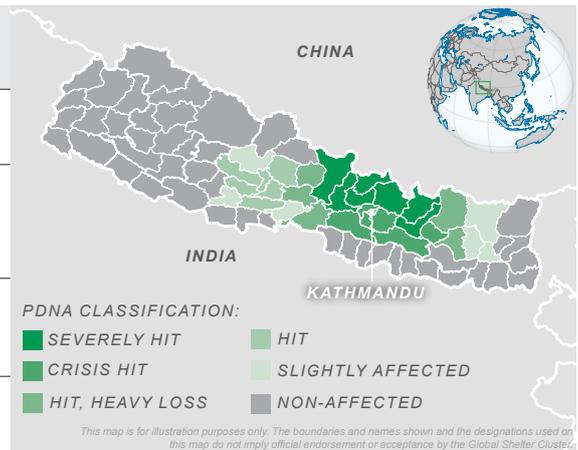
LESSONS LEARNED

- **Balancing resources.** Resource allocation was of paramount importance in project design (i.e. cost per household, duration of training, human resources). As Sector lead agency, it is crucial to **reach consensus on the resource allocation strategy in coordination fora** (such as technical working groups and strategic advisory group), in order to lead a Sector-wide joint response. Discussing implementation challenges – such as logistics and procurement – within the Sector benefits the development of a realistic and effective strategy.
- **Utilizing skills and expertise of affected people.** Communities were found to have not only unskilled workers, but also skilled individuals in carpentry and other techniques. Although this project took a people-driven approach (complemented with technical assistance), **Rohingya carpenters could have been more involved** even in the planning process, i.e. the development of the IEC materials and the training curriculum.

OVERVIEW

NEPAL 2015–2018 / RECOVERY

CRISIS	Nepal Earthquake, 25 April 2015 (and major aftershock on 12 May 2015)
TOTAL PEOPLE AFFECTED¹	8 million people (almost one third of the population)
TOTAL PEOPLE DISPLACED AS OF MARCH 2019	3,913 households (approx. 19,095 people) identified as eligible for relocation grant (1,669 of these households already completed relocation) ²
TOTAL HOUSES DAMAGED³	812,371 fully damaged (to be reconstructed) 61,891 partially damaged (to be retrofitted)
TOTAL HOUSING NEEDS	Over 4.2 million people (based on number of houses damaged and average family size of 4.88)



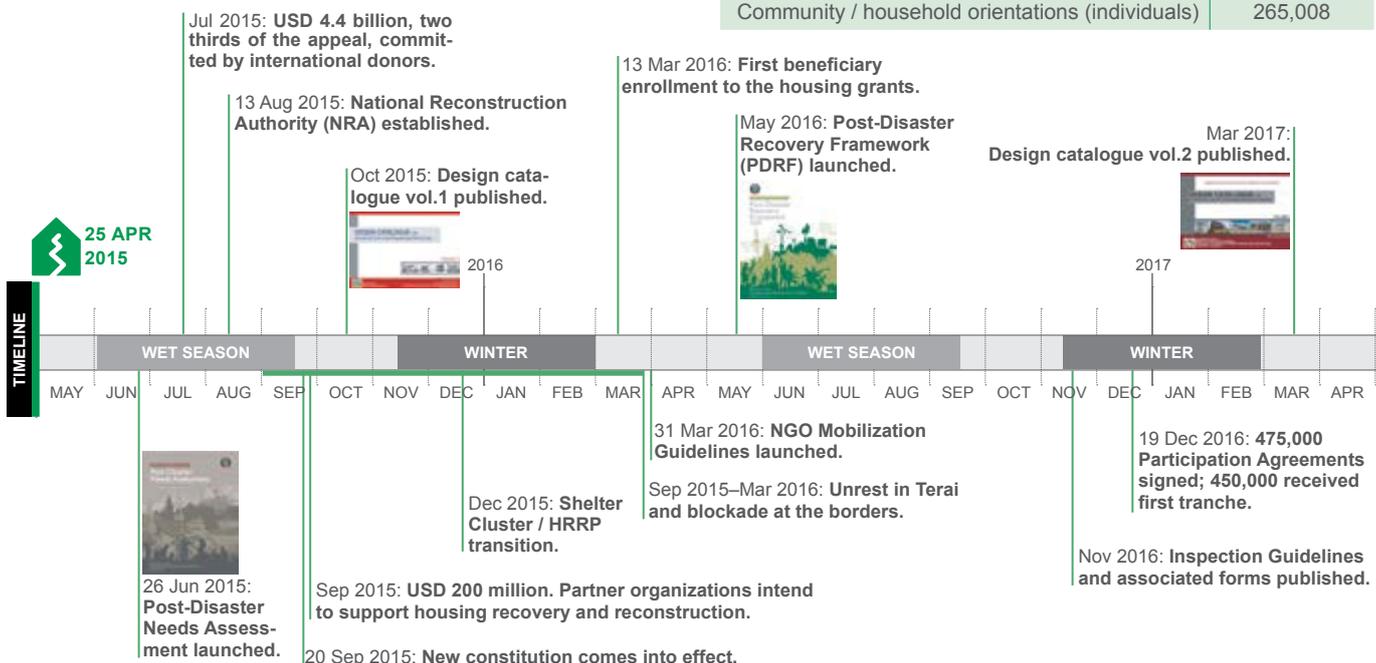
SUMMARY

The Nepal earthquakes of 2015 caused immense damage to housing stock across 32 districts, nearly half of the country. The Nepal Government surveyed over one million houses damaged or destroyed and then implemented an owner-driven reconstruction programme with a generous grant. The case studies that follow reflect on important elements of the humanitarian response and recovery four years after the event and highlight the continued need for recovery activities and coordination. A.17 focuses on coordination and transition from emergency to recovery; A.18 explores the importance and challenges of socio-technical assistance programmes to accompany reconstruction; A.19 describes a response to flooding during ongoing recovery.

RECONSTRUCTION AND RETROFITTING		
As of 8 Apr 2019	Reconstruction	Retrofitting
Houses surveyed	996,582	
Total beneficiaries	824,031	62,655
Partnership agreements	760,210 (92%)	19,716 (31%)
1st tranche received	755,826 (91%)	18,785 (30%)
2nd tranche received	563,225 (68%)	27 (0.1%)
3rd tranche received	401,161 (48%)	NA

SOCIO-TECHNICAL ASSISTANCE	
Coverage by municipalities (5 or more TAs)	55 / 282
Coverage by municipal wards (5 or more TAs)	179 / 2,552
Housing partners currently active	23
Demonstration construction (houses)	1,839
Number of door-to-door visits (households)	158,059
Number of community reconstruction committees formed or supported	2,425
Total number of masons trained (individuals)	66,338
Skills training	44,985
Vocational training	21,353
Support provided through help desk / resource centres / hotlines (households)	63,846
Community / household orientations (individuals)	265,008

¹ Post-Disaster Needs Assessment (PDNA), June 2015, Government of Nepal, <https://bit.ly/2uy1VE0>.
² National Reconstruction Authority (NRA), Land Management and Geological Investigation Section, 18 March 2019.
³ NRA, 15 March 2019, <http://nra.gov.np/en/mapdistrict/datavisualization>.



CONTEXT

See overview A.3 in *Shelter Projects 2015-2016* for more background information.

Nepal is prone to multiple natural hazards.⁴ Following the emergency response to the 2015 earthquake, recovery operations took place in a context of peace-building, political change and rapid urbanization.

SITUATION AFTER THE EARTHQUAKE

The 25 April 2015 M7.6 earthquake killed 8,790 people and injured 22,300. Eight million people were affected (nearly 30% of Nepal’s population).⁵ The biggest aftershock of M7.3 on 12 May killed a further 218 people. More than 800,000 houses were destroyed.

The Post-Disaster Needs Assessment (PDNA) categorized the 32 earthquake affected districts as 1) severely hit, 2) crisis hit, 3) hit with heavy losses, 4) hit, and 5) slightly affected (see map on previous page).

From September 2015 to March 2016, unrest in the Terai region, due to protests regarding the promulgation of the constitution, resulted in a border blockade that had a huge impact on the whole country. Goods, including fuel, could not be brought in or out of the country. The impact on the response and housing recovery was significant, as fuel shortages limited movement and shelter and winterization goods were either stuck at the border or much more difficult to access.

Initially, the government asked international actors to prioritize assistance for 14 of the affected districts.

NATIONAL SHELTER STRATEGY

Following the earthquake, all clusters were activated and began coordinating partners in each sector. The Shelter Cluster was co-led by the government and one international organization. The initial emergency shelter response targeted the most vulnerable and was focused on providing relief shelter and household items, such as shelter kits, tarpaulins, blankets, and bedding materials, or their cash equivalents.

⁴K. Oven et al, May 2017, Review of the Nine Minimum Characteristics of a Disaster Resilient Community in Nepal. Available at <https://bit.ly/2G4eSbU>.
⁵PDNA, June 2015.

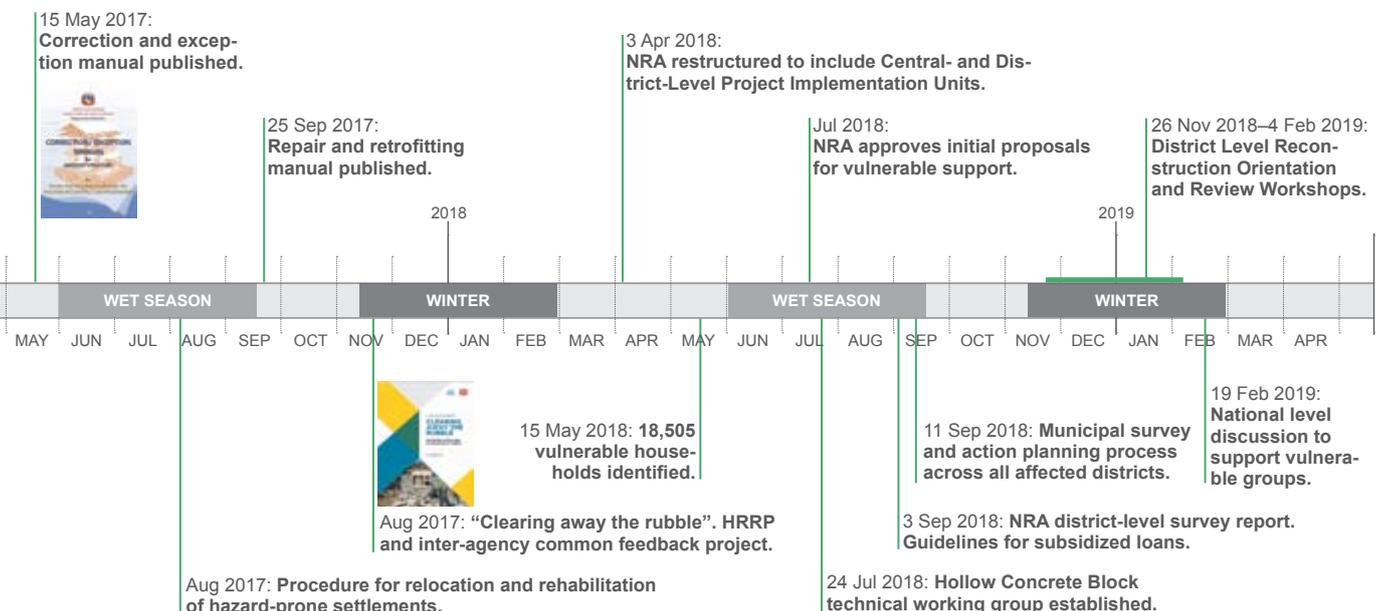
The temporary shelter strategy was based on the government cash grant of NPR 15,000 (USD 136) to affected households to cover some of the labour and material costs of setting up a temporary shelter. In more remote areas, where transport costs were high, corrugated galvanized iron sheets of the same value were provided to households directly.

The early phases of the response also included work on recovery, such as early masons training and model houses. In December 2015, the Shelter Cluster handed over its role to the Nepal Housing Recovery and Reconstruction Platform (HRRP) to support coordination of longer-term post-earthquake recovery programming.

HOUSING RECONSTRUCTION PRINCIPLES

The principles of the housing reconstruction programme were also decided early and were set out in the PDNA, which was published in June 2016. These included:

- Empower communities to take control of their recovery using an owner-driven reconstruction approach;
- Apply integrated safer settlement principles, such as holistic habitat development, with an emphasis on basic services and community infrastructure;
- Promote long-term community resilience;
- Strengthen the local economy through processes supportive of the poor, marginalized and informal sector, to improve their overall living and economic conditions;
- Ensure sustainable and environmentally conscious processes that keep in mind issues such as climate change, natural resource management and scientific risk assessments;
- Ensure that the programme is equitable and inclusive, with equal rights to land and property accorded to women;
- Targeted strategies should address the specific needs of the diverse communities and settlements affected by the earthquakes.



HOUSING AND SETTLEMENT TYPOLOGIES*

Nepal is a geographically diverse country, ranging from as low as 59m above sea level in the Terai region to 8,848m above sea level at the peak of Mount Everest, in just a couple of hundred kilometres. This creates a diversity of housing typologies and settlement styles, which also vary owing to sociocultural factors, such as caste or ethnicity.

In mountainous areas in the North of the country, the traditional style of building is dry-stone masonry and families typically have two houses – one higher up that is used during the summer months and one lower down that is used during winter months.

In historic, core traditional settlements in urban areas (particularly in the Kathmandu Valley but also outside), the traditional style of construction is brick masonry with carved timber windows and doors, often built around courtyards.

In non-traditional settlements in urban areas, the most prevalent form of construction is multistorey reinforced concrete frame with brick infill walls.

In rural, hilly areas, the most common type of construction is 2.5-storey stone or brick masonry with mud mortar. The attic space is used for storing grains and other goods, the ground floor is used for livestock, and the first floor is the living space.

In more tropical climates, houses traditionally were built with timber frames with thatched roofs, and the walls were made of bamboo and mud plaster. This is changing dramatically as access to traditional materials is becoming more challenging, and many families are investing remittances from family members working overseas in construction of reinforced concrete or block houses.

Construction in rural areas is predominantly non-engineered and self-built. The introduction of the National Building Code in 1996 and the Building Act in 1997 launched building code implementation processes across the country. In Village Development Committees, the process was relatively basic and focused mainly on registration of intention to build. In municipalities the process was more complicated and required engineering designs, including inspection visits during construction.

HOUSING RECONSTRUCTION PROGRAMME

The government housing reconstruction programme provided grants in three tranches to contribute towards the costs of earthquake-resilient elements in reconstruction and retrofitting, and to incentivize households to include these elements.

GOVERNMENT RECOVERY GRANTS		
Tranches	Reconstruction	Retrofitting
1st	NPR 50,000 (USD 455)	NPR 50,000 (USD 455)
2nd	NPR 150,000 (USD 1,360)	NPR 50,000 (USD 455)
3rd	NPR 100,000 (USD 910)	NA

The average exchange rate of USD 1 = NPR 110 was used for cost conversion.

As of March 2019, the government had disbursed more than USD 1.63 billion through these grants. Recognizing that the government engineers would be primarily occupied with the inspections associated with these grants, the government requested I/NGOs not to provide households with the reconstruction grant, but instead to support socio-technical assistance (STA). By the end of 2018, coverage of STA provided by



Gatlang in Rasuwa (Photos: HRRP).



Left: traditional style house around courtyard in Patan. Right: traditional timber window frame on a house in Patan (Photos: HRRP).



Left: Chitwan, Khairahani Municipality, Ward No. 2. Right: Sindhuli, Sunkoshi Rural Municipality, Ward No. 6 (Photos: HRRP).



Left: Syangja, Waling Municipality. Right: Lalitpur, Gimdi (Photos: HRRP).



Nawalpur district (Photos: HRRP).



* See 'Housing Typologies: Earthquake Affected Districts.' HRRP, Sep 2018. Available at <https://bit.ly/2Vx9XGJ>.

I/NGOs remained below 10 per cent, with much of the international funding still concentrated in a few areas. This was exacerbated by the focus of shelter actors on the "safe shelter" product rather than critical, process-oriented, interventions.

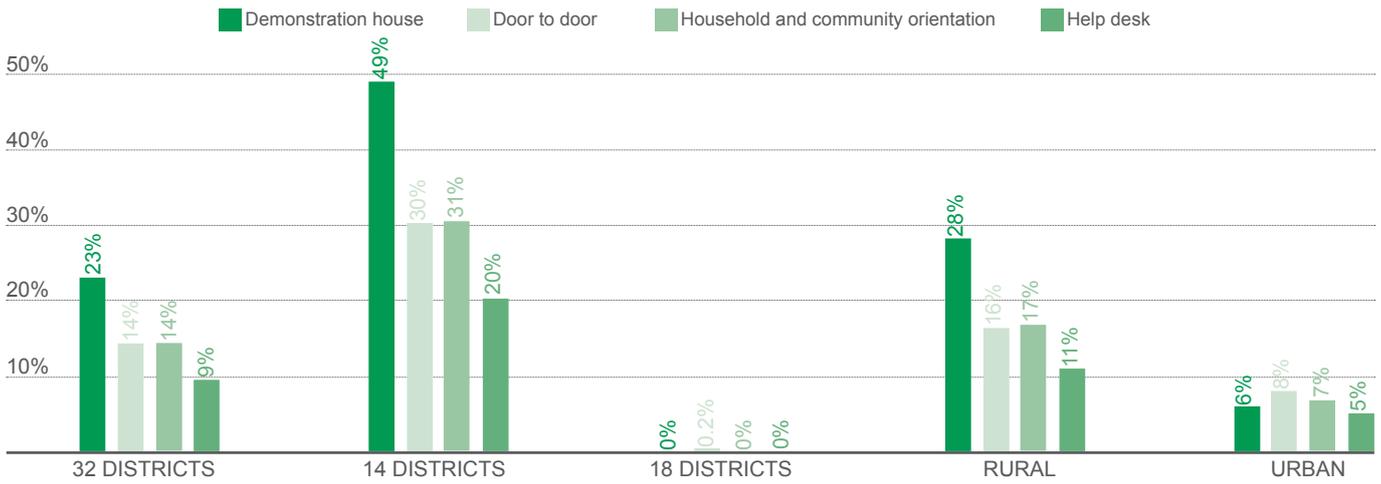
The heavy focus on the 14 most-affected districts left the 18 moderately affected districts with almost no support. Urban areas also received limited to no support from I/NGOs and other recovery actors.

Around USD 2.5 billion were needed for the housing grants alone, with the needs for overall recovery exceeding USD 7 billion.⁶ USD 4.1 billion (two thirds of the appeal) was pledged by international donors. As of Nepal fiscal year 2016–17, just over USD 3 billion had been committed by donors, and only 16 per cent had been disbursed (less than USD 0.5 billion).⁷ I/NGOs contributed an estimated USD 300 million towards the overall recovery (just 4% of the funds estimated for the recovery and response).

⁶ Post-Disaster Recovery Framework (PDFR), available at <https://bit.ly/2N86v1Y>.

⁷ Government of Nepal, Development Cooperation Report, December 2017, available at <https://bit.ly/2QW7R0B>.

COVERAGE OF KEY TECHNICAL ASSISTANCE ACTIVITIES BY % OF WARDS (BASED ON NRA 5W, FEB 2019)



Outside the 14 most-affected districts, very little international support was provided. The HRRP advocated for technical assistance to be spread across all affected areas.

RECONSTRUCTION HIGHLIGHTS

The PDNA and the Post-Disaster Recovery Framework (PDRF) were completed in a timely fashion, which provided the groundwork for the government housing programme, which allocated a generous financial assistance to over 800,000 households, established policies and guidelines, and put in place over 3,000 engineers to provide technical support and house inspection. Over 66,000 masons were trained in earthquake-resistant building techniques. Newly elected municipal officials and bureaucrats were supported to engage and take the lead for the recovery, disaster risk reduction and contingency planning in their respective areas.

In areas where I/NGO partners and donors supported recovery, the quality and pace of reconstruction was improved, however the focus of partners was primarily on the emergency and temporary shelter phases. A top-up grant for the most vulnerable was also provided by some partners. Hazard mapping and identification allowed at-risk households to be supported with associated relocation and resettlement grants.



Although 70 per cent of households were headed by women, the overall engagement of women in reconstruction activities was limited.

SOCIO-TECHNICAL ASSISTANCE

Socio-Technical Assistance (STA) is accompaniment during recovery to people affected by disaster. It should not be a one off activity and should be delivered on an on-going basis, according to need, throughout the process of recovery. It should be designed in a tailored way with different approaches targeted towards different needs.

In Nepal, a minimum and basic STA package was agreed with government and partners. However, there are many other areas where STA can play a role, including in Housing, Land and Property, access to finance, disability services, translation services, employment and livelihood integration. As such, STA quality can vary greatly, monitoring is complex and largely focused on outputs rather than outcomes.

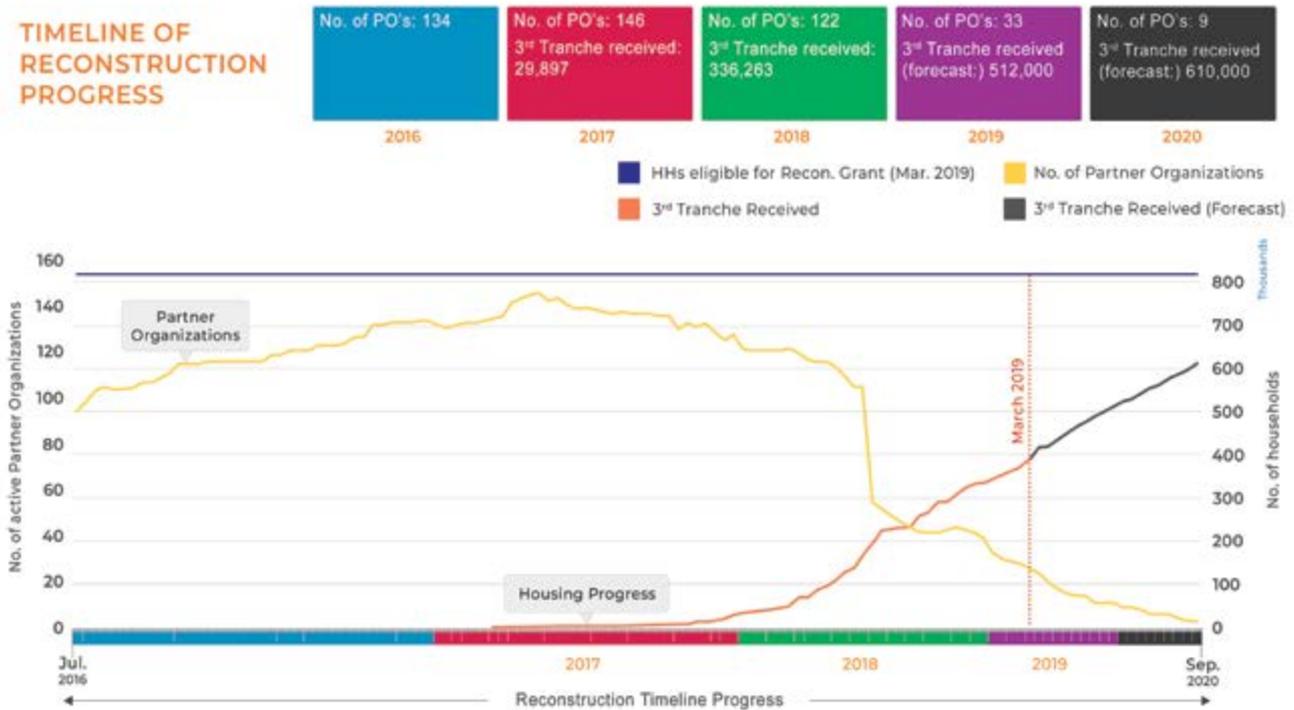
The basic minimum package for STA in Nepal included the following core activities: community/household orientations; mobile technical support / door-to-door support; short and refresher trainings for masons; vocational / on-the-job training for masons; help desk / call / technical support centre; demonstration constructions; and community reconstruction committees set-up and support.

At the time of writing, this package and guidance was being updated.

CORE SOCIO-TECHNICAL ASSISTANCE PACKAGE IN NEPAL



Basic STA package in Nepal. STA is not a one-off activity (Diagram: HRRP).



MAIN CHALLENGES

Despite some significant successes in the government-led recovery programme, there were also some concerns and lessons:

- Nepal has a predominantly female population, and in some districts more than 70 per cent of households are headed by women. Yet engagement of women in reconstruction by aid agencies and government departments was limited.
- There was still a lack of clarity in communication of response policy and guidelines and inconsistency of advice and support between central and field levels. These included false rumours such as blacklists, requirement to follow the design catalogue or one room houses, which caused significant issues at household level.
- There are urban areas across all 32 earthquake-affected districts, including 589 urban wards across 94 municipalities. However, while some urban policies were in place and there were government agencies working on urban issues, there were few I/NGOs focusing on urban recovery issues.
- More than half of the affected houses had taken a loan. This meant that, overall, there was a post-earthquake debt burden of nearly USD 1.3 billion, often taken out at extortionate interest rates (average annual rate of 23%). There were realistic concerns about a looming debt crisis, as households may struggle to keep up with repayments.
- A total of 29 I/NGOs provided the recovery grant (or committed to) to 22,680 households, totalling just under USD 68 million. As of March 2019, over USD 48 million of this had been distributed. Because the systems were not fully set up when I/NGOs started, there were concerns that over USD 20 million may have been duplicated.

DISASTER RECOVERY TIMELINES

Experience shows that the average time frame for recovery from major disasters is 12 years.⁸ Recovery actors often forget this reality and, as was the case in Nepal, the disaster response front-loaded collective resources into the immediate humanitarian phase, without taking realistic time frames into account. No provisions were made for additional temporary shelter support or maintenance over the years. The most vulnerable households that were not able to engage in the reconstruction in most cases remained in inadequate temporary shelters. With most international partners leaving the country, and less accompaniment being provided to navigate the reconstruction process, many households were expected to be living in temporary shelters for the years to come.

Although humanitarian responders should have been prepared for longer time frames, they should also be conscious that in reality there is no rule, and appropriate time frames are set by the affected population and rarely align with responders' own timelines. Households planning their reconstruction needed to align with their projected income, their family concerns, traditions and other factors that were largely not considered by responding agencies. Compounding this was the essential time for the process of policy, procedure and systems development by the government. The impetus for responders to be fast meant activities were delivered or designed before the government systems were in place, or communities ready.

In Nepal most recovery partners were finalizing their activities in 2019 and, based on project approvals, the HRRP estimated that in 2020 less than 10 organizations would remain to provide accompaniment to households in the recovery process. At the height of the response in 2015 there were over 250 shelter partners, while in 2019 less than 40 were active and less than 30 were reporting. However, the households that remained were those who struggled more to engage in recovery, who normally were the most vulnerable and would therefore require more support.

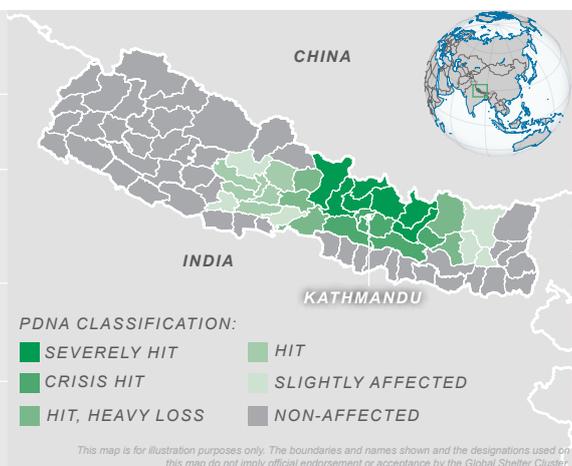
⁸S. Platt, 2017, Factors affecting the speed and quality of post-disaster recovery and resilience.

CASE STUDY

NEPAL 2015–2019 / COORDINATION

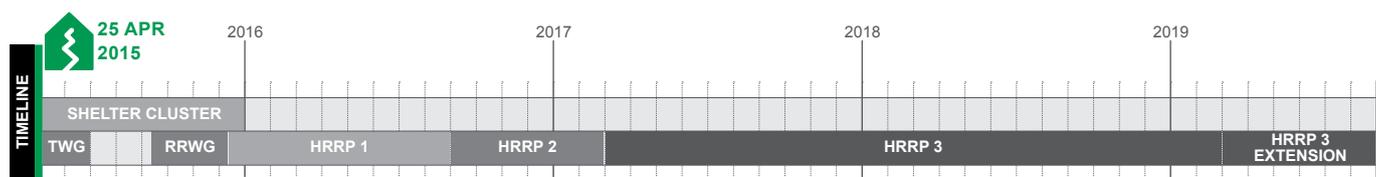
KEYWORDS: Housing recovery, Coordination, Advocacy

CRISIS	Nepal Earthquake, 25 April 2015 (and major aftershock on 12 May 2015)
TOTAL PEOPLE AFFECTED¹	8 million people (almost one third of the population)
TOTAL PEOPLE DISPLACED AS OF MARCH 2019	3,913 households (approx. 19,095 people) identified as eligible for relocation grant (1,669 of these households have already completed relocation) ²
TOTAL HOUSES DAMAGED³	812,371 fully damaged (to be reconstructed) 61,891 partially damaged (to be retrofitted)
TOTAL HOUSING NEEDS	Over 4.2 million people (based on number of houses damaged and average family size of 4.88)
PROJECT LOCATIONS	National level and 32 earthquake-affected districts
PROJECT OUTPUTS	Coordination services provided across 32 districts for a total of 203 partners (45 active as of Feb 2019) Guidance and reports including: joint advocacy report, ⁴ information bulletins, ⁵ and Socio-Technical Assistance package agreed with NRA and partners ⁶
PROJECT OUTCOMES	61% of survey respondents made changes to activities based on information from HRRP 3 district-level events; 99% agree that HRRP 3 technical guidance is easy to access, 86% that it is well researched, and 96% that it is relevant to their work; 82% agree that HRRP 3 has reduced gaps and prevented duplication in reconstruction efforts; 60% agree that HRRP 3 has supported strengthening of emergency preparedness and response



PROJECT SUMMARY

After the Nepal earthquake of 2015 and its aftershocks, coordination of recovery efforts was critical. Since 2015, the coordination platform for these efforts evolved, with leadership from a series of different recovery actors. The case study focuses on two periods of time. First, on the transition of coordination leadership from the Nepal Shelter Cluster to the Housing Recovery and Reconstruction Platform (HRRP) in its first phase. Second, on the HRRP's third phase, under the co-leadership of a national and an international NGO. Through these two snapshots, the case study highlights the impact of initial challenges and successes on later recovery coordination efforts.



- 25 Apr–31 Dec 2015: **Nepal Earthquake Shelter Cluster.**
- May–Jun 2015: **Shelter Cluster Technical Assistance and Training (TWG).**
- 10 Sep–7 Dec 2015: **Recovery and Reconstruction Working Group under Shelter Cluster (RRWG).**
- Dec 2015–Aug 2016: **HRRP 1 (led by two UN agencies).**
- Sep 2016–Feb 2017: **HRRP 2 (led by one UN agency).**
- Mar 2017–Feb 2019: **HRRP 3 (led by INGO). Extension expected until July.**
- Aug 2019–Dec 2020 / Jul 2021: **HRRP 4 (planned). Depends on National Reconstruction Authority timeframe.**

Refer to the expanded timeline on “The Path to Housing Recovery”, available at <https://bit.ly/2UhxkXt>.

STRENGTHS

- + Early start of the Recovery Working Group under the Cluster.
- + Holding technical meetings at national NGO offices helped developing a collective approach to technical assistance.
- + Having a recovery advisor within the Cluster early.
- + High involvement of national organization in HRRP 3.
- + Flexibility of HRRP 3 to adapt to the changing context.
- + Two-year funding was attracted thanks to initial contributions from the HRRP 3 lead INGO.

WEAKNESSES

- Collaboration challenges in HRRP 1 reduced effectiveness.
- Limited translation services led to the exclusion of local actors.
- Assistance was prioritized towards 14 out of 32 districts affected.
- Lower global experience and support mechanisms of the HRRP 3 lead INGO compared to larger agencies.
- Some activities were not handed over to the government.
- Lack of funding diversification.

¹ Post Disaster Needs Assessment (PDNA), June 2015, Government of Nepal, <https://bit.ly/2uyIVE0>.
² National Reconstruction Authority (NRA), Land Management and Geological Investigation Section, 18 March 2019.
³ NRA, 15 March 2019, <http://nra.gov.np/en/mapdistrict/datavisualization>.
⁴ A Joint Advocacy Report: Clearing Away the Rubble, November 2017. Available at <https://bit.ly/2uwwqb8>.
⁵ Available at <http://www.hrrpnepal.org/>.
⁶ Available at <https://bit.ly/2YCPgv8>.



Government grants were used to rebuild a variety of different housing typologies. From load bearing brick masonry and reinforced concrete (above-left) to timber frame and stone masonry (above-right).

CONTEXT

See overview A.16 in this edition and overview A.3 and case study A.4 in *Shelter Projects 2015-2016* for more information.

The Shelter Cluster has been working in Nepal from 2008, contributing annually to the local, district, and national monsoon and earthquake contingency planning process led by the government and the United Nations (UN) Resident Coordinator's Office.

In response to the 2015 earthquake, the Shelter Cluster was fully activated, along with the majority of other clusters. The government designated a ministry for coordination of the emergency response activities, which was supported by other ministries as well as by UN agencies and a number of national and international NGOs working in the country. However, a government authority to lead the recovery and reconstruction was not designated until August 2015.

Post-cluster coordination for recovery and reconstruction has generally been ad hoc, because there is no global support mechanism to replace the cluster system. In many cases, national governments have the capacity to take on this role. Where this capacity is not fully developed, additional support is requested from the international aid community. The development of HRRP Nepal is one such case.

TRANSITION FROM CLUSTER TO HRRP

The 2015 earthquake was a major disaster for the housing sector and was met with a large-scale response by over 300 agencies. The wider humanitarian coordination context favoured ending operations and coordination and closing the cluster system as soon as possible. Deactivation of the clusters was endorsed by the Humanitarian Country Team. Most clusters, including Shelter, were deactivated by December 2015. This occurred in the context of an ongoing winterization response, along with the continuing development and roll-out of government structures for the recovery phase, potentially impacting the transition. Given the scale of the response, it was acknowledged early by the Shelter Cluster, donors, government, and I/NGOs, that coordination support would be required in the long term. Two UN agencies jointly led the Recovery and Reconstruction Working Group (RRWG),

which launched in September 2015 under the Shelter Cluster. Importantly, all the lead agencies of the Cluster and the HRRP were members of the Global Shelter Cluster Strategic Advisory Group (SAG), which promoted linking the emergency shelter coordination with the subsequent recovery.

HRRP PHASE 1

In December 2015, the RRWG transitioned to become the first phase of the HRRP (HRRP 1). HRRP 1 was jointly led by the two agencies and was funded by two donors, with significant in-kind contributions from partners to implement the platform. With both agencies having been involved in the Cluster response, it was an opportunity to ensure a smooth transition of work, staff and knowledge. Coordination under HRRP 1 kept the same structure and core functions as it had under the leadership of the Shelter Cluster. National coordination was led by the same two agencies, and in the districts there was an effort to maintain the leadership from the same organizations that had supported the Cluster. The leading agencies conducted a series of consultations with key partners, including government, NRA, HRRP SAG members and donors, to make recommendations for the following 18 months of the platform, captured in a strategic document.

HRRP PHASE 2

Based on the recommendations, the second phase of the HRRP saw one of the lead agencies at the national level discontinue its involvement. This ensured that there was greater clarity and ownership of HRRP 2 for the remaining lead agency and for platform members. Launched in September 2016, HRRP 2 was mainly funded by one donor and some contributions from the lead agency. As a result of the review process and limited funding, HRRP 2 initially adopted a different model with no technical coordination and with limited district staff. Partners were expected to provide technical coordination capacity. The lead agency collaborated with an existing INGO member of the platform to fill the National Coordinator position. HRRP 2 then began to implement changes to include some technical coordination and increase its district presence. The lead agency discontinued its role in February 2017, and the platform tendered for a new lead agency.



The response and recovery efforts from INGOs were limited in urban areas.



Grants were given in three tranches, based on construction milestones. However, some houses were missed in damage assessments and did not receive the grants.

HRRP PHASE 3

For the third phase of the HRRP, an INGO took the leadership and agreed to co-fund the platform, while sub-national coordination in five districts was led by Nepalese NGO partners. Technical coordination at national and district levels was led by a national NGO with extensive technical and coordination experience from Nepal and the region.

The three-tiered structure (district, national and hub) was shared by all phases of the HRRP. However, the make-up was a bit different, with three types of coordinators at each level: technical, information management, and general. The national level structure of HRRP 3 included some new elements. For example, HRRP 3 included a dedicated staff member and a comprehensive system for monitoring and evaluation; technical coordinators in the districts; operational, finance, IT and administrative staff; a translator; and a recovery advisor. Building on the relationships developed during HRRP 1 and 2, the majority of HRRP 3 staff worked from government offices. The platform maintained a high level of investment in staff capacity-building and development, as part of a platform-wide staff performance management system (non-agency specific).

With the recovery needing significant time, and having regained some trust with partners, donors and government, the platform secured two years of funding for the first time under HRRP 3. This allowed for longer-term planning and the chance to adapt implementation to changing circumstances. In February 2019, the platform was going to be extended for five months and a new phase planned to start in August.

MAIN CHALLENGES IN THE TRANSITION

In spite of the willingness and significant investment in hand-over, there were challenges in engaging partners and establishing government ownership of the Shelter Cluster RRWG, the precursor to HRRP. Significant and frequent leadership changes in the government institutions established to oversee reconstruction were happening, making it difficult to build momentum and agree on longer-term goals and coordination strategy.

In addition, the transition of resources and knowledge from the Cluster to HRRP 1 was challenging, including staff continuity, and some key activities were dropped or redone. Challenges with joint leadership of the HRRP 1 also affected the overall performance of the platform. With limited resources and many roles yet to be fully established, discussions remained at a high level. Challenges of continuity during the transition, phase 1 and 2 of HRRP were exacerbated by uneven sporadic funding.

MAIN CHALLENGES IN HRRP 3

With the September 2017 changes to Nepal's administrative structure, HRRP 3 had to stretch funding levels to provide capacity-building and information-sharing support to the newly elected municipal officials.

The structure of HRRP 3 involved multiple agencies, each with different salary scales, operational support and expectations, and a very large geographical area. This presented challenges to team spirit and cohesion, management, staff security and maintaining a positive reputation.

Differences in communication, language, representation within the Humanitarian Country Team, and management structures created **challenges to meaningful engagement of local NGOs** and limited the platform's impact, although their involvement was key to its success.



International partners were asked to focus on socio-technical assistance, to support households in rebuilding using earthquake resilient techniques

Since NGO deputed staff often had to dedicate time and effort to non-HRRP related work, **there were issues of identity and impartiality.**

The platform lead also faced operational and administrative challenges, including central management of staff hired by multiple organizations, especially in relation to expenditures and performance.

WIDER IMPACTS

The transition from Cluster to HRRP set the scene for recovery and reconstruction coordination support after the closeout of clusters.

HRRP provided technical input for the development of reconstruction guidelines and policies, allowing the government inspection of housing reconstruction for tranche disbursement to be uniform and harmonized.

Advocacy on STA and overcoming barriers to reconstruction led to some agencies changing their programmes to include more or more effective STA. HRRP advocacy also resulted in the government engaging more in co-funding activities, and considering provision of direct STA.

District- and local-level orientations and trainings for I/NGO and government staff reduced the misinformation presented to affected households, increased the knowledge and improved the practices of responders, as well as improved government access to tools for coordination.

Information management provided access to dynamic data and analysis, which was used by government and partners to reduce gaps, avoid duplications and target appropriate responses, based on better defined needs. This resulted in households having better access to more appropriate support.



The HRRP provided coordination services, guidance and advocacy to support reconstruction efforts. The early start of the Recovery Working Group under the Cluster was key in facilitating a transition from the relief phase.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



© Magnus Wolfe-Murray / DFIID



© People in Need



© Jennifer Hardy / CRS

National actors assumed a stronger role in the third phase of the HRRP, which helped developing a shared approach to technical assistance and more local ownership.

STRENGTHS

+ **The planning for the RRWG began early** and was supported by the Shelter Cluster SAG and contributions from the two organizations that co-chaired the group. Partner organizations were also supportive of the group and actively engaged with its activities.

+ **Holding technical working group meetings at national NGO partner offices** provided a space for them to share experience and guidance collectively, and enabled planning for a shared approach to technical assistance and training.

+ **Having a recovery advisor** within the Shelter Cluster providing input at early stages of the response.

+ **In HRRP 3, the number and responsibilities of national organizations** implementing coordination at district and national levels increased, also thanks to the partnership focus of the INGO lead.

+ **HRRP 3 was able to adapt to the changing context.** It did so by expanding coordination support to the newly-established municipal-level government; expanding support to a wider geographic area without additional resources; and supporting training needs of government and partners as gaps arose.

+ **The lead agency of HRRP 3 contributed significant funds to the platform**, which made the timing for receiving donor funds less critical. This then allowed to attract two-year funding.

WEAKNESSES

- **The two lead agencies of HRRP 1 found it challenging to work together**, which impacted the effectiveness of the platform and undermined transition, creating gaps in coordination services at critical moments.

- **Limited translation services led to the exclusion of local actors** and, subsequently, less than optimal communications.

- Although 32 districts were identified as affected, the humanitarian community advocated for partners to work in 14 districts, as outlined by the government. **This left the majority of those affected with little international support.**

- **The global experience, size and support mechanisms of the lead INGO of HRRP 3 were limited** compared to larger agencies. This resulted in a learning curve and an additional workload for staff, who had to balance the operational requirements with national and global expectations, and needs of post-cluster coordination services in Nepal.

- **Some activities and services were not handed over**, especially in the area of communications. For example, the HRRP developed a significant subscriber audience for email updates and for social media. However, with no government counterparts and not enough effort by the platform itself, these initiatives may struggle to be sustained after exit.

- **Up to 2019, most funds came from only one donor**, while more efforts should have been made to attract more diverse contributions.

LESSONS LEARNED

- **The concept of “transition” is not entirely applicable.** In Nepal, coordination for recovery began early (May 2015), but coordination for residual humanitarian needs was also needed in 2017 (e.g. winterization).
- **Recovery specialists should be deployed early** and have provision for remaining beyond the cluster.
- Coordination services for reconstruction need to be **mindful of the time frames for various government activities**. NGOs and donors often make rigid decisions on projects and activities in advance of policies and frameworks from government. **Transition should build on and support government structures for recovery**, not only emergency.
- **Strengthening engagement of a wide range of partners** – especially national organizations – contributes to the effectiveness of the platform. **The higher the degree of impartiality, the more effective** the coordination platform. Agency visibility may hamper this.
- **Longer-term, dependable funding** contributes to better retention of staff (as well as allowing time to support capacity-building initiatives), dependability of coordination services, and establishing and developing key relationships with reconstruction actors. It also aligns better with recovery time frames.
- **No coordination mechanism should operate without translation as a core service.** Having live translations at meetings requires additional consideration and investment. With such investment, the platform could improve inclusivity of meetings at the national level and continue to support document translation.

CASE STUDY

NEPAL 2016–2017 / EARTHQUAKE

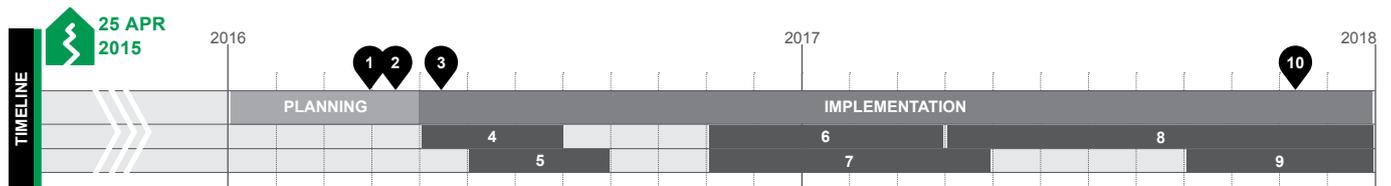
KEYWORDS: Reconstruction grants, Technical assistance, Community engagement

CRISIS	Nepal Earthquake, 25 April 2015 (and major aftershock on 12 May 2015)	<p>PROJECT AREAS</p> <p>CHINA</p> <p>INDIA</p> <p>KATHMANDU</p> <p><small>This map is for illustration purposes only. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the Global Shelter Cluster.</small></p>
TOTAL HOUSING NEEDS*	874,262 households (4.2 million individuals)	
TOTAL HOUSES DAMAGED**	812,371 fully, 61,891 partially	
PROJECT LOCATIONS	Gorkha, Nuwakot, Sindhupalchowk and Dolakha districts	
PROJECT BENEFICIARIES	1,797 households (8,985 individuals) receiving shelter grant and technical support 4,699 engineers, workers and masons trained	SHELTER SIZE 33m² SHELTER DENSITY 6.6m² per person MATERIALS COST PER SHELTER USD 4,000 on average TRAININGS COST USD 251 per day for ToT USD 205 for construction workers USD 635 for vocational training
PROJECT OUTPUTS	1,797 permanent shelters built 260 engineers and technicians trained to be trainers 3,140 construction workers trained 1,299 unemployed youth received vocational training	
PROJECT COST	USD 4,200 per shelter (incl. operational costs) USD 5,054 per household (incl. training costs)	

* Estimated based on average household size and number of damaged houses. ** Source: National Reconstruction Authority (NRA), 15 March 2019.

PROJECT SUMMARY

The project targeted 1,797 vulnerable households in remote areas affected by the 2015 earthquake. It provided a housing reconstruction grant, coupled with technical assistance, to build a seismically safe structure. The implementing organization trained over 3,000 masons on earthquake-resistant, code-compliant construction techniques using local materials, and offered vocational training to over 1,000 youth in the project areas to address the severe lack of skilled labour. A national awareness campaign on the government reconstruction procedures and Build Back Safer messages was also conducted, to reach a wider group of the affected population outside of the direct targeted households.



- 1 31 Mar 2016: Launch of the NGO Mobilization Guidelines.
- 2 Mid-Apr 2016: The National Reconstruction Authority (NRA) begins signing reconstruction grant agreements.
- 3 May 2016: The organization signs a MoU with the NRA to construct permanent shelters and train engineers and construction workers.
- 4 May–Jul 2016: Seven-day trainings to 3,140 masons conducted.
- 5 Jun–Aug 2016: Agreement with the beneficiaries and release of the first tranche of financial support.
- 6 Nov 2016–Mar 2017: Vocational training for 1,299 unemployed youth.
- 7 Nov 2016–Apr 2017: Construction up to plinth level and distribution of the second tranche.
- 8 Apr–Dec 2017: Construction up to roof level and distribution of the third tranche.
- 9 Sep– Dec 2017: Construction or repair of latrines and completion of construction activities.
- 10 Nov 2017: The organization starts another project only focusing on door-to-door technical assistance.

STRENGTHS

- + Effective coordination.
- + Community engagement.
- + The project provided an example for the government programme.
- + Integrated programming at the settlement level.
- + Door-to-door technical support.

WEAKNESSES

- Lack of labour market assessment.
- Limited employment opportunities for masons beyond the project.
- Lack of supply chain engagement.



The project trained masons who were then deployed to work in reconstruction.

For more background information, see overview A.4 in *Shelter Projects 2015-2016* and A.16 in this edition.

NATIONAL RECONSTRUCTION STRATEGY

Eight months after the earthquake, when the emergency response was closing and the Shelter Cluster phasing out, the government officially established the National Reconstruction Authority (NRA) to lead the reconstruction activities. The government strategy was to enable people to rebuild permanent houses by providing conditional cash grants. In view of the lack of adequately skilled labour for large-scale reconstruction, the training of construction workers was prioritized. Initially, guidelines and training for retrofitting were not prioritized.

Through the NGO Mobilization Guidelines and the Post-Disaster Response Framework (PDRF), the NRA provided guidance for NGOs to engage in development or reconstruction activities, requesting them to focus on socio-technical assistance. The government would remain in charge of disbursing the grants. However, as some NGOs were already planning to hand out the grants while the guidelines were being developed, this option was also accepted.

PROJECT COMPONENTS

The organization leading this project submitted a proposal to the NRA for an integrated recovery project with shelter as the main focus, also including WASH and livelihoods. For shelter specifically, three aspects were prioritized:

1. Public awareness on safer construction;
2. Capacity-building of community members and youth for reconstruction work;
3. Technical and financial support to vulnerable families.

TARGETING OF LOCATIONS

This project was implemented in 13 Village Development Committees (VDC) of four of the most affected districts which had already received support from the organization during the relief phase.¹ This allowed to maintain the relationships already established with the same communities. For the reconstruction project, only the most remote areas were selected.

¹ See case study A.7 in *Shelter Projects 2015-2016*.



The project provided a holistic support package including shelter, WASH and settlement-wide interventions. It was implemented in close coordination with a variety of government and non-governmental agencies at the national, subnational and field level.

BENEFICIARY SELECTION

In order to prioritize the most vulnerable households, a pre-selection was conducted from the NRA-approved list in coordination with the local authorities. Beneficiaries were then selected from this list using a scorecard system, which considered several vulnerability criteria. The list was finalized in consultation with local stakeholders and, to avoid duplication, was sent to the government's information management units at national and district levels.

PROJECT IMPLEMENTATION

After the approval of the proposal, the organization signed a tripartite agreement with the NRA and the appointed unit for the implementation of reconstruction activities. Thanks to this agreement, the project gained full support from the NRA, which was otherwise discouraging NGOs from disbursing the grant directly.

The organization had a shelter unit composed of architects and engineers at the national and field levels, supported by social mobilizers at district level. The project was implemented by a local NGO partner (in line with government directives), whose shelter staff included architects, engineers, social mobilizers and trained masons. The organization was responsible for coordination with the Cluster and government authorities, capacity-building of partners and monitoring and quality assurance. The partner conducted construction works, verified adherence to the building code and released the grants in designated tranches. The project included the following activities.

PUBLIC AWARENESS CAMPAIGN. Public awareness activities were implemented through printed brochures and handbooks, short audio and video messages, a song, a short tele-serial disseminated via various media such as television, radio, national and local press and by distribution of leaflets and billboard materials directly to the community.

MASONS TRAININGS. A seven-day practical course developed by the government was given to 3,140 existing masons and construction workers (7% women). A list with trainees' contact details and photograph was provided to the local authorities to maintain a roster of available trained masons.

VOCATIONAL TRAININGS. 240-hour trainings were conducted in partnership with the Council for Technical Education and Vocational Training. The curriculum included theoretical studies and “on-the-job” practical works. Using a scorecard system, pre-tests and recommendations from local authorities, 1,299 unemployed youth (below 40 years in age) were selected for this training (38% women). After its completion, trainees were supported to take a skill test, equipped with construction tools and paired with experienced masons.

BENEFICIARY AGREEMENTS. Selected households signed an agreement with the NGO partner (witnessed by the local authority) for the construction of a permanent shelter and construction or refurbishment of a latrine.

DESIGN AND CONSTRUCTION. Beneficiaries were organized into groups of 10 and invited to attend orientation sessions. These focused on earthquake-resistant houses, including how to procure quality construction materials.

Beneficiaries could choose their house design. Project staff advised them during this selection, explaining financial implications, material choices and the best location for the house. Staff then supported households to lay out the building and provided an orientation to the masons on the chosen design.

During the construction phase, the project team conducted frequent monitoring visits. Mobile masons were also recruited by the partner NGO to support around 10 houses each, preferably within their own communities.

CASH TRANCHES. The project provided a cash grant of about USD 3,000 (NPR 300,000) in three tranches, as per government policy. The first tranche, worth USD 500, was released immediately after the agreement was signed, and covered site clearance and foundation works. The second tranche of USD 1,500 was released after completion of the plinth level. The final tranche of USD 1,000 was provided upon completion of the superstructure up to the roof and the construction of a permanent latrine. Following government guidelines, for households in remote mountain areas an additional USD 500 was provided for transportation.

At the start of each new stage of work, the project teams worked with beneficiaries on material requirements and construction details to ensure appropriate planning and management of the funds. Each group of beneficiaries was required to complete the houses of all of the respective members before the next tranche of the cash grant could be disbursed.

Government engineers certified the construction work prior to releasing the second and third tranches. The release was dependent on compliance with the National Building Code and measured against a checklist developed by the government. Once the official authorization was received, the organization approved the transfer of cash to the beneficiary’s bank account.

SHELTER MONITORING COMMITTEES

Shelter monitoring committees were formed to facilitate the quality assurance process and identify when beneficiaries faced any challenge. The committees consisted of representatives from the ward citizen forum, beneficiaries and other community members, and pre-dated the Community Reconstruction Committees that were later prescribed in the government guidelines.

INTEGRATED PROGRAMMING

Following a holistic approach, water supply projects were also implemented in the same communities. WASH staff provided technical support for the design, placement and construction of latrines and sanitation systems. All households were provided with a new or repaired latrine near their houses. Cash for work and other livelihood activities enabled families to generate more income, which was then often invested in their houses. The health team supported reconstruction of five health posts and seven outreach centres, and the education team rebuilt 13 school buildings in the project areas.

COMMUNITY ENGAGEMENT

Owing to the prior links of the partner with the targeted communities, all decisions related to beneficiary selection, tranche release, procurement, mobilization of workers, daily wages and construction monitoring were taken with the active involvement of the community and other local stakeholders.

Regular meetings were held with local authorities and the community to solve issues around implementation of the project and explain that assistance would only target the most vulnerable.

The shelter monitoring committees helped in resolving issues during construction, supporting the less able with procurement and labour mobilization, ensuring other requirements such as water and road access were available, as well as assisting teams in monitoring quality and progress.

Community action planning was conducted to identify local hazards at the settlement and house levels, and to assess people’s capacities in addressing these issues. A small fund was allocated to enable a selection of quick-impact projects to be implemented. These included:

- Improvement of foot trails and roads;
- Establishment of a drinking water supply system;
- Implementation of a mass hygiene campaign;
- Cleaning and debris removal.

The action planning stimulated a sense of ownership and greater capacity to implement some of the simpler mitigation issues identified. The process was designed to produce ward-level action plans that in turn fed into the VDC development plan.



Vocational trainings included practical sessions on seismic resistant construction techniques. 38 per cent of participants were women.

HOUSE DESIGNS

The organization prepared alternative, more affordable, local housing designs to those in the government's design catalogue, which were then circulated as approved alternatives. The focus was on the earthquake-resistant components. These included vertical and horizontal seismic bands, the use of light materials in gables and roofs, the selection of quality construction materials and workmanship, the appropriate size, proportion and height of the buildings.

Traditional houses in the earthquake-affected areas were usually made of stone masonry with mud mortar and plaster, covered with corrugated iron sheets or occasionally slate roofing. Typically, houses had a footprint of 28–65m² and had three stories. Most people used the ground floor as kitchen and living space, the first floor for sleeping and the attic for storage of crops.

To minimize construction costs and comply with the building code, the new designs were often smaller than traditional houses. Nonetheless, as most of the targeted households had small family sizes, it was easy for them to adapt. Larger families decided to use alternative designs with greater floor plans, expanded the attic floor (without compromising structural integrity), or used the transitional shelters built in earlier response stages for livestock or storage.

MAIN CHALLENGES

DELAYS IN POLICY FORMULATION. As the NGO Mobilization Guidelines were only released at the end of March 2016, activities were delayed for almost five months. This caused additional challenges as the monsoon season was approaching. Specific procedures were adopted to speed up the reconstruction, such as mobile masons, community working groups and additional support for transportation to more remote areas.

AVAILABILITY OF MATERIALS. Due to increased demand caused by the response activities and the difficulties for international imports via the land border between India and Nepal, materials such as cement, reinforcement bar and CGI sheets were scarcely available and very costly. With this in mind, the house designs were flexible and allowed a variety of options to use local materials.

LABOUR SCARCITY. In the target communities there had never been large construction programmes and many young people had left to find jobs abroad, hence there was a real shortage of experienced workers. To address this issue, along with the training, in some locations local labour organizations were engaged to enable construction workers from outside the community to be employed in the reconstruction works.



Designs were flexible and allowed the use of local materials without compromising on compliance with the building code.

WATER AND TRANSPORT IN REMOTE AREAS. In remote communities, water scarcity during winter caused problems for construction activities. This was addressed through the small-scale projects, in coordination with the organization's WASH team. As some of these locations were also far from local markets, transport costs were extremely high. In these cases, the working groups and shelter monitoring committees arranged bulk procurement and transport to reduce costs.

LAND ISSUES. In some cases, families either did not have proof of land ownership or were subject to relocation due to the imposition of a "right of way" to construct new roads. From the first group, some families were referred to the government, while for the second land deeds were signed with relatives or community members free of charge, thanks to the efforts of the project team and the local authorities. For the second group, it was possible to find an agreement with the authorities to realign the road.

HANDOVER AND EXIT

Upon completion, beneficiaries signed possession acceptance certificates confirming that the construction standards had been verified by the authorities. The organization also supported them in the application process to receive additional services from the government, such as electricity and phone connections.

Towards the end of the project, following the shift from the NRA allowing NGOs to provide only technical support, the organization decided to implement another intervention focusing on door-to-door technical assistance, while the government provided the grant. This allowed to reach an additional 7,000 households across five locations in about nine months.

WIDER IMPACTS

This project was one of the first to start permanent reconstruction in the targeted locations, providing a testing ground for a variety of processes later adopted or adapted by the government. Other project components were also widely adopted, such as the mobile masons, the formation of community groups and the additional transportation support for vulnerable families.

Model houses were built to act as a demonstration for the whole community and surrounding areas. Technical suggestions were provided to the wider community through the site office in all project locations. The houses built through the project also served as examples of seismically safer construction techniques for the wider community. Thanks to these measures and the awareness sessions, many other families in the project area were observed to have replicated the techniques and designs implemented within this project.



Door-to-door technical support was provided to households, who were divided into groups of ten to support each other during the construction process.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ **Coordination.** All stakeholders were involved directly at each stage of the project cycle, including government actors at national and local levels, humanitarian organizations and coordination bodies such as the HRRP.

+ **Community engagement** through the organization of groups of households to work together during construction, which fostered social cohesion and helped keeping the momentum. The shelter monitoring committees were also essential to identify early where delays could occur and help the project team to find solutions.

+ **Example and testing ground for the government reconstruction programme.** The identification of existing masons and the training and mobilization of construction workers from the local communities benefited the wider reconstruction campaign. As this was one of the first reconstruction projects, many processes were tested for the first time.

+ **Programme integration with WASH, Food Security and Livelihoods, Education and Health.** This provided a holistic support package within each settlement, addressing interdependent needs. It also generated other positive outcomes, such as the cash earned in livelihood or infrastructure projects being reinvested in the houses.

+ **Door-to-door technical assistance.** The project team provided support through individual house visits to all beneficiaries. This was effective in raising awareness of construction safety and disseminating practical knowledge to the community on simple seismic-resistant construction techniques.



WEAKNESSES

- **A labour market assessment would have been useful** to better understand whether the supply of labour was adequately skilled and, if not, understand the wider range of capacity-building efforts required to improve the construction industry as a whole.

- **Masons had limited employment prospects after the project ended.** Apart from supporting the creation of the district-level roster, there was no further follow-up to track the locations or further employment of trained masons beyond the project timeframe. There was no livelihoods planning beyond the reconstruction phase.

- **Lack of supply chain engagement.** The organization did not work with local suppliers and markets to provide bulk construction materials at negotiated rates. Beneficiaries were free to procure imported materials from any vendor in the local market. A collective approach for price bargaining or testing of materials' quality would have helped.

MATERIALS LIST FOR A TYPICAL HOUSE				
Items	Unit	Qty	Unit cost (USD)	Total cost (USD)
Stone*	m ³	36.61	13.00	-
Cement bag (50kg)	pcs	39.93	8.00	319.44
Sand	m ³	2.78	21.00	58.38
Aggregate	m ³	5.30	19.00	100.70
Wood	m ³	0.93	500.00	465.00
CGI sheet	bundle	3.00	75.00	225.00
Mild steel	kg	527.27	0.72	379.63
Skilled labour	daily rate	176.46	8.15	1,438.15
Unskilled labour	daily rate	184.42	5.80	1,069.64

* Stone is considered to be acquired locally or salvaged.

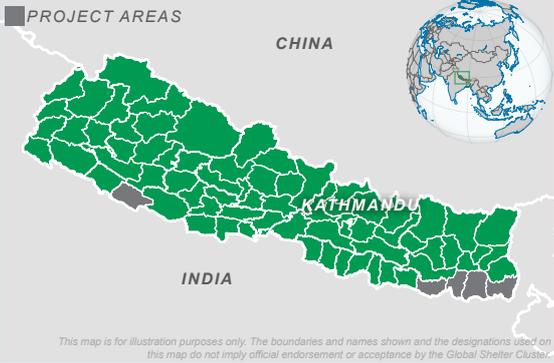
LESSONS LEARNED

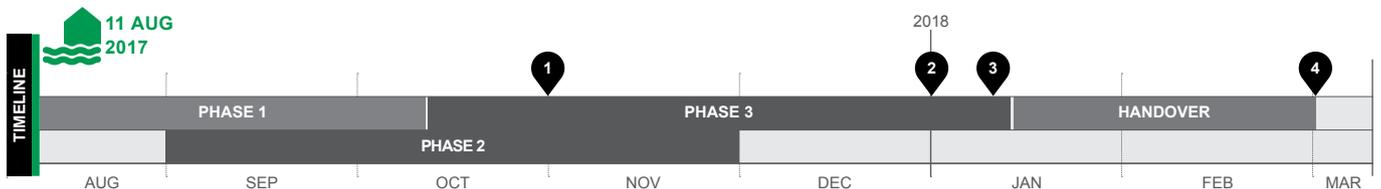
- **Small coverage.** The project provided grants and technical support to a limited number of vulnerable households, using a targeted approach. This was partly because it was implemented ahead of the change in guidance from the government, whereby NGOs had to only focus on socio-technical assistance. Having chosen to focus on technical support would have allowed to reach a much larger group, for a longer term. After this project, the organization chose to move to the provision of technical assistance only.
- **Use local materials and human resources where possible.** Without compromising safety, the use of local materials – such as stone and timber – was much more cost-effective than using imported materials, which were expensive and required prohibitive transport costs for remote areas. Local materials were also more familiar to communities, which helped explaining seismic-resistant techniques without introducing new materials. Moreover, local labour had localized knowledge and relationships with the community, which motivated to achieve higher quality. It was also cost-effective, reducing the need for transportation and accommodation costs.
- **Community action planning should be central to assessing needs.** It was clear that there was greater scope for this approach to encompass a far wider range of stakeholders to more effectively identify the needs and opportunities for early recovery. **Learning from this project made the organization expand its settlement-based approaches,** to reach more actors and link into local government development processes more effectively.
- Data showed that **many houses with moderate damage could have been retrofitted** to achieve seismic safety levels, however this was not identified from the beginning. Early advocacy and action could have stopped many households from destroying what remained of their houses, in reaction to announcements of reconstruction grants.

CASE STUDY

NEPAL 2017–2018 / FLOODS

KEYWORDS: Emergency shelter, Local construction techniques, Training, Links to recovery

CRISIS	Floods, 11 August 2017	
TOTAL PEOPLE AFFECTED	336,695 households* (1,688,474 individuals)**	
TOTAL PEOPLE DISPLACED*	158,575 households	
TOTAL HOUSES DAMAGED**	41,626 damaged, 150,510 destroyed	
PROJECT LOCATIONS	18 municipalities in Morang, Sunsari, Jhapa, Saptari provinces in east Nepal; Banke province in west Nepal	
PROJECT BENEFICIARIES	1,418 households (approx. 6,950 individuals) supported with NFIs and temporary shelter solutions 1,300 individuals trained on bamboo construction	
PROJECT OUTPUTS	1,418 temporary shelters built 400 NFI kits distributed 21 trainings conducted in communities	
SHELTER SIZE	21m²	
SHELTER DENSITY	3.5m² per person (up to six people)	
MATERIALS COST	USD 344 per shelter	
PROJECT COST	USD 393 per household	
		<p>PROJECT SUMMARY</p> <p>This project provided 1,418 flood-affected households with emergency shelters through a participatory process and using locally available materials. Shelters were made of bamboo and included several risk mitigation features. Trainings were conducted on safe construction techniques, resulting in many people upgrading their shelters during and after the project. The organization also advocated and paved the way for longer-term reconstruction programmes, and looked at addressing land tenure issues of landless populations.</p> <p>* Nepal Red Cross Society, Situation Report, 20 Aug 2017. ** National Planning Commission, Post-Floods Recovery Needs Assessment (PFRNA), Nov 2017, https://bit.ly/2Riom6D.</p>



- 1 31 Oct 2017: 15 demonstration emergency shelter units constructed and training implemented.
- 2 1 Jan 2018: 1,341 emergency shelter units constructed.
- 3 10 Jan 2018: Extra 62 units constructed with remaining resources.
- 4 1 Mar 2018: Handover event attended by the government to formally hand over the shelters.

STRENGTHS

- + Risk mitigation through design features.
- + Cultural appropriateness of the materials and design used.
- + Innovative monitoring and evaluation tool.
- + Community participation and complementarity of assistance.
- + Volunteer and community mobilization for improvements.

WEAKNESSES

- Some elements of the shelters were not always preferred due to households' differing backgrounds and low flexibility of the design.
- Limited WASH solutions for remote locations.
- Problems with the bamboo supply.



Heavy rains in August 2017 caused heavy flooding and massive damage to housing. The floods displaced over 150,000 families and damaged nearly 200,000 houses.

© Habitat Nepal

CONTEXT

Nepal has three distinct regions stretching east-west, namely Himalayas, Hills and Terai (plain land). Most of the 2015 earthquake-affected districts lie in the hilly region, while the 2017 floods mainly affected the southern plains, where most of the agricultural production of the country comes from.

Humanitarian organizations working in Nepal in 2017 were mostly involved in ongoing reconstruction programmes after the 2015 earthquakes, while in the flood-affected districts only a few organizations were active in development projects, including the organization implementing this project.

SITUATION BEFORE THE FLOODS

People living along the river banks were highly vulnerable to floods, primarily due to the increase of climatic events and the environmental degradation of the region, compounded by their financial situation that made them unable to adopt mitigating measures (such as relocating to safer areas or retrofitting their existing dwellings). Although disaster preparedness activities had been conducted by various stakeholders (including the government), these proved insufficient to avoid the disaster.

SITUATION AFTER THE FLOODS

In August 2017, days of heavy rain resulted in large-scale flooding, affecting 35 districts and causing massive damage. Despite response efforts by humanitarian agencies and local government, many displaced families were forced to stay in overcrowded locations and makeshift tents, with no privacy nor basic facilities. Many flood-displaced families temporarily settled close to the highways (usually on higher ground), exposing themselves to severe health and safety risks – such as dust, fumes and accidents.

NATIONAL EMERGENCY RESPONSE

A state of local emergency was declared in the affected districts, the cluster system was activated and local and central government, humanitarian organizations, I/NGOs, business groups and communities supported affected populations with emergency items. Damage and needs assessments were conducted by the National Planning Commission. The Flood Reconstruction and Rehabilitation Project (FRRP) was established under the National Reconstruction Authority (NRA) to coordinate recovery activities. The NRA distributed a grant of about USD 98 to each affected household and USD 0.7 per person per day for 30 days, for immediate emergency support.

PROJECT IMPLEMENTATION

The project aimed at enabling affected households to recover as quickly as possible. As such, it was designed in three phases, implemented through local partners and with a high involvement of the selected communities.

PHASE 1 (EMERGENCY DISTRIBUTIONS). Launched immediately after the flood, this phase primarily focused on distribution of NFI kits including tarpaulins, water filters and purifiers. At the same time, donors were approached to secure funds for the construction of temporary shelter units.

PHASE 2 (DEMO SHELTERS). As funds were secured, 56 demonstration shelters were built in several affected communities to refine and agree designs, bill of quantities and construction procedures. Bamboo was chosen as the main material for the frame, as it was locally available, culturally appropriate and cost-effective, as well as relatively easy and fast to assemble.

PHASE 3 (SHELTER CONSTRUCTION AND TRAINING). An additional 1,362 emergency shelters were built in this phase. The construction was accompanied by distribution of tools to selected families and training of the wider community on bamboo construction techniques.

COORDINATION

The project was undertaken in close coordination with the government, particularly with the FRRP. Weekly meetings to review project steps were conducted with government officials, who also participated in the supervision, monitoring and evaluation of the project. Meetings were also conducted with local NGO partners and community representatives, to quickly address project implementation issues.

IMPLEMENTING PARTNERS

As international organizations cannot directly conduct activities in Nepal by law, this project was implemented through existing local partners and other actors with extensive experience in working in the target communities. Partners were responsible to implement specific project activities, such as coordinating with local government, distributing NFI kits, mobilizing the community and building the emergency shelter units.



The project provided emergency shelters for flood-affected populations using local materials, and was implemented by local organizations who trained community members on bamboo construction techniques.

SHELTER DESIGN & TECHNICAL SOLUTIONS

The main frame of the shelter was made of untreated bamboo. Treatment was not used due to the temporary nature of the shelters and the decision to prioritize the scale and timeliness of the response. The walls were made of tarpaulins that could be later replaced, while the roofing was made of corrugated galvanized iron (CGI) sheets.

Some key features of the shelter were as follows:

- **Raised floor** to reduce the effect of seasonal floods. However, some families claimed this was not needed when shelters were built in areas not prone to flooding. The design was adapted following this recommendation.
- **The posts were wrapped** in plastic sheets for the portion underground, to protect them from damp and water and increase the shelter lifespan.
- **Bamboo was used to tie down the roofing sheets** with lashing connections and not nailed down onto the rafters; this way, the CGI sheets were not perforated and could be reused to build permanent houses in the future.
- **The central CGI sheets were raised** by an extra layer of purlins to allow the heat to escape from the gap created at the top. The high ceiling was also aimed at providing better ventilation.
- **Bamboo bracings** were used to strengthen the frame by making it a single structural unit.
- **Connections** were done with lashings.
- **Anchorage** was used to increase stability.



© Habitat Nepal



© Habitat Nepal

Shelters included mitigation features, such as raised floors, bracing and secure connections, and allowed for some adaptations, such as the upgrade of floors and walls.

COMMUNITY ENGAGEMENT

Community leaders participated in the selection process and volunteer mobilization. They lobbied with government officials to leverage the resources to provide permanent housing following this project, especially for the landless and other vulnerable groups.

Family members – including women – participated through various tasks, including distributing NFI kits, safeguarding materials and providing labour to build the emergency shelters.

The shelter design was developed through a workshop with 48 households who were supported in the first phase of the project. After the consultation, the organization's technical team prepared the designs and provided the communities with a step-by-step manual with technical and 3D drawings. Although this process was largely successful, some elements of the design (e.g. windows and one-sloped roof) were not preferred by a few families and more flexibility could have been given to adapt to the intended design (e.g. selecting alternative walling materials).

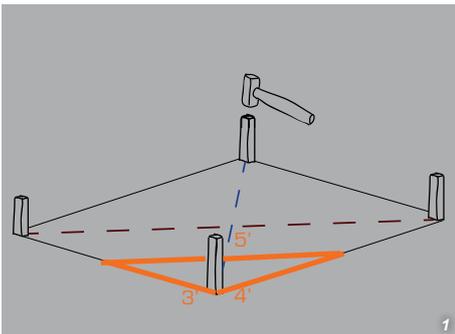
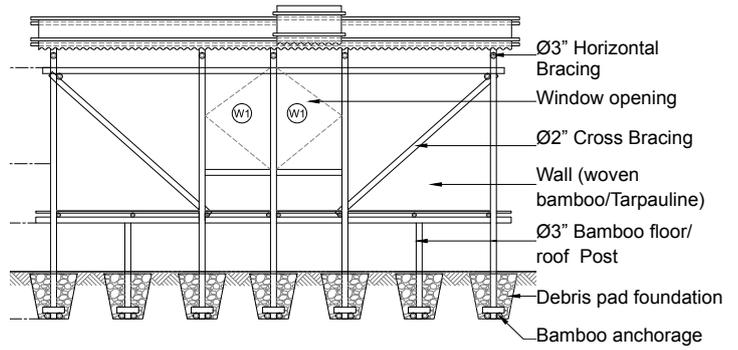
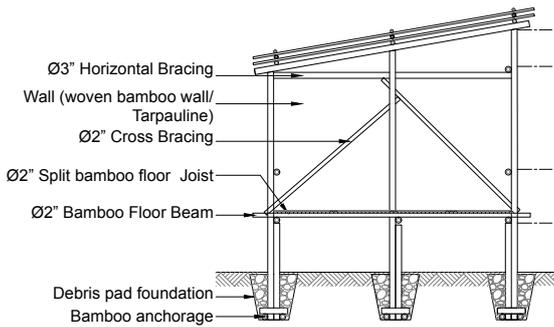
Communities were also mobilized to make improvements to the shelters provided, such as improved mud floor, mud plastering in walls, and substitution of plastic sheeting by bamboo mats.

TARGETING

All decisions regarding project locations and beneficiary selection were taken in close consultation with government officials, local leaders, implementing partners and community members, in order to guarantee transparency and validation of the process.

Families had to be enlisted as flood-affected by the government, have a fully destroyed house and have not received any previous shelter support. As general vulnerability criteria, landless, poor and vulnerable families (e.g. women heads of household, disabled, orphans) were prioritized for this project. Families were selected from diverse communities in terms of caste and ethnicity, including minorities.

The selection process was conducted in three steps. The list of potential beneficiaries was obtained from the local government, then verified through field visits and, finally, validated through meetings with local stakeholders.



Left (1): Draw lines for foundation according to the dimensions and place the stakes in the ground. Check whether the stakes are at right angle using the 3-4-5 method. Centre and Right (2-3): Dig 21 post holes of 2' x 2' in the ground. (Photo credits: Habitat Nepal).



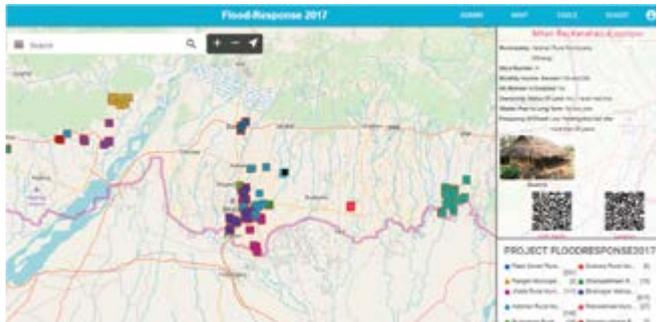
Left (4-5): Cut the required length of floor and roof posts with saw, tie them together and wrap them with polythene sheet. Cut the upper ends of the posts with a fish-mouth cut. Right (6-7): Place and tie floor beams to the bamboo floor post with rope. Place the next set of beams on top, perpendicular to the beam below. Place split bamboo joists above the floor beams. (Photo credits: Habitat Nepal).



Left (8-9): Tie bamboo posts to the anchorage and place it inside the post hole. Then fill the hole with debris and tamp using wooden tamper. Right (10): Tie diagonal bracings of required dimensions to the roof post. Then tie the horizontal bracing at lintel level. Place the roof beams on top of the bamboo post and tie with rope. Place the cross bracings at roof level and then tie to the beams with rope. Right (11): Place bamboo purlins on top of the roof beam and tie with rope. Arrange 8 CGI sheets over them leaving one sheet width vacant in the middle. Tie 2 layers of purlins together to hold the CGI sheets in place. Place the remaining CGI sheet over the void and place 3' length purlins on top of each purlins below to hold the sheet down. This provides air movement inside the shelter through the roof. (Photo credits: Habitat Nepal).

MOBILE MONITORING TOOL

A web- and mobile-based Monitoring and Evaluation tool was used from assessments and baselines to progress reports. It created interactive maps and charts and allowed to collect an open-source database of all supported households, for future use by the organization or other stakeholders as needed.



MAIN CHALLENGES

PROCUREMENT DELAYS. Due to the large quantity of bamboo needed at short notice, the identification of vendors able to deliver was lengthy. To address this challenge, bamboo components were directly harvested from nearby plantations, in consultation with vendors and certified bamboo cultivators. However, for the western region, the bamboo had to be transferred from the east to maintain uniformity in material price – as per requirements from the donor – and because bamboo supplies were not sufficient in the west. Additionally, after the disaster the prices of construction materials spiked, so the organization negotiated with suppliers on bulk quantities to keep prices down.

LAND ISSUES. Many of the affected families residing along river banks did not have proof of ownership. To include them in the project, the organization only requested the tenure status to be validated by the community leadership and local authorities, as the shelter solution was temporary. Around 75 per cent of the shelters were built on government or community land. After the floods, the government developed plans to provide safe land and housing for families living in disaster-prone areas, including river banks. At the time of writing, in some communities in the east 220 families had already received an official letter from the local government to access safer plots of land.

POORER FAMILIES WERE DISADVANTAGED. Extremely poor families – who depended on daily wages – could not attend to their livelihood activities, because household members were involved in the construction and other project activities. To mitigate this negative effect, guidance was given to help families access food distributed by the government and other organizations.



Materials and designs were culturally appropriate and designed in consultation with the affected households. After the project ended, families were already upgrading the shelters and it was expected that these could last for up to two more years, if properly maintained.

EXTENDED LIFESPAN OF THE SHELTERS

The minimum lifespan for the shelters was estimated at six months, but it could be prolonged with regular maintenance, repairs and protection measures from the elements. Early observations after the project was finished showed that beneficiaries were already upgrading the original shelters, for example by substituting worn plastic sheeting on walls with bamboo mats and plastering, improving floor finishes and installing more secure windows and doors. This was mainly because bamboo was a locally known material and households and local masons had been involved in the construction process. A year after the completion of the project, families were still living in the shelters and it was expected that the structures could last for at least another year or two. It was also anticipated that, depending on the longer-term solutions for each household, the temporary shelters would continue to be used, either by recycling the materials or giving alternative uses to the shelters.

LINKS TO RECOVERY

The organization took steps to support flood-affected families in their path to recovery. It hosted an official handover event which drew top government officials, aiming at making the government accountable toward landless and vulnerable families. It advocated for these families to be included in reconstruction programmes from the government. Community leaders also played a vital role in this regard, throughout and beyond the emergency project. As an outcome, both the central and municipal governments allocated funds for 2019 for housing programmes for landless flood-affected families, and the latter also allocated land. Additionally, households who received the emergency shelters were considered for a joint permanent housing project by the Biratnagar municipality and the organization.

WIDER IMPACTS

The emergency shelter project avoided further displacement of the targeted households. This made it easier for other organizations to initiate support projects in the affected communities, such as food distribution and health and sanitation programmes. For example, some communities were supported with toilets and public water taps after the construction of the shelters.

In addition, the use of bamboo benefited local cultivators and businesses, reinforcing the local building culture and the use of an environmental sustainable material. The skills provided to the communities in terms of bamboo construction techniques allowed the families to perform repairs, maintenance and expansions of the emergency shelters and beyond, and could increase future livelihood opportunities.



STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ Mitigation by design: the shelters were elevated on stilts to mitigate flood risk; connections throughout the structure were reinforced with nylon elements that work well with bamboo; the bamboo post footing was protected from water to increase its lifespan.

+ Cultural appropriateness: construction materials were locally appropriate, and the shelter design was contextualized thanks to thorough consultation with the affected families.

+ Innovation: the mobile-based monitoring and evaluation tool was extremely useful during the project and created an interactive, open-source database available to the organization and partners for future projects.

+ Community participation: affected community members, including women, contributed to project activities, from selection to implementation to advocacy. This was successfully complemented by technical and in-kind inputs, and enhanced by the involvement of local government and implementing NGO partners.

+ Volunteer and community mobilization for improvements of original shelter solutions provided.



Affected families were actively involved in project activities and, for example, contributed to the distributions of materials in their communities.

WEAKNESSES

- Relatively low flexibility of the designs. Some elements of the design were not always preferred and the use of alternative wall materials was not sufficiently discussed. This was mainly due to the differing backgrounds and preferences of targeted households. However, issues only occurred in a few cases.

- Limited water and sanitation solutions for shelters built in remote locations.

- Problems with the bamboo supply: transportation costs were excessive for some locations in the west, and delays were faced in material procurement, as normal procedures were followed, resulting in untimely delivery of bamboo and unavailability of vendors.

MATERIALS LIST				
Items	Unit	Qty	Unit cost (USD)	Tot cost (USD)
Shelter Materials				
Bamboo	pcs	70	1.67	116.90
CGI sheets	pcs	9	11.11	99.99
Lashing rope	kg	4	1.97	7.88
Polythene sheets	kg	1	3.25	3.25
Tarpaulin sheets	sq ft	566	0.10	56.60
Tools (to be used by 2 families)				
Hammer	pcs	1	2.46	2.46
Saw	pcs	2	4.92	9.84
Measuring tape	pcs	1	2.46	2.46
Marker pens	pcs	2	0.59	1.18
Shovel	pcs	2	2.95	5.90
Pick	pcs	2	3.44	6.88
Tamper	pcs	1	7.87	7.87
Cotton thread	roll	5	0.20	1.00
Khukuri (knife)	pcs	1	5.90	5.90
Lime (powder)	bag	1	0.49	0.49
Labour				
Skilled mason			7.87	15.74

LESSONS LEARNED

- Use of alternative materials according to the context and household preferences:** bamboo is a renewable resource and is culturally appropriate as construction material in the targeted regions. However, cultural preferences on materials and shelter design should be better understood and **greater flexibility should be allowed** for households to express their feelings during consultation and make modifications.
- A streamlined procurement process should be in place** to prevent delays in the order and awarding phases, ensure availability of the quoted items and mitigate price increases. A systematic distribution flow should also be identified prior to implementation, to ensure smooth and fast release of materials.
- Local government's involvement** in relief programmes helps making distribution processes smoother and reducing implementation challenges, particularly those related to beneficiary selection.
- Secure tenure and permanent shelter solutions are directly related in Nepal.** While it is challenging to work with landless populations, emergency shelter projects should explore modalities to support people regardless of tenure status. Organizations can advocate for households' tenure security, which is directly linked with recovery.

CASE STUDY

PHILIPPINES 2015–2017 / TYPHOON HAIYAN

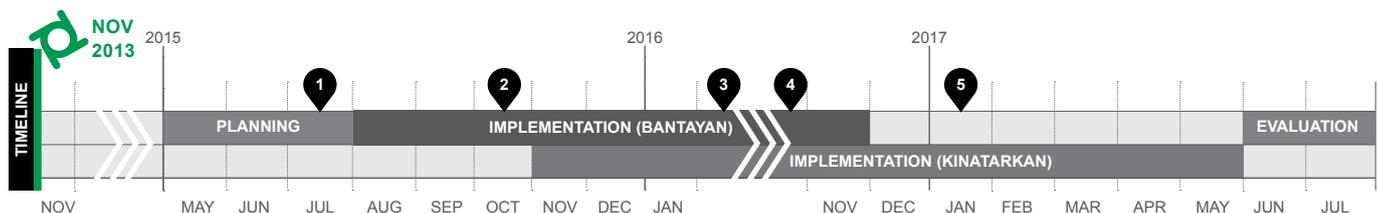
KEYWORDS: Core housing, Disaster Risk Reduction, Construction techniques

CRISIS	Typhoon Haiyan (Yolanda), 8 Nov 2013
TOTAL PEOPLE AFFECTED	3,424,593 households (16,078,181 persons)
TOTAL HOUSES DAMAGED	1,012,790 houses (518,878 partially damaged and 493,912 totally destroyed)
PROJECT LOCATIONS	Municipality of Madrdejos on Bantayan Island and Municipality of Santa Fe on Kinatarkan Island
PROJECT BENEFICIARIES	1,200 households (6,480 individuals, 52% female)
PROJECT OUTPUTS	1,200 core houses and sanitation facilities 380 workers engaged in the construction process (including 36 master trainers and 288 workers trained) 234 workers obtained a TESDA certification 260 workers participated in a workshop on safety and rights in the workplace
OUTCOME INDICATORS	90% of beneficiaries implemented safe construction techniques 80% of craftsmen applied the skills acquired in the training
SHELTER SIZE	17.5–21m² for the core living space (24m ² including bathroom)
SHELTER DENSITY	3.5m² per person (average household size of 5.4)
MATERIALS COST	USD 2,642 per house (including bathroom and sanitation system)
PROJECT COST	USD 5,160 per household



PROJECT SUMMARY

The organization targeted 1,200 of the most vulnerable households on two islands in North Cebu hit by Typhoon Haiyan. It provided long-term earthquake- and typhoon-resistant core houses through a cash-based and owner-driven approach. Houses were made partly of timber and partly of interlocking compressed earth blocks (ICEB) procured from local suppliers. The project provided training in disaster risk reduction measures, safe construction techniques, financial and project management, thereby strengthening community cooperation and support mechanisms.



- 1 Jul 2015: Pilot phase completed. First 15 houses and 6 model houses built on Madrdejos, training of trainers and workers conducted.
- 2 Oct 2015: Review of model houses.

- 3 Feb 2016: Materials procurement and transportation completed.
- 4 Oct 2016: Construction of 593 houses on Bantayan completed.
- 5 Jan 2017: Construction of 607 houses on Kinatarkan completed.

STRENGTHS

- + High beneficiary participation with an efficient support and monitoring system.
- + The conditional cash transfer approach, the flexible house design and the inclusive implementation process empowered beneficiaries and fostered a sense of ownership.
- + Effective targeting process and do-no-harm approach.
- + The project was multisectoral and addressed crosscutting issues.
- + Cost-effective, durable, structurally safe and comfortable construction technique.

WEAKNESSES

- Small scale project compared to the level of needs.
- Some families could not finance the transport of materials, so the organization had to cover the costs.
- Many households could not extend their houses with good-quality structures.
- Some families needed a lot of support and monitoring in the construction process.
- Professional logistics and procurement expertise was recruited late.

For an overview of the situation before and after the disaster and the national shelter response, see A.23 in *Shelter Projects 2013-2014* and A.8 in *Shelter Projects 2015-2016*.

SITUATION AFTER THE TYPHOON

Many international humanitarian actors responding to Haiyan focused on the islands of Leyte and Samar. However, within the three municipalities of Bantayan, Madridejos and Santa Fe in northern Cebu, 93 per cent of the houses were either totally or partially destroyed, due to their poor workmanship and maintenance. Even though the population was exceptionally resilient and proactive in rehabilitating their houses, many people lacked the financial means and the technical know-how to rebuild without external support. Insecure land tenure rights, as well as very limited livelihood options, made it even more difficult for vulnerable families to recover. Almost three years after the typhoon, only about one per cent of the government housing for people in coastal danger zones had been achieved, and none had been initiated in the target areas.

PROJECT IMPLEMENTATION

Many houses in the project locations were irrevocably damaged. As such, although repair and retrofitting would have reached more people than building anew, it would not have been very effective. Therefore, the organization decided to focus on the most vulnerable and build 1,200 core houses with sanitation facilities on two remote islands: Bantayan and Kinatarkan. The project was implemented with conditional cash grants and close technical coaching of the beneficiaries, including both theoretical and on-the-job trainings in earthquake- and typhoon-resistant construction techniques.

The project team was composed of an international technical delegate supported by a local project manager (architect) and a local construction manager (engineer), plus four local field engineers. A local WASH team implemented the sanitation components of the project. A social team was also recruited including a social delegate and a team of four community mobilizers. The technical and social teams were supported by a chief delegate and a finance and administration delegate.

The targeted households led the construction of their own house, including the procurement of some of the materials, the hiring of workers and the supervision of works. In many cases, women managed the construction, since men were usually working elsewhere. The organization supported the beneficiaries with bulk procurements, financial and management

training, monitoring and the establishment of bank accounts. Each barangay was split into groups of 7 to 10 households, based on their geographical proximity. The groups worked together, shared information and gave each other support throughout the construction process.

The cash grants for materials and labour costs were split into four tranches worth 10–35 per cent of the total construction costs and transferred to the beneficiaries' bank accounts after all members in the group had reached the same construction step and certificates of completion were issued. This reduced financial management burden and ensured mutual support between group members. Five per cent of the total amount was disbursed after all works had been completed. The workers were supported and supervised by master trainers and field engineers, who gave practical support and monitored each stage of the works. Once all construction stages were completed, a final inspection was conducted.

CORE HOUSES

Two basic core house options were selected, both developed on locally rooted, simple and cost-effective designs that beneficiaries could choose from:

- Hybrid structure made of ICEB (Interlocking Compressed Earth Block) and timber;
- A full-timber structure.

Mostly for durability and aesthetic reasons, all beneficiaries chose the ICEB-timber version. This was a cost-effective construction method (only USD 60 more costly than the timber house), structurally more resistant and environmentally friendly than other building methods, and using locally available materials. The decision to use the ICEB technology was mainly based on structural safety and durability considerations and was verified by engineering calculations. The model met the specific requirements of the donor on spatial standards and safety (from earthquake and typhoon), while keeping the costs as low as possible.

The design was developed from a common rural house – which usually includes a main private room and an adjoining room used as communal space – and was flexible to allow people to make extensions or adjustments according to their needs (e.g. the design and position of the windows/doors/porch). In compliance with national regulations on accessibility, adjustments in construction were provided when a family member had a physical disability.



A year and a half after the typhoon, many houses were in very poor structural conditions. For this reason, repair and retrofitting assistance was not an option, although this would have reached more people because of the lower costs.



The project provided core houses with light-weight extensions, based on a common rural design. The houses included a gutter and a water tank for rainwater collection.



The construction was owner-driven and implemented via conditional cash transfers. People could choose between a full-timber house or a hybrid ICEB-timber structure.

TARGETING

Prior to the start of the project, the organization conducted a comprehensive mapping of the target area and existing actors. The selected barangays were not covered by any other actor and were mainly rural or peri-urban, which was in line with the housing design chosen by the organization. Within the targeted communities, the organization provided shelter to 29 per cent of the population and covered the most vulnerable households in the areas.

COMMUNITY ENGAGEMENT

Reconstruction committees were established to provide feedback and inputs throughout the project. On Bantayan Island, communities used weekly listening desks and feedback boxes. On Kinatarkan Island, the organization conducted community meetings and periodic feedback meetings with the beneficiaries to address construction issues and concerns.

The committees were also responsible for community-wide projects, implemented in the target areas with the aim to reduce community tensions between the housing beneficiaries and the rest of the population.

The combination of the people's involvement in the construction process and the cash modality led to the substantial reduction of construction time per house (three to four weeks) compared to initial estimations based on organizational benchmarks (six weeks).

LAND TENURE

Most households had no legal status or proof of ownership. To address this, the organization contracted a local development NGO with extensive expertise in solving land rights issues for fisher folk communities. The NGO developed a land tenure map and supported over 1,000 households in securing proof of ownership or by creating usufruct agreements with the landowners for a minimum of ten years. Households located in an unsafe zone – or where no agreement with the landowner could be reached – were supported for relocation to host families or smaller group resettlements in communal or private plots identified by the local stakeholders. The regular exchange with the local government was also important for the clarification of land issues.

As part of its exit strategy, the organization contracted an environmental NGO which developed a legal training to help families secure their land rights after the expiration of the usufruct contract.

TRAINING AND DRR COMPONENTS

Thanks to the training component, unskilled workers gained additional skills for future livelihood opportunities. 234 construction workers obtained a certification through a widely recognized national organization. To qualify for the certificate, the workers had to contribute to the construction of several houses and participate in the training for at least six months. In addition to the certificate, workers received a construction starter toolkit and participated in an entrepreneurship seminar. More than 80 per cent of the trainees obtained this certification and could thereby improve their job opportunities beyond the project. Furthermore, 72 per cent of the community members who implemented additions to their houses considered the safe construction techniques taught in the training.

Based on an international study on Disaster Risk Reduction and Management, the organization carried out a stakeholder consultation on Bantayan Island. A wide range of DRR measures were suggested to increase the resilience of the communities, some of which were adopted for the project (e.g. the Safe Shelter Awareness trainings organized for all community members).

TECHNICAL SOLUTIONS

According to the calculations of an independent engineer, the core structure of the house was expected to last a minimum of 20 years and was built to resist seismic loads of up to 7.2 on the Richter scale and up to 200km/hr wind load. The buildings fulfilled the requirements of the National Structural Code and took into account a safety margin for construction skills and management. While tests were conducted on the materials, a full-scale test of the house performance was not done.

The compressed earth blocks had a ratio of 90 per cent limestone to 10 per cent cement. Widely spread in the region, this technology was already in use in the Visayas prior to the project. It can achieve high strength without requiring specialized skills and resources. The blocks were also very cost-effective, being produced mainly with local materials.

The adjoining room was made of lightweight materials with a coco-lumber structure and amakan walling. Termite treatment and protection of the coco lumber were critical to ensure durability. This part was also designed to be typhoon- and earthquake-resistant, but was expected to last less than 10 years. The coco lumber and walling could be easily replaced or adapted. In fact, many families changed some of the design or built extensions for small kitchens and dining areas.

MATERIALS AND SUPPLY

Materials were mostly procured directly by the beneficiaries, who organized themselves into groups for joint purchases. However, the ICEB blocks and other materials needed in big bulks (sand, gravel) were purchased by the organization, who negotiated with suppliers in order to fix best prices and to ensure adequate supply. Due to the limited capacity of some of the supply companies (especially for coco lumber), the organization put the families in touch with new suppliers. This ensured timely delivery of materials and spread the benefits through the local market. The organization’s engineers conducted quality checks of the purchased material and advised the households to pay the suppliers only once all materials had been delivered in the required quality.

The activities on the remote Kinatarkan Island required a more complex and costly logistics set-up than initially planned, as no transport facilities, electricity nor hardware stores were available. At the time of preparing the project, the organization had an agreement with suppliers to deliver the materials to the island. However, once the companies realized the cost implications, they pulled out, so the organization had to organize transport and distribution on the island on its own. This included the construction and management of a warehouse, a makeshift jetty and specialized maritime transport solutions, causing delays and requiring increased resources. Additionally, some beneficiaries were not able to cover the transport costs for the materials, and the organization had to increase its contribution.

A significant challenge was the official ban on coco lumber and limestone, which resulted in shortage of supply and increased costs of the two main construction materials. Additionally, one of the main suppliers of ICEB went bankrupt halfway through the project, so the organization had to search for a new supplier. Although these challenges caused delays, the project was completed within the overall timeframe.



Courtesy of the organization

The adjoining room was made with a structure in coco lumber protected with a termite treatment, and an amakan walling. This could be replaced or re-design, so some families could built extensions for small kitchens and dining areas.

EXIT STRATEGY

As this project was the last for the organization in response to Haiyan, the phasing out was planned gradually for one barangay after another. Project staff were trained to increase their chances to find another job. The certified training component and the links with local organizations (especially with regards to legal advice for land tenure rights) also contributed to a smooth exit.

Additional employment support for the workers was provided through their organization into groups and the linkage with a local construction workers’ NGO. This NGO advocated for issues related to workplace safety, rights and minimum wages, whilst supporting the workers to sign contracts within their communities. The lead organization facilitated this linkage and coordinated the establishment of local chapters of the NGO at the municipal level.

WIDER IMPACTS OF THE PROJECT

The knowledge and skills gained by the trained workers, beneficiaries and the larger community contributed to the construction of safer houses and were expected to continue to do so in the future. Assessments showed that around 80 per cent of the local workers applied the knowledge acquired in the training courses in other work. The skills also increased the local adaptive capacities within the community and led to improved job opportunities. As a result, the project contributed to empowering people, improving their livelihoods and fostering a sense of pride and self-worth.

The project also improved beneficiaries’ land tenure security. Beyond the target households, the organization initiated procedures to clarify the rights of groups whose land was claimed by large landowners. After termination of the project, the Department of Agrarian Reform took over this responsibility.

Finally, as a result of the successful use of the ICEB technology in the project area, the national government also began to consider the promotion of this building technique for its reconstruction projects.



A “Beneficiary Guide and Construction Handbook” with 3D drawings was used to show the households how to build their new house.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- + **High beneficiary participation, combined with an efficient support and monitoring system**, resulted in high productivity and decreased the construction time.
- + **The conditional cash transfer approach** – coupled with training and technical assistance – **empowered the beneficiaries** who could manage the construction themselves. **The flexible house design and inclusive implementation process also fostered a sense of ownership** and commitment among the beneficiaries.
- + The most vulnerable households in very remote locations were reached thanks to an **effective targeting process**. Community involvement and the focus on do-no-harm principles **minimized conflicts over the provision of houses** to only the most vulnerable families.
- + The project was multisectoral and **addressed various crosscutting issues** (land tenure, gender, capacity-building, livelihoods, water and sanitation) to ensure its sustainability through the combination of both “hard” and “soft” components. This was also possible thanks to a **strong partnership with civil society groups and local organizations**.
- + The hybrid construction system was **cost-effective, durable, structurally safe and provided a comfortable living environment**. It was chosen by all the beneficiaries.



Core houses were built to resist typhoons and earthquakes and have an expected lifespan of 20 years for the core and 10 for the extension.

WEAKNESSES

- **The project could only reach a relatively low number of beneficiaries** compared to the needs (29% of the total affected population in the targeted municipalities and about 0.12% of the total in the country), mainly because of its high costs. However, the project covered 100 per cent of the most vulnerable households affected by Haiyan in the project area.
- Because of lack of financial resources, **some beneficiaries were not able to finance the transport of the building materials**, causing the organization to increase its contribution for transport costs.
- **Many households were not able to extend their houses** with good-quality structures, due to their limited financial means. Though they did apply the safe construction techniques learnt in the trainings, they were unable to use stronger materials and techniques that implied high costs (e.g. concrete). For some, even the maintenance or finishing works on the house – such as painting and protective coating – was limited to the exterior wall.
- Although the project intended to be owner-driven, **some families needed a lot of support** for monitoring the workers and the house construction process, and more encouragement to make design decisions about their house, based on their particular needs and wishes.
- Professional **logistics and procurement expertise was recruited late**. This was needed from the outset, considering the high logistical challenges encountered.



The project was implemented on a remote island, which caused several logistical challenges, especially after suppliers decided not to deliver to the island.

LESSONS LEARNED

- **The formation of groups of families** who built their houses together resulted in positive outcomes in terms of production, quality, community cohesion and solidarity.
- The transfer of knowledge through a **combination of technical assistance, theoretical and on-site practical trainings and close monitoring** was important to ensure effectiveness and a real enhancement of capacities. Trainings should be linked with livelihood opportunities and, where possible, the **collaboration with local associations and/or national technical training institutes** should be encouraged, to open opportunities for workers.
- **Comprehensive feedback mechanisms** with an effective response management demonstrated the importance to not only focus on the outputs, but also on the approach and the processes.

CASE STUDY PHILIPPINES 2016–2018 / TYPHOON HAIYAN

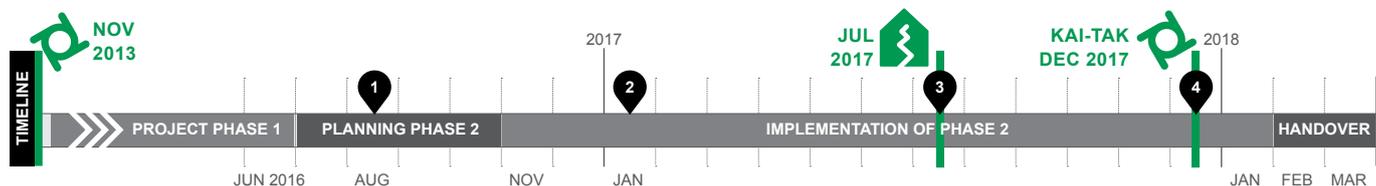
KEYWORDS: Shelter repairs, Structural assessment, Capacity-building, Cash and Technical Assistance

CRISIS	Typhoon Haiyan (Yolanda), 8 Nov 2013
TOTAL PEOPLE AFFECTED	3,424,593 households (16,078,181 persons)
TOTAL HOUSES DAMAGED	1,012,790 houses (518,878 partially damaged and 493,912 totally destroyed)
PROJECT LOCATIONS	Ormoc, Leyte island
PROJECT BENEFICIARIES	516 households (approx. 2,580 individuals)
PROJECT OUTPUTS	516 shelters repaired
SHELTER SIZE	Varied, as only a core section of the house was repaired
MATERIALS COST	USD 302 per shelter (materials only)
PROJECT COST	USD 464 per household



PROJECT SUMMARY

The project supported 516 typhoon-affected households with shelter repair assistance. With lessons learned from the first phase of the project, which started shortly after the typhoon, the second phase gave homeowners and technical staff options to use cash grants effectively, in order to improve one core room of the existing house to withstand future forces such as earthquakes or strong winds.



- 1 Aug 2016: Review of the shelter repair assistance approach in Phase 1.
- 2 Jan 2017: Coco lumber moratorium declared by the Philippines Coconut Authority, lasting three months.

- 3 Jul 2017: 6.5 earthquake hits the city of Ormoc, displacing over 4,000 households.
- 4 Dec 2017: Tropical storm Kai-Tak hits large areas of the Visayas, causing landslides and flooding.

STRENGTHS

- + The project was able to learn and adapt from its first phase.
- + Cost-effectiveness.
- + Households were always active agents in the implementation.
- + Clear and transparent beneficiary selection process.
- + Conveyed the importance of prioritizing structural improvements.

WEAKNESSES

- Cumbersome and lengthy procurement processes.
- The budget ceiling limited the interventions.
- Limited technical capacities available at field level.
- Limited exchange of lessons learned.
- In some cases, the option-based approach was compromised.



Many houses in the target areas were damaged to varying levels due to the typhoon. The project provided an option-based repair approach to upgrade all the key components of one core room of the house.

For more information on the situation and shelter response after Typhoon Haiyan, see overview A.23 in *Shelter Projects 2013-2014* and A.8 in *Shelter Projects 2015-2016*.

SITUATION IN ORMOC

Ormoc is exposed to geological and climate-related hazards such as earthquakes and storms. A high reliance on farming and agricultural labour results in uncertain household incomes that vary with seasonal fluctuations and market prices. Insecurity of land tenure, low quality housing and inadequate access to water and sanitation also contribute to households' vulnerability.

SITUATION AFTER HAIYAN

Typhoon Haiyan affected most of the population in Ormoc. Most houses were constructed with light materials (i.e. timber and woven split bamboo) and the structures did not incorporate adequate bracing or other disaster-resistant construction techniques, with roofs of thatch or light corrugated galvanized iron sheets (CGIs). Houses built with concrete and masonry fared better, but most of the rest suffered varying degrees of damage. Over half of the houses were partially repaired quickly, to make them habitable (e.g. damaged roofs were covered with tarpaulins), but remained susceptible to future storms.



Most houses built in lightweight materials failed during the typhoon and were quickly repaired to be re-inhabited by the affected households.

PROJECT STRATEGY AND GOALS

The programme was implemented by a large national organization supported by an international organization and in partnership with a technical NGO. It consisted of two main phases:

1. Relief and early recovery, 2013–2016;
2. Recovery, which started in July 2016 and included shelter repair assistance and core housing construction. This case study focuses on the shelter repair component of this phase.

The shelter repair project aimed to support **households with only partially destroyed homes** or who had been able to partially repair or rebuild their shelters since the typhoon. Often, households lacked both the financial means and the technical knowledge to rebuild their home whilst making them resistant to storms in the future. The shelter repair assistance addressed this gap, by providing material and financial support, as well as technical guidance. This approach allowed to reach more households by investing a smaller amount compared to core shelter construction.¹

Due to organizational policies, **the budget available for housing upgrades was limited** to roughly USD 485, which was not enough for a full, code-compliant, structural retrofit. However, in prioritizing key structural upgrades, the aim was to reduce the likelihood of damage or collapse in moderate earthquakes or typhoons. With this objective, the organization partnered with an NGO with experience in disaster-resistant housing, to revise and improve the shelter repair component from the first phase. **The approach was to strengthen a core room instead of different elements in the entire house.** In the core room, each component – from the foundation to the posts, walling, truss and roofing – was enhanced according to minimum standards defined by the partner NGO, which developed technical guidelines specifically for this project.

¹ For example, see projects implemented in the country in previous editions: A.27 in *Shelter Projects 2011-2012*, and A.09, A10 and A.13 in *Shelter Projects 2015-2016*. Project costs per household ranged between USD 1,000 and 2,600. For this project, the core house had a cost of USD 1,367 (almost three times as much than the repairs cost).

<p>WOOD BRACING ✓</p>  <p>Wood bracing is more susceptible to deterioration and poor connection than metal bracing or sheathing.</p> <p>MATERIAL GUIDE</p> <ul style="list-style-type: none"> 4" x 4" timber braces 4" x 4" posts at ends of frame 	<p>METAL BRACING ✓✓</p>  <p>This scheme is suitable for wall lines with non-structural coverings, i.e. Amakan, plywood which are less than 3/8 inch thick.</p> <p>MATERIAL GUIDE</p> <ul style="list-style-type: none"> 18 gauge (min.) GI metal 4 cm wide (min.) strip both sides of the wall 	<p>PLYWOOD SHEATHING ✓✓✓</p>  <p>Plywood (marine type) is used to cover the wall over the full height. The plywood is nailed to top and bottom beams, studs/posts at the edges and along the intermediate studs.</p> <p>MATERIAL GUIDE</p> <ul style="list-style-type: none"> Good quality marine plywood. Minimum thickness of 1/2".
---	---	--

A partner NGO, which specialized in disaster-resistant design, developed guidelines with three steps for all components of a house to be repaired.



The partner evaluated all the houses repaired through the project, confirming that all had been strengthened after the intervention.



Cash was distributed in two tranches to achieve the repairs, following technical assessments of the quality of the works conducted.

OPTION-BASED APPROACH

Shelter repair needs in the target areas were very diverse. Given that many households had already started repairing their homes without technical guidance and because of the limited funds available, an **option-based approach** was used. The guidelines listed three different options for each component of the house, each representing an improvement in terms of resistance compared to the previous one. Instructions on minimum material requirements, minimum dimensions and connection methods were included. The option-based guidelines and decision-making tool made sure **all components of the core room were at least upgraded to the level of the first option** before any further investments could be made. With this approach, households had less flexibility to decide how to use the assistance, but the decision-making process was more transparent and the assistance more standardized.

TARGETING OF LOCATIONS

After two years since the typhoon, targeting could be more detailed and accurate compared to the relief phase. Locations were chosen based on the Ormoc City Government's list of barangays² with most damaged houses, cross-referenced with those where no NGOs were reported to be active. The six barangays selected were then visited again. The barangay officials were interviewed and for each barangay a household survey was carried out in one sample purok.³

BENEFICIARY SELECTION

Trained volunteers conducted a household interview and an initial assessment of the house damage. After that, a project engineer visited all affected houses to better define the damage category. The engineers' assessment was used to allocate houses to core shelter or shelter repair assistance, depending on the level of damage (total or partial respectively).

Data was analysed and the selection was based on a score calculated from 14 vulnerability criteria. Scores were compared across all six project barangays and a cut-off was defined, based on available resources.

Lists with the results were posted in the communities, along with feedback boxes and instructions on the process and the different mechanisms to submit questions or complaints.

Once complaints were followed up and the vulnerability scoring data was cleaned, final beneficiary lists were posted again. It was found that while the initial assessment by volunteers raised concerns among some community members, the engineers' assessments were more widely accepted.

² Barangays are the smallest administrative divisions in the Philippines.

³ Puroks are subdivisions of a Barangay (i.e. zones).

COMMUNITY ENGAGEMENT

After initial coordination meetings with the city government and barangays, a general assembly session was publicly announced and held in all six project barangays. This was the official entry point for the project team in the barangays and allowed to discuss the household survey and beneficiary selection procedures, as well as community engagement opportunities. For the whole recovery programme, **the organization established Barangay Recovery Committees** at the outset of a project. These committees were usually comprised of purok leaders and other key community leaders or representatives of specific groups. The committees assessed the impact of the typhoon on the communities, defined households' vulnerabilities and targeting processes, accompanied the household surveys and other assessment activities. The committees remained active over the entire duration of the project, holding regular monthly meetings with project staff.

PROJECT IMPLEMENTATION MODALITIES

The project team was composed of 20 staff, including three engineers, community mobilizers, logisticians, finance officers, database officers, as well as other office staff. Two international staff (a construction delegate and a field delegate) supported the team.

Similarly to the first phase, **the repair assistance was provided through a cash grant** – distributed to the households by a service provider in two tranches (60% and 40%) – plus the distribution of CGI roofing sheets and the support of a construction team to implement the works, supervised by the project engineers. The main differences were the following:

- In Phase 1, the number of roofing sheets per household was standardized to ten pieces and there were two cash grants depending on the level of damage. However, as this distinction was very difficult to make in the field, **under Phase 2 the total assistance provided was the same for all households**, while the number of CGI sheets was determined by the engineers. If more or less than ten sheets were required, the corresponding amount was deducted from or added to the cash grant.
- While in Phase 1 cash was distributed per barangay leading to monitoring challenges (as many households started works at the same time), **in the second phase cash was given out in batches of about 10 households**. This allowed to accompany the process more closely.
- Due to the small batches, a different service provider was used to distribute the grants. **Distributions were arranged in the branch office of the service provider** in Ormoc City, so beneficiaries had to travel there. For elderly persons or those who had trouble making the trip, the grant was given to an authorized person.

TECHNICAL ASSESSMENTS, PROCUREMENT AND CONSTRUCTION PROCESS

Engineers conducted detailed technical assessments for each household and developed a proposal for the repair intervention, including a bill of quantities for materials to be purchased. **The engineers ultimately decided on the best measures** to be implemented with the limited budget. While most households understood this, it often **took several visits and lengthy discussions before a proposal was finalized** and accepted by both parties.

With a finalized repair proposal, a beneficiary household was allocated to a batch for cash distribution. The first tranche was distributed, and the householder was instructed on which materials to purchase.

Once the materials were delivered to the construction site and checked by a monitoring volunteer, the project team gave approval for the payment of the second tranche.

Only when all materials had been purchased according to the proposal, did the engineers dispatch the CGI sheets and – if the house did not have a functional toilet facility – the latrine materials.

Before the constructions started, **a briefing session was organized** together with the carpenters, the households and the monitoring volunteers. One carpenter and one helper were allocated to each house for five days.

Engineers visited each of the construction sites when repairs were halfway through completion and upon request of the carpenters or the volunteers.

Once the construction was finished, the engineers reviewed the repairs and signed the checklist, or instructed the carpenters to make specific alterations. Labour payments to the construction team were only made after the final approval of the repair works.

TECHNICAL SUPPORT AND EVALUATION

The partner NGO carried out monthly visits to provide technical support and build the capacities of the engineers, the local carpenters and the volunteers. This was achieved through ongoing support and on-the-job training during the preparation of repair proposals as well as before, during and after the completion of the repair works.

According to the final report, **all houses were structurally strengthened**, with an estimated 60 per cent considered to be fully reinforced, while the remaining 40 per cent required further improvements. This was observed in larger houses, where the funds distributed were stretched more, or in houses which were partially timber and partially masonry, requiring more expensive connection techniques. However, through the orientation sessions and information materials, those households were also given knowledge about how to address these issues and how to continue strengthening their home.



Technical support was provided to all households during construction, and on-the-job training given to project engineers.

MAIN CHALLENGES

MORATORIUM ON COCO LUMBER. A three-months nationwide moratorium on the cutting of coconut trees in early 2017 affected the procurement of the main construction material unexpectedly. For around two months, coco lumber was barely available at the local market and the price increased significantly. While exceptions were made and permits to cut were still issued, the situation remained unpredictable and many actors in the field were unable to supply beyond the three months of the moratorium. Due to the organization's extremely slow and inflexible procurement system, the project was considerably affected. The only feasible approach at the time was to start procuring materials through the international partner.

LABOUR SHORTAGES. Partly related to the above, many carpenters chose to search for other employment opportunities. This was an ongoing challenge, but the project team was able to cope by hiring trained carpenters from barangays targeted in the first phase.

NATURAL HAZARDS. In July 2017, a 6.5 earthquake hit near Ormoc City, affecting 27 barangays and 4,130 families. While the team continued working, activities were heavily affected for three weeks by interrupted power supply, limited availability of construction materials and by many community members and volunteers being occupied with response activities. Towards the end of the project implementation, in December 2017, Ormoc also experienced several days of heavy rains and subsequent heavy flooding due to a tropical storm. Large areas of the city were flooded, and again project activities were affected for around a week. However, during both events, **damage to newly constructed or repaired structures was minimal**, whereas materials stored near construction sites were damaged and had to be replaced.

WIDER IMPACTS OF THE PROJECT

The project trained and engaged local carpenters in the repair works. Besides the employment opportunities for the community members throughout the project, the capacity-building activities benefited beneficiaries and the wider community beyond the project. At the end of the training, trainees who passed the examination successfully received a national certificate in carpentry. For many this represented the first formal recognition of their skills. Accordingly, this training was welcome, and feedback received was overwhelmingly positive. The certification of the successful trainees **increased their chances of finding better employment opportunities**. Some carpenters trained in Phase 1, for instance, found jobs with better paying organizations, while others left for jobs abroad, so the implementing organization had to train more workers.



The project was cost-effective, especially if compared with core house construction.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ **The project was able to learn and adapt from its first phase** and it retained most of the team. After Phase 1, it became clear that no “one size fits all” solution could be used to repair homes years after the disaster. In order to address this, **the project identified an option-based approach**.

+ **Cost-effectiveness.** The project was able to maximize the resources by placing emphasis on technical assistance of a core room within the houses. This allowed to reach more households within the limited resources available, which were about a third or less compared to other core shelter projects.

+ Although the project included some restrictions over the use of the grants, **the affected households were always active agents** in the implementation and this stimulated a sense of ownership.

+ **Clear and transparent beneficiary selection process**, which used a scoring methodology and involved the community to identify and address feedback and complaints.

+ The project succeeded in conveying **the importance of limiting resources to structural improvements** of one core room of the house. Other households in the area also copied this approach.

WEAKNESSES

- **Delayed procurement** (especially for CGI and latrines) due to cumbersome and lengthy processes within the national implementing organization.

- **The budget ceiling** per house imposed by the organization limited the interventions that could be conducted.

- **Limited technical capacities available at field level.** For example, assessments conducted by volunteers were in some cases not accepted by the communities.

- **Limited exchange of lessons learned** with other actors, including between project partners.

- **In some cases, the option-based approach was compromised** due to the following: i) large houses, resulting in more connections and structural items; ii) timber-masonry houses, requiring more expensive techniques; iii) remote locations, which made consultation with the homeowners and supervision of construction more difficult; and iv) limited time available for the engineers to design the last two batches of repairs within a barangay.

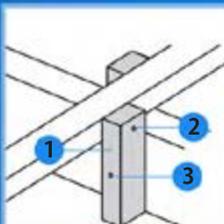


This picture shows a house before and after the intervention. All targeted shelters were structurally strengthened, with a high involvement of the affected people.

LESSONS LEARNED

- **Avoid setting a fixed budget per household**, instead provide homeowners with the full budget needed to completely strengthen their home. In this context, communities understood this logic and did not feel slighted that some households had more than others.
- **Engage more engineers** so they are responsible for fewer houses and can focus more time on monitoring construction.
- **Budget for good-quality construction materials.** The project used exclusively coco lumber, including for structural elements, while local hardwood should have been used instead.
- **Develop simple tools** – such as checklists – that homeowners and community-based volunteers can use to assist in monitoring construction, **and provide incentives for verified safer houses.**
- **Include information on maintenance in the training** module for homeowners and volunteers, and **provide information on housing upgrading** to achieve a full retrofit, for examples through leaflets or brochures.

Purlin - Rafter/Truss Connection

2-Cleat	4-Cleat	Metal Strap
 <ol style="list-style-type: none"> (2) 2" x 2" cleats placed diagonally on opposite side. (3) #3 nails on purlin at each cleat. (3) #3 nails on rafter at each cleat. 	 <ol style="list-style-type: none"> (4) 2" x 2" cleats placed on each corner. (3) #3 nails on purlin at each cleat. (3) #3 nails on rafter at each cleat. 	 <ol style="list-style-type: none"> (2) 18ga. metal strap placed diagonally on opposite side (4) #1 1/2 nails on purlin (4) #1 1/2 nails on rafter

CASE STUDY

PHILIPPINES 2018 / TROPICAL STORM KAI-TAK

KEYWORDS: Shelter kits, Links with recovery, Security of tenure / HLP, No-build zones

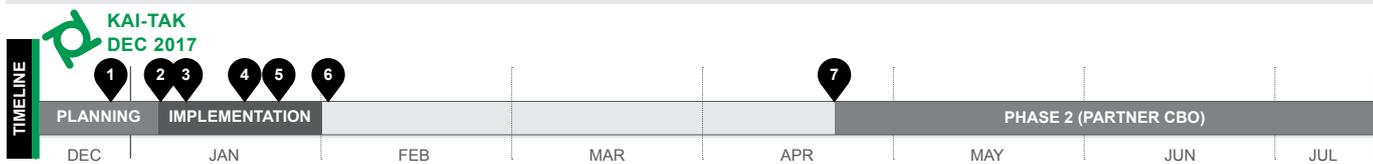
CRISIS	Tropical Storm Kai-Tak (Urduja), 16 Dec 2017
TOTAL PEOPLE AFFECTED*	435,220 households (1,852,900 individuals), including 94,675 households in 1,911 evacuation centres and 88,775 households with host families
TOTAL HOUSES DAMAGED	35,286 houses (2,748 totally destroyed and 32,538 partially damaged)
PROJECT LOCATIONS	Municipalities of Cairbiran, Almeria, Naval, Biliran, province of Biliran
PROJECT BENEFICIARIES	957 households (580 totally / 376 partially damaged. 28 HH with disabilities, 257HH with elderly, 62HH with lactating women and 3HH with pregnant women)
PROJECT OUTPUTS	900 shelter kits and 57 tents NFIs: 1,914 solar lights, 1,800 mosquito nets, 1,795 water carriers, 1,800 blankets
OUTCOME INDICATORS	76% / 100% of beneficiaries reporting that the assistance facilitated their return to a homesite / movement to a temporary relocation site
SHELTER SIZE	Shelter Kits: varied, based on original shelter / plot Tents: 16m ² , suitable for a family of 4–5 people
SHELTER DENSITY	Shelter Kits: varied Tents: 3–4m ² per person on average**
MATERIALS COST	USD 135 per household
PROJECT COST	USD 189 per household



PROJECT SUMMARY

To fill the gap between emergency shelter and permanent housing after displacement caused by Tropical Storm Kai-Tak, this project delivered shelter kits and non-food items to support the return of households to homes located on no-build zones. It recognized that it was preferable for affected households to repair storm-damaged homes located on restricted land rather than continue staying in collective centres, while they awaited the completion of the national government housing. This potentially contentious project was completed with support from local government units and the affected communities.

* National Disaster and Risk Management Council, as of 4 February 2018.
** Some households may have had more than five people.



In the short term, the project aimed to respond to the immediate needs in collective centres, but working on the knowledge that, in the long term, the targeted households would be provided with permanent housing (above).

- 1 27 Dec 2017: Decision to deploy a response team from the Headquarters.
- 2 4 Jan 2018: Decision to provide emergency shelter solutions.
- 3 8 Jan 2018: Distributions of shelter kits, NFI and tents start.
- 4 16 Jan 2018: Post-Distribution Monitoring begins.
- 5 20 Jan 2018: Distributions of emergency shelter finish.
- 6 1 Feb 2018: Team exits.
- 7 23 Apr 2018: Partner CBO begins temporary shelter project.

WEAKNESSES

- The training “cascading” approach initially left gaps in coverage and had to be adjusted.
- Lack of framing materials due to wrong assumption that affected people could easily access and use salvaged materials.
- Some of the pre-positioned tents degraded due to poor supply-chain management during the tents’ life cycle.

STRENGTHS

- + Rapid delivery thanks to pre-positioned stocks.
- + Successful partnership with municipal authorities.
- + Timeliness and effectiveness due to clear geographic targeting.
- + The project was implemented taking into account recovery pathways.

CONTEXT AND SITUATION AFTER THE STORM

Because of its unique geography, the Philippines is prone to earthquakes, volcanic eruptions, typhoons and floods. Typhoons occur on average 20 times per year. On 16 December 2017, Tropical Storm Kai-Tak affected the Eastern Visayas and brought 75km/h winds and heavy rainfall. The equivalent of two months of rainfall fell in just 48 hours. As the storm moved over the island of Biliran, flooding and landslides caused major damage to homes across the province. The worst-affected families found refuge in collective centres. Within two days of the storm, half of the evacuation centres were cleared, as people started to return to their homes. However, some people were unable to return, due to the damage sustained to their houses.

NO-BUILD ZONES AND NHA HOUSING SCHEME

Four years earlier, category 5 Typhoon Haiyan had devastated 36 provinces, displacing over four million people and damaging more than one million homes.¹ Across many provinces in the Philippines, the government declared areas at risk as no-build zones. Despite this ruling, people continued to live in these areas in the absence of other immediate solutions. Under a National Housing Authority (NHA) scheme, people occupying no-build zones became eligible for permanent housing located away from high-risk areas. In Biliran, work to complete the NHA housing scheme was still underway when Kai-Tak made landfall. Many of the households that suffered severe damage to their houses were living in areas designated as no-build zones.

PROJECT RATIONALE AND SHELTER OPTIONS

Although people from no-build zones were to be provided with permanent housing, the expected timeframe for delivery was thought to be around six months and the precedent was for these projects to be delivered behind schedule. The implementing organization recognized that providing families stranded in evacuation centres with an interim shelter solution was required. There was a need to bridge the gap between the planned closing of evacuation centres and the provision of permanent housing under the NHA scheme.

The organization suggested that the provision of emergency shelter kits to affected households would enable them to return to their homesites, to make temporary repairs to the houses that they had previously lived in. Materials to be included in shelter kits were easily available from regional pre-positioned stocks, guaranteeing prompt delivery.

¹ For information on the overall response and some specific project examples, see overview A.8 in Shelter Projects 2015-2016.



For 57 households in two municipalities, the option of returning home could not be envisaged, due to the high risk of further landslides in their area of origin. For these families, the plan involved the provision of tents and the temporary relocation to alternative sites on private land. Water and sanitation facilities on site were provided by local charities, local government or the landowner.

COORDINATION WITH OTHER ACTORS

The Shelter Cluster was not activated in response to Kai-Tak and there was no evidence that other actors were planning to respond in Biliran (other than the aforementioned NHA housing project). At the municipal level, the disaster response was managed by the Local Government Units (LGUs), the Municipal Disaster Risk Reduction Management Council (MDRRMC) and the Municipal Social Welfare and Development Office (MSWD). The project team worked closely with the municipal authorities to ensure that they supported this intervention and recognized its temporary nature. Distributions were coordinated with and approved by the LGUs. Meetings were scheduled with mayors to discuss the planned response. Some initial concerns were raised regarding the provision of shelter materials to people located in no-build zones. Once it was clarified that the aid was a temporary solution which would facilitate the repair of existing houses in the short-term, enabling households to leave collective centres, all mayors offered their support for the project, knowing that the NHA scheme was unlikely to be completed quickly. The MDRRMC were also informed of the planned intervention and were willing to support the activities.

TARGETING

The project was initiated across four municipalities in Biliran Province. In addition to geographic targeting, the beneficiary selection was based on the level of structural damage, utilizing household-level needs assessment data provided by the MSWD. In two municipalities, all households with partially or totally destroyed homes were provided with shelter repair kits. Those unable to return to their homesites were provided with tents. In the other two municipalities, all households with a totally destroyed home were provided with shelter kits.

PROJECT TEAM AND COMMUNITY ENGAGEMENT

The implementing organization comprised a team of four international staff who worked in direct partnership with a community-based organization (CBO), which was well placed to leverage support within the relevant stakeholders, such as the



By stressing the temporality of the project and by explaining how it fitted to the long-term sheltering process, the project team was able to obtain the appropriate level of support from the local authorities. Most people received a kit to return to their homesites (left), while some families who could not return were provided with tents (right).

municipal government. The MSWD provided around 40 local social workers to help with the distribution of aid at centralized locations, provide technical training to beneficiaries and undertake post-distribution monitoring (PDM). Sixty-five per cent of the beneficiary households were surveyed, a figure that speaks of the desire of MSWD to assist. The findings from the PDM survey were discussed with the entire project team and were then used to guide future distributions and training. An additional team of volunteers, made up of people from the target population (around 40 individuals), supported the training and distribution components of this project. Working in partnership with the MSWD and volunteers ensured that the connection between the organization and the affected population was mediated by members of the community, giving the recipient population a sense of ownership over the intervention.

MATERIALS AND SUPPLY

The shelter kits and tents were drawn from stocks pre-positioned in the country, leading to a cost-effective and timely delivery. Shelter items were available for distribution within two weeks after the storm made landfall. A three-day domestic supply chain ensured that materials could be mobilized and transported to the affected area in smaller consignments, enabling the project team to expand the area of operation swiftly and effectively.

An initial consignment of tents came from stocks that had been kept in storage for a considerable period, with the exact place of origin (prior to arriving in the Philippines) unknown. Although the tents were stored in a secure and robust warehouse – originally used for the storage of dry food – some degradation had occurred to the outer tent fabric (polyester with polyurethane coating), leading to the ingress of water. This consignment was subsequently replaced with tents of known origin.

To complement the kits, the project assumed that people could salvage construction materials from debris relatively easily. It later became clear that the use of some salvageable items was reliant on obtaining a permit from the municipal government. In some cases, a lack of suitable framing materials limited the quality of the shelters constructed, although the majority of households were able to retrofit existing structures or use debris from pre-existing shelters effectively.

CASCADE TRAINING MODEL

The technical shelter kit training was delivered using a cascade model. Staff from the organization delivered training on the use of the shelter kit to MSWD social workers and representatives from the affected community. Each of the trainers (around 80 in total) were asked to replicate the training to a smaller group of beneficiaries, with the expectation that they would provide further assistance if needed. Whilst this model was largely successful, through the PDM survey it was noted that in some cases the training had not been adequately cascaded to the targeted households, leading to the construction of poorer quality shelters. Because the PDM was conducted throughout the implementation period, the training strategy could be adjusted to address such gaps. However, it was often impossible to make changes to those shelters that had already been constructed.

WIDER IMPACTS

This project supported the closure of evacuation centres, enabling these facilities to return to their intended purpose (i.e. schools). By helping communities to function as normal following the event, this project supported wider post-disaster recovery.

SECOND PHASE OF THE PROJECT

Even if the project was implemented in a very short time frame, the strategy took into account the recovery needs and pathways of the targeted families. Initially, it was understood that all of them were to be provided with NHA housing within six months, but it later became apparent that some of the beneficiary population would be waiting significantly longer. One of the groups affected by this delay would be the 57 households residing in tents on the relocation sites. The partner CBO developed an intermediate solution for this caseload, so that they would not be left in tents for too long. The aim of the CBO was to construct more durable shelters for this group on two sites in the municipality. An usufructuary agreement also ensured that households benefited from security of tenure. The usufruct stated that recipients would have rights to the land and shelters free of charge for three years. This legally binding agreement, signed by the landowners, was negotiated by the CBO on behalf of the families. The expectation was that within three years, the households living in the temporary settlements would have received the NHA housing. However, a focus group conducted with households living in NHA housing uncovered some perceived issues related to size and thermal comfort, but also in terms of location, limiting their access to livelihoods. Considering the perceived disadvantages of the NHA housing, the CBO subsequently negotiated with the landowners to sell the land and shelters to the beneficiaries in affordable instalments. At the time of writing, both landowners were amenable to this suggestion, subject to more detailed plans being presented.

As plans for this second phase of the project were developed, the organization agreed to support it by donating goods in kind (including corrugated galvanized iron sheets), while the project was managed by the CBO. The LGU also supported this project through the provision of construction equipment. A project team of four staff from the organization later reviewed the technical specifications and confirmed that all essential services provided were in line with sector standards.



As it became clear that some beneficiaries would be waiting long to be allocated permanent housing, the project supported them with transitional shelters on private land that could be occupied through a usufructuary agreement.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- + The use of locally pre-positioned stocks of materials supported the **rapid delivery of emergency shelter items**.
- + **A solid working relationship with the relevant municipal authorities** enabled access to assessment data in a timely fashion, facilitating swift decision-making. **Utilizing staff from the municipal authorities** for training, distributions and monitoring ensured that the project was delivered by members of the affected community.
- + The decision to target a clearly identified geographic area enabled **better engagement with the affected communities and increased the timeliness and cost-effectiveness** of the intervention.
- + This emergency shelter project **was implemented swiftly, but with a view to recovery pathways**. It led to the development of a temporary shelter intervention, delivered by a partner CBO and supported by the organization. This ensured that **the emergency component was linked to the longer-term shelter needs** of a particularly vulnerable portion of the affected population.



A temporary settlement was established with water supply and sanitation services by the partner organization.



WEAKNESSES

- **The delivery of training using the cascade approach led to some gaps in coverage**. This was related to some community trainers not adequately cascading the shelter kit training to affected households in their designated area.
- **Some families identified a lack of framing materials to support repair or reconstruction as an issue**. This was partly due to the assumption that people could use salvaged materials, while in reality this was carefully controlled by the municipal authorities, with people requiring a permit to do so.
- **Some of the pre-positioned tents had degraded** prior to arriving in the Philippines due to the climate of the storage facility and/or the duration they had been in storage. Following this project, the organization adopted a global pre-positioning strategy with robust stock tracking. For old stocks or those with an unknown point of origin, detailed inspection must be conducted prior to distribution.



Technical shelter kits trainings were delivered using a cascade approach, thanks to the support of social workers and volunteers from the affected population.



Issues of size, thermal comfort and location were uncovered through focus group discussions about the national housing.

LESSONS LEARNED

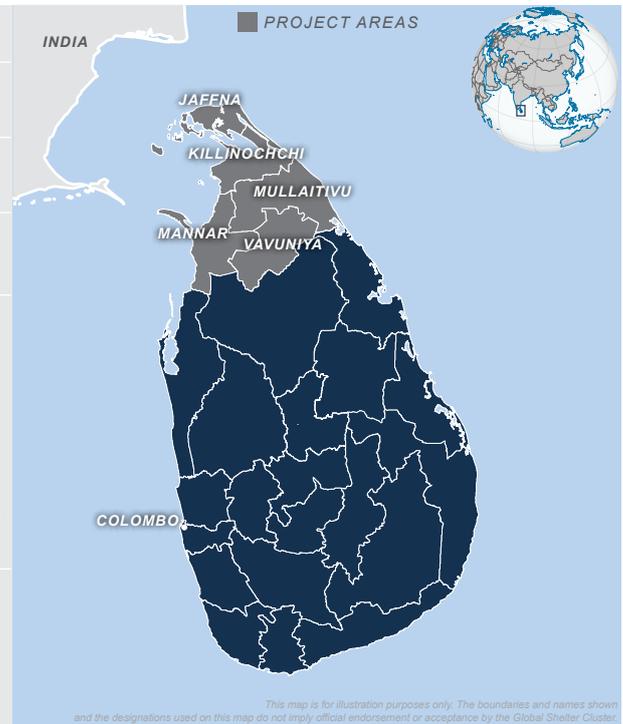
- When the implementation of emergency shelter is **viewed in terms of long-term sheltering processes, the distribution of aid to households in no-build zones can be a suitable approach**. This should only be undertaken when support from the appropriate stakeholders (i.e. affected populations and relevant authorities) has been obtained.
- It is often assumed that affected communities will complement the items in a shelter kit by salvaging debris after a storm. However, in the context of this intervention this assumption did not hold true, as municipal authorities required a permit for the use of debris. For future projects, prior to the distribution of shelter kits, **the organization should understand the extent to which the affected communities are able to access suitable framing materials**, considering access to sustainable sources.
- **Training is a critical part** of the effective use of emergency shelter kits and is essential to achieving high-quality shelter outcomes. Whilst monitoring can reveal weaknesses in a training model, **after shelters are built it is difficult to make changes if materials have been used inappropriately**.

CASE STUDY

SRI LANKA 2010–2016 / CONFLICT

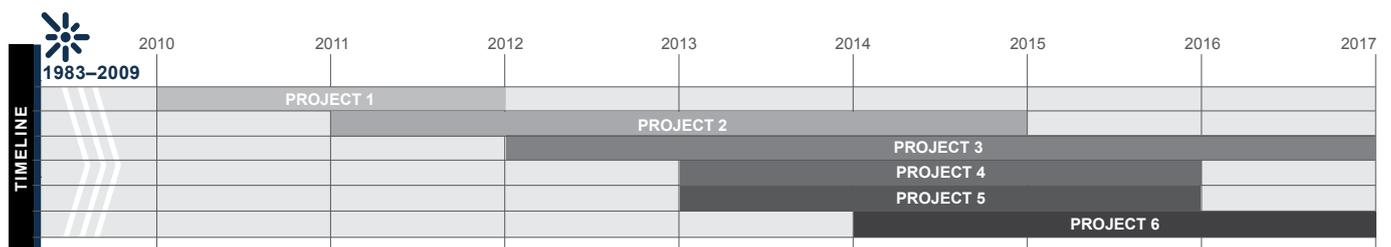
KEYWORDS: Housing reconstruction, Community engagement, Women’s empowerment

CRISIS	Sri Lanka Civil Conflict, 1983–2009
TOTAL PEOPLE DISPLACED	Approx. 450,000 people after the conflict
TOTAL HOUSES DAMAGED	160,000–200,000 units
PROJECT LOCATIONS	Jaffna, Killinochchi, Mullaitivu, Vavuniya and Mannar districts in northern and eastern provinces
PROJECT BENEFICIARIES	31,358 households (122,297 individuals) supported with permanent houses (out of which 3,000 Female Headed Households) 420,000 people indirect beneficiaries Others: 153 Women’s Community-Based Savings Groups comprising 1,513 members. 67 Women’s Self-help Groups with 1,750 members. 60 Women’s Rural Development Societies
PROJECT OUTPUTS	31,358 permanent houses built or repaired 520 infrastructure facilities 150 trainings on constructions skills for 2,400 builders and tradesmen
SHELTER SIZE	42m², 46.5m², 51m² depending on the different projects
SHELTER DENSITY	10.5–12.6m² per person
MATERIALS COST	USD 2,915–4,933 for construction USD 1,345–2,242 for repairs
PROJECT COST	USD 4,538 per household on average



PROJECT SUMMARY

After the three-decade long conflict in the country, this multi-year reconstruction programme supported 31,358 returnee families in Sri Lanka through an owner-driven approach. With a budget of over USD 142 million, it provided permanent houses, infrastructure and communal facilities to conflict-affected communities, reaching over 420,000 individuals in seven years.



Project 1: Construction of 3,786 houses.

Project 2: Construction of 5,059 houses; 52 community wells; 20,000 trees planted, 10 rainwater harvesting systems.

Project 3: Construction of 17,944 houses.

Project 4: Community infrastructure: rehabilitation of 96 km of internal access roads and 6km of storm water drains; Establishment of 62 rainwater harvesting systems in public buildings; construction of 29 community centres and 22 pre-schools; planting of 76,184 trees.

Project 5: Construction of 4,569 houses and community infrastructure, as a continuation of Project 2.

Project 6: Community infrastructure, continuation of Project 4: construction of 45 community centres and 31 pre-schools; establishment of 76 rainwater harvesting systems; construction of 13 community storage facilities and 5 small irrigation channels; rehabilitation of 14km storm water drainage and 32km internal roads; planting of 70,568 trees.

STRENGTHS

- + New concepts were introduced in the conflict-affected communities.
- + Land tenure issues were resolved swiftly.
- + The project mainstreamed gender from the onset.
- + The owner-driven methodology was successful.

WEAKNESSES

- Lack of flexibility in operational procedures.
- Security restrictions were not sufficiently taken into consideration.
- Lack of flexibility in determining grant amounts.



© Charmalee Jayasinghe

Returnee family outside their temporary shelter, with their damaged house in the background. The project supported households affected by the three-decade long conflict to return and rebuild their houses through an owner-driven approach, which also included communal infrastructure rehabilitation.

SRI LANKAN CONFLICT

The Sri Lankan civil conflict between the Liberation Tigers of Tamil Eelam and the government forces in the north and east of the country began in 1983. After a 26-year military campaign, the Sri Lankan army defeated the militants in May 2009. The conflict resulted in the displacement of over 1.4 million people over time. All five districts in the northern province were severely affected. A wide range of infrastructure was heavily damaged, including housing, water supply, public buildings, health infrastructure and education facilities. Estimates indicated that between 160,000 and 200,000 houses were damaged or destroyed. As of October 2009, there were around 450,000 people displaced, and the majority were living in camps within the Vavuniya district.

NATIONAL RESETTLEMENT PROGRAMME

In November 2009, the government initiated a resettlement programme to enable displaced people to return to their homes, or at the least to their districts of origin. A special Task Force was established to oversee the implementation of the programme, donors were mobilized and coordination mechanisms activated at district and divisional level.

PROJECT GOALS

The organization implemented the reconstruction programme from 2010 to 2016, aiming to support return and recovery by providing permanent housing, community infrastructure and improved facilities. It was funded through six projects by five different donors.

PROJECT IMPLEMENTATION

The programme was managed from the capital, while in the field each project had a manager and a team that included engineers, technical officers, community mobilizers, monitoring assistants and administration support staff. Officers were located in four of the most affected districts during different times and for different projects. The programme was implemented via a network of community-based organizations that were either formed or strengthened by the lead organization.

Following an owner-driven approach, the families were responsible for the planning, implementation and monitoring of their own construction projects. Their early involvement in the process ensured that the outcome reflected their own aspirations, in addition to fostering a greater sense of ownership. Even after the trauma and loss of the war, people displayed tremendous resilience and resourcefulness, once they were given the opportunity to be actively engaged.

The process also revived the local economy. By procuring materials and labour locally, the funds were directed and remained within the communities, while the families saved money by contributing their labour. Field-based project teams provided technical assistance and guidance.

BENEFICIARY SELECTION

Selection criteria were agreed at the outset between the organization, the government and respective donors. The eligibility criteria included the following:

- The family owned the property;
- The family had been displaced due to the conflict;
- The family had returned;
- The house had been damaged or destroyed;
- The family did not own another permanent house anywhere else in Sri Lanka.

Because of these criteria, the project encouraged many displaced families to return to their places of origin, as they wanted a durable housing solution. Mass public meetings were conducted by the project team in each village after people had returned, which helped the organization to assess the status of the families against the criteria. A complaints and feedback mechanism was also set up to allow people to voice their concerns in the selection process.

To select beneficiaries, eligible households were then ranked according to a comprehensive set of criteria. Attention was given to vulnerable families, especially female-headed households.

HOUSING, LAND AND PROPERTY

The loss of title deeds, land permits and other tenure documents was a key issue, as people had fled their villages during the conflict without documentation. According to the eligibility criteria, construction could not begin until new documents were available. The assistance of land officers in the district and divisional secretariats was instrumental in resolving these issues. The organization held regular mobile land consultations with the affected communities and the government officers. In a few cases, disputes arose over land ownership during the construction of houses. These were referred to the relevant government authorities for resolution. In some instances, where resolution was not possible, the housing grant was re-allocated to another beneficiary family.

COMMUNITY ENGAGEMENT

During the programme, approximately 250 community-based reconstruction committees were formed, each consisting of seven office bearers and with a mandatory inclusion of 40 per cent women. This enabled both women and men to collectively determine development at intra-household, inter-household and community levels and acted as a means of consultation, encouraging female-male power balance. The committees were trained on bulk procurement of building materials, basic bookkeeping, mine risk education and participatory settlement improvement planning. Community members had a space to identify gaps and prioritize their own needs in the development of their villages. The committees were also empowered to voice the collective needs of communities with relevant government departments. For example, they helped many families to gradually regain their lands from military occupation.

COORDINATION

The programme was implemented with a wide range of partners, including central government, local authorities, NGOs, CBOs, private sector and funding partners. It would not have been possible without the full cooperation of government officials at all levels. This cooperation was possible thanks to the good relationship that the organization enjoyed with central, district and local government, which had been fostered over many decades of engagement in the country.

DISASTER RISK REDUCTION

As natural hazards periodically affect the project areas, DRR aspects were included in site selection, house location and orientation, as well as design of houses and community infrastructure facilities. Community centres and preschools – that would serve as gathering points during disasters – were located on high ground and had rapid drainage facilities. The road designs incorporated culverts and storm water drainage. For houses and community building designs, the following DRR features were incorporated:

- Raised foundations to protect from flooding;
- Specially reinforced foundations for structurally poor soils, such as expansive soils.
- Increased external wall thickness (150 mm) combined with a reinforced concrete ring beam at lintel level, to improve structural stability during strong winds and floods;
- Increased roof gradient (25 degrees), anchoring of roof to the ring beam and mortar restraining bands over roof tiles.



Roof work in progress in Vavuniya district. DRR features were included in roofs, foundations and walls. The gradient was increased to enable better run-off.

MAIN CHALLENGES

SECURITY, ACCESS AND APPROVALS. Due to travel restrictions and security clearance requirements, careful planning was essential to maximize the time that could be spent with communities. Not being able to establish offices close to the affected areas was also challenging, but was later overcome, once infrastructure facilities were in place. Government approval was generally required for organizations to operate in post-conflict interventions, delaying implementation. However, this affected some agencies less than others, based on organizational mandates and presence in the country.

UXOS. The programme was delayed by the clearance process of mines and unexploded ordnance (UXOs) which posed a major risk to residents as well as humanitarian workers. In some instances, land mines and UXOs were found in cleared areas where construction had commenced. The organization held awareness programmes for community members on these risks.

WOMEN'S EMPOWERMENT. The displaced population included many female-headed households, due to large numbers of men losing their lives in the war, as well as desertion by male household members due to the breakdown of family cohesion after the conflict. However, it was challenging to engage women in reconstruction. Many women were trained in construction skills, such as masonry and carpentry, to carry out construction work themselves and to supervise construction workers. This was quite novel to the culture of the region. Training was also provided on negotiation skills, to prevent extortion or exploitation by suppliers.

MISUSE OF THE GRANTS. In some cases, housing grants were not used for the intended purposes. Vulnerable families lacked regular income to manage their day-to-day expenses and were tempted to use the grants to meet their basic needs. Also, female-headed households often paid for additional labour, as they could not contribute their own. To minimize this practice, the village reconstruction committees formed self-help groups to support single women with heavy construction tasks. Female-headed households with no income were referred to livelihood organizations through inter-agency coordination meetings. Separately, some male household heads started to misuse their housing grant by purchasing alcohol. The introduction of joint bank accounts, making it necessary for both husband and wife to sign for a payment withdrawal, prevented men from using the grant inappropriately.



Damaged house in Mullaitivu district. One of the issues to solve in the reconstruction was land tenure, as many families had lost their titles during the conflict.

FINANCIAL PLANNING. Many families who received financial assistance for construction initially miscalculated the cost and overestimated the size of their houses, which would have resulted in incomplete houses. To prevent this, each family received education on financial planning prior to construction, and the project team monitored the whole construction process.

CULTURAL PRACTICES. Most communities in the conflict-affected areas believe in traditional cultural practices pertaining to their daily lives, which include the construction of houses. They thought that not adhering to all their beliefs would bring misfortune to their home. For example, people were unwilling to commence construction until auspicious dates, requested larger room sizes, or specific roof styles. This often led to delays in project implementation.

WIDER IMPACTS OF THE PROJECT

The project contributed to the peace process in the affected communities. Firstly, it created a stable home environment by enabling people to return to a permanent house and secure tenure. Secondly, involving the families and communities in the entire process generated a sense of ownership and enhanced community spirit that otherwise may have taken years to develop. Families and communities began to show self-confidence and initiative for further recovery, which was often not the case before the project.

Communities in the target areas had suffered severe disruptions to their social fabric during the conflict. Collective consciousness was largely missing due to various factors, such as social stratification based on caste and distrust among community members. Once the conflict was over, the caste system that prevailed in these societies started to surface. However, the establishment of reconstruction committees allowed divisions to be overcome and the communities to come together and support vulnerable families to build their houses, regardless of gender or caste.



Women engaged in construction training, Kilinochchi district. Gender mainstreaming was promoted through the mandatory representation of women in reconstruction committees, as well as involving women in capacity-building and construction activities.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ **New concepts were introduced in the conflict-affected communities**, including quality management, affordable technology, Disaster Risk Reduction, construction safety, disability inclusion, environmental preservation and financial planning.

+ **Land tenure issues were resolved swiftly** thanks to coordination with government authorities. It was essential to settle disputes over land ownership at the initial stages of the project.

+ **The project mainstreamed gender from the onset**, by establishing minimum quotas for women's representation in reconstruction committees and including women's groups in infrastructure programmes. Gender was further integrated into the project by collecting sex and age disaggregated data and conducting awareness sessions on gender issues, including gender-based violence.

+ **The owner-driven methodology was successful** in mobilizing the community and empowering women, giving people a sense of ownership. This was possible thanks to the use of participatory approaches, such as community action planning and the establishment of a transparent complaints and feedback mechanism.

WEAKNESSES

- **Lack of flexibility in operational procedures.** The situation on the ground demanded changes to existing operational procedures and tools, but the organization was unable to accommodate these.

- **Security restrictions on movement were not sufficiently taken into consideration** when establishing realistic project timelines. Staff members should have been located as close as possible to the project areas, to minimize time spent on travel and reduce security risks.

- **More flexibility was needed in determining the grant amounts and housing standards.** Conflict-affected families returning after displacement were particularly vulnerable and required additional support to construct their homes.



Completed house in Mullaitivu district. The use of reconstruction committees and community action planning methodologies helped restore social cohesion.

LESSONS LEARNED

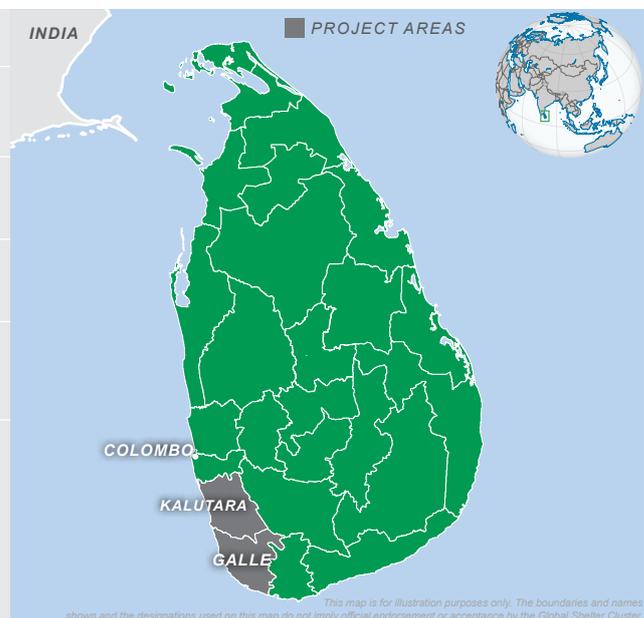
- **The project deviated from the linear approach to post-disaster shelter recovery**, challenging the necessity to move through the various stages of recovery – emergency, transitional, and durable solutions – and chose to **support a permanent solution at a much earlier stage**.
- **Coordination, awareness-raising and advocacy** are important components in a post-conflict situation, to deliver long-term sustainable shelter solutions for rapid recovery and return to normality.
- **Close relationships should be built with all relevant agencies responsible for unexploded ordnance and mines** (including security department, local civil-military affairs coordinator, public administrative officials), to ensure demining activities are conducted prior to the commencement of project interventions. In addition, awareness should be raised with communities – and particularly children – on the dangers posed by UXOs.
- **The expectation that people would contribute financially to the construction process was impractical**, as most returnees faced prevalent poverty, including the loss of able-bodied family members. However, in cases where the grants were insufficient, families provided unskilled labour and took out loans, out of their motivation to settle into a permanent home. **Rapid training programmes for construction workers became necessary**, to meet the labour shortages and facilitate families to substitute their own labour for hired labour to reduce costs.
- **Cultural beliefs cannot be ignored**, and greater flexibility in construction schedules needs to be allowed to accommodate traditional cultural activities. Therefore, **organizations should be familiar with the prevalent cultural practices when designing a project**. Where necessary, such reasons for delays should be made known to donors to avoid misunderstandings.
- **Permanent housing brings about a sense of permanency** for both individual families and entire communities. This would not be possible to achieve for transient populations. As such, **housing should not be delayed** until after the restoration of all other aspects of normalcy, such as regular employment or the build-up of savings.

CASE STUDY

SRI LANKA 2017 / FLOODS

KEYWORDS: Housing repair, Transitional shelter, Evacuation centre upgrade, Disaster Risk Reduction, Community-based organizations

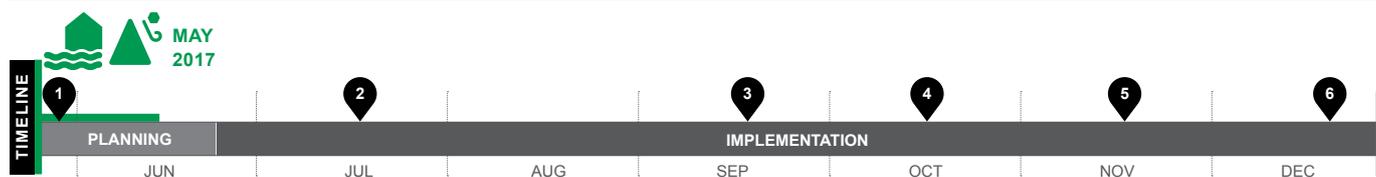
CRISIS	Floods and Landslides, 24 May 2017
TOTAL PEOPLE AFFECTED*	229,233 households (879,778 people) as of 31 May 2017
TOTAL HOUSES DAMAGED¹	3,048 fully damaged and 76,803 partially damaged
PROJECT LOCATIONS	Kalutara District (Western Province) and Galle District (Southern Province)
PROJECT BENEFICIARIES	6,358 households (28,075 individuals, 52% female)
PROJECT OUTPUTS	89 transitional shelters 692 households provided with shelter repair assistance 6,358 households provided with NFIs 4 evacuation centres upgraded
SHELTER SIZE	18.5m²
SHELTER DENSITY	4.5m² per person
MATERIALS COST	USD 1,545 for transitional shelters USD 95 for shelter repairs USD 65 for NFIs
PROJECT COST	USD 2,600 per household



PROJECT SUMMARY

The project targeted a total of 25,365 people affected by floods and landslides with lifesaving shelter and NFI assistance. A network of community-based organizations and affected families themselves were engaged to conduct shelter repairs, build transitional shelters for those unable to return, distribute NFIs and upgrade evacuation facilities. Disaster risk reduction features were included in the response and salvaged materials were reused in the repairs.

* Post-Disaster Needs Assessment, May 2017, <https://bit.ly/2sGXLGK>. On 31 May, as flood waters were yet to recede, the number of damaged houses was expected to increase.



- 1 May 2017 Planning phase and rapid damage assessment conducted.
- 2 Jul 2017 Awareness sessions on resilient constructions conducted. Shelter construction begins.
- 3 Sep 2017: NFI distributions begin.
- 4 Oct 2017: Procurement of materials and hiring of labour completed.
- 5 Nov 2017: NFI distributions completed.
- 6 Dec 2017: Project closure, lessons learned, handover of temporary accommodation centres (safe locations) to community-based organizations.

STRENGTHS

- + Timeliness and effectiveness of the project thanks to the partnership with CBOs.
- + Reuse of salvaged building materials.
- + Linkages with government and local authorities.
- + Participatory monitoring and evaluation.
- + Geo database increased transparency and accountability.



The 2017 floods caused extensive damage, especially in rural areas.

WEAKNESSES

- Slow internal processes caused delays.
- Challenges in adjusting activities and target locations.
- Delay in recruiting emergency field staff.

CONTEXT

Rapid, unplanned settlement development and climate change have increased Sri Lanka’s vulnerability to disasters. The impact of recurrent climate-induced disasters is most severe in rural areas with high poverty levels in the south-west, where livelihoods and assets, pivoting on agriculture, have been repeatedly depleted.

SITUATION BEFORE THE FLOODS

In the years before the floods, affected districts had faced a rapid increase in population. Settlements had grown along rivers and streams bordering main cities. Informal housing and economic activities increased, surpassing the local government’s capacities to control development.¹

SITUATION AFTER THE FLOODS

In May 2017, heavy rains resulted in floods and landslides, affecting over 220,000 households. A week after the disaster, an estimated 73,560 people were displaced from their homes and then relocated to 354 evacuation centres in public buildings, such as schools, temples and other facilities located on higher ground, unaffected by the floods and landslides. In June, the flood waters receded and the affected people returned to their villages. Many of their homes were destroyed or inhabitable, so they stayed with friends, relatives or other host families.

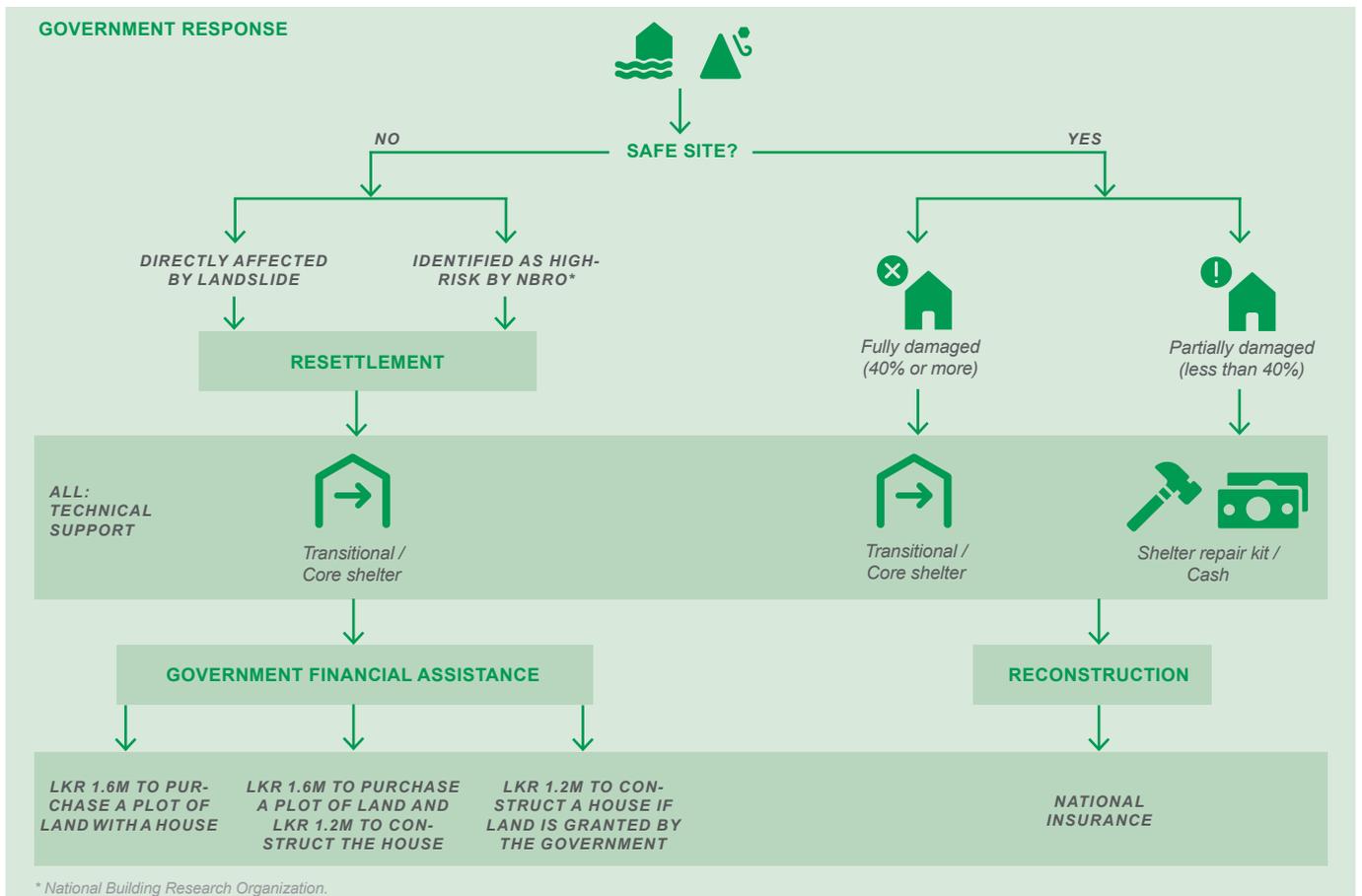
¹ Post-Disaster Needs Assessment, May 2017.

NATIONAL SHELTER PLAN

The Disaster Management Centre was officially mandated to coordinate the emergency response to the floods and developed a plan centred around three strategic objectives: 1) provide immediate life-saving and protection assistance; 2) facilitate early recovery through emergency livelihood and provision of basic services; and 3) strengthen the resilience of affected communities to recover.

The shelter strategy – developed based on early damage and needs assessments – focused on four main objectives:

- **Emergency shelter:** support vulnerable households (whose homes had been partially damaged, but were able to return or were already living near their houses) through the provision of emergency shelter items contributing to self-recovery, such as shelter kits (including tools and CGI) or their cash equivalent;
- **Return:** support the most vulnerable households to return through the provision of NFI kits (including kitchen sets and solar lights), or their cash equivalent;
- **Relocation and resettlement:** provide transitional shelter options for vulnerable households in designated high-risk zones, where a permanent housing solution would need to be found;
- **Technical support:** provide information, education and communication (IEC) on safer construction principles, community-based hazard awareness, preparedness and Disaster Risk Reduction (DRR), during all phases of the response.



The government response included an advance of LKR 10,000 from the national insurance to affected families, and a monthly subsidy of LKR 7,500 for three months for households in evacuation centres. Government officers conducted technical assessments to assess the level of damage and determine the national insurance coverage.

TARGETING AND PROJECT COMPONENTS

The project initially targeted a total of 25,365 people vulnerable to landslides and floods across five of the most affected divisions. Thanks to additional funding and budget reallocations, the project could target additional locations and reach 2,710 more beneficiaries. Approximately five per cent of the people with shelter needs in the targeted districts were assisted. The project aligned with the national strategy by supporting return or safe relocation, as well as by upgrading evacuation facilities, coupled with technical support on DRR features. Cash amounts and kits contents were defined based on Sector recommendations.

The project components were:

- **Shelter repair:** cash grants were provided to 692 returnee households to implement basic repairs;²
- **NFI:** direct NFI assistance was provided to 6,358 households who required essential items for day-to-day living, the contents being customized in consultation with community members;
- **Transitional shelter:** 89 extremely vulnerable households whose houses had been fully destroyed received cash grants to build transitional shelters. These included female-headed households, households with infants, elderly and persons with disabilities;
- **Evacuation centre upgrade:** 50 landslide-affected households facing prolonged displacement in evacuation centres were also supported with maintenance and repairs.

PROJECT IMPLEMENTATION

The project was implemented through a **network of 16 local community-based organizations (CBOs)** overseen by a team of 15 staff from the lead organization: one project manager, one assistant engineer, four technical officers, four community mobilization assistants and several operational staff. The CBOs included farmer organizations, welfare and funeral societies, self-help groups and village development committees. While all activities were conducted by the CBOs and the people themselves, **the lead organization facilitated the process** through technical assistance, community mobilization, monitoring, quality assurance and financial tracking.

The project was designed based on surveys with affected people and discussions with government officials. **Affected communities were closely involved in project planning** stages, which included the selection of beneficiaries and CBOs, and the design of shelter and NFI assistance.

²These included roof repairs, kitchen renovations, carpentry and joinery, WASH repairs, plastering, structural works and floor rendering.



The project was implemented through a network of community-based organizations, which conducted assessments in the affected areas after the floods.



The lead organization distributed household items to affected populations

The CBOs undertook damage and needs assessments in 20 divisions and conducted a baseline survey to collect household information, data on land ownership and present residence, vulnerability of the families, extent of damage to the former residence and NFI requirements.

After finalizing the community contracts, the lead organization transferred 80 per cent of the agreed funds to the CBOs, which then **disbursed cash grants to selected households through their bank accounts**. This proved to be fast and effective, as most people in Sri Lanka have bank accounts. For people who did not have an account, cash distributions were conducted. The households then commenced construction of their transitional shelters or repair works. For NFI distributions and evacuation centre upgrades, activities were conducted by the CBOs.

The CBOs mobilized the communities to assist vulnerable beneficiaries who were unable to manage construction activities. **Community networks were mobilized to pull resources** to procure building materials in large quantities (especially for women-headed and vulnerable households), to reduce overall material and transportation costs. **Many families contributed** in kind with skilled and unskilled labour, as well as financially from savings and small loans.

The CBOs and project staff helped the families to select good building materials and identify skilled construction workers. In consultation with the lead organization, the CBOs also assisted the families to reuse building materials from their damaged houses and ensure their quality before use.

Participatory monitoring and evaluation methods were used throughout the project, such as the establishment of community monitoring committees in all locations. A geo-referenced database accessible to field-based staff was developed to increase transparency and accountability of the utilization of the funding. Beneficiary selection data (including scores), visual evidence of shelter damage and progress of construction, were included in the database, which enabled real-time, off-site monitoring. Financial monitoring of the CBOs was undertaken by the lead organization.



People displaced by the floods found shelter in public buildings. The project upgraded such evacuation centres in cases where families could not go back quickly.



For very vulnerable households with a completely destroyed home, cash grants were given to build a transitional shelter.

PARTNERSHIP WITH CBOS

Partnering with local CBOs enabled timely and effective project implementation, ensured lower administrative costs and increased accountability to affected populations. The lead organization overcame the delays in processing agreements with other international organizations through community contracts signed with registered CBOs. After transferring the funds, the lead organization, together with government officials, monitored the progress and approved the release of funds to beneficiaries only after certification of the withdrawal slip or a fund request form for accounting and bookkeeping. Wherever possible, electronic transfers with vouchers were used to improve organizational accountability.

COORDINATION

Following the floods, sector working groups were activated to coordinate the response. The Shelter Sector was led by two other international organizations and coordinated closely with both the National Disaster Relief Services Centre and the National Building Research Organization (NBRO). The project team participated in coordination meetings at all levels to coordinate activities in the same location and engaged relevant government authorities to facilitate and monitor project activities. Coordination was also essential for the lead organization to oversee the 16 CBOs implementing the project.

DISASTER RISK REDUCTION

The Shelter Sector developed technical IEC brochures based on NBRO construction guidelines to support owner-driven recovery and resilient construction and posters for distribution in evacuation centres and safe relocation sites, to increase awareness of site selection, environmental hazards and other risks. It also disseminated general IEC materials developed by the Disaster Management Centre amongst partners, to increase community DRR awareness and support capacity-building activities.

Beneficiaries and CBOs included key DRR features in construction and repairs, such as choosing safe locations or plots and the best orientation of buildings to mitigate wind impacts, raising foundations above flood levels, reinforcing structures and anchoring roof elements against high winds (using metal straps and hooks) and improving slope stability with recycled materials.



In some cases, transitional shelters were also built using salvaged materials.

SALVAGED MATERIALS

Reclaimed materials were used to reduce costs by decreasing the procurement of new materials and limit the environmental impact of the disaster by recycling debris. Affected households recovered roof tiles and timbers, doors and windows damaged by the disaster, stored them on site and reused them both for repairs and new construction. The debris available on site (such as bricks and concrete rubble) were sorted, cleaned and reused as aggregates into foundations and as floor concreting.

CROSSCUTTING ISSUES

Design and construction of transitional shelters and shelter repair assistance included accessibility considerations for people with disabilities, such as construction of ramps and the installation of support bars in toilets.

The project also mitigated risks of gender-based violence (GBV) associated with communal living spaces. Firstly, GBV awareness sessions were conducted and community mobilizers monitored the evacuation centres regularly. Secondly, women and children were assisted to return to their homes.

MAIN CHALLENGES

As funding was received very early after the disaster, in a rapidly changing environment, accurate data was not available in the planning stage for some of the most affected areas. This created challenges in moving funds from one affected location to another or in changing proposed activities, once better data came in. In the end, the worst affected areas were targeted based on written requests from government authorities.

The project also faced delays in processing contractual agreements and payments due to internal processes. Mobilization of community resources mitigated this challenge in most instances, thus enabling a timely response.



Community engagement was essential throughout the project, from mobilizing resources jointly to ensure vulnerable families would get support.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- + **The project was implemented timely and effectively** thanks to the partnerships with local community-based organizations, which also ensured lower administrative costs and higher accountability to affected populations.
- + **Salvaged building materials from damaged houses were reused** for shelter construction, enabling cost savings and reduced environmental impacts.
- + **Strong linkages with government departments** and local authorities enabled a smooth information flow and support both in decision-making and implementation activities.
- + **Participatory monitoring and evaluation methods** were used throughout the project.
- + **The development of a georeferenced database** accessible to field-based teams helped increase transparency and accountability of the utilization of funds.

WEAKNESSES

- **Slow internal processes delayed contractual agreements and payments** to CBO partners.
- Partial assessments in the early stages led to **challenges in adjusting project activities and target locations**. This was also due to the limited flexibility of the emergency funding received. Quicker release of funds from within the lead organization could have avoided this.
- **Delay in recruiting field staff for the emergency response** due to slow recruitment processes. The lead organization could have focused more on building staff capacities in emergency response, to deploy trained personnel in the aftermath of the disaster.



Along with distributing NFIs and shelter repair grants, the project supported 89 households in building transitional shelters via transferring funds to their bank accounts.

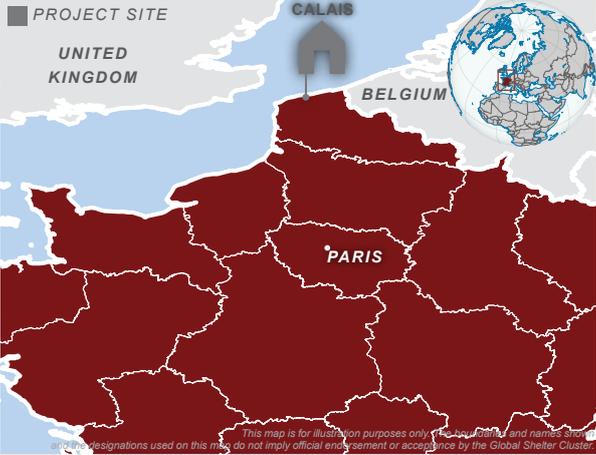
LESSONS LEARNED

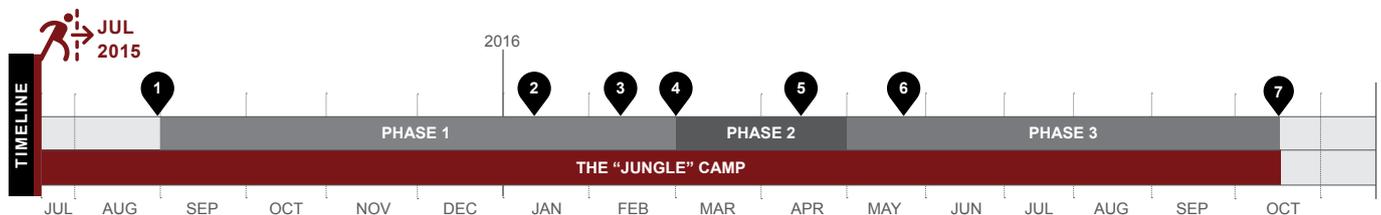
- **Engaging CBOs with prior recovery experience**, an understanding of the social context, demographic data, and lists of local service providers, was a timely and effective approach.
- **Community contracts have a lower turnaround time** in the lead organization's procurement system, which allowed quicker implementation, critical to the timeliness of the emergency assistance.
- A major challenge in the aftermath of a disaster is often the disposal of construction debris. By reusing and recycling construction materials, **the project contributed to reducing the environmental impact** in the disaster-affected areas, as well as reducing costs.

CASE STUDY

FRANCE 2015–2016 / REFUGEE CRISIS

KEYWORDS: Emergency shelter, Unplanned site, Volunteers

CRISIS	Europe Refugee and Migrant Crisis, 2015–2016	 <p>PROJECT SITE</p> <p>UNITED KINGDOM</p> <p>BELGIUM</p> <p>PARIS</p> <p><small>This map is for illustration purposes only. It is not official and names shown are not designations used on this map. It does not imply official endorsement or acceptance by the Global Shelter Cluster.</small></p>
TOTAL CAMP RESIDENTS	Believed to fluctuate between 6–10,000 for the period the project was active in Calais*	
PROJECT LOCATION	Calais, northern France	
BENEFICIARIES	10,000 individuals in total (approx. 75% male aged 18–50. This varied over time)	
PROJECT OUTPUTS	1,500 shelters built and constantly maintained 500 self-build shelter kits plus training	
SHELTER SIZE	7m² (varied with materials available and donations)	
SHELTER DENSITY	1.5m² per person	
PROJECT COST	USD 277 per household	
	<p>MATERIALS COST</p> <p>USD 243 for cladded shelters</p> <p>USD 199 for plastic sheeting shelters</p> <p>* Known recorded figures include 5,500 people in February and 7,000 people in July 2016 (Sources: Refugee Rights Data Project; Help Refugees Census, https://bit.ly/2DtFh2s)</p>	
PROJECT SUMMARY		
<p>This project provided shelter assistance to 10,000 refugees and migrants living in the unplanned “Jungle” camp in Calais. It was implemented by a volunteer-run network with limited capacities in a very fluid environment (the camp was partially destroyed twice). Self-build shelter kits and technical support were provided to those able to build, while volunteers built prefabricated shelters for the most vulnerable. After the second reduction, further shelter construction was prevented by the authorities, and volunteer groups mainly provided tents solutions the final closure and dismantlement of the camp.</p>		



- 1 Sep 2015: Introduction of self-build shelters and a repairs team to support all building projects.
- 2 Jan 2016: Destruction of 100m “buffer zone” around the perimeter of camp and movement of shelters. Density in the site increases.
- 3 Feb 2016: Nearly all tents replaced with shelters.
- 4 Feb–Mar 2016: Destruction of southern half of the camp, with very short notice. Many shelters are destroyed.
- 5 Apr 2016: Police at camp entrances begins to restrict the access of building materials into the site. Most people are living in various types of tents.
- 6 26 May 2016: A fire destroys 300 shelters. 1,000 people are left without shelter and volunteers are unable to rebuild. Limited tents continue to be distributed.
- 7 Oct 2016: Complete destruction of the camp.

STRENGTHS

- + Community engagement was successful.
- + Scale, timeliness and coverage of needs.
- + Timely procurement of materials.
- + The repairs team was efficient and reliable.
- + Agility of a grassroots group in a complex political environment.

WEAKNESSES

- Fire safety procedures were not adhered to.
- Lack of guaranteed and consistent workforce.
- The organization did not have sufficient training or experience.
- Limited site planning.
- Small size of the allocation team, which led to oversights.



The organization started using a shelter design at the end of September 2015. Frames were prefabricated off site and built by volunteers only for the most vulnerable.

CONTEXT

Calais has been a “hotspot” for migration to the United Kingdom (UK) since the Channel Tunnel was opened in 1994. Due to the UK border being on French soil, the French side attracts many of those wishing to claim asylum in the UK. Since the 2000s, the numbers reaching the area steadily increased, and refugees and migrants were living in squats, under bridges and in fields, often camped in groups according to their areas and countries of origin, or to whom they had travelled with.

Although the “Jungle” camp became the main focal point of media attention in 2015, other camps existed across the region, notably the Grande Synthe camp in Dunkirk. Smaller camps existed close to truck stops, often run by smugglers and consisting of people of only one or two nationalities waiting to try to cross the border.

THE “JUNGLE” CAMP

During the spring and summer of 2015, the number of refugees and migrants in northern France grew exponentially compared to previous years. The authorities of Calais designated a former asbestos dump in an industrial zone of the city to be opened to these people, with limited sanitation facilities and one meal per day (for up to 400 people only). The camp was supported by volunteers and in-kind donations. Volunteers initially worked with a variety of French charities. The organization implementing this project was born during these months and partnered with a local NGO.

As it became clear in the autumn of 2015 that the camp would not vanish before the winter, and rather was likely to continue grow, the organization started a building project with the aim of ensuring everyone had a better form of shelter than a tent throughout the winter. At that point, there was still hope that by the end of 2015 the government would have moved everyone from the camp into official accommodation.

People of very different backgrounds, cultures and ages were able to live side by side. Volunteers were generally welcome, if they were seen to be actively helping and respectful of camp residents. The coexistence of religions was also peaceful: mosques and churches were built, often by the residents themselves. When violence did break out, it was usually due to personal grievances between groups of different nationalities.



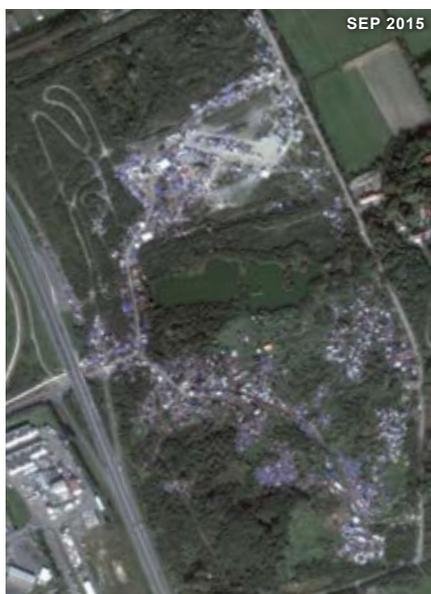
The camp was established in the summer of 2015 and had to major roads with public lighting and small shops.

GOVERNMENT ACTIONS

The government did not support shelter projects in Calais. However, it did fund a local charity to run a centre at the back of the camp, with limited sleeping spaces for women and children only. Many women chose not to stay here, though, because they wanted to remain with husbands or other male family members, and disliked that there were no cooking facilities or communal areas.

Towards the end of 2015, the government contracted a French NGO for WASH facilities, and the new water points and portable chemical toilets were received with great enthusiasm after a high court ruling that they must be provided by the government. However, these were not enough – with around one latrine per 100 people when the population was at its highest – and were not properly maintained. Although the issue was constantly raised with local authorities, these claimed that there was not enough funding and hoped that, if conditions remained poor, people would be discouraged from staying in the camp.

The camp was reduced in size twice by the authorities in January and March 2016, with the use of bulldozers. Only on the first occasion were volunteers from the organization notified and managed to assist with the moving of shelters. By April 2016, the authorities prevented any building materials being brought into the site, leading to the end of the project. Finally, in October 2016, the government demolished the camp.



Camp evolution. Left: the authorities of Calais designated a former asbestos dump to be opened after the large influx of displaced populations into the north of France. Center: after the creation of the “buffer zone” around the perimeter and the destruction of the southern half. Right: after the camp was dismantled.

PROJECT IMPLEMENTATION

Shelter building started on an ad-hoc basis in the camp in August 2015, with volunteers and residents creating shelters from any available material. The organization started using a shelter design at the end of September 2015. Shelters were initially prefabricated in a warehouse off site and built on site by volunteers. To increase the pace of the process, self-build kits were then distributed to residents who were able to build for themselves, while construction was done for the most vulnerable.

The project team comprised three allocation coordinators – down to one by the end of February 2016 – as well as two building coordinators. The allocation team would get to know camp residents, record those in need of shelter to prioritize construction, as well as choosing the location according to residents' preferences. The building team supervised volunteers during the distribution of kits or direct construction, and provided technical support and repairs when necessary.

Coverage could not be achieved for all by the end of 2015, but only for the most vulnerable. This was due to limited material resources and volunteers, an increase in camp population and poor weather conditions.

SHELTER TYPES AND SITE LAYOUT

The supply of building items depended on inconsistent funding and donations. This affected the shelter design, which changed slightly over time. The walls were mostly made of plastic sheeting and insulated with carpet underlay, while wooden cladding was used for particularly vulnerable people.

Cladded shelters were harder to break into and offered more protection from noise and the elements. These were a safer option particularly for women – many of whom had had their tents slashed by men attempting to enter during the night. The different shelter types were accepted as necessary and often encouraged where there were men living in the same community group as women. On the other hand, where a nationality group was entirely male – and none of these men were given a cladded shelter – the difference was seen as unfair. Over time, a “black market” of shelters developed and gangs would force people out of their cladded shelters at knife or gun point, in order to take over the shelter and sell it. Sometimes they would be allowed to stay in their shelter if they paid money to those in control. This led to an increase in gang activity and control in the camp, and a very hostile atmosphere in several parts of the site.

There was little planning on the placement of shelters in the camp. Upon arrival, residents organized their tents into groups – mainly by nationality or age – and when it was their turn for a shelter, the tent would be replaced in the same place. When the southern half of the camp was bulldozed, as many shelters as possible were moved into the northern part. Here some planning was carried out, for example to secure empty areas for a specific group ahead of time. However, in the end much of this was undone as there was not enough space to accommodate all the people that had to move. Countless shelters were destroyed and those that remained were squashed together, further increasing fire and health risks. Generally, throughout the site there was not enough space to create any firebreaks, nor willingness from the residents to abide by fire risk mitigation measures, either.



The camp population fluctuated as people kept trying to cross the border and new arrivals settled. At its peak, there were around 10,000 residents across the two parts of the site. The southern half (in the foreground in the picture above) was destroyed in early 2016.

SHELTER ALLOCATION

Defining vulnerability was challenging, as the allocation team had no prior training or experience in the refugee camp context and no understanding of how to identify the “most” vulnerable among thousands of individuals with many different problematic backgrounds and health issues.

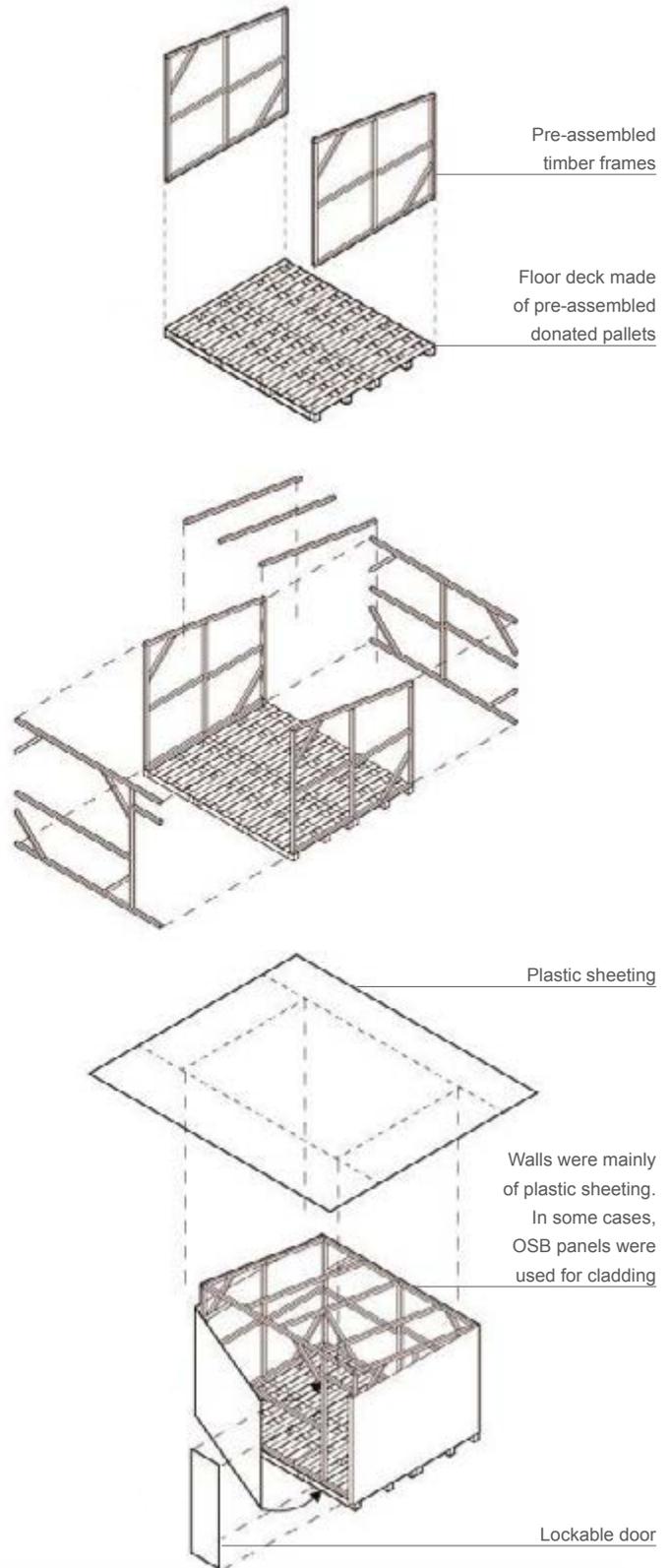
After several days of deliberation, failed attempts to contact larger INGOs for advice and discussions with some of those living in the camp, a vulnerability list was created to prioritize beneficiaries. Those identified as the most vulnerable were single women (the camp was at the beginning approximately 98% male), unaccompanied children, the elderly, the physically or mentally unwell or disabled and young families.

Allocating based on vulnerability was perceived by many to be racist, when it led to different numbers of shelters being allocated to each nationality. As it became apparent that the single women were mostly from the same country of origin, members of other national groups – who were mostly males – felt shelter was being unfairly allocated.

This prompted the design of self-build shelter kits, which were then allocated to a different demographic – mainly men aged between 25 and 40, who also seemed to be from a couple of national groups specifically – who were willing and able to build shelters for themselves.

Along with the criteria above, the length of time a person had been living in the camp was also taken into consideration, as well as referrals of particular individuals from onsite medical teams. When the number of teenagers in the camp increased dramatically in the summer of 2016, younger teens had to take priority over older teens, prompting further adjustments to the allocation “rules” and, consequently, upset among residents.

The team often had to make judgements on whether people were telling the truth about their needs. The allocation team soon learnt to identify a lie, but one could never be completely certain. This was difficult to overcome due to lack of an early registration system, a small team unable to keep track of everyone, as well as a lack of training. On several occasions, the team also faced threats and violence from camp residents desperate for a place to sleep.



The shelter had a self-build design, with wooden structure and plastic walls. The construction changed over time, depending on the materials available (image source: Help Refugees).



The organization started using a shelter design at the end of September 2015. Frames were prefabricated off site and, for the most vulnerables, shelters were set up by volunteers.



Refugees set up shops along main roads and at intersections, patching together pieces of different donated plastic sheeting.



© Giulia Ravassard

There were different kinds of shelters in the camp. New arrivals mainly slept in flimsy tents. By the end of 2015, the most vulnerable had received a timber-frame shelter.

COMMUNITY ENGAGEMENT

The camp's community was a mixed one. There were residents of many different ages, nationalities and social backgrounds living in the Jungle, so project coordinators engaged in different ways with the community depending on the individuals and the groups involved. The organization ran sensitization programmes via flyers and word of mouth in the relevant languages. Community meetings were also held to discuss new builds or changes to existing areas.

In order to gauge women's opinions, it was often necessary to close off a "safe space", as many felt uncomfortable speaking in a group of men, or were unable to enter an all-male environment for specific social, cultural, personal or religious reasons.

It was often also necessary to call upon an informally elected "community representative" to resolve disputes. These representatives occasionally assisted with allocation by recommending people who were most in need of shelter. They also disseminated information from the project teams about any issues which would cause delays, such as with procurement of materials or access to the site (e.g. as a result of police restrictions). Issues surrounding the use of these community representatives did arise, though, as not everyone from a particular community felt that their representative was trustworthy or the most appropriate person for the role.

SITUATION AFTER THE CAMP WAS DISMANTLED

After the Jungle was officially destroyed, camp residents were dispersed to collective centres across France and given a set period within which to apply for asylum. Some of the children were brought to the UK, while many others, tired of waiting and unsure of their chances in France, walked or travelled back to Calais to keep trying to "make it" to the UK. As of September 2018, there were around 1,000 refugees and migrants living in and around Calais, with an estimated 1,500 in northern France in total. The small camps were evicted on an almost daily basis, with property destroyed or confiscated by the national police.

WIDER IMPACTS

Following its activities in Calais, the organization continued to support grassroots humanitarian initiatives across Europe and the Middle East with funding, volunteers and coordination assistance. In 2018, it supported 75 projects globally and advocated regularly for the rights of those who have been displaced. Work also continued within and in relation to Calais, including by holding the UK government to account for its inaction on unaccompanied minors in Europe.



© Rob Pinney



© Help Refugees

The camp was reduced in size twice in January and February/March 2016 and finally demolished in October 2016. During the first occasion volunteers managed to assist with the moving of shelters. The second time several belongings, including legal documents, were lost, as shelter were demolished.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Little to no site planning was done in the camp. Refugees and migrants gathered based on nationalities. Overcrowding was a serious issue, as well as fire hazards.

STRENGTHS

- + **Community engagement** – use of community representatives, involvement of residents in the construction and dissemination of information relevant to the project.
- + **Scale and coverage** – although the entire camp was never completely “housed”, vulnerable cases were given shelter quickly and, by February 2016, almost everyone had a shelter.
- + **Material procurement** – funding providing, materials were sourced quickly when needed, including through donations from different groups.
- + **The repairs team** – reliable, efficient and developed good relationships with camp residents.
- + **Speed and agility of grassroots groups** to act where traditional humanitarian actors cannot.

WEAKNESSES

- **Lack of adherence to fire safety procedures**, due to limited initial understanding and awareness of their importance, as well as a lack of space in the camp. Fire concerns were not prioritized by the residents either, given the extremely dire conditions they were already facing.
- **Lack of guaranteed and consistent work force**, due to an uneven flow of volunteers.
- **Lack of training and experience of almost everyone involved** in the building and allocation teams.
- **Limited site planning**. There was some organization in the way that people of the same nationality were generally allocated shelters near to each other (at the request of the residents themselves), but for the most part shelters were simply built where there was space, and this often led to disagreements.
- **Small size of the allocation team**. The size of the team was reduced to two people from January 2016, and to just one person from the end of February 2016. This meant that allocation was not as efficient or coordinated as it could have been, and led to oversights when shelters had to be moved from the southern to the northern half of the camp.

LESSONS LEARNED

- **Understanding the dynamics between different national groups**. Given that none of the team had any previous experience in similar contexts, many lessons were learnt around the ways in which various cultures differ from and relate to each other, and the ways in which systems had to be adapted to allow for these differences and similarities.
- **Create a project plan** before commencing any work, and **conduct regular reviews of project procedures**, to ensure it remains as effective as possible. Given the nature of the situation, there was little time to work on a strategy before building began. However, in hindsight, perhaps even a few days spent planning and researching would have significantly increased the efficiency of the shelter project as a whole.
- **Outline vulnerability criteria before the allocation process**. Attempts were made by the allocation team to create a “vulnerability scale” at the beginning of the project, however, with no experience in the sector, it was difficult to know who should be deemed most vulnerable. The team felt underprepared and lacking in the authority to make such decisions.
- **Necessity of having a positive, proactive relationship with the local authorities**. It really helped when, on occasion, the team was able to reason with the national police, to make allowances for the bringing in of particular materials or for the continuation of building in a certain part of the camp. If the police had been consulted and allowed to feel as if building was happening on their terms, they might have been less obstructive to the process. This would have significantly sped up the project and improved relations with the volunteers. In turn, if the camp residents had seen the police to be accommodating of the project, this may have also improved the incredibly difficult relationship between them.
- **Contact could have been made with the local and national authorities earlier on**, to allow for liaising and better information gathering and dissemination further down the line. However, at the start of the project, it was the general hope that the government would have accommodated camp residents by winter, so little long-term planning was carried out.

CASE STUDY

IRAQ 2016–2017 / CONFLICT

KEYWORDS: Site planning, Infrastructure, Coordination, Coverage and scale

CRISIS	Mosul operation, 17 Oct 2016–July 2017 (though displacement continued)	
TOTAL PEOPLE DISPLACED*	Over 170,000 households (1,021,476 individuals) from 17 Oct 2016 to 29 Jun 2017	
PROJECT LOCATIONS	Al Qayyarah sub-district, Mosul district, Ninewa governorate	
PROJECT BENEFICIARIES	17,500 households (105,000 individuals)	
PROJECT OUTPUTS	Two emergency sites established with a capacity of 10,000 and 7,500 households	
SHELTER SIZE	24m² (standard government tent of 6x4m)	
SHELTER DENSITY	3.5–4m² per person	
MATERIALS COST	USD 1,200 per household (estimation including the tent and installation costs)	<p>PROJECT COST USD 1,700 per household</p> <p><small>* Cumulative number of IDPs displaced by Mosul liberation operation from 17 October 2016 to 29 June 2017. Source: DTM.</small></p>

PROJECT SUMMARY

To respond to the mass displacement as a result of military operations in Mosul, this project established two emergency sites following a request from the government and in coordination with CCCM and Shelter Clusters. The organization adopted a rapid-response settlement approach whereby – together with partner agencies – the sites were selected and planned in a month and an initial capacity of 1,200 households was established within two months. Additional capacity was created incrementally, with infrastructure upgrades such as water supply, electricity and service facilities. The project eventually achieved an accommodation capacity of 17,500 households within less than six months.



Courtesy of the organization



- | | |
|--|---|
| <ul style="list-style-type: none"> 1 21 Sep 2016: Initial site assessments. 2 15 Oct 2016: Government approval of Qayyarah Airstrip emergency site. 3 27 Oct 2016: Site development and construction start. 4 14 Nov 2016: First 1,200 tents installed at Qayyarah site. 5 End-Nov 2016: Installation of communal facilities and upgrade works begin in phases. | <ul style="list-style-type: none"> 6 6 Dec 2016: First 180 IDP families arrive at Qayyarah site. 7 5–26 Jan 2017 East Mosul offensive leads to another IDP influx in the sites. 8 Feb–Mar 2017: West Mosul offensive triggers new surge. 9 23 Mar 2017: Qayyarah site completed (capacity 10,000 households). 10 1 Apr 2017: Haj Ali emergency site completed (capacity 7,500 households). |
|--|---|

STRENGTHS

- + Timeliness of the intervention.
- + Leadership and coordination generated buy-in.
- + Development of special guidelines on the planning, set-up and maintenance of the emergency sites.
- + Remote site planning through observation and satellite imagery.

WEAKNESSES

- Minimum surface area of the site.
- Vulnerability to rains and floods.
- Delays in installation of water and sanitation facilities.
- Tents quality and durability.



Before mine clearance was completed, sites were only accessible from the perimeter. Planning was done remotely, by observation and thanks to satellite images.

CONTEXT

For more background on the Iraq crisis and shelter response, see overview A.33 in *Shelter Projects 2015-2016*.

BEFORE THE MOSUL OPERATION

Before the Islamic State of Iraq and the Levant (ISIL) took control of Mosul, the city had a population of 1,377,000 people. After ISIL occupation in June 2014, up to half a million people were believed to have fled.¹ In 2016, the operation to liberate Mosul was expected to be the largest and most complex humanitarian response in the world. In February, lead humanitarian agencies started working on a contingency plan, estimating a worst-case scenario of up to 1.5 million people requiring assistance.

In September, 200,000 civilians were expected to be displaced during the first week of the military operation. Following a request from the government, the organization agreed to support the establishment of emergency sites² in locations protected by security forces, and immediately deployed a surge team composed of five engineers and site planning experts.

SITUATION DURING MILITARY OPERATIONS

Since military operations to retake Mosul started on 17 October 2016, displacement figures raised on a daily basis.

During the first few weeks, operations took place in areas surrounding the city, so people fled to nearby villages and stayed with host families or in unfinished buildings. In December, the operation reached the city and IDPs started to arrive to the emergency sites, directed by the military. Large-scale displacement out of the city continued until the completion of the operations in late 2017. By the end of June 2017, over one million individuals were displaced, with nearly 350,000 hosted in camps.³ Access to safety and provision of basic services for those fleeing Mosul were considered the main priorities by the government and the humanitarian community.

COORDINATION

For site identification and set-up, the organization worked with the government and humanitarian coordination centres specifically established for this crisis. The CCCM Cluster was the primary forum under which technical standards were discussed and multi-sectoral services coordinated. The Shelter Cluster focused on delivery of tents and Non-Food Items, while the WASH Cluster coordinated with partners for installation of latrines and bathing facilities, as well as other WASH services. Further, civil-military coordination was provided by a humanitarian coordination agency to support communication between the organization and the Iraq Security Forces, for access and safety issues.

¹ UN-Habitat, Mosul city profile, October 2016.

² These are basic camps relatively quick to set up and with minimum services such as WASH.

³ DTM, 2017. Mosul Crisis – Population Movement Analysis.

SITE IDENTIFICATION

Due to the scale of the needs and the administrative burden of preparing and managing multiple small sites, it was agreed that a few large sites would be set up instead.

With support from the government, the CCCM Cluster and civil-military coordinators, the organization and partners conducted joint site selection missions to assess eight government-proposed locations near likely escape routes from Mosul. Due to the urgency, only a limited number of criteria were assessed: safety of the location, terrain and topography, mine contamination, and availability of water and electricity. The assessment team was composed of civil engineers, WASH experts, mine-action and civil-military coordination specialists. This process was challenging, as the military plan was confidential and operations largely unpredictable. The security situation – due to the presence of armed groups – was also dynamic and caused delays in finalizing site selection.

As Iraq was coming from decades of war, it was very complex to assess mine risks in a short time frame. For this reason, multiple sources of information were analysed, and high-risk locations were excluded. Other sites were discarded due to serious security issues, with fighting occurring nearby.

Based on the above criteria and guidance from the government, the organization suggested two large sites for immediate set-up. These were located in rural areas surrounded by agricultural land with host community houses scattered around. To determine the site perimeter, joint visits were conducted with site planners, the CCCM Cluster coordinator, government officials and host community leaders, which were followed by the issuance of official government letters.

EMERGENCY SITE GUIDELINES

Due to the uncertainty of the military operations, funding could not be mobilized and plans could not start until just one month before the influx. For this reason, the organization proposed to adopt a rapid-response settlement approach. This consisted of providing shelter and basic services first, and then incrementally upgrading the site in phases, to meet minimum humanitarian standards. The approach initially received strong criticism because of the low standards in the first phase. To gain cooperation, special emergency site guidelines were developed and the approach had to be carefully discussed and presented to various stakeholders.

The guidelines, developed by the Shelter, WASH and CCCM Clusters, determined minimum requirements for site planning, earthworks, drainage, shelter options, security, access, WASH and other site facilities.

SITE CAPACITY ESTIMATES

The project initially aimed to accommodate as many as 200,000 individuals. Once the detailed military operation plan was revealed, the target figure was adjusted to 105,000 based on anticipated displacement figures. Another six locations were assessed and site plans for 100,000 individuals across those locations were developed, in case of changes in military operations.

6. SITE UPGRADE, LIGHTING AND ELECTRICITY.

Concrete was poured over the tents' floors and gravel placed in the outdoor living areas. During this step, families temporarily moved to adjacent empty tents or large unused multi-purpose tents, or were hosted by other families in the camps. Perimeter lighting was installed in all corners of the blocks and standby generators and electricity lines were provided for camp management facilities.

7. HUMANITARIAN SERVICE FACILITIES. While IDPs settled in sites, the organization coordinated with CCCM, Health, Protection, Education, and Logistics Cluster partners to prepare spaces for facilities such as clinics, temporary learning centres, women-friendly spaces, logistic hubs, and distribution sites. This coordination was challenging, as all partners had different timelines and funding constraints. Because of the urgency of the intervention, meetings were held regularly both at inter-cluster and field level, with all clusters involved being asked to nominate one agency focal point.

Within a month from the start of construction, an initial 1,200 tents (60 blocks) were erected with latrines and gradually occupied in December. By the end of the year, 2,200 households were accommodated in the Qayyarah Airstrip emergency site.



In less than six months, capacity for 17,500 households was established in two sites. The main roads were used for small shops and storage of materials.



Government standard tents of 6x4m were installed in clustered blocks of 20 each. Space for extensions was minimal but, after families had moved in, upgrades were conducted to the floor and electricity was installed. Partners could then build service facilities in specific blocks pre-allocated in the site plan.

DRAINAGE AND FLOODING

In addition to the small tertiary drainage around each tent, 30x30cm secondary drains were dug around shelter blocks. These were connected to large ditches around the perimeter of the site through pre-cast concrete culverts. The site drainage system was eventually connected to natural drains to discharge rainwater from the site.

Drainage was designed based on preliminary studies on ground conditions, rainfall data and a topographic survey, as well as after checking runoffs to nearby valleys.

In 2017, after unprecedented levels of rainfall, low-lying sectors of the sites were flooded mainly because of the surcharge of water from an adjacent site and poorly constructed culverts in surrounding residential neighbourhoods.

Storm-water drainage was later expanded in early 2018, after five new sites were built around the main Qayyarah Airstrip site. This consisted in wide earthen channels with protective berms and large concrete culverts.

In late 2018, minor flooding occurred due to the blocking of culverts by informal settlements outside the site.



One site was vulnerable to heavy rains and suffered minor flooding during winter. In 2018, storm-water drainage channels and culverts were upgraded.



Using a rapid settlement approach, families were accommodated before all facilities and infrastructure were installed. Gravel was added in the shelter areas and roads excavated 20cm lower than the blocks, to prevent flooding.

SUPPLY OF TENTS

Tents were partly supplied by the government and partly procured by the organization within the country. These followed the government standard specifications and had an estimated lifespan of 6–12 months. About two years after the sites were set up, most tents were damaged due to the extreme weather conditions and the flooding events. In early 2019, the organization was planning to replace the mobile components of over 23,000 such tents, while maintaining the steel structure.

HANDOVER, CARE AND MAINTENANCE

After the completion of construction in April 2017, one site was handed over to a CCCM partner agency. The organization provided site maintenance trainings and remained responsible for site maintenance for the following six months. The other site continued to be managed by the organization.

Repair of fences, drainages and roads were carried out since then, often through the employment of camp residents through cash for work.

To mitigate fire hazards, camp management teams conducted weekly awareness trainings and two fire extinguishers were installed in each block. Although minor fire incidents occurred in kitchens within each block, these never spread to adjacent blocks.

By early 2019, returns had started to occur, but emergency sites were still hosting nearly 90,000 people. The two sites set up by this project were at about 70 per cent capacity. According to a survey conducted by the organization, about 88 per cent of camp residents either intended to remain or did not have an intention to return within the following 12 months.

WIDER IMPACTS OF THE PROJECT

Apart from providing accommodation for 105,000 IDPs, the project enabled over 20 partners to provide humanitarian assistance to the sites.

IRAQ - Hajj Ali Camp

General Infrastructure - Updated 20 December 2017

For Humanitarian Purposes Only
Production date : 16 February 2018

Camp Infrastructure

- Fence
- Sector
- Block
- Health
- Distribution
- Office
- Education
- Child Friendly Space
- Community Area
- Mosque
- WASH Facility
- Service
- Storage
- Entrance
- Gate
- Health
- Shop
- Storage
- Generator

Thematic Date: 20/12/2017 - REACH
Administrative boundaries: GADM
Satellite imagery: WorldView-3 from 15/04/2017
Copyright: DigitalGlobe, Inc.
Source: ILO, Department of State, Humanitarian Information Unit, NextView License
Projection: WGS 1984 UTM Zone 38N
Contact: iraq@reach-initiative.org
File: IRQ_Mid_IDP_HajjAli_16Feb2018

Note: Data designations and boundaries contained on this map are not warranted to be error-free and do not imply acceptance by the REACH partners, associates or donors mentioned on this map.

Layout of Single Block

- Tent
- Shower
- Tap Stand
- Latrine
- Water Tank



GPS Coordinates of Camp Location:
Longitude: 43° 19' 25.427" E (43.32674)
Latitude: 33° 44' 56.466" N (33.74918)

Scale 1: 2,000

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ **Timeliness of the intervention.** Tents and WASH facilities were set up in the emergency sites before the first arrival of families fleeing from Mosul.

+ **Leadership and coordination generated buy-in.** The phased approach used by the project initially faced strong opposition, as most actors did not accept that IDPs could be accommodated before all basic services had been provided. The organization succeeded in generating buy-in thanks to extensive coordination and this then allowed all partners to incrementally provide humanitarian assistance in the sites.

+ To support the coordination process and harmonization of activities to implement this phased approach that was new to the context, **special guidelines on the planning, set-up and maintenance of these emergency sites were developed** in a highly consultative process.

+ **Remote site planning.** In the initial planning stage, the site could not be accessed and so topographic analysis and measurement of site boundaries were done by a mix of observation from the perimeter and analysis of satellite imagery. Plans were then adjusted during the implementation phase. Such remote planning worked well thanks to the high-resolution satellite images acquired from authorized agencies.



105,000 IDPs fleeing Mosul found shelter in the two sites. About two years later, the majority of the site residents did not intend to return to their homes yet.

WEAKNESSES

- **Minimum surface area of the site.** As this project aimed at sheltering as many IDPs as possible to provide life-saving assistance, initially the minimum surface area per individual was 20–23m², which was about half of the Sphere recommended indicator (45m²). The plan included the gradual decongestion of the sites as people started to return to Mosul, which entailed the modification of block layouts to increase the surface area per person. Since after two years the occupancy rate was still about 70 per cent, this was only possible to a limited extent.

- **Vulnerability to rains and floods.** Before upgrade works could be completed, the shelter blocks' areas became muddy due to the heavy rains. This was later improved by installing drainage and adding a layer of gravel in the living areas. However, mainly due to poorly constructed or maintained drains and culverts (especially outside the site), minor flooding occurred in some sectors of one site.

- **Delays in WASH installation.** This project relied on partners for the funding and installation of WASH facilities, which was not always timely, since different agencies had different timelines. During the peak of the IDP influx, the shortage was mitigated thanks to a camp management agency installing temporary toilets, while partners worked to fill the gap.

- **Tents quality and durability.** The tents installed had a limited lifespan and required constant maintenance and repair, which was not always conducted due to funding constraints. The need for future replacement was expected, but proper plans and resource allocation did not happen early on, leading to a need for replacement of almost all units after about two years.

LESSONS LEARNED

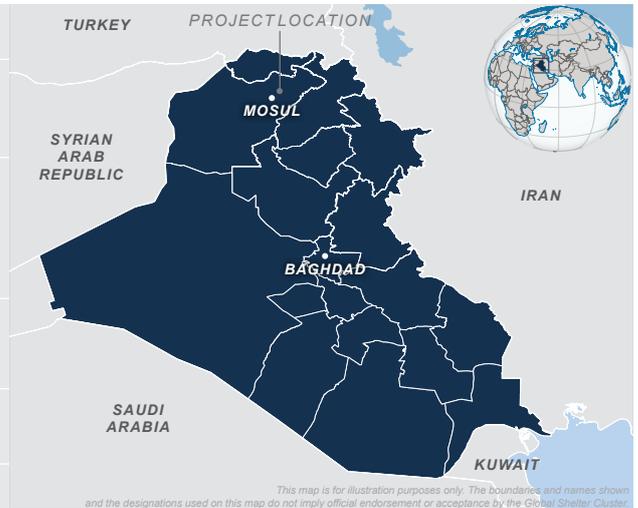
- **Various levels of coordination were required.** To coordinate the implementation of all the site facilities with partners, meetings were held at multiple levels, including the Inter-Cluster operation centre, CCCM and Shelter Cluster coordination meetings, and on-site construction briefings. Sharing construction progress regularly with partners on the ground was essential to align interventions and keep the rapid pace of all the construction activities.
- **Camps tend to last for years, but decisions need to be taken with urgency and in uncertain conditions.** In the initial stages, it was challenging to anticipate the lifespan of the sites, and this influenced decision-making and resource allocation. Although the project's main objective was to provide emergency assistance quickly, it was expected that the sites would exist for years rather than months, requiring maintenance and continuous fundraising. After over two years, indeed most of the IDPs remained in the camps and did not intend to return soon.
- **Tents' specifications and procurement plan should have been better designed.** Partly related to the above, the need for replacement of tents could have been better anticipated, and resources allocated for in advance. Specifications could have been more detailed and include quality control parameters and replacement procedures. Alternative shelter solutions could have also been proposed from the outset, choosing more durable options with reduced need for maintenance, although costlier up-front.
- **Construction managers should be part of coordination meetings.** For the smooth progression of coordinated site planning and development activities, an overall construction manager should be nominated from the lead site planning organization to attend coordination meetings, and all partner agencies should appoint a construction focal point (i.e. an engineer), as well.

CASE STUDY

IRAQ 2017–2018 / CONFLICT

KEYWORDS: Housing repair, Vouchers, Local private sector engagement

CRISIS	Iraq conflict, Jan 2014–onwards
TOTAL PEOPLE DISPLACED¹	4.3 million internally displaced 1.9 million returnees, as of Jan 2017
HOUSING DAMAGE²	65% damage rate in Ninewa governorate, as of Jan 2018. Additionally, 74% returnee households reported moderate damage and 72% reported insufficient quality of their shelter ³
TOTAL SHELTER NEEDS⁴	3.9 million individuals at the start of 2017 (1.3 million in Ninewa governorate)
PROJECT LOCATION	Khorsebat village, Ninewa governorate
PROJECT BENEFICIARIES	873 households (4,387 individuals)
PROJECT OUTPUTS	650 shelters repaired 2,383 vouchers distributed
SHELTER SIZE	Variable following Iraqi minimum standards ⁵
SHELTER DENSITY	Variable (min. 5.5m ² per person for the first six family members, 3.3m ² thereafter)
MATERIALS COST	USD 892 per shelter on average ⁶
PROJECT COST	USD 1,295 per shelter on average



PROJECT SUMMARY

The project repaired 650 houses in the Ninewa governorate in Iraq, benefiting displaced, returnee and local vulnerable households. It was implemented using a voucher modality. This significantly contributed to increasing livelihood opportunities within the local markets through the engagement of local suppliers. The project used a community-based approach, as beneficiaries could choose between having the organization in charge of carrying out the rehabilitation (through local contractors) or completing the agreed renovations themselves, with supervision and support.

¹ Iraq Humanitarian Needs Overview 2017, <https://bit.ly/2UjHFid>.

² Ministry of Planning and UN-Habitat (Jan 2018). No data is available for the whole crisis. Initial satellite assessments show the following damage rates: Ninewa 65% / Anbar 20% / Salah al Din 10% / Diyala, Baghdad, Kirkuk 5%.

³ IOM Iraq Mission (October 2016). Returnee Location Assessment Report.

⁴ Iraq Humanitarian Response Plan 2017.

⁵ The Iraqi minimum standards is 33m² for a family of six, with an additional 3.3m² of covered living space for every additional member. In some cases, where multiple families were in a single structure, efforts were made to maintain 5.5m² per person for additional private living space for each family.

⁶ Categories of repairs for war damage in Iraq: below USD 500 = Cat 0, USD 500–1,500 = Cat 1, USD 1,500–5,000 = Cat 2, USD 5,000–10,000 = Cat 3, USD 10,000+ = Cat 4 (not humanitarian). <https://bit.ly/2WjRl8L>.



- 1 Sep 2017: Initial household and technical assessments conducted, initial market assessment completed. 442 shelters identified.
- 2 Nov 2017: Comprehensive market assessment and development of standardized BoQ for repairs.
- 3 Jan 2018: Second household and technical damage assessments conducted. Total of 652 shelters identified (due to increased returns).
- 4 Mar 2018: Tendering process completed and median price set across all suppliers.

- 5 Mar 2018: First round of voucher distributions.
- 6 Apr 2018: Construction commenced
- 7 Jun 2018 Second round of voucher distributions. Budget for repairs increases due to cost savings.
- 8 31 Jul 2018: Construction completed and verified by project engineers.
- 9 Aug 2018: Payment of suppliers and monitoring.

STRENGTHS

- + Customization of assistance at the household level.
- + QR codes concealed prices from vouchers, which helped preventing tensions.
- + Local capacity was built and financial benefits distributed locally.
- + Gender-balanced team.
- + Multisectoral approach.

WEAKNESSES

- Houses with minor damages were targeted, meaning that less resources were available for repairing heavier damage.
- Inaccuracies in the vulnerability scoring.
- Repeated turnover of staff delayed implementation.
- Engineers did not clearly communicate structural issues and risks.



The project rehabilitated houses through a voucher scheme. Repairs included roofs and walls.

CONTEXT IN NINEWA GOVERNORATE

For more background on the Iraq crisis and shelter response, see overview A.33 in *Shelter Projects 2015-2016*.

The conflict between the Islamic State of Iraq and the Levant (ISIL) and the Iraq Security Forces started in late 2013 and spread to central governorates in June 2014. The Ninewa governorate was one of the most impacted by displacement, adding to the impact of previous waves of displacement and returns between 2006 and 2013.⁷

Although early assessments of the effects of the military operation to retake Mosul in October 2016 pointed towards large numbers of people moving to camps,⁸ many families chose to either remain in their houses while villages were retaken, or to travel short distances from military operations to return to their villages as soon as possible.⁹

SITUATION DURING THE CRISIS

The majority of IDPs in Iraq during the crisis resided outside of formal camps. The housing situation of many families – both displaced and non-displaced – deteriorated due to depleting financial resources, rising inflation, limited income-generating opportunities and the continued arrival of newly displaced households.¹⁰ The latter caused increased competition over available housing and forcing displaced families to reside in sub-standard conditions. Fifteen per cent of IDPs in northern Iraq lived in “critical” shelters that included public spaces, such as religious centers and schools, unfinished and abandoned buildings. Shelter issues were primarily associated with poor insulation and damage, as well as a lack of basic household items.

NATIONAL SHELTER STRATEGY

As the humanitarian crisis in Iraq entered a new phase from emergency to early recovery, the national shelter strategy prioritized rehabilitation of existing structures, particularly for returnees. During this project, the Shelter Cluster also formalized five War Damage Categories, and repair cost ranges for each.¹¹ The Shelter Cluster asked partners to prioritize Categories 2 (Major) and 3 (Severe) as those with the greatest need and ability for humanitarian actors to intervene, whereas Categories 0 (No damage) and 1 (Minimal) may be repairable by the households themselves. For Category 4 (Destroyed), the response should most likely come from the government and development partners. Most households targeted by this project fell into damage Categories 1, 2 and 3.

PROJECT IMPLEMENTATION

The project was part of a larger multisectoral programme including shelter rehabilitation, NFI distribution and WASH infrastructure repair. The shelter component focused on rehabilitating houses in Khorsebat village – which had been damaged by airstrikes, mortars, IEDs and machine-gun fire – to facilitate recovery from the conflict and enable return.



Ninewa governorate was the most affected in terms of displacement and damage to housing.

Project engineers conducted structural assessments of houses to ensure people were not inhabiting unsafe structures and to create individualized Bills of Quantities (BoQs), taking into consideration households’ unique needs and the different types and levels of damage.

The shelter team consisted of a male project manager, a female lead shelter engineer and four additional shelter officers (two men and two women), who were also engineers. This gender balance was critical to ensuring adequate access to all beneficiaries and representation of all household members’ needs in the final BoQs. Due to the cultural norms of this area of Iraq, unaccompanied men or women may often not enter the home of someone of the opposite gender, or enter all rooms of the house.

As the targeted village had access to functioning markets and skilled workers, the project used restricted vouchers. In order to support and restore livelihoods in the project area, the team conducted market assessments and trader capacity assessments among small local suppliers, and then invited them to submit quotations for the items they supplied. Rather than selecting a few large suppliers, the organization selected 24 smaller suppliers near the village, and then divided BoQs for each type of work among the participating suppliers based on geographic proximity to the beneficiaries and their capacity to implement. This ensured that households worked with multiple local suppliers and increased livelihoods in the community, as well as accountability of suppliers to beneficiaries. Since a list of BoQs and beneficiary households were given to the suppliers, materials arrived directly to people’s homes, improving service delivery.



To repair damage to houses, multiple small suppliers were engaged.

The vouchers used QR codes which were scannable by suppliers to conceal the total monetary value of the rehabilitation. This was important to prevent tensions within the community and to ensure that, while households were able to refuse installation of certain items, there was no financial incentive for them to do so. If there had been any incentive, households may have resorted to hiring untrained young men to do electrical and plumbing work to maximize savings. However in this case, when beneficiaries refused installation, the cost savings were pooled again, and then a second round of vouchers were issued to conduct additional rehabilitation works, targeting particularly vulnerable households.

TARGETING

The project area was selected after consultation with Shelter Cluster representatives on underserved areas, following which the project team conducted structural and vulnerability assessments. As this was the first time the project was implemented in the area, the organization prioritized a location where more than 80 per cent of the houses had minor, moderate, or severe damage and many households were particularly vulnerable. Initially, 500 structures were targeted. As the project progressed, more households returned from camps in hopes of participating in the project and the organization secured funds to cover an additional 150 structures. This meant that more than 87 per cent of households with shelter needs in the target location were reached.

COMMUNITY ENGAGEMENT

The project team continually engaged with the community and the suppliers. During the initial assessment phase, the objectives of the project and the responsibilities of actors involved were shared with the community. The project team worked with the community to facilitate UXO clearance and rubble removal – which were the respective responsibilities of the government and the property owners – and shared the processes for beneficiary and supplier selection. While the construction was underway, project officers were on site every day to supervise work, provide guidance and feedback, and listen to concerns.



Engineers conducted structural assessments and developed individual BoQs.

To avoid tensions within the community when additional funds were made available, the project team reassured the community that more households would be served and that some households would receive additional assistance, as well as outlined the criteria for selection. Families were selected based on size or other vulnerabilities, and depending on the gaps between the BoQ and what had already been achieved. A feedback mechanism was also used to allow community members to raise any concerns (anonymously, if they wished).

MAIN CHALLENGES

INSECURITY AND INCREASED RETURNS. During the planning phase, the Kurdish independence referendum and resulting insecurity affected access to the project area for more than a month. Furthermore, increased returns during that time led to an increase in the number of households participating in the project, which required a second round of assessments.

HOST FAMILIES. While the households served were primarily owners, there were also many IDP families hosted by local households, increasing the amount of floor space needed to ensure that minimum standards were met. Where possible, the organization rehabilitated additional rooms to create private spaces, or enclosed additional spaces with partitions. When two households within a structure were identified as vulnerable, the organization increased the budget available.



The shelter component of the project focused on repairs to houses in category 1, 2 and 3. This was part of a wider programme including the distribution of household items and the rehabilitation of water and sanitation infrastructure.

HOUSING, LAND AND PROPERTY. In areas controlled by ISIL, the militants aggressively confiscated and resold property based on ethnic or religious affiliation. As such, multiple people may have had documentation asserting their right to a property. With guidance from the HLP Sub-Cluster, the organization allowed people to submit property ownership documents or other items which could be verified by the municipality, such as inheritance documents, utilities bills or government-issued documents noting their address. Where people lacked official documentation, their neighbours were required to formally attest that they had the right to occupy the house, and then a committee of elders from the community reviewed the claims. If approved by the community, the document was then filed with the municipality. While this system was not immune to corruption, the nature of the relatively small community meant that there were no competing claims. For areas held for a longer time under ISIL or in larger communities and cities, this problem would have likely been more challenging.

WIDER IMPACTS OF THE PROJECT

Through this project, households learnt about structural safety and how to prioritize technical repairs over beautification, with a strong emphasis on privacy and security (e.g. gates, doors, privacy walls within shared buildings) as a cultural priority.

Additionally, through the method of splitting BoQs among suppliers, the project team could spread the financial benefits of the project amongst local businesses, who then hired skilled community workers, restoring supply chains and livelihoods in the communities. As suppliers were paid after the work was completed, they were incentivized to finish major works quickly. This promoted greater employment of labourers and material orders. Suppliers also reported that because of the works they did, they gained a trustworthy reputation in the community, which brought them more contracts for further repairs beyond the scope of the project. In total, nearly USD 580,000 went to 24 local suppliers for materials and labour.

The multisectoral nature of the programme led to the rehabilitation of the pumping station serving the whole project area, as well as repairs to some individual household connections. This supported returns to areas with both adequate shelter and WASH services. Ultimately, the repairs made by this project ended the displacement of households that had been living in nearby camps for months or years. While the project was very small in scale compared to the overall needs in Iraq, its nature helped households to no longer require assistance, therefore contributing to durable solutions.



Families in conflict-affected areas also conducted repairs themselves. The image shows a self-built rehabilitation in another location.



The project repaired walls and stairs, and added handrails for safety.

NEXT STEPS

For the next iteration of the project, the organization intended to focus on Category 2 and 3 structures to ensure that more urgent needs were met effectively. It also planned to work more closely with the HLP Sub-Cluster to further refine its approach to addressing HLP issues. Additionally, the organization conducted focus group discussions in large camps to identify barriers to return and facilitate more safe and voluntary returns. The next iteration of the project, which was in the planning stage, was also going to include WASH and livelihoods components to help households recover holistically.



Using vouchers, each individual household had a customized scope of work.

ENDNOTES

⁷ Prior to 2013, the Ninewa governorate had hosted the second largest IDP population post-2006 (158,721 IDPs), as well as 95,000 returnees, plus Syrian refugees and Iraqi returnees from Syria. IOM, Governorate Profile: Ninewa, April 2014, <https://bit.ly/2c5sbNI>.
⁸ See case study A.26 in this edition for a project that set up emergency sites for households displaced by the Mosul operation.

⁹ IOM Iraq Mission (October 2016). Returnee Location Assessment Report.
¹⁰ REACH (June 2016), Multi-Cluster Needs Assessment (III) of Internally Displaced Persons Outside Camps – Iraq, Assessment report.
¹¹ Iraq Shelter Cluster (March 2018), Guidance Note on Emergency Repairs of War Damaged Shelters. <https://bit.ly/2WjRl8L>.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

+ **Customization at the household level.** Each BoQ was adapted per individual shelter and developed in consultation with both structural engineers and the households themselves, in order to meet their unique needs and priorities.

+ **Pricing data was concealed by QR codes** on the BoQs, such that suppliers were aware of costs, but households could not easily directly compare the amounts received. This was **helpful in preventing potential tensions** between targeted households.

+ The selection of many local suppliers ensured that **capacity was built at the local level.** It also meant that the **financial benefits were distributed** amongst the target community and neighbouring villages (that were not selected), rather than to a larger city like Mosul. **This improved community acceptance and allowed suppliers to hire locals**, which helped many families regain secondary income.

+ **The gender-balanced team** allowed for engineers to speak at length with female-headed households without any issues and ensured that female family members' unique needs were considered in the development of the BoQs.

+ **The multisectoral approach** allowed some households with damaged water and sewage connections to have these repaired as part of the WASH component.



Gender-balanced teams allowed to discuss needs and priorities with all household members.

WEAKNESSES

- To mitigate community conflict, **many houses with minor damages were considered for repairs, leading to fewer available funds to repair more badly damaged homes.** While this was mitigated with a transfer from another portion of the project, it should be considered for the future.

- **Inaccuracies in the vulnerability scoring.** Certain vulnerability criteria, such as income per family, were taken as reported by the project team. However, more in-depth exposure with the community eventually revealed that some households did in fact have sources of income, affecting their vulnerability scoring.

- **Repeated turnover of staff delayed project implementation.** The project was without a manager for several months at the beginning, and a new project manager came in towards the end of the project. This meant that the majority of the construction works were completed in the summer, when temperatures were hot and staff and beneficiaries were fasting, slowing implementation further.

- **Engineers should clearly communicate** structural issues and risks to households. In some cases, households were concerned about structural integrity of certain shelters and demolished them, even though they were repairable. Having a transparent and effective system to delineate structures as repairable or not would help the community better.



The project also targeted houses with minor damage to avoid tensions within communities. However, this meant that less resources were available for heavier repairs.

LESSONS LEARNED

- In communities where long-term work is expected, **taking time to familiarize with their customs** from the beginning will improve the targeting and scoring processes.
- Where possible – and especially in conservative countries – **having female technical staff** can ensure that all community and household members' points of view are considered.
- **Colour coding vouchers can be very helpful** for non-literate populations. **Using images or pictures** is also useful to help colour-blind individuals separate different BoQs.

CASE STUDY SYRIAN ARAB REP. 2015–2017 / CONFLICT

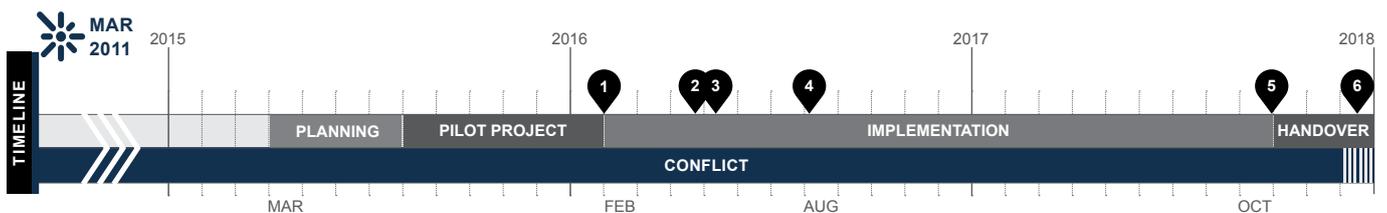
KEYWORDS: Adobe houses, Local construction techniques, Capacity-building

CRISIS	Syrian conflict, 2011–onwards	<p><small>This map is for illustration purposes only. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the Global Shelter Cluster.</small></p>
TOTAL PEOPLE IN NEED*	13.5 million as of October 2015	
TOTAL PEOPLE DISPLACED*	6.5 million internally displaced	
TOTAL SHELTER NEEDS*	2.3 million individuals within Syria	
PROJECT LOCATIONS	Five locations in Harem and Idleb districts, Idleb governorate	
PROJECT BENEFICIARIES	1,100 households (7,219 individuals) 3,500 workers with access to job opportunities (40% from the above group)	
PROJECT OUTPUTS	1,100 houses built 3,500 individuals trained 450 mud toolkits distributed to workers Public facilities and infrastructure built in five villages	
SHELTER SIZE	60m ² (525 units), 36m ² (309 units), and 24m ² (266 units)	
SHELTER DENSITY	6.8m ² per person on average	
MATERIALS COST	USD 2,685 per house on average (USD 60 per m ²)	

* Figures as of October 2015. Syria Humanitarian Needs Overview 2016.

PROJECT SUMMARY

Between 2015 and 2017, five housing projects were implemented by a lead organization and its partners in Syria close to the Turkish border. The projects built a total of 1,100 mud houses using a traditional and cost-effective construction technique, mainly with local materials, to support displaced people in a highly volatile context. The projects provided vocational training, job opportunities and local market reinvigoration. They also contributed to social cohesion in targeted communities and longer-term sustainable development, by supporting investments and enhancing local capacities and knowledge.



- 1 1 Feb 2016: Pilot project completed.
- 2 25 Apr 2016: Training of Trainers in Turkey with international consulting partner.
- 3 10 May 2016: Training of Trainers in Syria with local partner.
- 4 1 Aug 2016: Four model houses built, with upgrades based on lessons learned in the pilot.
- 5 31 Oct 2017: Project 1 completed and houses handed over.
- 6 31 Dec 2017: Projects 2, 3 and 4 completed and handover conducted.

STRENGTHS

- + The pilot mobilized funds and scaled up successfully.
- + Several advantages of adobe construction compared to other shelter options.
- + The project enhanced skills and generated income opportunities.
- + Women were involved in most stages of works.
- + Low environmental impact.
- + The settlements can be dismantled or reused after the conflict.

WEAKNESSES

- Implementing in the wet season caused delays and extra costs.
- Adobe construction requires space and plenty of water, is not portable and needs frequent maintenance.
- The project did not conduct proper market assessments.
- Contractors and local partners were not properly identified and trained.
- A site was attacked due to limited risk assessments and poor communication.
- Poor site selection in some cases increased transport costs.



© ORC Turkey / Media Unit

For more information on the crisis and regional response, see A.29 in *Shelter Projects 2015–2016*.

PROJECT GOALS AND APPROACH

The project aimed to provide a more durable alternative to camps and contribute to social cohesion between displaced and host communities, create job opportunities, build capacities and revitalize local markets. For this reason, housing construction was chosen as the main intervention modality.

The organization chose to use a traditional building method (mud housing) to address the limited availability of construction materials inside the Syrian Arab Republic (Syria), while maintaining cultural appropriateness. The materials and design adopted were the result of hundreds of years of adaptation to the local context (including climate, social and cultural way of life). Though this approach had declined due to urbanization, the local knowledge remained readily available. This technique suited both contextual challenges (e.g. limited power supply and machinery) and shelter standards (including privacy, thermal comfort and adequate covered living space).

Another reason for choosing adobe was to allow for an easy dismantlement of the buildings after the conflict, as the local authorities and public opinion would not permit the building of permanent settlements.

As most of the targeted communities were from rural areas and were used to living in this type of housing, the solution was generally well received.

PROJECT IMPLEMENTATION

Five projects were conducted in non-government-controlled areas between 2015–2017 by a lead organization operating from Turkey, together with an implementing partner in Syria.

Although the selected technique was traditionally used in the area, local expertise was limited at the time the project started. This led to an extensive search for an experienced consultant on earth construction who could support the process.

PILOT PHASE. A pilot project was conducted from April 2015 in consultation with the selected international consulting organization, which provided technical guidance, developed a preparatory study and supported project implementation. As the consultants worked remotely, some challenges in communication arose and this limited the level of technical support that could be provided. The local implementing partner subsequently engaged in the construction of 90 houses and their service infrastructure (drinking water system, drainage, roads and a mosque). The consulting partner then conducted an evaluation to provide recommendations for future projects. These included:

- Selecting a technique coherent with local materials;
- Identifying local organizations or contractors with experience in the technique;
- Starting activities with model houses before scaling up;
- Adopting a training of trainers (ToT) approach.

TRAINING OF TRAINERS. The international partner conducted a ToT on local building cultures to the lead organization and its implementing partner's technical staff, to analyse the construction techniques and architectural designs available. This training was held in Turkey to allow all partners to attend and was then replicated inside Syria for the local partner's engineers. After the training, samples of the mud units with three

different methods of earth building (adobe, cob and rammed earth) were tested. Adobe was adopted for the projects.

IMPLEMENTATION PHASE. Starting from spring of 2016, an additional 1,000 houses were built in four different locations. The team was composed of two engineers (project manager and quality control engineer). Construction was conducted by local workshops and labourers under supervision of the local partner team (one field engineer and two assistants). Approximately 3,500 job opportunities were created and 450 toolkits were distributed to the most efficient workers, to help them start their own businesses. These included light tools needed for adobe construction, such as shovel, wheelbarrow, sieve, metallic mould, etc. The toolkits were procured by another international organization, which also provided vocational training and covered some of the workers' fees.

SECURITY AND RISK MITIGATION

One of the major challenges to implementation was security. Both the first and second location selected for the pilot project were attacked by air strikes, killing and injuring several people and destroying a school which was hosting displaced families. This led the organization to relocate the project to a safer and scarcely populated area, away from schools, delaying the implementation period for three months. Security challenges led the organization to reconsider the project feasibility, as it proved complex to identify safe zones within the conflict area.

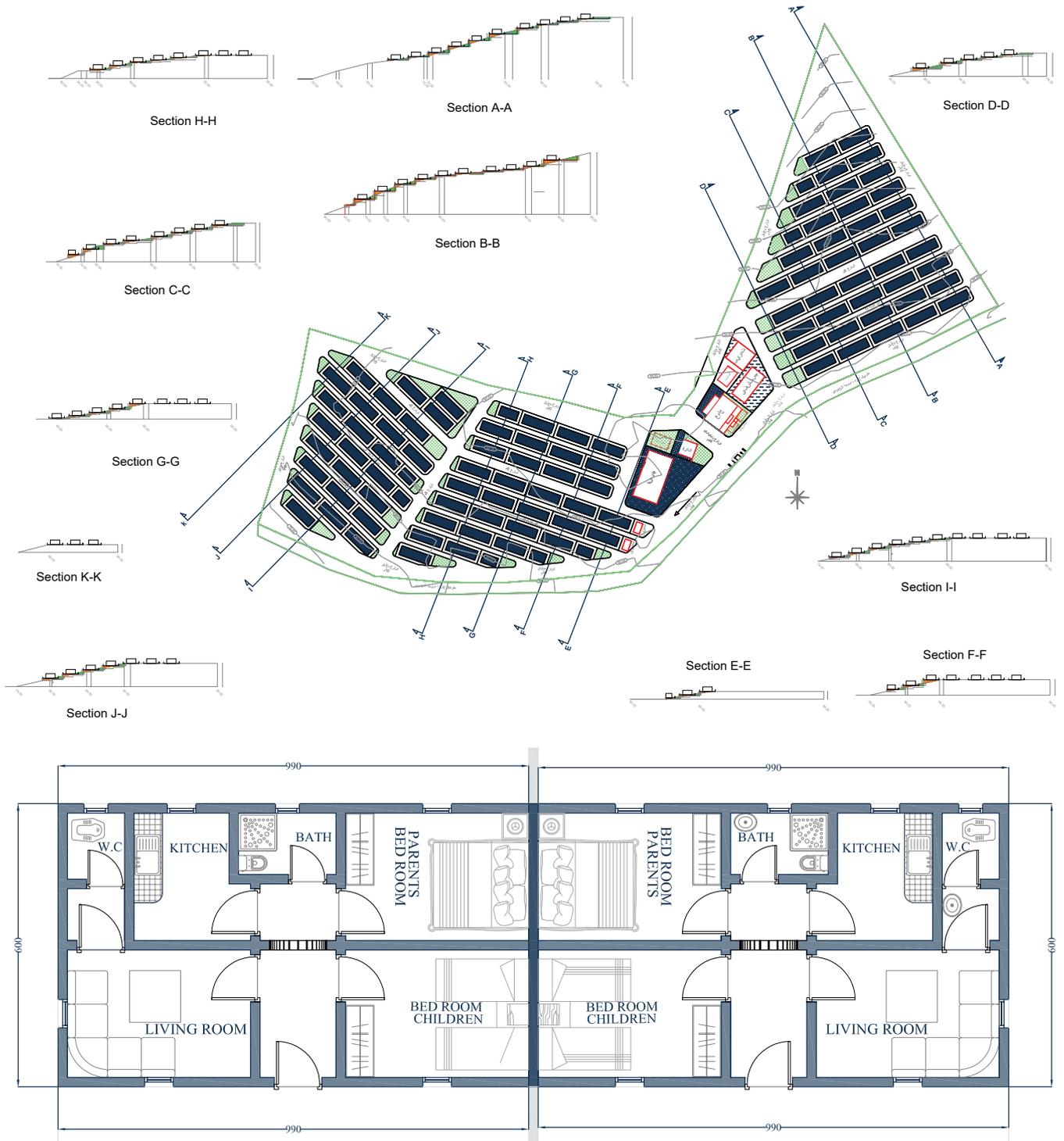
A risk mitigation plan was developed to include the following:

- Continuous monitoring of developments in and around project sites, to anticipate any intensification of conflict;
- Communication with local councils and stakeholders to maintain their support for the projects;
- A preparedness plan for rapid evacuation of workers in the case of artillery or air strikes;
- Whenever possible, small quantities of raw material were procured and stored to reduce the effects of market fluctuations and border closures.

Areas close to the Turkish border were finally selected, as these seemed to offer more safety due to their proximity to Turkish communities. While this led to additional challenges to finding suitable land, it proved to be the right decision.



A ToT on local building cultures was organized in Turkey in partnership with an international consultant. Adobe was selected as the material for the houses.



A ToT was also conducted in Syria for the local partner staff. It consisted of a class-based module and practical tests in the field, such as testing bricks made with different mixtures and analysing different samples of soil.



Adobe brick production required very large spaces and could only be conducted during the dry season. This caused some implementation challenges.

TARGETING

The locations were targeted primarily due to their proximity to IDP camps. Implementation sites were chosen in consultation with local councils and municipalities, who provided information and documents relating to land ownership, to ensure that the plots were publicly owned and were not subject to any legal dispute.

The organization contracted local partners to conduct surveys to identify IDP communities close to each project location and propose selection criteria. Partners also conducted a mapping of existing manpower and defined selection criteria for the vocational training and income-generating opportunities, depending on the workers' profession and background.

Firstly, the organization received lists from local councils based on three criteria: displaced households, unable to return, with six or more family members.

The second selection depended on whether the family did not possess any habitable and accessible property, nor had received any shelter-related assistance from other actors.

Additional vulnerability criteria were used only if the number of eligible beneficiaries according to the first and second thresholds was higher than the number of housing units available.

These included: women-headed households; child-headed households (under 18 years); elderly-headed households (older than 60 years); and households headed by persons with special needs or with permanent disability due to conflict.



Sample buildings were tested in the ToT. Close coordination and cooperation with local organizations ensured knowledge transfer and allowed them to go on and implement similar projects in the future.



The project was implemented in five different locations close to the Turkish border in Syria. Soil for bricks was sourced in abandoned hills and holes refilled after extraction.

COMMUNITY ENGAGEMENT

In the planning phase, displaced households were consulted on the size and internal divisions of the houses. The house plan was modified as per their requests and taking into consideration cultural customs, such as having two rooms to separate women and men or give privacy for elder household members. A small front garden was also added to allow for social interactions between neighbours. The local authorities and host community dignitaries were consulted on the pros and cons of the projects for their communities. Some of the beneficiaries also participated as construction workers.

As mud-housing construction was in use in the host communities in the past, elders followed the construction process and shared their knowledge. This helped the implementation team to overcome challenges such as finding alternative sources for local materials when the Turkish-Syrian border was closed.

A feedback mechanism was set up and complaints sent to the field offices and communicated via phone to the relevant departments in the main office in Turkey.

WOMEN'S PARTICIPATION

Traditionally, mud housing techniques were used in rural areas as a communal activity, where all family members would participate. However, during the crisis, the view of women's role in public life had taken a conservative turn (e.g. armed groups preventing women to work). It was also very difficult to find skilled women in the targeted communities. Nonetheless, a few women did assist their husbands in building their homes out of necessity and, though it was frowned upon at first, this was eventually accepted.



The project had a low environmental impact thanks to the use of mud bricks. Settlements were built as transitional and could be dismantled after the conflict.

MAIN CHALLENGES

MATERIALS AND LABOUR. Border closures and the instability of domestic markets (affecting both availability and quality of materials and labour) led to delays and an increase of the total project cost by 25 per cent.

CONTRACTORS SHORTAGES. The limited local expertise in the selected technique also affected the project. This was due to the migration of many professionals and the inability to advertise the project owing to security issues. Additionally, many armed groups with no prior experience or permits to conduct construction works tried to be involved in the projects, as they had several trucks and other machinery. These factors led to the direct engagement of the organization in technical planning and implementation.

UNFORESEEN WEATHER CONDITIONS. During implementation, the project area went through long bouts of harsh winter weather (including heavy rain and snow), resulting in the suspension of work. Mud bricks and walls were covered and the rainwater was discharged from the villages through makeshift tunnels, leading to additional costs.

DISPUTES WITH NEW IDPS. Due to the multiple waves of displacement in the area and the relatively long implementation timeframe, there were issues with newly displaced households occupying houses that were intended for others. This caused disputes that could have been avoided through more direct engagement of the intended beneficiaries throughout the construction process.

HLP ISSUES. Due to the limited experience of the organization in Housing, Land and Property (HLP), as well as a lack of contextualized HLP standards in northern Syria at the time the project started, HLP issues were not adequately considered. Houses could only be built over public land and owned by the local councils, while beneficiaries had the right to occupy the houses for one year, as per contracts signed with the organization and the councils (renewable for another year if the situation of the household did not change).



The project provided skills development and job opportunities in the targeted areas.



It was challenging to identify contractors, also due to a lack of proper training and selection. This meant that the organization often had to conduct activities directly.

SOIL SOURCING

Adobe does not need a lot of energy to be produced. The process (extraction/transport/mixing/production) is manual and has a low environmental impact and embedded energy level. The soil used in this project was not organic, so there was no competition with agricultural usage. It was extracted from abandoned hills in collaboration with the local councils, without leaving any holes or caves. When extraction works were finished, the sites were always levelled, and the local community started to rehabilitate them into agricultural land.

EXIT STRATEGY

To ensure a smooth exit, a local council was established by the beneficiaries for each location, with all related records of built houses and infrastructure designs, list of occupants and a manual for the annual maintenance. Members of these local councils received training on the basic principles of technical project management and governance; financial management of the project, including the collection of symbolic fees for the continuation of municipal services and the continuous maintenance of the facilities; training on managing beneficiary contracts and criteria to identify new beneficiaries if any of the current beneficiaries left. They were also trained on beneficiary feedback through establishing a complaints mechanism.

WIDER IMPACTS OF THE PROJECT

The projects provided vocational and skills training and distributed light building tools to support workers in establishing their businesses. Many local contractors were used and workshops were established by the displaced and local community to work on the projects. On average, there were 500–600 workers on site every day. This generated income and had a positive impact on the transportation system and local markets more broadly. The use of locally available materials boosted the local economy. Finally, partner organizations were strengthened to implement similar projects in the future.



Displaced households were involved in the design of the houses.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- + **The pilot was successful in mobilizing funds and scaling up** from 90 to over 1,000 houses plus infrastructure.
- + **The adobe construction technique had several advantages** compared to other options (such as concrete buildings or caravan units). These included ease of building with manual tools; traditional technique allowing community buy-in; lower costs; high thermal insulation; and privacy (solid walls and sound proof).
- + **The project enhanced skills and generated income opportunities** for local host communities and displaced people, contributing to social cohesion. Many workshops were established and the projects helped to partially revive the economy in the in the area.
- + **Women were involved in most stages of works**, although this was challenging due to social norms.
- + **Low environmental impact.** The raw building materials (soil and straw) were locally available and sourced sustainably; buildings were also easy to dispose compared to other shelter options.
- + **The settlements were intended as transitional and could be dismantled or reused** after the conflict. For instance, these could be occupied by the local communities or converted to other uses, such as tourist resorts.



It was challenging to involve women in the construction, but the project succeeded in engaging some of them throughout implementation.

WEAKNESSES

- **Affected by cold and rain, this construction technique can only be executed during the hot and dry season**, since the mud should cure and dry properly. Because of limited time, the project was carried out through the winter and – although most elements were covered – the rain affected parts of the construction. Rebuilding some wet walls had an impact on the overall budget.
- **Some disadvantages of adobe construction** include: a very large space and plenty of water are needed for mixing the mud and drying the bricks; portability is impossible; it requires annual maintenance, so users should be trained, and this maintenance can represent a burden especially for poorer households; the implementation time is much longer compared to tents and caravan units.
- **The project failed to conduct proper market assessments**, leading to an increase in costs as some materials, such as timber, were not available in local markets and had to be imported.
- **The organization did not properly identify and train contractors and local partners** before implementation. As a result, it often had to implement activities with its own staff.
- **The site for the pilot project was targeted by aerial bombardment**, killing and injuring several people. This was partly due to the limited risk assessments and partly to the failure to adequately announce the beginning of construction to the warring factions (also compounded by the lack of communication between these).
- **Poor site selection for two projects** in a mountainous area, where water and the right type of soil for making bricks were not easily accessible, **increasing transport costs significantly**.



One site was hit by an air strike, highlighting the security risks in the project areas.

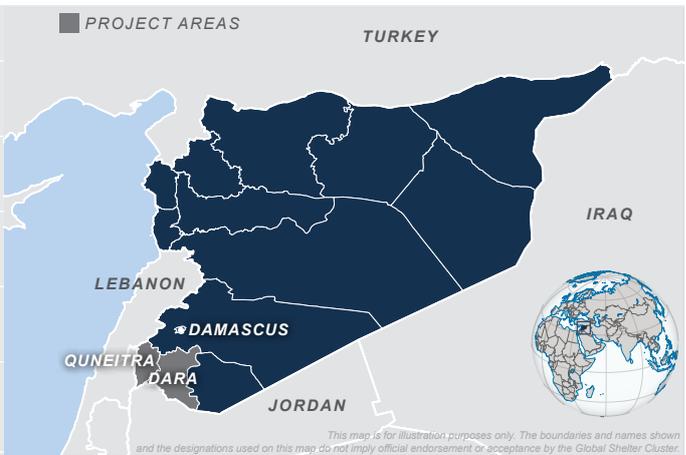
LESSONS LEARNED

- **Site selection is essential.** The project site should be in a low-rainfall area due to the mud being affected by water and thus the constant need for maintenance work. It must also be located close to main roads, water sources and near or over a soil type suitable for making adobe. When selecting locations, neighbouring local communities should be assessed to avoid building close to poorly serviced communities, which might cause friction with the IDPs. In one instance, this issue caused the project to change location.
- **Beneficiary selection should be conducted before the start of construction activities, and the selected households should be more actively engaged in building their houses.** This would mitigate the issues faced when newly displaced households arrive to the area and make claims over the houses, as well as limit the intervention of armed groups.
- **The projects should be implemented in stages**, each including about 100 houses, which facilitates the management, monitoring and evacuation from the site in the event of any security threat.

CASE STUDY SYRIAN ARAB REP. 2017–2018 / CONFLICT

KEYWORDS: Shelter rehabilitation, Remote management, Security of tenure / HLP

CRISIS	Syrian conflict, 2011–onwards
TOTAL PEOPLE IN NEED*	13.1 million (5.6 million in acute need)
TOTAL PEOPLE DISPLACED*	6.1 million internally displaced
TOTAL SHELTER NEEDS*	4.2 million individuals within the country
PROJECT LOCATIONS	Dara and Quneitra governorates
PROJECT BENEFICIARIES	124 households (629 individuals, 43% host community)
PROJECT OUTPUTS	124 housing units rehabilitated
OUTCOME INDICATORS	81% of housing units occupied 83% satisfaction rate 100% reported improved privacy and security
SHELTER SIZE	52.5m²
SHELTER DENSITY	6.3m² per person
MATERIALS COST	USD 1,550 per household
PROJECT COST	USD 1,716 per household



PROJECT SUMMARY

This project provided shelter, WASH and HLP rights assistance to rehabilitate 124 housing units, targeting both long-term displaced and host community members in urban and peri-urban areas. Through a process of verification of ownership and usage rights, all tenants signed a certificate of occupancy for a 12-month rent-free period, while owners signed a donation certificate. The project team was involved in managing and resolving any potential disputes. Owing to access constraints, the project was managed remotely from Amman.

* Figures as of December 2017. Syria Humanitarian Needs Overview 2018.



- 1 Jul 2017: Signing of project implementation agreements with local partners.
- 2 Jul–Aug 2017: Targeting of locations and community-level HLP due diligence assessment.
- 3 Jul–Aug 2017: Vulnerability and technical assessment.
- 4 Sep–Oct 2017: Household-level HLP due diligence assessment.
- 5 Oct 2017: MoUs signed between the local partner and landlords.
- 6 Nov–Dec 2017: Rehabilitation of the housing units.
- 7 Jan 2018: Verification and monitoring.
- 8 Jan 2018: Handover and signing of Certificate of Occupancy (free of charge).
- 9 Mar 2018: Post-implementation monitoring.
- 10 Jun 2018: A shift in control of project locations affects the access of both the organization and the implementing partner.
- 11 Nov 2018: Planned discussion of potential future hosting arrangements after the rent-free period cannot take place due to access constraints.
- 12 Jan 2019: End of rent-free period. Loss of access to project areas does not allow to monitor any further.

STRENGTHS

- + Local labour and materials supported the local economy.
- + Solar panels helped reduce households' expenditure.
- + Protection mainstreaming and disability inclusion.
- + HLP issues were addressed and local stakeholders strengthened.
- + The hotline was effective in obtaining regular feedback.
- + The project improved living conditions.

WEAKNESSES

- Limited engagement and cooperation with the local council.
- Low construction quality.
- The HLP due diligence process was time consuming.
- Households that did not meet HLP requirements were not assisted.
- Information flows between different project teams were not smooth.
- The project had a very small scale.
- Some families decided to leave the house or the area.



CONTEXT

For more information on the crisis and regional response, see A.29 in *Shelter Projects 2015-2016*.

Prior to the crisis, the Syrian Arab Republic (Syria) was witnessing a trend of urbanization and a growth of informal settlements in major cities. This increased after the start of the crisis, due to the escalation in violence and the subsequent displacement of populations from rural to urban areas, ultimately weakening urban infrastructure.

As of 2018, about 4.2 million individuals required shelter assistance across Syria. Shelter options were mostly inadequate and lacked access to livelihoods, education and health services. Host communities were the primary provider of shelter for displaced populations. Rent was a major component of households' expenditure and, with rental prices escalating since the beginning of the crisis, the inability to pay rent was often the cause of multiple displacement. Housing Land and Property (HLP) issues were very common, such as disputes over ownership, rental and hosting arrangements.¹

¹Syria Humanitarian Needs Overview (HNO) 2017 and 2018.

HLP CHALLENGES IN SYRIA

1. Lack of tenure security is one of the many reasons for displacement. Multiple waves of displacement involve different claimants of the same plot of land;
2. Destruction of land registries means that reliable land records are often unavailable;
3. Most landlords do not want to enter into formal rental agreements. Preference to verbal arrangements was also common prior to the crisis;
4. Many HLP transactions are not recorded in the statutory system, and there are often overlapping claims;
5. Disputes around rent, payment of utilities and property occupied by armed groups are very common;
6. Women face additional challenges, as their access to HLP is usually linked to their relationship with a man. Inheritance disputes are also very common, which are exacerbated by the lack of necessary documents;
7. HLP documents are often destroyed, lost, left behind or confiscated at checkpoints. Many existing documents are incomplete, inaccurate or of uncertain legal standing.

Adapted from "HLP in the Syrian Arab Republic", NRC, May 2016.



The project integrated a due diligence approach (at community and household levels) to uncover HLP issues, which are common in Syria (photo: Damascus).

PROJECT IMPLEMENTATION

The project was managed from Amman and implemented by a local partner in southern Syria in areas not controlled by the Syrian government. The project team was composed of nine staff of the international organization and 22 of the local partner. Both organizations had two main teams working in synergy (shelter/WASH and legal assistance), plus support staff.

The programming was an extension of a set of procedures – integrating shelter and HLP throughout the programme cycle – which was already well established by the organization and had supported thousands of households in other parts of the region. Tools and implementation modalities were adapted to this project, taking into account that it was managed remotely.

The project aim was to provide non-structural rehabilitation of occupied, sub-standard shelters to improve climatic protection, physical safety and privacy for vulnerable households.

The project targeted conflict-damaged buildings with light rehabilitations or upgrades, depending on the technical assessments conducted by the local partner's field engineers. Both beneficiaries and property owners were consulted about their needs and shelter priorities, against the minimum standards defined by Shelter Technical Working Group and the scope of the intervention. Where required, rehabilitations included household-level water and sanitation facilities. Local contractors conducted the works, which included maintenance and installation of doors and windows, treatment of mould, tiling, repairing WASH facilities, installation of solar panels, etc.

Third-party monitors conducted regular visits to all rehabilitated properties to assess progress, submitting narrative reports, verified Bills of Quantities, photographs and videos.

Post-implementation monitoring was carried out through household visits by local partner staff immediately and three months after handover, as well as remotely, via WhatsApp and phone calls.

TARGETING

This project targeted vulnerable conflict-affected households living in substandard conditions in urban and peri-urban areas, regardless of displacement status. Households were selected based on two sets of criteria: socio-economic vulnerabilities and housing conditions (both technical and HLP-related).

Project locations were identified in collaboration with the local partner's field staff, based on a combination of access, context and security risk analysis, and severity and scale of needs. Following the pre-identification of potential communities, the local partner's legal team conducted a community-level assessment that looked at safety, accessibility and number of IDPs in the community, along with the HLP due diligence process outlined below. Approval from both the shelter and legal teams was required to confirm the communities' eligibility for the project. To avoid any social tensions, the organization chose villages where all houses could be assessed.



The legal team assessed each building and confirmed if works could be conducted. While this ensured HLP issues were mitigated, it also meant that some households had to be left without assistance.

HLP DUE DILIGENCE PROCESS

An HLP due diligence process was followed to inform decisions and reduce the risk of doing harm to either members of the displaced or host community. The process aimed to achieve as much certainty as possible about the ownership and usage rights of targeted buildings, given time and resource constraints. It included two main steps:

First, a community-level process was designed to understand the highly varied HLP situation and stakeholder dynamics within the target locations and decide whether to move forward with the intervention. In areas outside the control of the Syrian government, the de-facto authorities had taken up normal governance roles. This stage looked at which law was applied in the area; how HLP rights were acquired; which HLP documentation was available; whether HLP disputes were prevalent; and whether and how these were resolved.

Secondly, a household-level exercise was carried out for each selected building or shelter unit, to verify ownership and usage rights, in order to reduce the risk of eviction and disputes. This included identifying the lawful person who owned the property and could authorize the use of the building, understanding the history of the building's ownership and use, and determining whether the building had been, was or was likely to be involved in any dispute. The process comprised interviews with the landlords or property owners and with the tenants or users of the property. The data collected was evaluated by the legal team, who then gave their recommendation whether there was enough certainty to proceed.

Many landowners were not able to provide documented proof of ownership of their property. However, the organization managed to apply community verification mechanisms to ensure that vulnerable individuals, including those without HLP documents, were included in the project.

For tenants, the rehabilitation works were completed in exchange for a 12-month rent-free period. Where the landlord threatened to end the tenancy during the lease agreement, the organization examined the case and resolved it – for example, through mediation between the household and the landlord, or by identifying an alternative shelter within the same sub-district.

COORDINATION AND REMOTE MANAGEMENT

As gaining acceptance from the local community was difficult working remotely, it was essential to build good relations with the local authorities through the local partner. In opposition-controlled areas, the local councils had overall responsibility for the humanitarian response, but did not have the required skills and experience, nor an understanding of key principles such as impartiality. They often tried to interfere with the beneficiary selection and other phases of the project. Therefore, the selection criteria and project steps and goals had to be clearly explained to the community and its leaders.

As the organization did not have direct access to the project locations, there were monitoring, logistics and communication issues. Good relations with the local partner and remote feedback mechanisms were essential to mitigate the impact of these challenges. To support remote implementation, a mobile application was downloaded on staff's phones to collect data from the field digitally and allow the organization to access and analyse it throughout the implementation process. A WhatsApp feedback mechanism was established to supplement other systems (e.g. phone calls), based on a study of available communication options.

PROTECTION AND CONFLICT RESOLUTION

Selection criteria were explained to the communities to reduce the likelihood of complaints during implementation.

The specific priorities, needs and concerns relating to age, gender or disability were considered through vulnerability-based targeting, community consultation, tailored interventions based on beneficiaries' inputs, mixed-gender teams with technical and social skillsets, regular monitoring and feedback mechanisms. Additional items such as disabled-friendly toilets, ramps and handles were included in the assistance package, to help address specific mobility issues within the shelter.

The legal team provided collaborative dispute resolution services on a case-by-case basis, when conflicts between property owners and the tenants arose.

SECURITY CHALLENGES

Apart from remote management challenges, the project had to adapt to a highly dynamic and unpredictable environment, where operational plans were based on most-likely scenarios and continuously updated based on context analysis. Additionally, working in southern Syria had exceptionally high risks. For this reason, the organization worked with the local partner to insure local staff through third parties and to establish duty-of-care policies and procedures.

MATERIALS AND SUPPLY

All materials and labour were sourced locally by the implementing partner. The material supplier was selected using a closed tender process (owing to visibility restrictions in southern Syria), with three quotations sought from different suppliers. The supplier was selected based on a combination of unit costs, quality, vetting, proximity to targeted communities and stock-levels.

HANDOVER PHASE

After the rehabilitation works were completed, a handover certificate was signed with the property owner and an occupancy certificate was signed between the property owner and the tenant. This occupancy certificate outlined the responsibilities and obligations of both parties.

WIDER IMPACTS

The project represented a step towards durable solutions and allowed the organization to scale up its response in various locations across Syria. Despite the enormous challenge of working remotely in such a volatile context, the organization successfully recruited, trained and provided the local partner staff with the necessary tools and methodologies required throughout the project cycle. This built their capacity to implement additional projects in the future.



Rehabilitation works were conducted using local labour and materials.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



The project considered the needs of persons with disabilities.

Where required, works included rehabilitation of household-level water and sanitation systems.

STRENGTHS

+ **Using locally available labour and materials helped support the local economy** in the project area through providing new income opportunities and improving the status of local vendors.

+ **Installing solar panels** for households with no electrical connection helped reduce their expenditure and provided a constant source of electricity in areas with very limited power supply.

+ **The specific needs of persons with disabilities and elderly were considered** in the intervention, by ensuring protection mainstreaming throughout the activities and enhancing the accessibility within the shelters.

+ **HLP issues were considered and addressed**, reducing the threat of eviction. The project uncovered important information about the power dynamics in the targeted villages and **strengthened the role of local stakeholders**, such as councils and community leaders in dealing with HLP issues, including dispute resolution. This was particularly relevant as the areas were outside of the Syrian government control.

+ **The hotline mechanism was effective in obtaining regular feedback** from the beneficiaries, which led to improvements in the project.

+ **The project improved living conditions** by increasing protection from harsh weather conditions, enhancing physical security and overall privacy of affected households, as confirmed by the post-implementation monitoring.

WEAKNESSES

- **Limited engagement and cooperation with the local council** (specially in handing over the beneficiary list), and capacity and understanding of humanitarian principles. This should have been anticipated and addressed from the outset.

- **Low construction quality.** Managing the project remotely made it more difficult to conduct proper monitoring and inspection of the quality of the works carried out by the local partner. Seventeen per cent of surveyed households were not satisfied with the assistance, and 78 per cent stated that their properties needed further rehabilitation.

- **The HLP due diligence process was time-consuming**, particularly for the complexity of understanding HLP rights in a conflict zone and the lack of ownership documents.

- **Households that did not meet the requirements of the HLP due diligence process were not compensated** with another form of assistance, although their needs were high. Most of the shelters assessed were in poor conditions and needed rehabilitation, but the organization could not proceed in cases where the owners were not identified.

- **Information flows between the shelter/WASH and the legal teams were challenging** at the beginning, causing confusion during the implementation. In addition, for most households the two teams conducted separate visits as part of the selection and due diligence processes. Instead, **all assessments should have been undertaken at once**, to save time and avoid multiple visits to the same family.

- **The project was very small in scale** compared to the needs in the country, as well as in the target areas.

- **Some families decided to leave the house or the area**, which resulted in about 19 per cent rehabilitated houses not being used (14.6% empty, 4.2% occupied by other families). This should have been identified in the selection process – to avoid wasting time – by asking more detailed questions about the intention of the family to relocate, or the risk of eviction.

LESSONS LEARNED

- **Registration should have occurred directly** through the organization's staff, without any interference from the local council or local partner. This would have been possible remotely via calling the organization's hotline or filling a survey via WhatsApp.
- **Only a few households did not meet the requirements of the due diligence process**, which shows that the team was able to balance the need for legal certainty with the situation on the ground and the lack of HLP documents.
- **Developing a database between Shelter/WASH and HLP assessment teams** would have improved the communication flow and documentation.
- **A community verification mechanism should be developed for households without any documentation** to prove HLP rights (i.e. a landlord who does not have any property document).

CASE STUDY

SYRIAN ARAB REP. 2017–2018 / CONFLICT

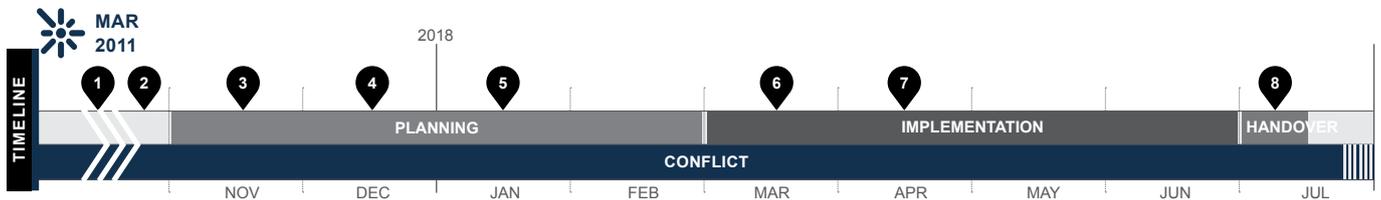
KEYWORDS: Collective centres upgrade, Protection mainstreaming, Remote management

CRISIS	Syrian conflict, 2011–onwards	
TOTAL PEOPLE IN NEED*	13.1 million (5.6 million in acute need)	
TOTAL PEOPLE DISPLACED*	6.1 million internally displaced	
TOTAL SHELTER NEEDS*	4.2 million individuals within the country	
PROJECT LOCATIONS	Dara and Quneitra governorates	
PROJECT BENEFICIARIES	58 households (259 people: 126 male, 133 female; incl. 123 minors under 18)	
PROJECT OUTPUTS	5 collective centres rehabilitated	
SHELTER SIZE	Approx. 50m² per household	
SHELTER DENSITY	Approx. 10m² per person	
MATERIALS COST	USD 2,000 per household	
PROJECT COST	USD 3,700 per household	

* Figures as of December 2017. Syria Humanitarian Needs Overview 2018.

PROJECT SUMMARY

The organization rehabilitated five collective shelters, with integrated WASH and protection assistance, through the establishment of voluntary community committees. The project was based on a shelter assessment conducted earlier by the organization with the aim of improving and harmonizing the humanitarian shelter interventions in the southern parts of the Syrian Arab Republic (Syria). Building on this, the organization also developed guidance notes for shelter interventions in collective centres, host families and informal tented settlements. Due to an escalation in conflict, the project failed to scale up and could only assist 58 households.



- 1 May 2017: Collective shelter and informal tented settlements mapping conducted and analysis report released.
- 2 Oct 2017: Release of the guidance notes for the rehabilitation of collective centres.
- 3 Nov 2017: Selection of collective centres.
- 4 Dec 2017: Launch of bidding process for selecting a contractor.
- 5 Jan 2018: Contractors due diligence and selection process.
- 6 Mar 2018: Commencement of rehabilitation works and signing MoUs with local councils.
- 7 Apr 2018: Formation of shelter/protection committees.
- 8 Jul 2018: Project closing and evaluation.

STRENGTHS

- + Effective selection approach for the implementing partner.
- + Households' participation in project design and implementation.
- + Harmonized rehabilitation guidelines were developed.
- + Good coordination with local councils and protection committees.
- + Integration of protection into shelter.

WEAKNESSES

- Women's engagement was very limited.
- Limited sustainability of the committees beyond project completion.
- Direct feedback from residents was limited.
- Loss of access meant that the project could not scale up.



Before (above) and after (right) rehabilitation works in one collective centre.



CONTEXT

For more information on the crisis and regional response, see A.29 in *Shelter Projects 2015-2016*.

Despite the formal cessation of hostilities established in February 2016, sporadic clashes in Dara and Quneitra continued to provoke displacement. Vulnerable conflict-affected populations including displaced, non-displaced, returnees and host communities lived in substandard, overcrowded and unsafe shelters and settlements, including collective centres (such as public, unfinished and abandoned buildings) and private accommodation (renting or hosted). Families experienced multiple displacements, and in many areas IDPs made up nearly a third of the population.

Family separation was a direct consequence (e.g. men away fighting, or detained) as well as a coping mechanism (women, girls and boys are more likely to be hosted). With prolonged displacement and a continued influx of IDPs, the capacity of host communities to provide adequate shelter diminished and, as resources become scarce, risks of abuse and eviction also increased. Women and girls living in substandard and overcrowded shelters were particularly exposed to risks (gender-based violence, theft, trauma, exploitation and abuse).

Families in the targeted collective shelters had been displaced for up to three years. Prolonged and repeated displacement often resulted in emotional distress.

NATIONAL SHELTER STRATEGY

The Shelter/NFI Cluster strategy in 2018 aimed to address life-saving and life-sustaining shelter interventions, prioritizing those most in need with emphasis on protection mainstreaming. Rehabilitation of collective centres was an important part of the Cluster strategy.

Prior to implementing the project, the organization conducted a comprehensive assessment in collective centres and informal tented settlements, aiming to harmonize and strategize humanitarian shelter interventions in southern Syria. Based on the assessments, guidance notes for rehabilitation of collective centres were developed for all Sector partners.¹ The project aimed to apply these guidelines for the first time, with the intention of being the start of a longer-term approach.

PROJECT IMPLEMENTATION

The project rehabilitated five collective centres in southern Syria, including four schools and a public housing complex. Conditions in the centres prior to rehabilitation posed physical safety and protection risks to the residents. The rehabilitation works included climate protection, securing partitions, water, sanitation and cooking facilities, according to standards developed collectively by shelter actors in southern Syria.

Due to lack of direct access to the area, the project was implemented by a local partner and remotely managed from Jordan. Through a competitive selection process, a local organization was chosen to coordinate with local councils and residents and carry out the rehabilitation works. Another local organization was selected to provide protection services. Independent monitors were contracted to verify the implementation and conducted site visits throughout the duration of the project.

¹ These are available at <https://bit.ly/2S5bXTX>.

² Faza'a refers to community support mobilized when a house is damaged. For instance, when a new IDP family arrives and community members bring them water and food and support them in registration with the local councils.

Since the facilities and infrastructure within and surrounding the collective centres were not functioning, the organization coordinated with other WASH actors in the area. For water provision, the only option was to provide water trucking. For sanitation, the works included the construction of cesspools and wastewater disposal systems.

Works were completed in July 2018, while the areas faced a major military offensive, which temporarily displaced over 300,000 people. Local partners lost access to the centres immediately after completion, which did not allow evaluations or satisfaction surveys to be conducted. At the time of writing, access had not been regained, so longer-term recovery pathways could not be assessed. Although the plan was to continue the interventions and scale up, this could not happen due to the shift in control in the area.

SHELTER/PROTECTION COMMITTEES

In addition to the physical rehabilitation, the project integrated protection considerations into the planning, implementation and management of the collective centres. In accordance to camp management principles, project partners put in place self-managed, community-based, shelter and protection committees (known as Faza'a Committees)² in three of the five collective centres. The committees were comprised of five members per location (one manager, two administrators and two protection coordinators) and received training, guidance and coaching from protection teams who operated in mobile units and static centres. The Faza'a committees' primary function was to enhance community-based protection. They were responsible for liaising between residents and humanitarian service providers, ensuring effective information sharing among site residents, supporting the process of establishing communal rules for the collective centre, mediating disputes and ensuring equitable access to communal areas and services for all the residents.



Rehabilitation works included furnishing and upgrade of common kitchens.



To mainstream protection in the shelter interventions, committees were formed in three collective centres with the role of improving information flows and dispute resolution, as well as fostering participation in the project.

TARGETING

An initial assessment of 100 collective centres was conducted in February 2017 and 12 centres were preselected for a more in-depth assessment, based on the following selection criteria: safety and security of the sites (e.g. number of airstrikes nearby the site for the past 90 days, armed groups presence, etc.), Housing, Land and Property due diligence, accessibility, financial feasibility, type of structure, use, functionality, structural integrity, level of damage and stakeholder engagement. The centre’s proximity to the psychosocial support centres established by the protection partner was also a strong consideration for the final selection. Five centres were finally selected.

To select where to pilot the Faza’a committees, the organization considered the population size, experience with self-established management committees and the willingness and capacity to participate. The committees were composed of 16 members (nine males and seven females).

COMMUNITY ENGAGEMENT

The assessment process included engagement with local councils, host communities and IDPs in collective centres. The latter were consulted prior to beginning project activities. A suggested scope of works was drafted based on a technical assessment and adapted, as needed, to meet their preferences. Because of the public nature of the sites selected, local councils were also involved in this process.

During implementation, men and women were consulted regarding their availability, interest and area of strength to support the rehabilitation works. A number of male and female beneficiaries were contracted as either skilled or unskilled labour, material guardians or cleaners.

Throughout the project implementation, residents had the opportunity to provide feedback and this resulted in adaptations, such as agreeing on the location and arrangement of facilities. For example, some kitchens were moved to more suitable locations within the buildings, toilets were separated by family rather than sex for increased privacy, the location of opaque lockable partitions was agreed, as well as the location of lighting for communal spaces.

One of the main purposes of forming the Faza’a committees was to increase the effectiveness of communication with and participation of the IDPs in the rehabilitation works. This was done through weekly reports, monitoring notes and suggestions, and direct feedback to independent monitors. The committees registered new residents, coordinated cleaning of communal areas, led community sensitization activities and other specific protection mainstreaming responsibilities, like raising awareness for protection issues and referring any special cases to the available service providers, with the support of the local partner.



The project was managed remotely and implemented by a local organization selected through a merit-based process.



Doors and windows were repaired or replaced to increase security and privacy.



Upgrade works were designed in consultation with collective centre residents and monitored by independents.



Good communication with the local council and the affected people helped in the targeting process and reduced security risks.



Extra rooms were added to allow for greater privacy where needed.

MAIN CHALLENGES

Despite extensive consultations, **two of the local councils initially refused to sign MoUs** with the organization and expressed disagreement with the selected locations or scope of work. Local acceptance of the implementing partner and some resistance to the improvement of residential conditions of those in collective centres were contributing factors to these blockages. Through engagement with residents and local councils, the local partner resolved the issues.

The project was implemented remotely and thus it required independent verification of the activities implemented by the local partner. This included third-party monitoring agencies and the organization’s monitoring consultants who visited the sites and gathered feedback from residents. The flow of information between the two partners (protection and shelter), independent monitors and the organization was a challenge. Information did not always reach parties on time or was outdated. These systems posed a significant burden on all actors and sometimes caused delays, as information had to be triangulated and verified remotely before actions could be taken.

Significant investment of time and resources was required to build the capacity of committees to fulfill their duties, particularly protection support. One-to-one sessions with each member was favored over collective trainings, which required a lot of time from the local protection partner. Similarly, committee members who volunteered their time requested that financial incentives be provided.

Limited funding and space in the collective centres represented a challenge to meeting minimum standards. In one location where there was no space to separate two families, a temporary sleeping room was built outside the building.

RISK MITIGATION

Prior to the project implementation, a risk management plan was developed. Many risks, such as the lack of cooperation from the local authorities, limited availability of or poor-quality supplies, aid diversion, etc. could be mitigated by community engagement and close independent monitoring. In the event of a threat of loss of access to project areas, the organization intended to reach out to other actors who would be able to maintain access. When the government advanced into southern Syria, work in the collective centres was in its last stages. As the scale of the displacement was unprecedented, the organization focused on delivering humanitarian assistance to the newly displaced. Access was fully lost before any other agency could reach the project sites.

WIDER IMPACTS

The formation of voluntary committees supported protection mainstreaming in shelter interventions. In addition, trained committee members were able to provide referrals and support residents with dispute resolution and accessing services.

The development of the guidance on collective centre rehabilitation was an important step in harmonizing shelter actors’ approaches in southern Syria. The guidelines were shared at the global level and used to inform programming in other countries in the region.



© SDI

The shelter/protection committees provided valuable feedback which helped agree on priority interventions, such as location of facilities and lighting.



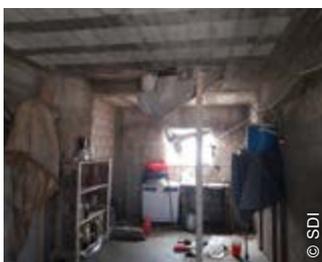
© SDI



© SDI



© SDI



© SDI



© SDI



© SDI



© SDI

The project applied contextualized standards and procedures developed by the Shelter Sector in southern Syria. However, due to loss of access, it could not be scaled up.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Works included the rehabilitation of water and sanitation facilities (left) and the construction of cesspools and wastewater disposal systems (right). Photos: SDI.

STRENGTHS

- + The high quality of the intervention was ensured through the selection of a competent implementing partner via a **transparent and competitive merit-based selection approach**.
- + **Households' participation in project design and during implementation**, which resulted in modifications based on people's preferences.
- + **The definition of a common standard for rehabilitation works** (BoQs and technical specification) with response actors within the Shelter/NFI Working Group helped harmonize interventions, providing more equitable support of standard quality to affected populations.
- + **Good coordination with the local council and the protection committees** ensured accurate selection and verification of targeted households, reduced safety and security risks for staff members and helped resolving any issues that arose during the intervention.
- + **Integration of protection activities into the shelter project** encouraged participation of collective centre residents in decision-making processes and made protection services – such as risk awareness, psychological first aid and referrals – available to project participants and the larger community.

WEAKNESSES

- **Women's engagement in project implementation was very limited**, due to the low interest and the cultural barriers that limited women's participation in social spheres. Although women were engaged in the protection committees, social norms made their participation in decision-making structures difficult.
- As committee members were not compensated for their work, it was **difficult to foresee the functioning of committees beyond project completion, without the continued support** and encouragement of the protection partner.
- **Direct feedback from residents was limited**, despite having independent monitors and feedback mechanism in place. On one hand, communities may have perceived a risk of not receiving assistance if providing feedback. On the other, monitoring visits were limited to once or twice a week and, although awareness campaigns on the mechanisms were conducted via phone calls, monitoring capacities were not sufficient. A more diverse and proactive approach in seeking feedback should have been considered.
- Although outside of the organization's control, **losing access to the implementation areas** at the late stages of implementation resulted in the partner's inability to engage with residents beyond the completion of works and provide longer-term support to the protection committees. It also meant that **the project could not scale up**.

LESSONS LEARNED

- **The integration of the protection committees into the implementation of activities** provided an opportunity for IDPs to be part of the implementation process and make the project activities more responsive to the community needs.
- It is always difficult to find technical partners who are able to **take into account all the non-physical aspects of shelter interventions** (such as dignity, equitable access and do no harm). The use of the Faza'a committees added a protection lens which was valuable to the shelter partner, while conversely shelter was used as an entry point to provide protection services and address gender norms.
- **Remote management requires very clear information management** systems and lines of communication. Even so, triangulating information and verifying programme quality takes a lot of efforts and time. **More resources should be made available** to the monitoring and verification of activities.
- **More emphasis on real-time evaluation approaches** should be considered in unstable environments, where it is not always possible to complete all planned activities – particularly those related to follow-up of the action with evaluations, satisfaction or occupancy surveys.
- **Incentives for the work that committee members perform should be carefully considered**. Although there is a clear rationale for compensating, this would not be sustainable. More work needs to be done on balancing the time these initiatives require for participants. For example, **agreeing ahead of time what is a reasonable amount of time members can dedicate without compensation** (e.g. two hours a week), setting up an initial compensation when the time investment is greater than that (training, consultations, etc.), followed by a gradual reduction of incentives as time commitments are lowered.

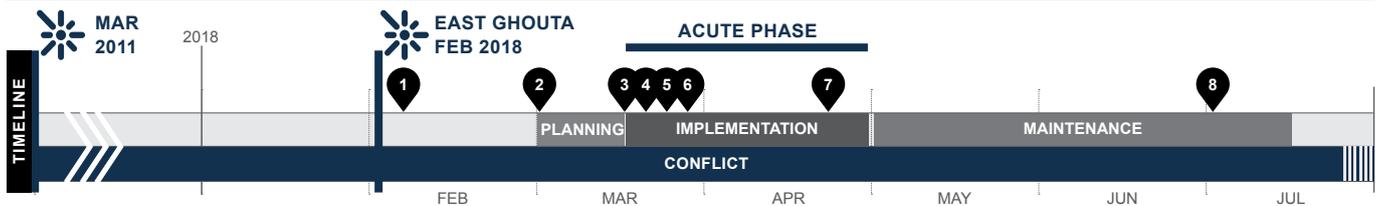
CASE STUDY

SYRIAN ARAB REP. 2018 / CONFLICT

KEYWORDS: Collective centre rehabilitation, Integrated programming, Timeliness, Scale and coverage

CRISIS	Syrian conflict, 2011–onwards	<p><i>This map is for illustration purposes only. The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the Global Shelter Cluster.</i></p>
TOTAL PEOPLE IN NEED*	13.1 million (5.6 million in acute need)	
TOTAL PEOPLE DISPLACED	6.1 million internally displaced in total* Over 100,000 people displaced in East Ghouta after February 2018 hostilities	
TOTAL SHELTER NEEDS*	4.2 million individuals within the country	
PROJECT LOCATIONS	10 collective centres in East Ghouta, Rural Damascus governorate	
PROJECT BENEFICIARIES	11,500 households (65,000 individuals) received multisectoral assistance (Over 7,800 households or 44,492 individuals received shelter assistance)	
PROJECT OUTPUTS	10 collective centres rehabilitated (incl. shelter, water supply, sanitation, hygiene, health and maintenance activities) Shelter outputs: 1,500 shelter kits installed, 125 family tents erected, 5 rub halls erected as multi-family shelters, 550 doors, 700 windows, internal partitions	
SHELTER SIZE	13m² (using the shelter kits of 3.6x3.6m)	
SHELTER DENSITY	2.3m² per person on average (acute phase)	
	MATERIALS COST	
	PROJECT COST	USD 87 per household

* Figures as of December 2017. Syria Humanitarian Needs Overview 2018.



- 1 Early-Feb 2018: East Ghouta hostilities begin.
- 2 01 Mar 2018: Two collective centres are prepared upon request of the national partner before the start of the crisis.
- 3 16 Mar 2018: Start of the emergency interventions in four collective centres, after the sudden influx of 20,000 IDPs.
- 4 17 Mar 2018: Construction of three temporary clinics completed.
- 5 19 Mar 2018: Rehabilitation of two new collective centres.
- 6 23 Mar 2018: Rehabilitation of three new collective centres.
- 7 20 Apr 2018: Hygiene promotion campaign conducted. Additionally, maintenance activities, waste disposal and vector-control measures are carried out.
- 8 01 Jul 2018: Post-implementation monitoring survey conducted.

STRENGTHS

- + Gender and protection mainstreaming.
- + Collaboration across departments of the organization.
- + Social customs and minimum standards were met.
- + Targeting areas of origin supported early return and recovery.
- + Holistic approach through the integration of complementary sectors.
- + Speed and scale of the response.

WEAKNESSES

- Lack of feedback and complaints mechanisms.
- Poor communication with the affected community.
- Delays due to access constraints.
- Limited planning and coordination.
- The post-implementation survey was not representative and needed fine-tuning.



Over 100,000 people were displaced in less than two months from East Ghouta.

CONTEXT

For more information on the crisis and regional response, see A.29 in Shelter Projects 2015-2016.

SITUATION IN EAST GHOUTA

East Ghouta was considered the largest besieged area in the Syrian Arab Republic (Syria), with an estimated population of 400,000 people. The area was under siege since April 2013. Hostilities escalated in late 2017 and first targeted rural areas, forcing people to flee to other locations within the besieged areas. To allow humanitarian convoys to access and evacuate medical cases, in January 2018 a ceasefire agreement was announced but failed to come into effect. Hostilities resumed in February, with air strikes and a ground offensive in densely populated areas, causing massive destruction of infrastructure and civilian deaths. To allow the evacuation of civilians, humanitarian corridors were established and, between March and April, over 100,000 people were displaced.

RESPONSE TO THE 2018 EMERGENCY

To respond to the massive displacement, the authorities started identifying evacuation sites. However, the movements were too rapid to keep the pace, especially since there were no preparedness plans in place. Thousands of people were moving on a daily basis, requiring additional sites to be identified and the response plans to be continuously adjusted.

A total of 12 collective centres were identified by the Ministry of Local Affairs. These included hangars, industrial buildings, schools and other public buildings. Most were partially damaged or had been looted and were not prepared to host high numbers of people, lacking basic water, sanitation and waste disposal systems. Although nearly half of the total caseload left these sites for other locations, the number of people remaining still outstripped the capacities by over 200 per cent.

At first, little coordination was in place and only a few humanitarian actors were active in the area. All activities within the sites had to be approved by the authorities.

PROJECT LOCATIONS

10 different collective centres were supported by this project. These were allocated by the authorities, often after IDPs had started moving in. As sites were not known in advance, little to no planning and preparation could be conducted. This meant that works had to be done as quickly as possible, often in already overcrowded conditions.

All sites were owned by the government and structural safety was checked by accredited engineers upon request of the authorities.

Prior to the East Ghouta offensive, the organization had also supported preparation works to increase the capacity of two collective centres within the besieged area, which were already hosting 1,500 people from other locations. However, in the event, people fleeing from the offensive were not directed to these sites.

PROJECT COMPONENTS

The main objective was to rehabilitate and adapt collective centres to increase their hosting capacity and improve living conditions for the IDPs. The project included activities spanning shelter, non-food items, water supply, sanitation and hygiene, health and site maintenance. A collective kitchen was also rehabilitated.

SHELTER COMPONENT

The shelter interventions consisted in light upgrades of walls and floors, installation or repair of doors and windows, erection of emergency shelters outside the buildings, and indoor partitioning to provide privacy to families. A total of 125 family tents were also erected and five large multipurpose tents used as collective shelters. Most of the shelter activities were conducted using over 1,500 standard shelter kits prefabricated by the organization and designed to be flexible enough to be used either as stand-alone or as components of partitions or walls. The standard unit that could be erected with a kit was of approximately 13m². Site levelling and preparation around the buildings were essential prior to the installation of shelters or tents, as well as water tanks, latrines and showers. Lighting (e.g. installation of lights and floodlights) and electrical works (e.g. sockets and generators) were complementary activities.



Little to no preparation could be done in the buildings, which soon became overcrowded due to the massive influx.



Collective centres included industrial buildings and schools and were often in very poor conditions. Locations were selected by the authorities.



Shelter kits were used to build indoor partitions to increase privacy.

PROJECT IMPLEMENTATION

The project was implemented jointly by an international organization and a national partner who could count on hundreds of volunteers.

According to security procedures, access had to be requested one month in advance, so the international staff were not present during preparations and assessments, slightly slowing down the initial activities. Assessment and reporting were conducted using mobile technologies, which made the process more effective but were not always used adequately.

All works were implemented by contractors, partly due to the time available, partly as a decision not to engage families who had suffered years under siege and had recently fled a war zone. Because of the urgency, standard tendering and contracting procedures could not be followed. Contractors started work before signing agreements and worked around the clock to deliver the works as quickly as possible. Within each collective centre, activities took as little as 10 to 15 days. To speed up the delivery further, multiple contractors were employed at the same time. Some skilled IDPs were also hired during implementation.

In the span of 45 days, over 65,000 people were supported across all the targeted sites.

Continuous changes in context and requests from the authorities required constant adaptation of work plans after activities had already started. For example, one site was expanded three times due to the growing number of new arrivals.

As people started to return to their areas of origin soon after the acute phase of the offensive ended, the organization also targeted the water infrastructure in those areas, to support longer-term recovery.

OPERATION AND MAINTENANCE

Additional contractors were hired after the implementation phase to de-sludge latrines, maintain and clean the facilities and dispose of the waste, with the main aim of avoiding vector-borne disease outbreaks. Teams with shoulder sprayers were responsible of cleaning the latrines. There was no formal handover nor site management. The organization chose not to engage the IDPs for the operation and maintenance, either, due to their distressed conditions. Maintenance services and further assistance were provided throughout the existence of the centres, which by early 2019 were hosting only a few families. The plan was to phase out as soon as all the IDPs had voluntarily returned.



Buildings were upgraded through the set-up of rooms, installation of doors and windows, general repairs, rehabilitation or provision of water, as well as lighting.

POST-IMPLEMENTATION FINDINGS

A survey was conducted in July 2018 to measure the impact of the project and the level of community engagement and accountability. As this survey was a pilot for the organization, only few questionnaires were carried out. The survey included questions on accessibility, quality and quantity of water, sanitation and hygiene, pest-control, shelter conditions, ventilation and lighting. In terms of shelter, it was found that only 38 per cent of respondents considered their living space as both adequate and comfortable, while the rest either considered it insufficient (25%) or adequate but not comfortable (37%). Lighting and ventilation was not available for 11 per cent of respondents, and only partially available for 52 per cent. IDPs suggested to install fans to improve ventilation and to increase the use of pesticides and the distribution of mosquito nets for pest-control.

PREPAREDNESS PHASE AFTER THE PROJECT

Based on the lessons from this project – where the lack of preparedness meant that thousands of people arrived daily to unprepared facilities – a contingency plan was developed to host over 40,000 IDPs from another area. The organization improved its preparedness activities, putting in place procedures and pre-positioning items to allow for a quicker response in future unforeseen events of this scale.



Works were implemented by contractors, who then were also hired for the maintenance phase.



Shelters were also set up outdoors using the materials in the kits.



STRENGTHS, WEAKNESSES AND LESSONS LEARNED



To improve the overcrowded conditions, interventions were carried out very quickly.



The programme also included water, sanitation, NFI and health components.

STRENGTHS

- + **Gender and protection were mainstreamed in the intervention.** For example, protection cases were referred, lighting was installed in common WASH facilities, latrines were segregated by sex and designed to mitigate GBV risks.
- + **The collaboration across departments of the organization was effective** and allowed the post-implementation survey to be conducted for the first time in Syria.
- + **Social customs on shelter and bathroom design were respected and minimum standards were met** (e.g. distance between shelters and latrines).
- + **Links with recovery.** The project maintained the established collective centres but also targeted the areas of origin of IDPs with ad hoc interventions, to guarantee water supply and encourage safe return as soon as possible.
- + **The project integrated several complementary sectors** to enhance living conditions in the collective centres in a more holistic way.
- + **Speed and scale.** Over 65,000 people were assisted across multiple sites in a very short timeframe, covering almost the entire caseload in collective centres after the East Ghouta offensive.

WEAKNESSES

- **Lack of feedback and complaints mechanisms.** IDPs were often unable to convey their views to the implementing organizations. This meant that the organizations could not always address issues in a timely fashion.
- **Poor communication with the affected community.** Beyond awareness sessions, more efforts should have been made by the organizations to communicate with the IDPs, for instance on the issue of water consumption.
- **Delays were generated as the international partner was not able to access** the sites for the first few weeks due to security regulations.
- **Limited planning and coordination.** The organizations could not plan in advance of the influx, mainly due to not knowing where and when IDPs would arrive. This was caused, to a certain extent, by limited communication with the authorities. Coordination with other humanitarian actors should have also been improved.
- **The post-implementation survey was not representative** as it was conducted on a very small sample. Additionally, **many questions needed fine-tuning**, as it was not tested before implementation and this was the first time it was used.

SHELTER KIT ITEMS LIST

Items	Qty	Items	Qty
Tarpaulin, 4x5m	1	Metal handle	4
Plastic sheeting, 4x5m	1	Hinge	8
Rope	30m	Latch	2
Round wire nails with washers	1/2kg	Padlock	1
Concrete nails	1/2kg	Silicone caulk + gun	1
Tie wire	10m	Heavy-duty duct tape	1
Hammer	1	Carpentry handsaw	1
Jerry can (10 litres)	2	Metre tape	1

Items	Qty	Items	Qty
Hose	25m	Safety work gloves	1
Clip (Clamp)	2	Woven bag	1
Water tap	2	Solar light	1
Teflon tape	2	Additional wood sub-kit	
Screwdriver (flat and cross head)	1 each	Plywood board (1,200x2,400mm)	2
Pipe wrench	1	Timber (3m long, section size 25x50mm)	4
Pliers	1	Timber (3m long, section size 25x100mm)	4
Chisel for wood	1		

LESSONS LEARNED

- **Affected populations should be better engaged** both in the implementation and in communication activities.
- **Contingency planning and preparedness procedures are essential.** Based on lessons learned from this project, the organizations developed a contingency plan that built in risk assessments, stocks pre-positioning and high flexibility to adapt to constantly changing scenarios.
- **Pre-agreed and simplified assessment forms** would help reducing delays and issues during site assessments.
- **The adoption of mobile technologies** (i.e. online spreadsheets) made the reporting easier. However, staff should have been trained on their use directly on their phones, as these are time effective, reduce the risk of mistakes and provide readily available data.

CASE STUDY

TURKEY 2017–2018 / SYRIA CRISIS

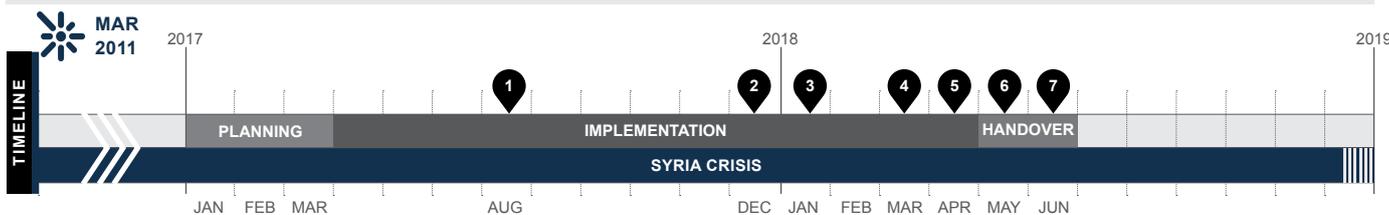
KEYWORDS: Housing repair, Security of tenure, Social cohesion, Local private sector engagement

CRISIS	Syrian refugee crisis in Turkey, 2011–onwards
TOTAL PEOPLE DISPLACED¹	3.5 million Syrians under temporary protection
SHELTER TARGETS²	49,050 people in 2017 (87,198 reached) ³ 175,070 people in 2018 (15,218 reached) ⁴
PROJECT LOCATIONS	Hatay and Sanliurfa Provinces, south-east Turkey
PROJECT BENEFICIARIES	1,300 households (6,951 individuals. 26% host community. 18% headed by women)
PROJECT OUTPUTS	1,200 houses rehabilitated (contractors) 100 houses repaired (cash modality) 100 shelter construction material kits provided 100 individuals trained on repair skills and received cash for work
OUTCOME INDICATOR	81% of beneficiaries satisfied with the assistance
SHELTER SIZE	50m ² on average
SHELTER DENSITY	4.5m ² of living area per person on average
MATERIALS COST PER SHELTER	USD 800 for the contractor-led modality USD 150 for the cash-based modality
PROJECT COST	USD 800 per household on average



PROJECT SUMMARY

The project assisted Syrian tenants and local host community households in south-east Turkey with rehabilitation and upgrade works and written landlord agreements. It was one of the first shelter interventions in the area and was mainly implemented via contractors, with only a small conditional cash component for lighter repairs. Upgrades included the installation of walled partitions with locks, improved lighting, repairs of water and sanitation facilities, sealing of exposed roofs and walls, and thermal insulation. The project also provided training, tools and job opportunities for refugees and host community members.



- 1 Aug 2017: Start of shelter technical assessment by field engineers, preparing landlord agreements and BoQs.
- 2 Dec 2017: Procurement process to select contractor starts.
- 3 Jan 2018: Rehabilitation works under the contractor modality start.
- 4 Mar 2018: Materials arrive and repair works under the cash-based modality start. The project shifts locations due to security issues.
- 5 Apr 2018: Cash-based repair works completed and payment to working groups.
- 6 May 2018: Completion of rehabilitation work, quality control and handover to beneficiaries.
- 7 Jun 2018: Post-implementation monitoring and evaluation reports.

STRENGTHS

- + Coordination and effective communication with local authorities.
- + Rental agreements improved households' tenure security.
- + Clear vulnerability criteria and effective selection process.
- + Targeting both refugees and host community members.
- + Flexibility to adapt and include a cash-based modality.
- + The use of local labour and materials.

WEAKNESSES

- Limited resources to cover the intended targets.
- Mismatch between targets and people in need in some districts led to challenges and delays.
- The cash-based modality had limitations in the type of work that could be conducted.
- Delays in identifying contractors.
- Lack of technical personnel in the procurement unit.
- Unplanned visits to the households caused fatigue.

¹ UNHCR Turkey: Key Facts and Figures July 2018.
² The Basic Needs Sector in Turkey focused on provision of cash-based interventions (CBI), NFI, WASH, infrastructure and shelter solutions. In 2017, 1,739,441 people benefited from CBI and 593,616 people from NFI.
³ Turkey Basic Needs Sector Dashboard 2017 Q4, <https://bit.ly/2T56w8R>.
⁴ Turkey Basic Needs Sector Dashboard 2018, <https://bit.ly/2FYXPTp>, and Syria 3RP 2018-2019 – Turkey, <https://bit.ly/2U9PW88>.

SITUATION IN TURKEY IN 2017

For more information on the situation and shelter response in Turkey, see overview A.29 in *Shelter Projects 2015-2016*.

In 2017, Turkey remained home to the largest refugee population in the world, hosting over 3.4 million Syrians under temporary protection. The majority lived in host communities (93%), often with insecure tenure arrangements, while only seven per cent lived in the 21 official temporary accommodation centres (TACs).⁵ Given the protracted nature of the crisis, Syrians largely exhausted their savings, therefore requiring continued support to meet their basic needs. Over 64 per cent of refugee households outside of TACs lived below the poverty line.⁶

In a joint inter-agency assessment conducted in five provinces of south-east Turkey in mid-2017, refugees reported inadequate shelter and WASH conditions, poor hygiene (28%), lack of protection from the weather (19%), and lack of privacy (10%).⁷ 60 per cent shared accommodation and 10 per cent lived in informal tented settlements, unfinished buildings, barns, shops and factories.

Within the provinces of Hatay and Sanliurfa (targeted by this project), Syrian refugees totalled 28 and 24 per cent of the overall population respectively,⁸ increasing population density, waste volumes and water consumption. Prior to the crisis, some of the rural areas already had low access to infrastructure services, and many low-income families lived in the peri-urban areas of large cities, where housing quality was poor.⁹ In the seventh year of the Syria Crisis, municipalities were providing an ever-growing share of services to Turkish residents and Syrian refugees, stretching public funding, infrastructure and operational capacity. Competition for services, such as education and health, had an increasing potential to fuel social tensions between host communities and refugees.

NATIONAL RESPONSE

The Turkish government led the delivery of assistance within the TACs, with the support of humanitarian partners. In host communities it was more challenging to identify and assess the needs of refugees. Shelter activities were coordinated under the Basic Needs Sector, including core relief items, water, sanitation and hygiene, and infrastructure services. Most interventions were conducted through cash-based modalities, particularly multipurpose cash.

LOCATIONS AND BENEFICIARY SELECTION

The targeted provinces hosted large refugee populations due to their proximity to the border. Districts were selected based on the shelter conditions and number of refugees hosted, after coordination with local authorities. Only three major international partners were active in shelter interventions in the project areas at that time.



The project targeted Syrian refugees and Turkish host communities with rehabilitation works implemented by contractors and, for a small caseload, through cash grants.

Refugees were supported to register with the relevant Turkish authorities. Initially, only refugee households were targeted for this project. However, after realizing that this was causing significant tensions within the local communities, 25 per cent of host community members were also added. Households were targeted from two main groups, namely refugees tenants and local Turkish owners and tenants.

A careful selection process was designed to prioritize households, using a combination of socio-economic vulnerabilities and shelter and WASH conditions:

- First, a list of damaged houses was collected from the local municipalities;
- Then, field engineers conducted house-to-house shelter and WASH assessments, categorizing the house according to three levels of damage.¹⁰ Protection considerations were also applied, by looking at lighting, locks, doors and windows conditions;
- 10 vulnerability indicators were also assessed, according to a list prepared by the organization. Each indicator was assigned a score of one, and a minimum of four points was the threshold for selection;¹¹
- A database was established with the results of the assessment, containing both household and landlord information, as well as pictures of the house;
- A basic ownership verification was conducted;
- The final list of eligible households was shared with the municipalities for validation.

PROJECT IMPLEMENTATION

The project was one of the first shelter interventions in the area and was based, in part, on the lessons and implementation modalities of a previous project conducted by the organization in Iraq.¹² One of the main differences was that refugee tenants were targeted, which meant that security of tenure was a more pressing issue, and that an indirect benefit also reached the local landlords. This project also aimed at increasing social cohesion, by targeting host community households.

⁵ TACs are large-scale camp-like settings providing collective accommodation and meals for individuals under temporary protection in Turkey.

⁶ Regional Refugee and Resilience Plan (3RP) 2018-2019 – Turkey.

⁷ The assessment is available at <https://bit.ly/2RZ0c3W>.

⁸ Directorate General of Migration Management, <https://bit.ly/1Np6Zdd>.

⁹ 3RP 2018-2019 – Turkey.

¹⁰ 1) No damage (0–10%); 2) Partial damage (10–30%), minor repairs needed; and 3) Significant damage (30–70%), with major repair works needed.

¹¹ Vulnerabilities included: female-headed households; pregnant and lactating women; youth-headed households; chronic disease; disability; lack of labour power or member of working age; no previous shelter assistance received; damaged shelter; families with over five members; elderly without support.

¹² See A.34 in *Shelter Projects 2015-2016*.



The organization had offices in both targeted governorates and was implementing shelter projects in south-east Turkey since mid-2016, with a total of 15 dedicated shelter staff, including 5 female and 8 male engineers. The project was part of a wider multisectoral refugee programme. With its wide footprint, the organization had direct access to remote areas, where many people in need were residing.

The project was implemented mainly through local contractors (1,200 houses). A cash-based modality was also used for a small portion of the targeted households (100 houses), after discussion with the local authorities. This was added for houses in the first damage category, after assessments showed that refugees and host community members had construction skills and were looking for employment opportunities.

Before the start of the rehabilitation activities, project staff conducted half-day induction sessions explaining project objectives, process and steps, including works schedules and landlord agreements.

CONTRACTOR MODALITY. After the assessments, field engineers prepared individual Bills of Quantities for the contractors and oversaw the signature of rental agreements between households and landlords. Works included roofing insulation; electrical repair; internal and external rehabilitation of roof and walls, including of washrooms; floors; plumbing for kitchen and washrooms; waste water system; and replacement of doors and windows. A special BoQ for accessible toilets for people with disabilities was also prepared. Contractors were selected with an open tender advertised through newspapers, social media and the organization's website. During the works, refugees would either stay in other rooms of the same house, or transfer to relatives in the same area for a few days.

CASH-BASED MODALITY. For this portion of the project, standardized raw materials and construction tools were procured and distributed by the organization, while works were conducted by groups of workers from the refugee community, including some of the targeted households. Ten groups of 10 workers each (both skilled and unskilled) were identified by the organization and represented by one focal point. The organization conducted an induction training to the groups, after which tools were distributed. Cash for work was paid as a lump sum to the groups after completion of repair works in one house.

For both modalities, field engineers monitored the implementation through house-to-house visits, about three times a week. After completion of the works, quality control reports were prepared by the engineers, landlords and households filled a form to approve the works, and the houses were handed over to the beneficiaries. In a post-implementation survey conducted by the monitoring and evaluation unit, it was found that 81 per cent of the households were satisfied with the assistance, while 13 per cent were dissatisfied. The main problems faced were that the repairs had not been completed (17%), the roof had not been properly repaired (9%), or there were issues with the paint, doors and windows installed.

PROCUREMENT AND SUPPLY

All technical specifications were prepared by the organization's engineers to ensure quality. To support the local economy, all materials and tools were procured from local markets. Local contractors were also encouraged and prioritized during the selection process.

COORDINATION

The organization worked closely with governors, subgovernors and local organizations during the project, to select locations, prioritize needs and define the implementation process. At times, local organizations in the area were also identified to complete some rehabilitation works. Inter-agency coordination was important in joint needs assessments and for referrals between agencies.

SECURITY OF TENURE

As many refugees did not have any legal or written rental agreements with the landlords, they were exposed to risks of eviction or sudden increase of rents. Firstly, the organization assessed the tenure situation by including HLP criteria during the beneficiary selection process. These included whether the household was a tenant or owner, if and what type of ownership or rental documents were available and, if any rental agreements existed, what was their duration and if rehabilitation works were allowed by the owner. Local authorities, established community representatives and neighbours were approached to verify ownership claims made by beneficiaries and landlords.



Repairs included roofing insulation, walls rehabilitation, electrical works, floor repairs, plumbing and replacement of doors and windows.

To improve households' tenure security, rental agreements were signed between the landlords, the households and the organization. The agreements contained the following provisions:

- Identification of land/property (location and boundaries);
- Parties to the agreement and proof of their identity;
- Acknowledgement of ownership status of land/property;
- The shelter intervention does not legitimize or confer ownership rights over the property in question;
- Roles and responsibilities of each party;
- Process in the event of breach of agreement – which should reflect what is most suitable to the parties in the local context. The final resolution could be facilitated by the de facto local authorities, village chief or other actor trusted by both parties;
- Conditions and process for termination of agreement.

The agreement bound landlords to continue hosting the households for a minimum of 12 months, with the following three options:

1. Rental freeze for at least 12 months (53% of the cases chose this option);
2. Free rent, duration depending on the negotiation (33%);
3. Rental discount for 12 months (14%).

A copy in Turkish, Arabic and English was prepared and signed by the three parties. In case of violation of the agreement, the landlord would be responsible for paying all expenses to the organization. While this in the beginning caused landlords to complain, project staff organized meetings with them to explain and discuss the terms and agree on a rent amount, based on the approximate cost of repairs from the initial BoQ.



The project also provided rehabilitation of water supply and sanitation facilities.

MAIN CHALLENGES

Security concerns along the border caused the suspension of project activities in some districts. To meet project targets, the caseload was shifted to safer districts. However, the shift in locations caused additional delays, for instance in the selection of contractors.

Challenges were also faced with the chosen contractors, as in some cases these (or their subcontractors) were unqualified to do the works. After the quality control visits showed such issues, the contracts were suspended and new contractors selected, which led to delays in the implementation.

WIDER IMPACTS OF THE PROJECT

Given the scale of the refugee population and the small number of actors engaging in shelter activities, the shelter coverage was very limited in Turkey. This project was considered as a first step to facilitate the involvement of local authorities in housing rehabilitation, as well as to highlight the role of shelter as a key factor to improve health, hygiene and living conditions of the refugees and host communities alike. In some districts, works were referred to local government organizations.

Besides, the project contributed to the local economies through procurement of materials and creation of job opportunities, as well as supporting social cohesion by reducing the tensions between refugees and host communities. After the project, the number of complaints received by the local authority in the target locations decreased.



By targeting both host communities and refugees, the project contributed to social cohesion. After its completion, the number of complaints to local councils about tensions between the two groups dropped.



Beneficiaries were selected in coordination with the municipalities through a combination of technical assessments, vulnerability criteria and ownership verifications.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED

STRENGTHS

- + **Coordination and effective communication with local authorities**, village leaders and local organizations granted easy access to locations and information, such as households lists.
- + **The notarized agreement improved households' tenure security** to protect them from eviction or exploitation, as well as giving them more stability in their current residence.
- + **Clear vulnerability criteria and effective selection process**, allowing the prioritization of the most vulnerable households.
- + **Targeting both refugees and host community members fostered social cohesion.**
- + **Flexibility to adapt and include a cash-based modality**, although for a limited caseload, which enabled households to build their capacities and earn an income, while choosing how to conduct the repairs based on their needs.
- + **The use of local labour and materials** which supported local markets.

WEAKNESSES

- **Resources were limited to cover the intended targets**, resulting in lower impact and effectiveness (especially for rehabilitation of roofs). Due to the **currency inflation**, which was not adequately anticipated, labour markets were affected and the high labour costs impacted on the extent of works that could be covered under the contractor-led modality.
- **Mismatch between targets and people in need led to challenges.** Because of security concerns in some districts, the organization shifted target locations hurriedly, selecting houses far from each other, which then caused challenges in selecting contractors and further implementation delays.
- **The cash-based modality had limitations**, as households often did not have skills to conduct heavier repairs (i.e. for damage category 2) and some works were dangerous.
- **The identification of potential contractors** in the targeted areas took a long time at project inception.
- **Continuous delays in the procurement of items with technical specifications**, due to the absence of technical personnel in the procurement unit.
- **Unplanned visits to the households** sometimes caused fatigue and were perceived as intrusions. Stronger field-level coordination would have mitigated this.

LESSONS LEARNED

- **A more organized, phased approach to the contractor-led modality** would have been more effective. For example, the organization could have maintained a database to organize houses in batches, depending on whether technical assessments had been conducted or not, thereby **allowing the implementation of works to start at different times**. Using an electronic portal would have also helped in producing BoQs, reports and all other project documents more quickly and in digital form.
- **Quality control systems should be in place from project inception**, to enable the timely identification and resolution of problems. This could have been achieved by a better collaboration between programme and monitoring and evaluation units.
- **Donor visibility can create tensions and should be carefully considered**, in consultation with local authorities. For example, the donor flag was displayed during project activities, which was not well received by some members of the host communities, due to the political tensions between the countries.
- **Stronger community engagement and more freedom for the households** to choose their priorities would have led to higher satisfaction. For example, it was found that beneficiaries in many cases would have focused more on lighting and sanitation facilities. **The cash-based modality was more successful**, as it enabled a certain degree of customization. The organization was planning to expand it for future projects.



Local materials and labour were used in the project to support local markets.



Households were protected from exploitation or eviction from landlords through an agreement signed between the two parties and the organization.

OVERVIEW

YEMEN 2017–2018 / MULTIPLE CRISES

CRISIS	Yemen Conflict, March 2015–onwards
TOTAL PEOPLE IN NEED¹	24.1 million individuals
TOTAL PEOPLE DISPLACED¹	3.3 million internally displaced
TOTAL SECTOR NEEDS¹	6.7 million (4.5 million in acute need)
TOTAL PEOPLE REACHED²	2.28 million individuals with Shelter-NFI and CCCM assistance in 2017–2018



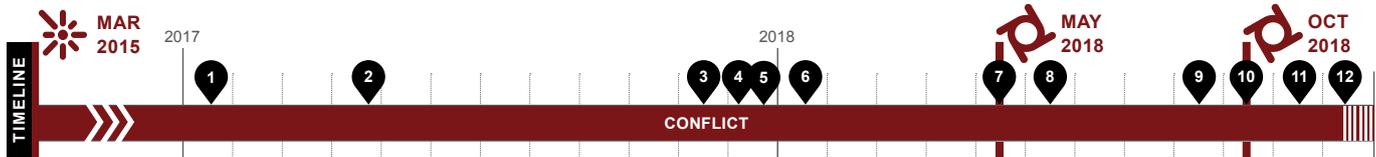
RESPONSE ACHIEVEMENTS (2017–2018)²

- 71,952** households – emergency shelter
- 179,374** households – NFIs
- 85,371** households – cash for rent
- 44,728** households – winterization NFIs
- 3,332** transitional shelters built
- 2,328** houses rehabilitated

¹ Figures as of Feb 2019. Yemen Humanitarian Response Plan 2019.
² Shelter/NFI/CCCM combined dashboards for Dec 2017 and Dec 2018.

SUMMARY OF THE RESPONSE

In 2017 and 2018, the humanitarian crisis in Yemen remained the worst in the world, with nearly 75 per cent of the entire population requiring assistance. People with shelter and NFI needs increased 17 per cent in two years, and needs were compounded by the food crisis, intense fighting, cholera and a cyclone. The shelter and NFI response focused on the distribution of emergency shelter and NFI kits and, to a lesser extent, on rental support, transitional shelter and housing rehabilitation. Activities were implemented using cash whenever possible.



- 1 Jan 2017: Conflict intensifies leading to significant displacement.
- 2 27 Apr 2017: Second wave of cholera outbreak in Yemen.
- 3 Nov 2017: All Yemeni air, land and sea ports closed.
- 4 Dec 2017: Heavy clashes in Sana'a and other governorates in the central and northern region.
- 5 20 Dec 2017: Yemen's ports opened for a 30-day window.
- 6 Jan 2018: Southern Yemeni separatists seize control of Aden.
- 7 May 2018: Cyclones Mekunu and Sagar cause displacement, flooding and damage to houses and public infrastructure.
- 8 Jun 2018: Fighting escalates in Hodeidah requiring shelter and NFI assistance.
- 9 Sep 2018: The economy is impacted by severe currency depreciation.
- 10 14 Oct 2018: Cyclone Luban causes displacement and flooding.
- 11 Nov 2018: International community calls for cease-fire.
- 12 Dec 2018: Reduction in hostilities allows Shelter and NFI partners to scale up response.

CONTEXT

See overview A.37 in *Shelter Projects 2015-2016* for more background information.

Yemen relies on imports for around 90 per cent of its staple food and for nearly all fuel and medical supplies. Already ailing before the escalation of the conflict in March 2015, the Yemeni economy contracted sharply since the conflict began.

The climate in Yemen varies greatly depending on the geographical region. The range of temperature in winter can go from 22°C to below 0°C at its coldest.

In the fourth year of the humanitarian crisis, conflict, severe economic decline and collapsing essential public services took an enormous toll on the population, exacerbating existing vulnerabilities. Yemenis faced multiple crises, including armed conflict, displacement, natural disasters, risk of famine and disease outbreaks, which created the worst humanitarian crisis of recent years. By the end of 2017, 75 per cent of the population – 22.2 million people – needed humanitarian assistance. This figure reached 24.1 million by the end of 2018.

The unique combination of all these factors created an extreme challenge to the provision of life-saving and life-sustaining shelter solutions and non-food items (NFIs) for the most vulnerable.



Air strikes in civilian neighbourhoods caused massive damage and loss of life.

DISPLACEMENT AND RETURNS

As of June 2018, 2.3 million people were internally displaced across the entire country, mostly due to the ongoing conflict. By the end of 2018, there were 3.3 million people displaced. The escalating conflict in the Al Hudaydah region alone (June to September 2018) displaced some 685,000 individuals. Eighty-one per cent of IDPs were displaced for more than a year, creating a prolonged burden on the host communities and on those paying rent. This situation was even worse for the 72 per cent who were displaced for more than two years.

On top of those who were displaced, one million people returned back to their place of habitual residence, requiring additional support to rebuild their lives.

Two major types of displacement occurred:

- **Families that moved pre-emptively** before the conflict reached their location. These were normally in a slightly better situation and could be reached with assistance (both in-kind and cash).
- **Families that tried to flee when the conflict had already reached their location.** These were normally out in the open or caught behind the front lines, only accessible through a humanitarian pause in the conflict, and could only be assisted with in-kind blanket distributions.

DISPLACEMENT LOCATIONS

The majority of IDPs in Yemen lived with host families for protracted periods of time. Therefore, the capacity of the hosts was extremely stretched. Others lived in rented accommodation with often significant strains on their economic situations.

An increasing proportion of families lived in IDP sites as an option of last resort. These families were considered most in need, due to lack of services and management, as well as the generally poor shelter conditions.

SHELTER AND NFI SITUATION

An estimated 5.4 million people in 2018 required emergency shelter or essential household items, and 2.6 million people were in acute need of this type of assistance.¹ As of late 2017, shelter remained the third most critical need for both IDPs and returnees, after food and access to income.²

Delivering immediate emergency assistance for newly displaced families was challenging, as the majority lived in precarious situations for several weeks before they could receive basic emergency shelter and NFI support.

NATIONAL SHELTER STRATEGY

Shelter activities were coordinated under a joint Shelter/NFI/CCCM Cluster. Shelter and NFI partners had to continually adapt their methodologies to ensure that – when access was possible – responses could be inclusive and integrated.

The Cluster operated six hubs across the country to ensure a granular understanding of the context and the needs.

In line with the coordinated response and the Humanitarian Response Plan structure, the Cluster operated a three-tier response strategy:

- **First-line response (prioritized):** basic kits, rental and transitional shelter support to newly displaced and highly vulnerable families, rehabilitation of damaged houses and site management and coordination activities;
- **Second-line response:** improved living conditions for families living in transitional shelter arrangements through maintenance, upgrade and provision of winterization kits;
- **Full-Cluster response:** increased sustainability of shelter arrangements by providing cash grants to reconstruct damaged houses.

¹ Yemen Humanitarian Needs Overview (HNO) 2018.

² Task Force for Population Movement (TFPM) report, September 2017.

CLUSTER RESPONSE ACTIVITIES AND COSTING

Line of Response	Standard Activity	Sub-activity	Unit cost (without ops)	Unit cost (incl. operations)		
				In-kind	Cash	Voucher
FIRST-LINE Provide basic kits and support to newly displaced and highly vulnerable families	Household kits, emergency shelter kits and tents	Non-food items	\$ 177	\$ 230	\$ 204	\$ 204
		Emergency shelter	\$ 233	\$ 303	\$ 268	\$ 268
	Rental subsidies and cash grants to rehabilitate damaged houses	Cash for monthly rental subsidies	\$ 100	-	\$ 135	-
		Housing rehabilitation	\$ 2,000	-	\$ 2,300	-
	Construct and help to manage transitional shelters where needed	New transitional shelter	\$ 523	\$ 680	\$ 601	\$ 601
		Rehabilitation of transitional shelter	\$ 500	\$ 650	\$ 575	\$ 575
		Steps to ensure emergency and transit sites meet minimum requirements	Site with site management structure	\$ 3*	-	\$ 30*
	Site monitored on monthly basis		\$ 1*	-	\$ 15*	-
	Site covered by Baseline Assessment		\$ 1*	-	\$ 2*	-
SECOND-LINE Upgrade living conditions for families in transitional shelter arrangements	Maintenance support and shelter upgrades	Shelter upgrade	\$ 50	\$ 65	\$ 58	\$ 58
		Shelter maintenance (basic)	\$ 50	\$ 65	\$ 58	\$ 58
	Winterization kits	Winterization NFIs	\$ 230	\$ 299	\$ 265	\$ 265
		Shelter winterization support	\$ 230	\$ 299	\$ 265	\$ 265
FULL-CLUSTER Increase the sustainability of shelter arrangements	Cash grants to reconstruct damaged houses	Housing reconstruction	\$ 5,000	-	\$ 5,345	-

Shelter/NFI/CCCM Cluster Technical Guidance Note for the 1st Standard and Reserve Allocations for the Humanitarian Pooled Fund (HPF) for 2018.

* Costs per individual beneficiary. All other costs are per household.

SCALE OF THE RESPONSE

Between 2017 and 2018, shelter-related activities reached over 160,000 households and NFI distributions reached 220,000 households. Achievements and funding grew significantly in 2018 compared to 2017, with Shelter-NFI partners receiving a total of about USD 76 million versus the USD 20 million of the previous year. In 2018, Yemen received the highest humanitarian funding for a single country in the world, and the second highest after the Syria Crisis for Shelter-NFI only.

TARGETING AND INCLUSIVE PROGRAMMING

Broadly, targeting was a two-stage process led by Cluster members. Indicators from the Humanitarian Needs Overview were ranked to identify the governorates with the most acute needs and then Cluster members agreed beneficiary identification criteria based on protection vulnerabilities.

Steps were also taken to ensure projects were more protection and gender sensitive. Key resource persons were accountable for protection and gender mainstreaming, helping ensure that projects did not inadvertently exclude any groups from assistance. Activities included collecting disaggregated data, ensuring that complaints and feedback mechanisms were in place and used, and that teams were gender balanced.

INTEGRATED APPROACH

In 2017 and 2018 there was an emphasis on integrated programming and a more holistic approach to meeting people’s varied needs.

An example of this was the Information Counselling and Legal Assistance programme which looked at confirming ownership and legal tenure for rental property, as well as land provided for transitional and other shelter solutions.

To improve coordination and promote an integrated response, the Site Management Coordination initiative was launched, in which the Shelter/NFI/CCM Cluster coordinated the identification and verification of gaps, the multi-sector response, and the monitoring of the implementation. In 2018, with the collaboration of the Inter-Cluster coordination mechanism, the initiative was piloted in 88 IDP settlements.



Displaced children stand amid ruins in Sana’a. By the end of 2018, 3.3 million people were displaced and 24.1 million needed humanitarian assistance.

CASH-BASED INTERVENTIONS

To gauge the appropriateness of multi-purpose cash, the Yemen Cash and Markets Working Group conducted an inter-sector market study in December 2017, looking at the functionality of different types of market systems and the communities’ preference for various response options. The study found that, based on availability, pricing, and restocking times, food commodities, cooking gas, water trucking and hygiene items were suitable candidates for unrestricted cash-based interventions (CBI) across the country. Markets for other commodity groups (houseware, building materials, and wheelchairs and crutches) were found to be not consistently functioning well at the district level, and CBI for these items were unlikely to be a suitable option in remote areas.

As part of its strategy to improve reach and increase coverage, the Cluster developed cash-for-shelter guidelines in 2017 and systematically promoted the use of CBI in its activities. The Cluster programmed 70 per cent of its response to be implemented through CBI. By the end of 2018, 45 per cent of the budget received had been implemented through CBI. In some remote locations, in-kind distribution continued to be used. Cash grants were also used to support returnees with the rehabilitation or reconstruction of damaged or destroyed houses.



Al Habbari IDP informal settlement in Sana’a. In 2017 and 2018, more and more displaced people settled in these sites, where living conditions were very poor.



© Becky Bakr Abdulla / NRC

Women, children and female-headed households were disproportionately affected by the crisis. One of the objectives of the Cluster was to improve targeting of aid.

MAIN CHALLENGES

Challenges to the response in Yemen included currency depreciation and increase of fuel costs, flooding that caused further damage and displacement, as well as strict import limitations on raw materials. Complex displacement patterns and access constraints due to insecurity and poor road network severely hampered partners to reach the most vulnerable affected populations.

Additionally, limited funding and capacity of partners to implement hampered the response (just 19% and 39% of funding requirements were received in 2017 and 2018 respectively).

Lack of income sources on the part of affected households was one of the main challenges to ensuring sustainability of the response, promoting economic self-reliance and reducing vulnerabilities amongst the affected people. To counter this, Shelter partners formed a collaboration with the Emergency Employment and Community Rehabilitation Cluster for livelihood and income-generating opportunities, and the Food Security and Agriculture Cluster for agriculture-related activities.

LESSONS LEARNED

ENGAGEMENT OF NATIONAL NGOS. Over the years since the beginning of the crisis, more and more national NGOs were engaged in the response, especially helping in hard-to-reach areas. However, there was only limited donor support for national actors, so this became a priority going forward.

IMPROVED TARGETING. In 2018, emphasis was placed on improving ways to identify the most vulnerable, given the limited available resources. Nonetheless, beneficiary selection was not free from challenges. This process needed to be undertaken carefully to ensure assistance was provided to the right people in the right locations. More independent checking of beneficiary lists and robust feedback mechanisms were needed to ensure the effective use of resources.

CHALLENGES IN MEASURING IMPACT. Despite an improvement in data collection and analysis, the constantly evolving context and displacement rendered measuring impact difficult. These challenges were also amplified due to access issues. In hindsight, real-time need indicators could have been set up to monitor response progress and impact, rather than relying solely on the main figures from the Humanitarian Needs Overview.

RESPONSE EFFICIENCY. In order to ensure that emergency shelter and NFI responses are timely and efficient, investment is needed in logistics, Standard Operating Procedures and forward planning.

LOOKING FORWARD

In 2019, the Cluster planned to focus more on supporting host families, engaging affected people and local authorities, as well as using CBI as the main modality. Scale-up of long-term shelter solutions identified by the people themselves was also a priority. Site management and coordination teams (managing IDP sites) started to include representatives of the national authority counterpart to the Cluster. Finally, capacity-building activities for national NGOs were going to be prioritized.



© Becky Bakr Abdulla / NRC

An increasing proportion of families lived in IDP sites and were considered most in need, due to lack of services and management, as well as poor shelter.

SECTION B

**OTHER CASE
STUDIES**



HISTORICAL CASE STUDY

INDIA 1935 / EARTHQUAKE

KEYWORDS: Governance, Urban, Disaster Risk Reduction

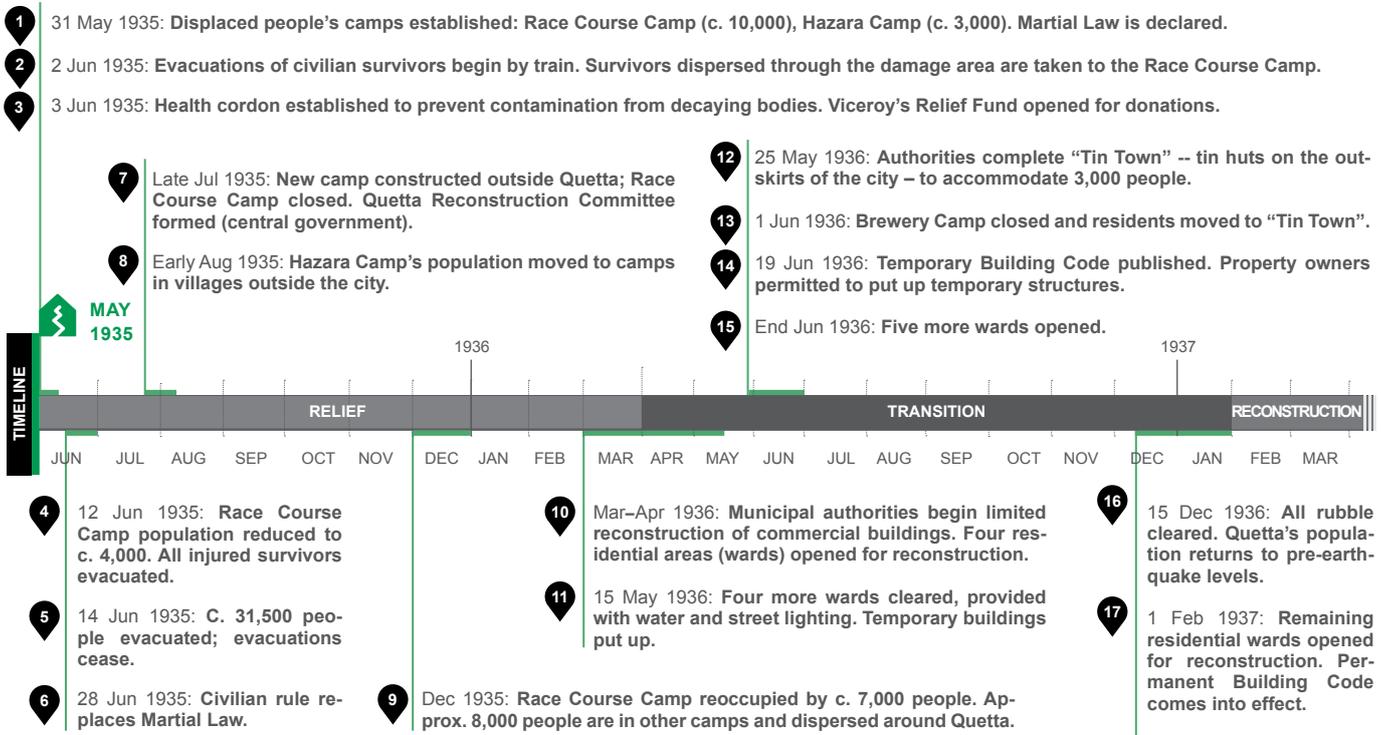
CRISIS	Quetta Earthquake, 31 May 1935, India (now part of Pakistan)
TOTAL PEOPLE AFFECTED¹	Approx. 71,000
TOTAL PEOPLE DISPLACED²	At least 31,500
TOTAL HOUSES DAMAGED³	Over 14,000
LOCATION	Quetta Municipality, British Baluchistan (now Balochistan Province, Pakistan)
PEOPLE SUPPORTED	13,000 individuals given shelter 31,500 individuals evacuated 26,000 individuals given financial or in-kind livelihood assistance



Map of Baluchistan, c. 1908.

PROJECT SUMMARY

In 1935 a major earthquake destroyed Quetta, a city on colonial India’s north-western frontier. The military and civilian authorities successfully organized shelter, food and medical attention for at least 13,000 survivors, before evacuating 31,500 survivors to other parts of India. Through a very centralized, top-down approach, Quetta was reconstructed according to a new, aseismic building code.



STRENGTHS

- + Decisions were taken quickly by decisive leadership.
- + The army organized quickly to reach survivors.
- + The medical response was prioritized effectively.
- + Health authorities took proactive measures against major epidemics and prevented contamination.
- + A new building code was defined and enforced.

WEAKNESSES

- Non-existence of a plan for the provision of shelter.
- Inappropriate design of temporary shelters.
- The two camps had far lower capacity than needed.
- Complex administration of the relief fund due to slow communication led to long delays in releasing financial support.
- Differential relief was given on a racial basis.

QUETTA CONTEXT

Quetta in 1935 was a garrison town on the western border of Britain's Indian empire. Its population had tripled between 1885 and 1935 and the town was home to troops, civil administrators, immigrants from elsewhere in India, indigenous inhabitants and merchants.

Quetta's population was spatially segregated into three areas, according to occupation and race.

- The Cantonment with military personnel, divided into (white) British, Indian and "Gurkha" (Nepalese) segments. It featured wide streets and open spaces. South of a small waterway were two further areas.
- The Civil Lines for high-ranking government servants, largely British. Dwellings here were spacious bungalows built to a high standard.
- The Municipality, the most populous area, was home to Indian civilians. Buildings were tall and constructed from mud or brick cemented with poor mortar, while streets were narrow and congested.⁴

SITUATION AFTER THE EARTHQUAKE

A magnitude 7.6 earthquake struck at 03:03 am on 31 May 1935. The shaking was strongest south-west of the waterway, in the Civil Lines and Municipality, due to the low-lying alluvial soils that were waterlogged, amplifying the earthquake waves. In the Municipality, the problems of escape and rescue through narrow, debris-filled streets raised the mortality rate. The Civil Lines were also badly damaged, but large open spaces enabled survivors to get clear of dangerous structures. Most parts of the Cantonment, built on dryer soil with well-constructed buildings, survived the earthquake.

INITIAL RELIEF EFFORTS

The army commander declared martial law with the assent of the head of the civilian administration. Troops were sent to dig for survivors and transport the wounded to the military hospitals, which were not badly damaged. The army prepared a camp for displaced survivors on the Race Course, a large open space.



Jinnah road after the earthquake of May 1935. The rubble was completely removed in December 1936.

Later, the military authorities put a cordon around the city, enforced by fences and troop patrols, which only allowed officially-sanctioned rescue and salvage workers to enter. This was explained as a public health measure, due to the hazards posed by decaying bodies, but angered volunteer aid organizations and those who wished to salvage their property. Non-official sources report self-rescue among neighbours as well as help from troops.⁵ Accusations that the authorities failed to save lives through inefficiency or callousness were repressed.⁶

EMERGENCY SHELTER, CAMPS AND EVACUATION

The skeleton of the Race Course camp was established nine hours after the main shock. Survivors were brought in on foot and by truck. The army provided some tents in the camp, while others had to piece together makeshift shelters from available materials, such as canvas roofs.⁷ An estimated 10,000 people sheltered at the camp.⁸ Military doctors took charge of sanitary arrangements and medical care there and the water supply was chlorinated.

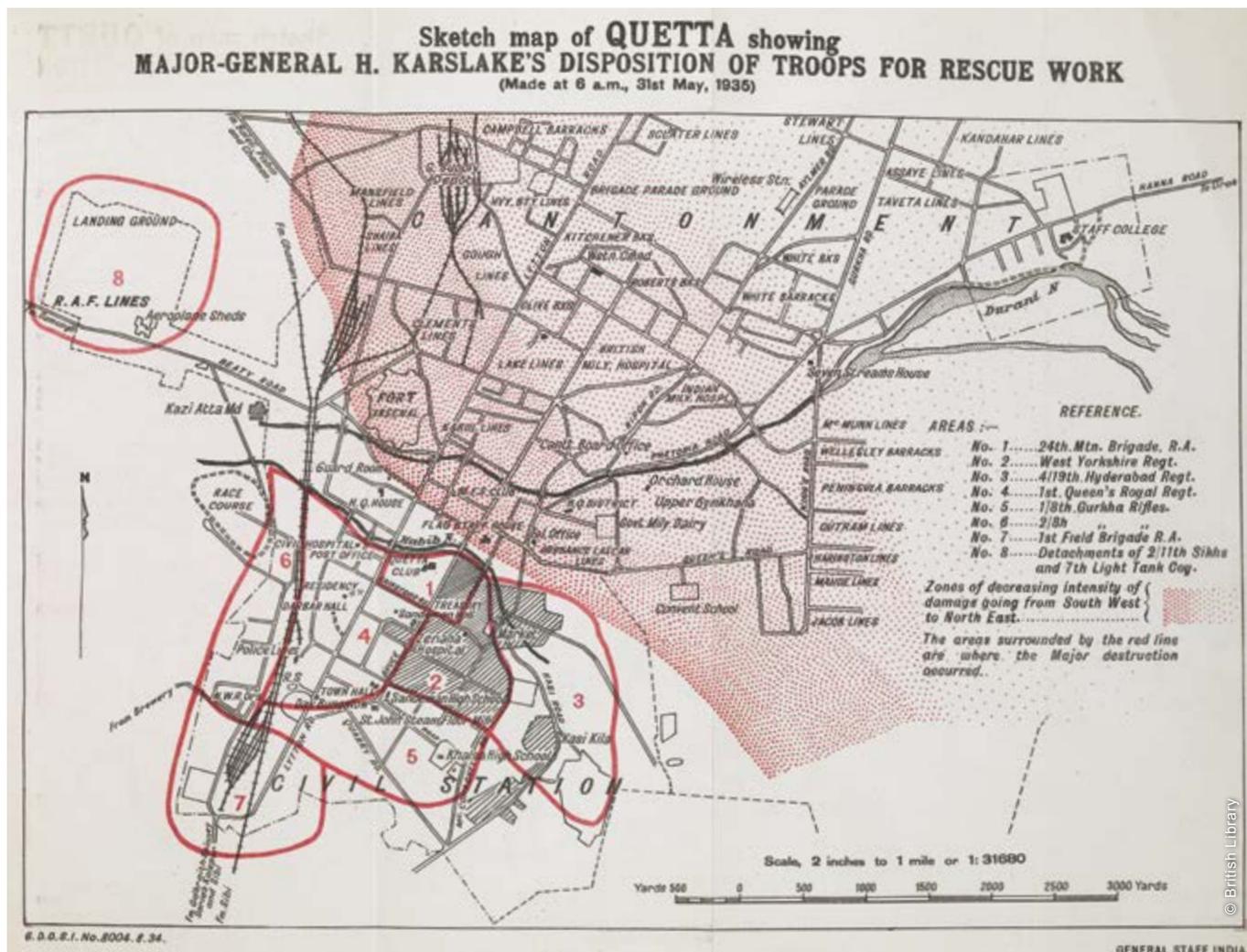
Smaller survivor populations lived elsewhere, including in a camp for 3,000 ethnic Hazaras in the Cantonment area, and an unknown number of civilians, presumably British, living in tents in the Civil Lines. To house the garrison, the army built more sophisticated and durable huts using double-fly tent roofing and mud brick walls, with salvaged doors and windows.⁹

The military's priority was to quickly evacuate the civilian population and the families of military men. The railway link between Quetta and the plains had remained intact, so by 14 June, 31,500 had been evacuated, including 17,000–20,000 injured.¹⁰ Approximately 10,000 evacuees went to camps and hospitals in Punjab. Local authorities in the provinces were assisted by volunteer organisations, as well as numerous private individuals. All but 6,000 Indian civilians were evacuated from the Race Course camp and hospitals.

Between June and December 1935, the camps' populations were moved to new camps, while the old ones were first reduced or closed for sanitary reasons, to then grow again due to the influx of labour (mainly for clearance and salvage work). By the end of the year, over 7,000 people were again camped on or near the Race Course, more than 4,000 were in other camps, and 4,000 lived in temporary dwellings in the Civil Lines.



A First Aid unit at the railway station. The railway between Quetta and the plains remained intact, so in about two weeks, 31,000 were evacuated.



Sketch map of Quetta showing the disposition of troops for rescue work, done three hours after the earthquake. Decisions regarding immediate relief and longer-term policy were taken quickly and seen through consistently. Source: British Library Board (Asia, Pacific & Africa PV 1752, Map facing p.26).

RELIEF FUND

Shortly after the earthquake, the Governor-General of India set up a Relief Fund to pay for continued support of survivors and partial compensation for lost property or businesses. The Fund took donations from private individuals, businesses and governments in India, Britain and worldwide. District officials executed distribution, while relief associations, including officials and non-officials, were organized to link the Fund to recipients. Other community organizations helped to bring cases to officials' attention.¹¹

During June, the Fund provided clothes, medical supplies and small cash grants to survivors, all distributed at the discretion of local government officials. Subsequently, the Fund made cash and in-kind grants to people who had lost their employment and to business owners. The grants period was initially three months and later extended to six.

Roughly 26,000 people received help from the Relief Fund, amounting to Rs 1,050,206 (USD 7.1 million at 2018 prices).¹² Most of the money was spent in Punjab and Sindh provinces (81%), some in Britain (3%) and the rest in other parts of India. Applications had slowed to a trickle by the end of 1938.¹³

The government's control enabled it to prioritize particular groups. A specially-chartered ship took British families back to the UK, an expensive operation that privileged a small group of racially-defined beneficiaries. Low-paid government

employees were also given preferential help, as were middle-class business owners.¹⁴ On a more clearly humanitarian basis, widows, orphans and older people were given extra assistance.

RECONSTRUCTION – PLANNING PHASE

With most of the population evacuated or in camps, the authorities planned for reconstruction. Rubble removal was done both by government and, from March 1936, by private individuals (to whom the government paid up to 80% of the cost), and took two years to complete.

Governance of the reconstruction process rested with the central government's Quetta Reconstruction Committee, which included military and civil officials.

The actual planning work was complex and involved numerous official stakeholders. Local government officials in Baluchistan drew up the actual plans for the new city's layout, in consultation with the local military and health authorities, and then submitted these to the central government.¹⁵ The plan included wider streets and improved water supply and sewage systems.¹⁶ The new plan was designed to conform to contemporary ideas about good urban planning, as well as ensuring that the widened streets offered escape and access routes in the event of another earthquake.

TRANSITIONAL PHASE

Due to heavy frosts during the winter, reconstruction could not begin until spring 1936. To enable some degree of normal life to recommence, the municipal authorities constructed markets and shops on government-owned land. By 15 May 1936, eight wards were reopened for residential occupation, with sanitation, water supplies and street lighting. No permanent rebuilding was permitted yet, and transitional accommodation had to follow a temporary building code. On 25 May the large camp populations were ordered to move into the city.

The transitional dwellings were highly inflammable and residential property owners and speculators on private land charged tenants very high rents. To provide an alternative, the government constructed accommodation for 3,000 people on the outskirts of the Municipality, charging low rents. Known as Tin Town, the huts were prone to overheating and proved unpopular. They were later lined against heat and given small, walled courtyards which enabled female family members to use the outside space without exposing themselves to view.

PERMANENT RECONSTRUCTION

On 1 February 1937, the last wards of Quetta were reopened for occupation and a new permanent building code came into effect. The code was devised by a central technical committee of geologists and engineers. Official buildings were designed with brickwork set in cement and reinforced vertically by round steel rods and horizontally by steel flats, with reinforced concrete roofs. Military residential buildings were only one storey high; office buildings could include a second storey if there was direct access to external stairways to enable quick escape. The Geological Survey of India recommended that square-shaped buildings be preferred, because it found that rectangular buildings had collapsed sideways when the earthquake wave hit their long-sided walls at right angles.¹⁷

It was the first time that a compulsory building code was enforced in a Municipality. Property owners in Quetta protested against the building code's requirements, likely due to the high costs imposed. The local government insisted on following the code anyway.¹⁸ It was able to do so relatively easily, because there was minimal engagement with Indian political representatives or community "spokespeople", in contrast with other areas of India.¹⁹ The buildings constructed using the Quetta code performed well during a 1955 earthquake, with the main damage occurring to unreinforced walls of buildings and minarets of mosques.²⁰

CONCLUSIONS

The military and civil authorities regarded their handling of rescue, relief and evacuation operations as exemplary. The methods they used were strongly authoritarian and carried out mainly by well-trained troops, who executed their orders effectively. By evicting the city's non-official inhabitants and forbidding permanent reconstruction until a building code was ready, the authorities ensured that Quetta was rebuilt to a safer standard.

However, the government's programme was far from user-centred. The discrepancy between the authorities' priorities and those of ordinary people became clear in disagreements over the new building code. In this case, the authorities refused to alter policy, while for the design of huts in the Tin Town, the government did respond to beneficiary concerns, but only reactively. Advance consultation with beneficiaries might have eliminated such problems.

The successes of this response were highly contingent on localized factors, namely the army's dominance and the lack of democratic structures. The contexts of and responses to subsequent humanitarian crises in India were very different.²¹ While individuals involved in the Quetta response did write up lessons learned, there was no institutional mechanism in colonial India to translate such lessons into national policy.



As the market had been destroyed, the municipal authorities constructed markets and shops on government land before reconstruction began, to restore a degree of normality.

ENDNOTES

- Estimates from: Situation Reports for 3, 10 and 17 June 1935, in: Government of India, Bureau of Public Information (ed.), Quetta Earthquake, 1935: Collection of information made available to the press in the form of communiques, statements and reports regarding the situation and of the measures taken in connection with Relief, Supplies, Evacuation and Salvage (Simla: Government of India Press, 1935); L. A. G. Pinhey, Report on the Quetta earthquake of 31 May 1935 (Delhi: Government of India Press, 1938), p.1.
- British Library, London, India Office Records, IOR/L/MIL/7/19486: Report on Medical Transactions by the Medical Services following Quetta Earthquake, the 31st May 1935 (DHQ Press, Quetta).
- Extrapolated from Gul M. Khan, Census of India, 1931: Baluchistan, Parts I & II (Lahore: Civil and Military Gazette Press, 1934), p.27
- India, The Quetta earthquake, 1935, p.2.
- Quetta Earthquake & After: A Note prepared for members of the Assembly (Karachi: Quetta Central Relief Committee, 1935).
- National Archives of India, New Delhi, Home Department, Political Branch, 1935, Home_Political_NA_1935_NA_F-88-7_35: Question of Prosecution of Dr Choth Ram and Babu Rajendra Prasad in respect of speeches in which they made various objectionable statements regarding the Quetta earthquake Relief Work (Dropped).
- Imperial War Museum Archive, London, Catalogue no. 898: Interview with Elizabeth Harrington, 18 March 1977, reel 4, <https://bit.ly/2B7o3q8>.
- L. A. G. Pinhey, Report on the Quetta earthquake of 31 May 1935 (Delhi: Government of India Press, 1938). Henry T. Holland, Frontier Doctor: An autobiography (London: Hodder & Stoughton, 1958).
- Centre of South Asian Studies Archive, University of Cambridge: Guyon Papers. J.M. Guyon, 'Recollections of the Raj' (unpublished, 1982), p.5.
- British Library, London, India Office Records, IOR/L/MIL/7/19486: Report on Medical Transactions by the Medical Services following Quetta Earthquake, the 31st May 1935 (DHQ Press, Quetta).
- Pinhey, Report on the Quetta earthquake, pp.47-8.
- Values were converted from Rs to USD at the 1935 exchange rate and converted to 2018 prices considering the inflation rate.
- British Library, India Office Records: L/F/7/919, Collection 109/7.
- Pinhey, Report on the Quetta earthquake, pp.48.
- Balochistan Archives, Quetta, File no C/7, 1936, Progs No.s XX Earthquake: Minutes of the third meeting of the Central Quetta Reconstruction Committee held on 30 May 1936.
- Balochistan Archives, Quetta, A.G.G/G 01282: Press communication on the reconstruction of Quetta.
- Balochistan Archives, Quetta: A.G.G/G 01294. G.D. West, Preliminary Geological Report on the Baluchistan Earth Quake of May 31st. 1935, p.13.
- Press communication on the reconstruction of Quetta.
- For example Bihar, where the provincial legislature debated reconstruction policy after a 1934 earthquake.
- Abdul Qadir Khan, "Earthquakes and aseismic design in Pakistan", in Proceedings of the 1st World Conference on Earthquake Engineering 19 (1956), 19, 23.1-23.9.
- Such as the Bengal famine of 1942-3, the Partition of India and Pakistan in 1947, and the 1950 earthquake on the north-eastern border with Tibet.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Camps were established as a measure to house homeless survivors. The largest hosted around 10,000 people in basic tents, often built by the people themselves. More durable tents were established to house the garrison.

STRENGTHS

- + **Decisive leadership** meant that decisions regarding immediate relief and longer-term policy were taken quickly and seen through consistently.
- + The army, as a disciplined body, was able to **organize quickly in order to reach survivors**.
- + **The medical response was prioritized**, with military and missionary doctors cooperating closely to reach the largest possible number of people.
- + **The health authorities took proactive measures** against major epidemic diseases, malaria and sand flies, while the sealing of the ruined town prevented contamination of the population by decomposing dead bodies.
- + The top-down nature of post-disaster governance enabled the authorities to **define and enforce a building code** for buildings that resisted future earthquake shocks.

WEAKNESSES

- The availability of shelter in the immediate aftermath of the earthquake was not enough for all, as it depended on the local military having a surplus of tents. **There was no pre-existing plan** for the provision of shelter.
- Design of temporary shelters, required **substantial modification to make them appropriate** to local climatic and cultural conditions.
- The number of survivors accommodated in the two main camps (13,000 total) was far lower than the number evacuated by train over the two weeks following the earthquake (31,500); **it is not clear how and where the remaining survivors found shelter before evacuation**.
- **The Relief Fund was complex to administer**, with local officials spending a full year assessing claims, due to slow communication between Quetta and elsewhere in India. Applicants were therefore left without support from the biggest provider for long periods.
- **Differential relief was given on a racial basis**, with disproportionate resources going to British survivors rather than Indians.

LESSONS LEARNED

- Shelter design must factor in **local climatic and cultural conditions** and the needs of users.
- **A large degree of political will is needed to enforce unpopular but effective measures**, such a restrictive new building code (or a public health cordon).
- **A decisive, authoritarian organization can quickly organize** shelter, food and evacuation for a large civilian population, despite not having any known plan for humanitarian crises.
- **The ethics of a response that overrides beneficiaries' concerns are problematic**. The colonial government's authoritarian policies were effective in the immediate term, but the benefits only lasted as long as the state retained high levels of authority and political power. The Quetta building code was not implemented elsewhere in India, suggesting a lack of buy-in from the local population. Given the typically long return period of major earthquakes, building practices must be sustained over many decades. A more inclusive approach might ensure that reconstruction continues to be appropriate to future hazard.

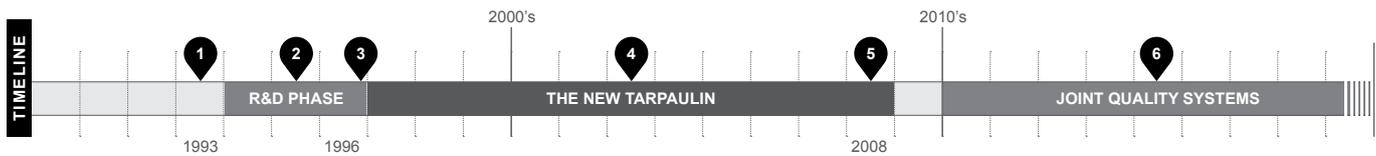
CASE STUDY HUMANITARIAN TARPAULIN DEVELOPMENT

KEYWORDS: Plastic sheeting, Specifications, Cost-effectiveness, Quality control, Procurement and supply

CRISIS	Humanitarian crises worldwide	
PROJECT OUTPUTS	The design of a standard tarpaulin for emergency shelter and the set-up of the appropriate system to guarantee quality in the long run	
USES OF THE TARPAULIN	Emergency, temporary shelters, and multiple other functions	
MATERIALS COST	USD 12–20 per tarpaulin, including transport	

PROJECT SUMMARY

By working with an inter-agency working group and by establishing clear quality control processes throughout the global supply chain for non-food items, the organization was able to improve quality, pricing and timeliness of a major relief item: the tarpaulin. Processes included research and development, active sourcing to identify manufacturers, factory visits to ensure that social and environmental conditions were adhered to, common specifications developed on an inter-agency basis, and scientific sampling. The organization’s quality control systems have led to more than USD 1.5 million of penalties (for suppliers) and savings (for agencies). But more importantly, the focus has been on building relationships with manufacturers so that they better understand the needs, and that agencies can provide items of suitable quality and durability to vulnerable crisis-affected people.



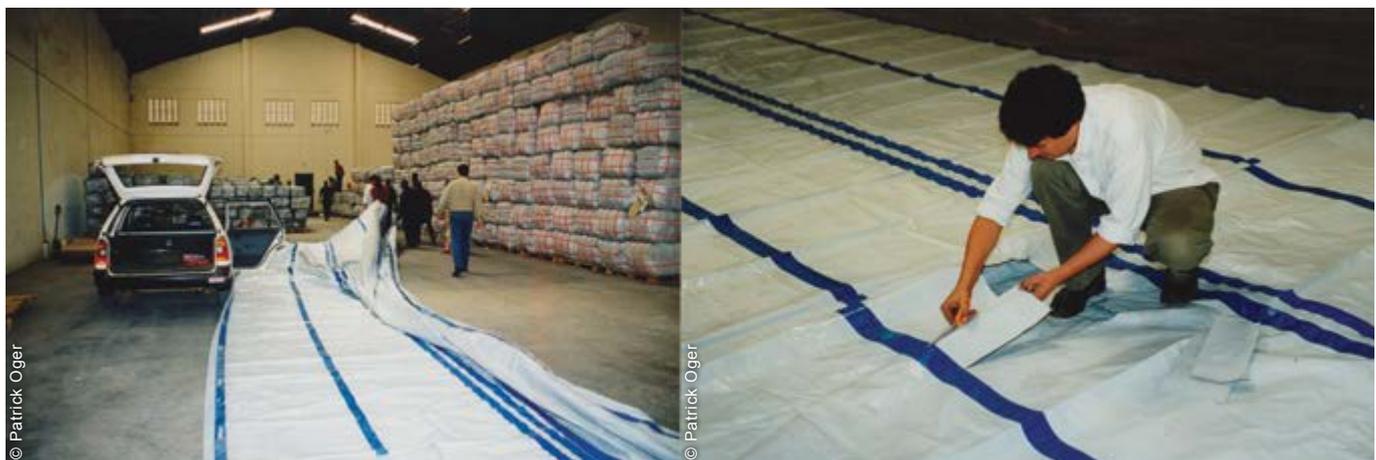
- 1 1993: Organizations decide to collaborate to design the tarpaulin.
- 2 1994–1996: One technical unit takes in charge the inter-agency research and development (R&D) project.
- 3 1996: Final specifications are set for the inter-agency standard tarpaulin.
- 4 1996–2008: Procurement takes over and a shift to the new product occurs.
- 5 2008: Quality issues in procurement appear year after year.
- 6 2010–onwards: Organizations decide to join their efforts to set quality systems. The QSE working group is formed.

STRENGTHS

- + Inter-agency collaboration to develop shared processes.
- + Universal applicability of the standard specifications.
- + Cost-effectiveness and speed of production.
- + Improved product quality and factory working conditions.
- + Durability of the items better serve the needs of affected people.

WEAKNESSES

- Lack of research and development funding and capacity in agencies.
- Low capacity to retain product development history.
- Challenges in maintaining consistent quality control systems.
- Standard tarpaulins are not easily available in many countries.
- Different standards are still used across agencies and operations.
- Many agencies insist on branding, reducing stock interchangeability.



The project established joint standard specifications for the most commonly used relief item: the tarpaulin. Simple tests on size and tear strength can be easily conducted in the field. These ensure quality is up to standard, and to apply penalties to suppliers for non-conformities.

BACKGROUND TO THE PROJECT

When people’s homes have been destroyed, using plastic sheeting is a fast and easy way to create an emergency shelter – a shelter that will shield them from the rain, the sun, the cold; that will protect them from disease outbreaks and offer them some privacy.

For humanitarian relief workers, plastic sheeting is indispensable – not just for shelters. It can be used to make fencing or walls for latrines; it can be spread on the ground when sorting out emergency food rations; it can be used to cover the food when fumigating against insects... It can even be made into guy-ropes to secure large tents, as it is extremely strong, with very high tensile strength.

But it was not always so dependable. When aid organizations first started using plastic sheeting in the 1970s, they used agricultural film, which was unreinforced and very fragile. There were also a diversity of products and qualities, making comparison and tendering challenging.

Moving on from polythene film, agencies began to purchase the kind of cheap plastic sheets that can be found in a supermarket. These cost just USD 0.20 per square metre, but tear easily and the polyethylene is very sensitive to the ultraviolet rays in sunlight. As a result, they degrade very fast. After just a couple of weeks in the strong sun of South Sudan, the plastic turns into powder.

EARLY HIGH-QUALITY PRODUCTS

Humanitarian agencies began to procure plastic sheets from one Danish company which was making very high-quality products out of thick plastic with braided reinforcement inside, with plastic eyelets every metre. But the problem was the price. These cost USD 1.5 per square metre – or USD 36 for a 4x6m sheet – which was expensive, particularly as agencies were purchasing tens of millions square metres every year. As the product was under patent, agencies were unable to find competitors, nor they could open tenders to get more competitive pricing.

Effective covered areas are smaller than plastic sheets themselves.



Poor-quality plastic sheeting in the field. This product can last just a few weeks when exposed to the elements.



Suppliers started producing the new tarpaulin in the late 1990s. The use of reinforcement bands instead of eyelets allows for mechanization, increasing quality and speed of production.

DEVELOPMENT OF COMMON SPECIFICATIONS

In the late 1990s, a consortium of organizations decided to start from scratch and write their own specifications, which they would take to the international market, so companies could bid to manufacture the product accordingly. Many tests were performed with different samples of plastic sheeting, including new and used tarpaulins from the field.

With support from laboratories and shelter specialists, technical specifications were designed based on standards from the International Organization for Standardization (ISO standards). The specifications included required parameters such as material composition (a black woven polyethylene with exterior laminations), strength in both directions, details of the reinforcement bands, etc. These allowed quality control testing in certified laboratories using standardized tests. In this way, manufacturers could know what was expected of their products, and agencies could control samples received. Field testing methodologies were also developed based on the ISO standards, as a way of conducting rapid quality control on samples in the field.

SOURCING

After the initial research spread over three years (1996–1998) and with a final specification, it was possible to identify companies to manufacture high-quality plastic sheeting in China and Korea, at the cost of USD 0.40 per square metre at factory door. This was a significant reduction. From the 2000s, the product was also produced in India, Pakistan and Kenya.



A good-quality tarpaulin can resist up to a year or longer. It can be used for multiple purposes, such as covering older plastic sheets to provide waterproofing.

CONTINUAL REVISION OF SPECIFICATIONS

Over the years, the specifications were continually and incrementally revised, thanks to feedback from the field and laboratory testing. Changes were as diverse as weight or colour of reinforcement bands (from blue to grey, to prevent the tarpaulins being confused with national flags), based on improvements of manufacturing technologies.

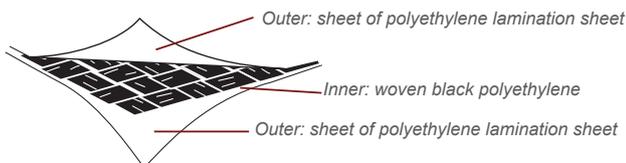
Initial specifications were for two types of tarpaulin: one with a black woven core and one braided, though with time the braided version was dropped. As issues arose, new tests were added. These included colour testing to ensure that the laminations are sufficiently thick.

These standards were adopted by many of the largest humanitarian agencies.¹ Further research was conducted on flame retardancy, which was going to be included in the next update of the specifications, scheduled for 2019.

QUALITY CONTROL

Quality control (QC) is implemented in multiple ways. Each line of the specification has corresponding tolerances and a grade to indicate whether shipments should be refused (a critical failure that compromises performance) or accepted (with or without penalties). Controls are made at factory door and in a network of agency managed QC centres in agency warehouses. The inspections are led by trained quality controllers and -- upon request -- with the help of external laboratories, in order to ensure compliance with the minimum requirements. If goods fail to match minimum requirements, financial penalties are imposed to suppliers and a corrective action plan is requested. A global network of 20 QC centres was established by four major agencies over the years using the same set-up. Agencies regularly meet and share findings.

¹ Updated specifications are available at <https://bit.ly/2Wg2Z9f>.



The illustration shows a section of plastic sheet with outer layers peeled away.

EXAMPLE OF STANDARD SPECIFICATIONS	
Material for the plain sheet	Woven high-density polyethylene (HDPE) black fibers fabric laminated on both sides with white low density polyethylene (LDPE) coating.
Tear strength in plain sheet at state of origin	Minimum 100N under ISO 4674-1B 2003, with a test piece of 200x200mm as described in ISO 4674 annex B, in plain sheet.
Width	4m ± 1% net width.
Length	6m minimum net length.
Weight, complete sheet including bands weight	Plain sheet specific weight plus 10% additional weight for the reinforcement bands under ISO 3801. Total weight from 187g/m ² minimum and 231g/m ² maximum. Specific weight of the bands from 150g/m ² minimum and 200g/m ² maximum.
Colour	White sun reflective on both sides of the sheet. Grey coating on the outside of the bands. Inner black fibers to ensure opacity.

FACTORY AUDITS

In recognition of variable working conditions and the potential for negative impacts both on the internal working environment and on external pollution by factories, agencies started conducting factory inspections. These, known as Quality, Social and Environmental (QSE) audits, were set up as part of the implementation of the lead organization's ethical purchasing policy. Audits are performed in partnership with external companies. Care is required to ensure that the factories visited represented the entire supply chain for each supplier. After each audit, the critically underperforming suppliers are black-listed. All suppliers are presented with a list of recommendations, with the goal of promoting better performance.

INTER-AGENCY COORDINATION

The QSE Procurement Group was created in November 2010 to promote inter-agency collaboration. Its aims at sharing information and best practices to develop synergies related to quality, social and environmental concerns regarding procurement of relief items. It acts in line with each organization's internal regulations and policies. In the long term, the group's purpose is to optimize quality management performance, as well as to define an ethical framework related to humanitarian procurement. One of the major products looked at by the QSE group is the tarpaulin.

MAIN CHALLENGES ENCOUNTERED

Throughout the years, with changes in the producing companies, the quality of the product had the tendency to decrease. The QC system described above enhanced the capacities of agencies to perform a continuous and reliable follow-up of all deliveries. This long-term action helped bring back the quality to the desired level.

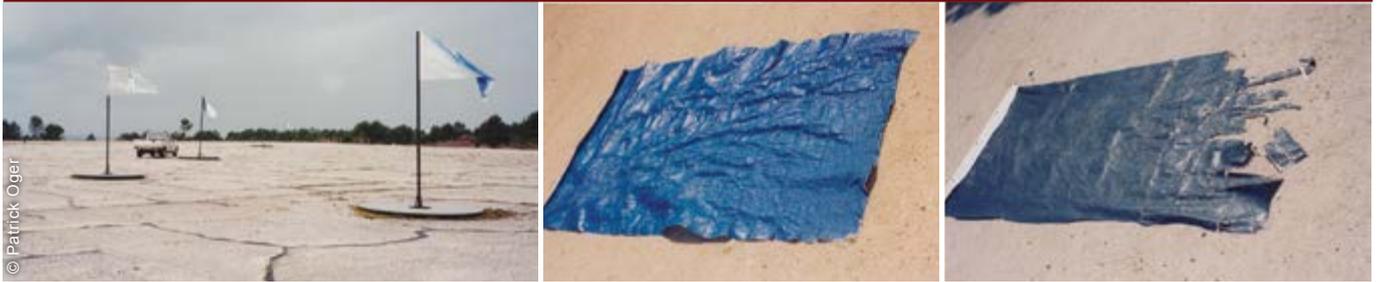
WIDER IMPACTS OF THE PROJECT

Whilst agencies recognize that plastic sheeting is far from ideal and is only one component in shelter solutions in emergencies, it remains the most practical and cost-effective material in terms of logistics and functionality. It can also be used for multiple purposes other than shelter, including for construction of medical and educational facilities. Plastic sheeting is one of the most life-saving of humanitarian products, reaching millions of people every year. For those in need of emergency shelter, there is a huge difference between a good-quality tarpaulin with a prospected lifespan of a year or longer, and a poor-quality one with a lifetime of just a few weeks or months.



Tarpaulins can be extremely versatile. Guidelines on their procurement, use and testing are available at <http://www.plastic-sheeting.org/>.

STRENGTHS, WEAKNESSES AND LESSONS LEARNED



Flapping tests showed how poor-quality plastic sheets degrade and tear extremely quickly, especially when exposed to strong sunlight, as in most field applications.

STRENGTHS

- + **Collaboration and exchange of information** from all major organizations to develop very similar specifications and quality control processes.
- + **Universal applicability** of the inter-agency standard specifications.
- + Common specifications and tenders across agencies allowed manufacturers to **produce larger quantities faster and at lower cost**, because of the decreased need to change production line set-up between orders.
- + **Technical solutions improved items' quality and workers' conditions.** For example, the use of reinforced bands with pre-punched holes in the tarpaulins, instead of eyelets, not only improves quality, tear resistance and is preferred by users, but also allows industrial processing, avoiding placing eyelets by hand in unacceptable working conditions.
- + **The needs of crisis-affected populations can be met more effectively** and consistently, with products that last ten times longer than poor-quality plastic sheets.

WEAKNESSES

- **Lack of specific research and development funding and expert capacity** within agencies, as well as low reactivity (variable in the different organizations), led to an extended time to implement.
- **Low capacity to retain the history** of products' development, in every organization.
- **Challenges in maintaining a consistent quality control system** for all shipments and for all details. Some details, such as ultraviolet resistance, are harder to test rapidly and without sending samples to laboratories.
- **Shelter-grade standard tarpaulins are not a default product** in many countries, meaning that they have to be imported at cost and often with delay.
- **Not all agencies or operations use the standard tarpaulins.** For example, some major agencies use 4x6m tarps, others use 4x5m.
- **Many agencies insist on branding**, making interchangeability of stock challenging.



Peeling and scratching tests can be conducted in the field after basic training.



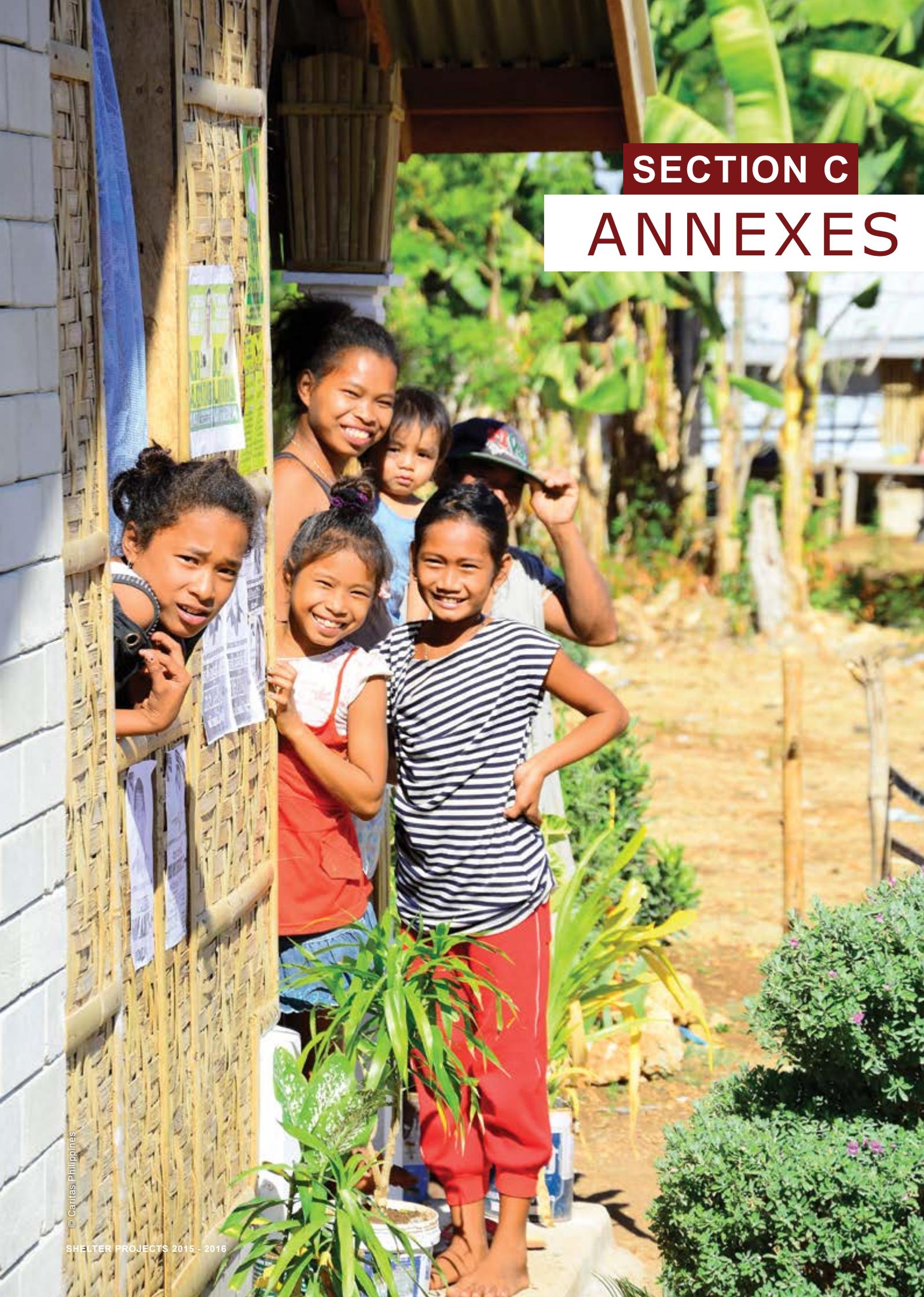
Entire settlements for displaced populations use shelter-grade plastic sheeting. A high-quality and durable product means needs of affected people are better met.

LESSONS LEARNED

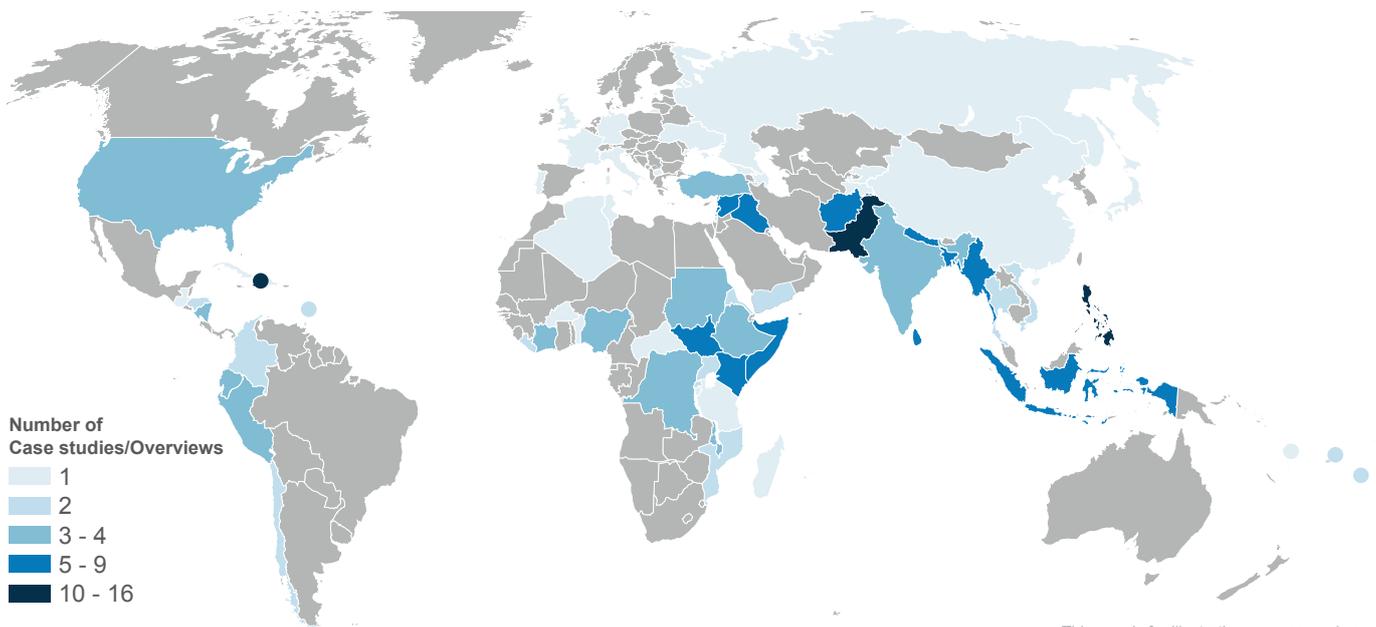
- **Dedicated capacity** is needed to continue improvements in the long term. This requires **advocacy with senior management** to support activities and ensure consistency of specifications is followed.
- **Inter-agency collaboration should be strengthened.** The Quality, Social and Environmental procurement project should receive top management endorsement, to push the products' evolution forward.
- **Quality assurance systems should be implemented**, including application of penalties. As most specifications can be verified with simple equipment, quality control centres should be installed and staff trained in as many locations as possible. This would reduce the amount of poor-quality plastic sheeting distributed in humanitarian responses.
- Need to maintain **diversity of suppliers** to ensure competition and availability of larger supply chain.
- Advocacy is required for more **support to research and development within the humanitarian sector** more broadly, and the shelter sector specifically.

SECTION C

ANNEXES



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 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	OV Ecuador, 2016, Earthquake	SP 2015-2016
UP Afghanistan, 2009, Conflict	SP 2010	CS Ecuador, 2016, Earthquake	SP 2015-2016
CS Afghanistan, 2009, Conflict	SP 2009	UP Eritrea, 2004, Conflict	SP 2009
CS Afghanistan, 2002, Conflict	SP 2008	CS Eritrea, 1998, Conflict	SP 2008
UP Afghanistan, 2002, Conflict	SP 2009	CS Ethiopia, 2014-2016, Conflict	SP 2015-2016
CS Algeria, 1980, Earthquake	SP 2009	CS Ethiopia, 2011, Conflict	SP 2011-2012
CS Azerbaijan, 1992, Conflict	SP 2008	CS Ethiopia, 2012, Conflict	SP 2011-2012
OV Bangladesh, 2017-18, Refugees	SP 2017-2018	OV Europe Refugee Crisis, 2015-16	SP 2015-2016
CS Bangladesh, 2017-18, Refugees (2)	SP 2017-2018	OV Fiji, 2016, Tropical Cyclone	SP 2015-2016
OV Bangladesh, 2009, Cyclone	SP 2009	CS Fiji, 2012, Tropical Cyclone	SP 2013-2014
OV Bangladesh, 2007, Cyclone	SP 2009	CS France, 2015-16, Refugees	SP 2017-2018
CS Bangladesh, 2007, Cyclone	SP 2009	CS Gaza (Palestine), 2014-16, Conflict	SP 2015-2016
CS Bangladesh, 1975, Conflict	SP 2008	CS Gaza (Palestine), 2009, Conflict	SP 2009
CS Benin, 2010-11, Floods	SP 2015-2016	CS Georgia, 2008, Conflict	SP 2009
CS Burkina Faso, 2012, Conflict	SP 2011-2012	CS Germany, 2015-16, Refugees	SP 2015-2016
CS Burundi, 2017-18, Floods	SP 2017-2018	CS Grenada, 2004, Hurricanes	SP 2010
CS CAR, 2013, Conflict	SP 2013-2014	CS Guatemala, 1976, Earthquake	SP 2008
CS Chile, 2014-16, Fire	SP 2015-2016	CS Haiti, 2012, Hurricane	SP 2013-2014
CS Chile, 2010, Earthquake	SP 2010	OV Haiti, 2010, Earthquake	SP 2011-2012
CS China, Sichuan, 2008, Earthquake	SP 2009	CS Haiti, 2010, Earthquake (3)	SP 2011-2012
CS Colombia, 2011, Floods	SP 2013-2014	OV Haiti, 2010, Earthquake	SP 2010
CS Colombia, 2010, Floods	SP 2011-2012	CS Haiti, 2010, Earthquake (7)	SP 2010
OV Côte d'Ivoire, 2010-11, Conflict	SP 2011-2012	CS Haiti, 2008, Floods	SP 2009
CS Côte d'Ivoire, 2010-11, Conflict (2)	SP 2011-2012	CS Haiti, 1982, Hurricane	SP 2009
CS Cuba, 2012, Hurricane	SP 2013-2014	CS Honduras, 1998, Hurricane	SP 2008
CS Dominica, 2017-18, Hurricane	SP 2017-2018	CS Honduras, 1974, Hurricane	SP 2009
OV Dominican Rep., 2012, Hurricane	SP 2013-2014	OV Hurricane Sandy, 2012,	SP 2013-2014
CS DR Congo, 2018, Conflict	SP 2017-2018	CS India, 2001, Earthquake	SP 2008
CS DR Congo, 2008-16, Conflict	SP 2015-2016	CS India, 1977, Cyclone (2)	SP 2009
CS DR Congo, 2009, Conflict	SP 2009	CS India, 1977, Cyclone	SP 2008
UP DR Congo, 2002, Volcano	SP 2011-2012	CS India, 1971, Conflict	SP 2008
CS DR Congo, 2002, Volcano	SP 2008	CS India, 1935, Earthquake	SP 2017-2018
CS Ecuador, 2016-18, Earthquake	SP 2017-2018	OV Indonesia, 2009, Earthquake	SP 2010

CS Indonesia, 2009, Earthquake (3)	SP 2010	OV Peru, 2007, Earthquake	SP 2008
OV Indonesia, 2006, Earthquake	SP 2008	CS Peru, 2007, Earthquake (3)	SP 2008
CS Indonesia, 2006, Earthquake (2)	SP 2008	CS Philippines, 2018, Tropical Storm	SP 2017-2018
CS Indonesia, 2004, EQ./Tsunami	SP 2008	CS Philippines, 2015-, Typhoon (2)	SP 2017-2018
CS Ingushetia, 1999, Conflict	SP 2008	OV Philippines, 2013, Typhoon	SP 2015-2016
CS Iraq, 2017-18, Conflict	SP 2017-2018	CS Philippines, 2013-, Typhoon (5)	SP 2015-2016
CS Iraq, 2016-17, Conflict	SP 2017-2018	OV Philippines, 2013, Typhoon	SP 2013-2014
OV Iraq, 2014-16, Conflict	SP 2015-2016	CS Philippines, 2013, Typhoon (2)	SP 2013-2014
CS Iraq, 2014-16, Conflict (3)	SP 2015-2016	CS Philippines, 2012, Typhoon	SP 2013-2014
CS Iraq (KR-I), 2013, Conflict	SP 2013-2014	OV Philippines, 2011, Cyclone	SP 2011-2012
OV Italy, 2009, Earthquake	SP 2009	CS Philippines, 2011, Cyclone (2)	SP 2011-2012
CS Italy, 2009, Earthquake	SP 2009	CS Philippines, 2010, Typhoon	SP 2010
UP Japan, 2011, EQ./Tsunami	SP 2011-2012	CS Portugal, 1755, Earthquake	SP 2013-2014
CS Jordan, 2014, Conflict	SP 2013-2014	CS Romania, 2010, Floods	SP 2010
CS Jordan, 2013, Conflict (2)	SP 2013-2014	CS Rwanda, 2008, Conflict	SP 2008
CS Kenya, 2018, Floods	SP 2017-2018	UP Rwanda, 2008, Conflict	SP 2009
CS Kenya, 2008, Conflict	SP 2008	CS Somalia, 2018, Drought	SP 2017-2018
UP Kenya, 2009, Conflict	SP 2009	CS Somalia, 2011-13, Complex	SP 2015-2016
UP Kenya, 2008, Conflict	SP 2009	UP Somalia, 2011, Conflict/Famine	SP 2011-2012
CS Kenya, 2007, Floods/Conflict	SP 2008	CS Somalia, 2009, Conflict (2)	SP 2009
UP Kenya, 2011, Conflict/Famine	SP 2011-2012	OV Somalia, 2008, Conflict	SP 2009
CS Kyrgyzstan, 2010, Conflict	SP 2010	CS Somalia, 2007, Conflict	SP 2008
CS Lebanon, 2015-16, Conflict (2)	SP 2015-2016	OV South Sudan, 2017-18, Conflict	SP 2017-2018
CS Lebanon, 2013, Conflict	SP 2013-2014	CS South Sudan, 2017-, Conflict (3)	SP 2017-2018
CS Lebanon, 2012, Conflict (2)	SP 2013-2014	OV South Sudan, 2013-, Complex	SP 2015-2016
UP Lebanon, 2011, Conflict	SP 2011-2012	CS South Sudan, 2014-, Complex (2)	SP 2015-2016
CS Lebanon, 2007, Conflict	SP 2011-2012	UP South Sudan, 2011, Conflict	SP 2011-2012
CS Liberia, 2007, Conflict	SP 2008	CS South Sudan, 2012, Conflict	SP 2013-2014
UP Liberia, 2007, Conflict	SP 2009	CS Sri Lanka, 2017, Floods	SP 2017-2018
CS Madagascar, 2012, Cyclone	SP 2011-2012	CS Sri Lanka, 2010-17, Conflict	SP 2017-2018
OV Malawi, 2015, Floods	SP 2015-2016	CS Sri Lanka, 2009, Conflict	SP 2010
CS Malawi, 2015, Floods (2)	SP 2015-2016	UP Sri Lanka, 2007, Conflict	SP 2009
CS Malawi, 2009, Earthquake	SP 2010	CS Sri Lanka, 2007, Conflict	SP 2008
CS Mozambique, 2007, Cyclone	SP 2008	OV Sri Lanka, 2004, Tsunami	SP 2008
CS Mozambique, 2007, Cyclone	SP 2010	CS Sri Lanka, 2004, Tsunami	SP 2008
CS Myanmar, 2013-16, Coordination	SP 2015-2016	CS Sudan, 1985, Conflict	SP 2008
CS Myanmar, 2014-16, Conflict	SP 2015-2016	CS Sudan, 2004, Conflict	SP 2008
CS Myanmar, 2012, Conflict	SP 2013-2014	UP Sudan, 2004, Conflict	SP 2009
CS Myanmar, 2008, Cyclone	SP 2009	CS Syrian Arab Rep., 2015-, Conflict (4)	SP 2017-2018
CS Myanmar, 2008, Cyclone (2)	SP 2010	OV Syria Crisis, 2014-16, Conflict	SP 2015-2016
CS Nepal, 2017-18, Floods	SP 2017-2018	CS Syrian Arab Rep., 2015-16, Conflict	SP 2015-2016
OV Nepal, 2015-18, Earthquake	SP 2017-2018	OV Syrian Crisis, 2011-14, Conflict	SP 2013-2014
CS Nepal, 2015-19, EQ. Coordination	SP 2017-2018	CS Tajikistan, 2010, Earthquake	SP 2010
CS Nepal, 2016-17, Earthquake	SP 2017-2018	CS Tanzania, 2016-17, Conflict	SP 2015-2016
OV Nepal, 2015, Earthquake	SP 2015-2016	CS Thailand, 1979-1980, Conflict	SP 2008
CS Nepal, 2015, EQ. Coordination	SP 2015-2016	OV Thailand, 2011, Floods	SP 2011-2012
CS Nepal, 2015, Earthquake (3)	SP 2015-2016	CS Tonga, 2010, Tsunami	SP 2010
CS Nicaragua, 2007, Hurricane	SP 2011-2012	CS Tonga, 1982, Cyclone	SP 2008
CS Nicaragua, 1972, Earthquake	SP 2008	UP Tunisia, 2011, Conflict	SP 2011-2012
CS Nicaragua, 1972, Earthquake	SP 2009	CS Turkey, 2017-18, Refugees	SP 2017-2018
CS Nigeria, 2017-18, Conflict	SP 2017-2018	CS Turkey, 1976, Earthquake	SP 2009
CS Nigeria, 2015-16, Conflict	SP 2015-2016	CS Turkey, 1975, Earthquake	SP 2009
CS Nigeria, 2012, Floods	SP 2013-2014	OV Turkey, 1970, Earthquake	SP 2009
OV Pakistan, 2010-2014	SP 2013-2014	CS Uganda, 2017-18, Refugees	SP 2017-2018
CS Pakistan, 2012, Floods (3)	SP 2013-2014	CS Uganda, 2007, Floods	SP 2009
CS Pakistan, 2011, Floods (2)	SP 2011-2012	CS UK, 1945, Conflict	SP 2009
CS Pakistan, 2010, Floods (2)	SP 2011-2012	OV Ukraine, 2014-16, Conflict	SP 2015-2016
OV Pakistan, 2010, Floods	SP 2010	CS USA, 1906, Earthquake	SP 2010
CS Pakistan, 2010, Floods (3)	SP 2010	CS USA, 1871, Fire	SP 2011-2012
CS Pakistan, 2009, Conflict	SP 2010	OV Vanuatu, 2015, Cyclone	SP 2015-2016
OV Pakistan, 2005, Earthquake	SP 2008	CS Vietnam, 2009, Typhoon	SP 2010
CS Pakistan, 2005, Earthquake (2)	SP 2008	OV Yemen, 2017-18, Multiple	SP 2017-2018
CS Peru, 2012, Floods	SP 2011-2012	OV Yemen, 2015-16, Conflict	SP 2015-2016
		CS Yugoslavia-Ex, 1963, Earthquake	SP 2009

ACRONYMS

3/4W	Who does What, Where (and When) Matrix	HRP	Humanitarian Response Plan
BBS	Build Back Safer	IDP	Internally Displaced Person
BoQ	Bill of Quantities	IM	Information Management
CBI	Cash-Based Interventions	INGO	International Non-Governmental Organization
CBO	Community-Based Organization	MoU	Memorandum of Understanding
CGI	Corrugated Galvanized Iron	M&E	Monitoring and Evaluation
CCCM	Camp Coordination and Camp Management	NFI	Non-Food Item(s)
DRR	Disaster Risk Reduction	NGO	Non-Governmental Organization
GBV	Gender-Based Violence	PDM	Post-Distribution Monitoring
HH	Household	SOP	Standard Operating Procedures
HLP	Housing, Land and Property	UN	United Nations
HNO	Humanitarian Needs Overview	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 four 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.
<i>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.</i>				

Nails - "Penny Sizes"													
Imperial	Penny Size	2d	3d	4d	6d	8d	10d	16d	20d	40d	50d	60d	100d
	Inches	1	1¼	1½	2	2½	3	3½	4	5	5½	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 a variety of sources. Some of the published sources are listed on the next page under General statistics and Websites, whilst others were project documents.

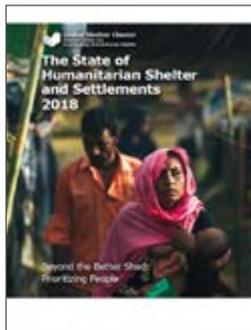
Also included are a list of key shelter texts, which readers can refer to for many of the shelter-related issues raised by these case studies. Some of them are directly cited in the text. Visit www.shelterprojects.org for a full list of resources for download.

Below we highlight some of the most relevant publications released in the past two years.

FEATURED PUBLICATIONS



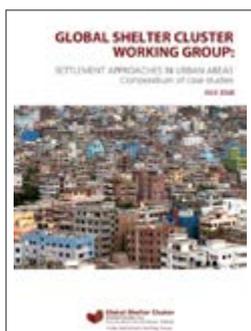
The Sphere Handbook, Humanitarian Charter and Minimum Standards in Humanitarian Response, 2018: The oldest initiative in the field of humanitarian standards, it has been field-tested over twenty years and regularly updated to ensure it remains fit for purpose in a changing world. It contains consensus 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. The 2018 edition of the shelter and settlement chapter includes standards on security of tenure and technical assistance, had a revised structure and definitions of settlement scenarios and assistance options. What does not change is its rights-based foundation: people have the right to assistance, the right to life with dignity, the right to protection and security, and the right to fully participate in decisions related to their own recovery. <https://spherestandards.org/handbook/editions/>



Global Shelter Cluster, The State of Humanitarian Shelter and Settlements 2018: This report aims to raise the profile and understanding of the shelter and settlements sector with a broad community, including policy makers, donors, governments, academics and senior managers in humanitarian agencies. It includes articles on a variety of topics and a section on data analysis. <https://bit.ly/2QJLxql>



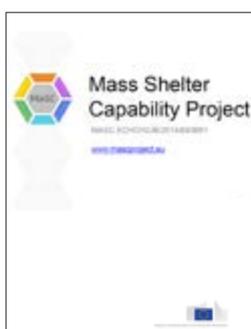
CCCM Cluster, Case studies Vol.2, 2016: In this second edition, case studies include reflections on addressing gender-based violence in complex environments; the value of strong inter-cluster coordination to ensure a rapid and effective response to humanitarian needs; and the importance of building the CCCM capacity of local authorities and partners to respond to displacement. <https://bit.ly/2HSGC6x>



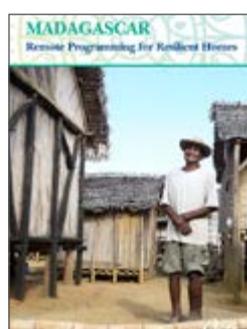
Global Shelter Cluster, Settlement Approaches in Urban Areas. Compendium of case studies, 2018: Including 31 case studies from 20 organizations, this compendium consolidates current practice on multisectoral, settlement-based approaches in response to urban crises, identifying common challenges, constraints and lessons. This and more at: <https://bit.ly/2WQvABY>



Nepal Housing Recovery and Reconstruction Platform (HRRP), Research products: This web page compiles research products developed in the context of the housing recovery in Nepal after the 2015 earthquake. <https://bit.ly/2Vx9XGJ>
More resources can also be found on the HRRP Reference Library at <https://bit.ly/2GbPbHC>



Mass Shelter Capability Project (MaSC), 2018: Guidance and tools for European Union (EU) member states on the preparation, activation and operational delivery of emergency mass shelter. The tools can also be applied outside the EU context. Find out more about the initiative at: <http://www.mascproject.eu>



CRS, Shelter, Settlements and Infrastructure case studies, 2018: A selection of short, compelling case studies that highlight diverse, challenging, innovative and impactful efforts in providing safe, dignified homes and settlement solutions for people in need in the wake of an emergency. <https://bit.ly/2VRBgw8>

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 – The Emergency Events Database – Université catholique de Louvain (UCL). www.emdat.be

IFRC, World Disasters Report 2018. Report providing a global overview of disaster trends. <https://bit.ly/2PyHJvx>

IDMC/NRC, Global Report on Internal Displacement (GRID) 2018. www.internal-displacement.org

UN OCHA, Global Humanitarian Overview 2018. Financial appeals, humanitarian needs overviews and response plans for OCHA coordinated responses. <https://bit.ly/2wA0tiX>

UNHCR, Global Trends 2017. <https://bit.ly/2ra2K1W>

UNHCR, Operational Data Portal. Web-based coordination tool for refugee operations. <https://data2.unhcr.org/>

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/2oY4IFR>

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.

Practical guidance on how to integrate gender 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/2nLIO66>

EU and UN-Habitat, Building, Owning and Belonging. From assisting owner-driven housing reconstruction to co-production in Sri Lanka, India and beyond, 2018. <https://bit.ly/2Udsrzt>

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. <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. <https://www.sheltercluster.org/gbv>

IFRC, Rapid tenure assessment guidelines for post-disaster response planning, 2015. Guidelines designed to assist assessment of a country's housing, land and property sector, to ensure a more equitable, informed and consequently sustainable shelter response. <https://bit.ly/2uGn5qW>

IFRC, Owner Driven Housing Reconstruction Guidelines (ODHR), 2010. Guidance on the planning and implementation of assisted self help reconstruction projects. <http://bit.ly/2nbyEbf>

IFRC, The IFRC shelter kit, 2010. A guide on the IFRC shelter kit and how to use it. <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. <http://bit.ly/2nVPLhr>

IFRC, Participatory Approach for Safe Shelter Awareness (PASSA). 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. <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-Habitat, Women in Post-Conflict Settlement Planning, 2014. This handbook goes through different areas related to the post-conflict settlement planning process and gives advice on how to include gender perspectives in each of them. <https://bit.ly/2H2yrVG>

UN-Habitat, Good Practices and Lessons Learned in Post-Conflict Reconstruction in Sri Lanka, 2017. A document capturing the key good practices and lessons learned in implementing the post-conflict reconstruction programme over a period of six years. <https://bit.ly/2KecYL2>

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. <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. <http://bit.ly/2mUWUwy>

MSF, Shelter Centre, Shade Nets: Use, deployment and procurement of shade net in humanitarian relief environments. <http://bit.ly/2nzpUxq>

Jha, A., Duyn 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. <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. <http://bit.ly/2nfUOHV>

NRC, Shelter Centre, Urban Shelter Guidelines, 2010. General guidance for urban humanitarian response. <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. <http://bit.ly/2nMXmSs>

NRC/Stronger Cities Consortium, Security of tenure in urban areas, 2017. This guidance note provides an overview of the key strategies for approaching tenure in urban humanitarian interventions from the outset of a response. <http://bit.ly/2aXaYzG>

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). <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. <http://bit.ly/2nbLOFu>

UNHCR, Handbook for Emergencies, 4th Edition, 2015. Handbook and tool containing guidance on the management and all key sectors in emergency operations. <https://emergency.unhcr.org/>

UNHCR, Shelter Design Catalogue, 2016. A compilation of shelter designs developed across a variety of locations, contexts and climates. <https://bit.ly/2VDLYpo>

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. <http://envirodm.org/green-recovery>



In 2017 and 2018, the total number of people displaced by crises in the world continued to grow. By the end of 2017, 68.5 million people were displaced due to conflict or violence, and there were 18.8 million new displacements caused by 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 2017–2018* is the seventh 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

ISBN Number: 978-92-9068-782-5



Global Shelter Cluster
ShelterCluster.org
Coordinating Humanitarian Shelter