HUMANITARIAN SHELTER GUIDELINES

ENGLISH VERSION

PMI & KEMENSOS EDITION

VERSION 2

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Palang Merah Indonesia

Humanitarian Shelter Guidelines
Version 2, 2018

An online version of the guidelines can be found at
www.shelterguidelines.com

Any feedback or input into the further development of this document is much appreciated.

All comments should be sent to:
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INTRODUCTION

UNDERSTANDING SHELTER

The principles, standards, and the key concepts of humanitarian sheltering. This includes Identifying the needs of the most vulnerable, and understanding the physical, social, cultural, environmental and political context in which humanitarian shelter programs operate.

DETERMINING SHELTER NEEDS

Pre and post disaster shelter conditions which impact effective program design. Understanding the provision of effective shelter must always be based on an assessment of needs.

DESIGNING A SHELTER PROGRAM

Outlining in detail the key considerations and steps which underpin program design and the provision of safe, adequate shelter.

IMPLEMENTING

Delivering a shelter program within the project management cycle. Highlighting measures which are vital to ensure the efficiency and effectiveness of assistance.

MONITORING, EVALUATION ACCOUNTABILITY AND LEARNING

ANNEX

Case studies, resources and references

Contents

Determining shelter needs

Designing a shelter program

Implementing

Monitoring, evaluation accountability and learning

INTRODUCTION

2010, Earthquake West Sumatera, Indonesia

Government buildings in Padang collapsed due to an earthquake of magnitude 7.6 off the coast of West Sumatra

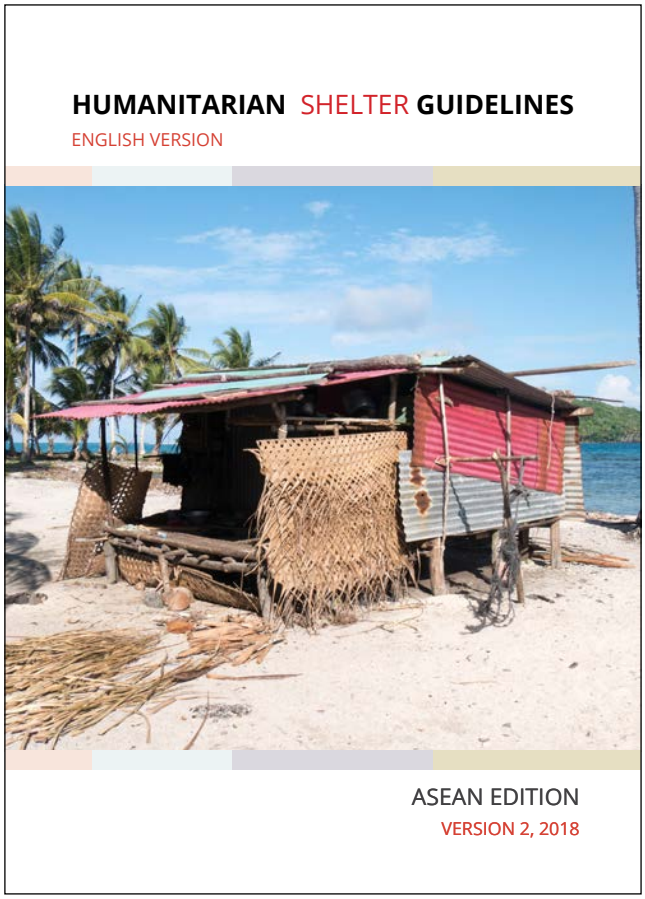
Photo credit: Technical Support Team of the Rehabilitation and Reconstruction, BNPB

1. Introduction

1.1 How to use the guidelines

The Humanitarian Shelter Guidelines contain global and regional level guidance for humanitarian shelter professionals. This includes a broad overview of humanitarian shelter concepts in accessible, simple and non-technical language. In addition to the core document, a series of regional, country and organisational insert pages are available at www.shelterguidelines.com

Using context specific insert pages the guidelines can be easily customised and contextualised, while still retaining key shelter concepts outlined in the core document. Organisations working in different locations are encouraged to develop new insert pages, and to use this document as a supplementary resource for shelter training.



Core Document

Humanitarian Shelter Guidelines

Regional Insert Pages

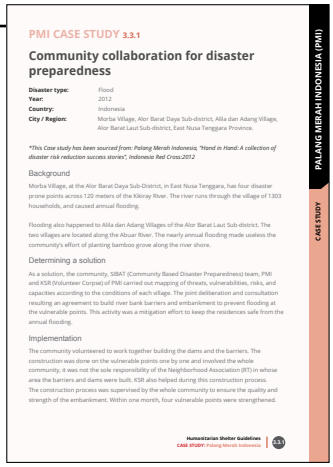
eg. ASEAN regional information

- Specific regional information
- Regional / global coordination mechanisms
- Regional case studies

Country Insert Pages

eg. Indonesian country information

- Country specific information, including political, religious, environmental, social and cultural considerations
- Coordination mechanisms and relevant disaster management policy
- Country specific case studies



Organisational Insert Pages

eg. Palang Merah Indonesia (PMI) specific information

- Organisational information and guidance
- Organisation structure
- Standard Operating Procedures (SOPs)
- Organisation specific case studies

What these guidelines **ARE**	What these guidelines **ARE NOT**

• A guide to the sheltering process
• Explanation of key shelter concepts
• A guide to making intelligent shelter decisions
• A guide to designing appropriate shelter assistance options
• A guide to the specifics of implementing shelter programs
• A training manual
  ° For both facilitators and participants
  ° For handing out incrementally in stages during a training
• Reference book
  ° For field workers
  ° For managers
  ° For decision makers
• Public record of shelter policy
  ° A document to be held accountable to
  ° Beneficiaries Communication / Community Engagement and Accountability (CEA) tool
	• A set of Standard Operating Procedures (SOPs): These will be annexed or referenced
	• A detailed design of any one shelter solution: These will be annexed or referenced
	• A technical manual about how to physically design or construct: Engineers and architects should be hired for this
	• A technical manual about materials: These will be annexed or referenced
	• A guide to permanent reconstruction: though it includes basic guidance on Build Back Safer programs

1.2 Background

These guidelines were originally created as a reference document for Indonesian Red Cross / Palang Merah Indonesia (PMI) volunteers and field staff and as a resource for ongoing shelter training in Indonesia. Since the first edition of the guidelines, the scope of these guidelines has been expanded to support a wider regional and global perspective, providing a broad introduction to sheltering affected populations after disasters in ASEAN countries. The guidelines are not intended to be overly technical in nature; rather they aim to provide an overview of the range of core concepts behind effective and relevant shelter delivery.

The Humanitarian Shelter Guidelines should be treated as a 'living document', with frequent updating and improvement as shelter experience grows and improves.

1.3 Acknowledgements

This second edition of the Humanitarian Shelter Guidelines has been created with the support of the Indonesian Red Cross / Palang Merah Indonesia (PMI), International Federation of the Red Cross, Australian Red Cross, Danish Red Cross, Swiss Red Cross, German Red Cross, Canadian Red Cross and Humanitarian Benchmark Consulting.

Production of these guidelines would not have been possible without the generous support and assistance of a vast array of individuals and agencies. This list is far from complete as many individuals and organisations, both local and international, have provided valuable input into the development of this document. We apologise for any omissions. Finally, we would like to specifically thank the vast array of humanitarian workers in the field who continue to provide input, ask questions and use the guidelines in their day to day work. We encourage anyone using these guidelines to contact us with any comments and suggestions for the next revision. Please visit www.shelterguidelines.com for further details.

Humanitarian Shelter Guidelines

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Generously provided by Shelter Projects (Global Shelter Cluster)
www.shelterprojects.org

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1.4 Glossary

Shelter terminology		
English	Bahasa Indonesia	Definition
Shelter	Shelter	A place giving temporary protection from bad weather or damage
Capacity	Kapasitas	The combination of all the strengths, attributes and resources available within a community, society or organisation that can be used to achieve agreed goals
Cash-based interventions	Intervensi berbasis tunai	The use of cash, electronic money transfers or vouchers, to provide disaster-affected individuals with support for their own flexible recovery priorities.
Conditional cash	Tunai berjangka/ bertahap	The provision of cash, based upon the completion of certain tasks by the beneficiary, for example after the completion of one specific stage of a house reconstruction has been completed according to design.
Continual assessment	Pengkajian berkelanjutan	It involves regularly updating information on the situation and seeking relevant feedback from the beneficiaries in order to
Core shelters/ one room shelters	Shelter inti/ shelter satu kamar	Post disaster household shelters planned and designed as permanent swelling, to be the part of future permanent housing, allowing and facilitating the future process of extension by the household, following its own means and resources. The aim of a core shelter is to provide one or two rooms, providing post disaster safe shelter by reaching permanent housing standards, facilitating development but not completing full permanent house.
Cross-cutting issues	Isu-isu lintas sektor	Critical themes overarching into all humanitarian aid activities
Detailed assessment	Pengkajian terperinci	A more detailed assessment is carried out after a rapid assessment, if the situation is changing and more information is needed. It takes about one month, depending on the size of the area and the complexity of the situation
Dignity	Martabat	Being worthy of esteem or respect.
Disaster	Bencana	A natural or man-made hazard resulting in an event causing significant physical damage or destruction, loss of life, or drastic change to the environment

Disaster mitigation	Mitigasi bencana	Systeming planning to reduce the impact of any future disaster, for instance by diverting the course of a river prone to flooding, so that it is directed away from nearby towns.
Disaster preparedness	Kesiapsiagaan bencana	The knowledge and capacities developed by governments, professional response and recovery organisations, communities and individuals to effectively anticipate, respond to, and recover from, the impacts of likely, imminent or current hazard events or conditions
Disaster Risk Reduction (DRR)	Pengurangan Risiko Bencana (PRB)	The reduction of the exposure of a building or community, to a hazard. This can be done by making the building stronger or more hazard-resistant, but can also be done by improving evacuation routes, or by resettling communities a distance from the hazard.
Displaced populations	Masyarakat yang mengungsi	Populations which leave their homes in groups, usually due to a sudden impact, such as an earthquake or a flood, threat or conflict
Early warning	Peringatan dini	The set of capacities needed to generate and disseminate timely and meaningful warning information to enable individuals, communities and organisations threatened by a hazard to prepare and to act appropriately and in sufficient time to reduce the possibility of harm or loss
Economic recovery	Pemulihan ekonomi	strengthening and expansion of new and existing enterprises, together with the creation of jobs
Emergency shelter	Shelter darurat	Short term shelter that provides lifesaving support, the most basic shelter support that can be provided immediately after the disaster.
Environment	Lingkungan	The physical, chemical and biological elements and processes that affect the lives and livelihoods of populations
Hazard	Ancaman	A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage
Human vulnerability	Kerentanan Manusia	The diminished capacity of an individual or group to anticipate, cope with, resist and recover from the impact of a natural or man-made hazard
Information management	Manajemen informasi	The management of information involving; coordination, delivery of relief assistance, beneficiary involvement, marketing and external relations, monitoring and evaluation

Land Tenure	Hak Penggunaan	The means by which individuals make arrangements for how long they can reside or use a plot of land, and under what circumstances
Livelihood	Mata pencaharian	the capabilities, assets (both social and material) and activities required for a means of living
Market-based approaches	Pendekatan berbasis pasar	Interventions which target markets, and local economies, in order to make improvements in access to shelter for disaster-affected populations
Most Vulnerable Persons	Masyarakat Paling Rentan	Those groups considered at the greatest risk and consequently the most dependent on assistance
Non displaced populations	Masyarakat yang tidak mengungsi	Populations which remain with their homes, or home cities, following the impact of a disaster
Non Food Items (NFI)	Bantuan non-pangan	Items other than food. Typically include essential household items such as blankets, plastic sheeting, containers for water, cooking items, etc.
Progressive shelters	Hunian progresif	Post disaster rapid household shelters planned and designed to be later upgraded to a more permanent status. This is achieved by integrating future transformation and alteration possibilities in structural basis of the unit.
Psychosocial	Psikososial	The interaction between social and psychological factors
Rapid assessment	Pengkajian cepat	Undertaken immediately after a disaster. Provides information on needs, possible courses of action and resource requirements. It normally takes up to a week
Rapid onset disaster	Bencana yang terjadi secara cepat	A disaster that is triggered by an instantaneous shock
Safety	Keamanan	Being protected against physical, social, financial, political, emotional, occupational, psychological, educational harm
Security of Tenure	Keamanan dalam kepemilikan	The arrangements by which occupants feel secure, or have protection according to formal or customary law, in the place where they are living.
Slow onset disaster	Bencana yang terjadi secara lambat	A disaster which continuously increases intensity over a period of days, months or years
Stakeholder	Pemangku kepentingan	A person or organisation with a concern in something

Structural vulnerability	Kerentanan struktural	Structural or physical vulnerability is the extent to which a structure is likely to be damaged or disrupted by a hazard event.
Temporary shelters	Shelter sementara	Post disaster household shelter designed as a rapid shelter solution by prioritizing speed and limiting costs of the construction. The lifetime of the shelter may be limited.
Transitional shelter	Shelter transisi	Rapid post disaster household shelters made from materials that can be upgraded or re-used in more permanent structures, or that can be relocated from temporary sites to permanent locations. They are designed to facilitate the transition by affected populations to more durable shelter. Transitional shelters respond to the fact that post disaster shelter is often undertaken by the affected population themselves, and that this resourcefulness and self-management should be supported.
Vouchers	Vocer atau Kupon	Paper or electronic substitutes for cash, allowing humanitarian organisations to restrict the list of items purchased, so that specific Shelter objectives can still be met, whilst also providing significant flexibility of choice to the beneficiaries.

UNDERSTANDING SHELTER

The principles, standards, and the key concepts of humanitarian sheltering. This includes Identifying the needs of the most vulnerable, and understanding the physical, social, cultural, environmental and political context in which humanitarian shelter programs operate.

Photo credit: Fabian Prideaux

2. Understanding shelter

2.1 Shelter in the humanitarian context

As humanitarian professionals, all our actions must be guided by the principles of universal global humanity; respecting human rights and dignity, and upholding the values of universal humanity that apply to individuals and communities around the world. These humanitarian principles and values are articulated in the Red Cross Code of Conduct, which is based around 10 core principles:

1. The humanitarian imperative comes first.
2. Aid is given regardless of the race, creed or nationality of the recipients and without adverse distinction of any kind. Aid priorities are calculated on the basis of need alone.
3. Aid will not be used to further a particular political or religious standpoint.
4. We shall endeavour not to act as instruments of government foreign policy.
5. We shall respect culture and custom.
6. We shall attempt to build disaster response on local capacities.
7. Ways shall be found to involve programme beneficiaries in the management of relief aid.
8. Relief aid must strive to reduce future vulnerabilities to disaster as well as meeting basic needs.
9. We hold ourselves accountable to both those we seek to assist and those from whom we accept resources.
10. In our information, publicity and advertising activities, we shall recognize disaster victims as dignified human beings, not hopeless objects.

- IRFC, 2018. Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Relief

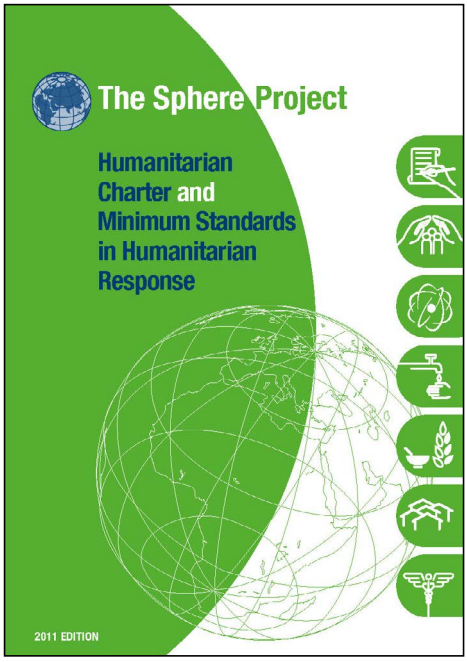
Application of the core humanitarian principles in the process of sheltering needs to be considered carefully. The following factors should be taken into consideration when implementing shelter programs:

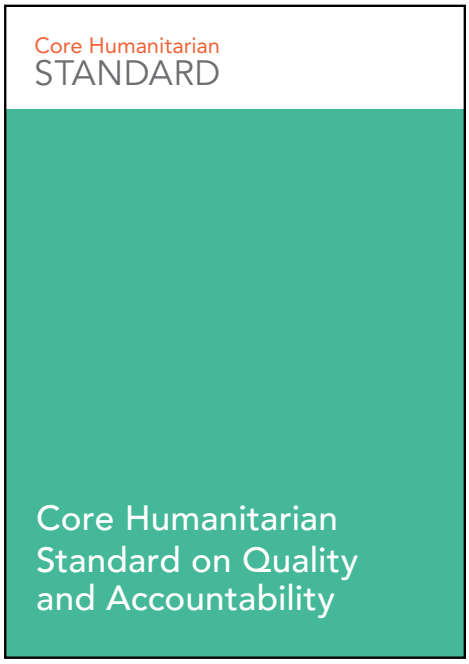
- Addressing the needs of the most vulnerable
- Shelter and protection
- Settlements and environment
- Participation and accountability
- Coordination and information management

2.2 Shelter standards

Refer to: + *Case Study 05: THAILAND / 1979 - 1980 / Political conflict*

International humanitarian standards provide benchmarks for assistance programs, aiming to improve both the quality of program implementation and the accountability of humanitarian actors. Within the humanitarian sector, The Humanitarian Charter and Minimum Standards in Disaster Response (The Sphere Project) is universally acknowledged as providing the framework for actions and the core principles that guide shelter and settlement responses. The Core Humanitarian Standard (CHS) will soon be fully integrated into the Sphere Handbook, replacing the handbook's six core principles. CHS is a voluntary code describing the elements of principled, accountable and quality humanitarian action.





Divided into four chapters, the Sphere minimum standards are evidence based, describing conditions that humanitarian shelter providers strive to achieve in any humanitarian response in order for disaster-affected populations to survive and recover in stable conditions with dignity. One of these chapters is dedicated to shelter, settlement and non-food items; It provides key actions, key indicators and guidance notes for shelter programming, monitoring and the evaluation of outcomes.

IFRC Shelter and Settlement Department (SDD) has developed a series of guidelines for shelter, which are based on recognised standards and best practice, this includes:

- Sustainable Reconstruction in urban areas: a Handbook
- Assisting host families and Communities After Crisis and Disaster: A Step by Step Guide
- Post-Disaster Settlement Planning Guidelines
- Owner-Driven Housing Reconstruction (ODHR) Guidelines
- Cash Transfer Guidelines

It is important to note that International standards provide a set of minimum standards only. The local context and regulatory framework must be taken into consideration for each response. This may require adjustment and adaptation to international guidance, to ensure that the response adequately addresses the needs of the most vulnerable, and is relevant and appropriate for local circumstances. When these cases arise, it is important that these amendments are discussed with all stakeholders involved in the humanitarian response to clarify and validate the reasons for making decisions.

Further information - Shelter standards:

Core Humanitarian Standard, 2018

Gender Based Violence (GBV) risk reduction in shelter programmes

IFRC, 2012. Assisting host families and Communities After Crisis and Disaster: A Step by Step Guide

IFRC, 2012. Post Disaster Settlement Planning Guidelines

IFRC/SKAT, 2012. Sustainable Reconstruction in Urban Areas

International Development Law Organisation (IDLO), 2009. International laws and standards applicable in natural disasters

International Development Law Organisation (IDLO), 2009. Natural Disaster Manual

The Sphere Project, 2011. The sphere handbook: humanitarian charter and minimum standards in humanitarian response.

2.3 What is shelter?

As professionals engaged in sheltering disaster affected populations, it is important to clarify what we mean by shelter in the humanitarian context.

The term 'shelter' is very broad, covering everything from a place we temporarily seek refuge from a storm (such as under the shade of a tree), through to a tent, a hut, a public building or a house. Almost any physical object may be used by people to seek refuge from harm and hence might be described as shelter. Importantly, shelter is a process and in most cases the **process of '*sheltering*'** is as important as the objects of shelter.

In the humanitarian context, the term shelter refers to any physical space that may be inhabited by people made homeless by a disaster or conflict. The physical spaces used for humanitarian shelter vary greatly depending on factors such as: the cultural and political context, available structures and materials, the profile of a disaster and the needs of the affected population.

> ***'Shelter: A place giving temporary protection from bad weather or danger'.***
> - Oxford Dictionaries | English. 2018. shelter | Definition of shelter in English by Oxford Dictionaries.

Communities seeking shelter after a disaster may turn to family and friends to host them, they may shelter in public buildings, in dispersed tents or camps or even in the remnants of their former home. Shelter assistance comes in many different forms, including: temporary shelters, collective centres, rental properties, market interventions, training, toolkits, materials etc.

> ***Sheltering affected communities is about ensuring the right to live in dignity.***

What remains common throughout, is the right to adequate and sufficient shelter, ensuring families can live with dignity and safety from the time their housing becomes uninhabitable through to when they are able to return or progress to permanent, safe and secure housing.

Almost any physical structure might be used for shelter, but what makes one structure suitable for human habitation and another uninhabitable or inappropriate? What is it that affected populations seek? By answering these question, we can get guidance on what we should try to provide.

Shelter checklist: What communities seek from shelter	
Safety from	• Adverse weather – such as storms, floods, droughts, heat waves and cold • Secondary hazards – aftershocks and communicable diseases • Social conflict or unrest • Evictions and forced relocation (security of tenure) • Harassment, personal violence or threat of violence, including Gender-Based Violence (GBV) • Insects and Wildlife
Adequacy of	• Space – to carry on the daily activities of life, including livelihoods. This includes flexibility of space to accommodate future activities • Privacy and dignity – to change clothes, to spend time with family and loved ones • Security – from harm, to be able to return to work
Access to	• Government services - schools, health facilities and public transport • Water supply – to wash, clean and drink • Sanitation and laundry facilities • Livelihoods – both through employment and other means • Social networks, family and friends • Religious and culturally important facilities
Appropriate	• Environmentally • Culturally / socially • Religiously • Thermally – ventilation, warmth and shade • Appropriate to the local building culture and context
Sufficiency of	• Household contents to carry on with life, including: bedding, clothing, storage, cooking and cleaning implements (NFIs / Non-food items)

From the above table, it is clear that the task of sheltering affected populations is not simply one of providing a physical space, but rather about working with affected communities to assist them to meet the above needs. This applies for individual and family shelters, along with their neighbourhoods and communities (settlement considerations). Fulfilling all these needs may not always be within the bounds of a single shelter program by one agency. Consequently, effective shelter programs should always be designed as an integrated component of a broader humanitarian response. Particular needs may be supported by different sectors or actors. When the above needs are not all met, communities remain in need of shelter assistance.

2.4 Shelter vs sheltering

Humanitarian agencies have traditionally viewed post disaster shelter interventions as a three-stage process: emergency shelter, temporary shelter and permanent shelter. Although a three-stage process may neatly fit the way agencies and donors are familiar operating within, it rarely reflects the process of recovery that most affected families find themselves going through. Rather than a neat three step process, families find themselves on an incremental journey, beginning from inadequate and insecure emergency shelter immediately after a disaster, followed by a series of slow improvements until they finally achieve adequate permanent safe and secure housing. These incremental steps will vary greatly from family to family, depending on how they are affected by the disaster, their ability to cope, and the support provided to them. Some families may have the personal resources to start reconstruction on Day 1 after a disaster, whilst more vulnerable families may have considerable barriers and delays, making them more reliant upon the assistance of humanitarian organisations. At stages along this journey, affected families may find themselves turning to humanitarian agencies for assistance.

Rather than viewing shelter assistance as a range of predesigned products that are handed out during these three distinct stages, **sheltering is a process** of working with communities, assisting them on their journey, in line with what is efficient and cost effective. This process involves consultation with communities, analysis of needs, and from this, an understanding of which direction sections of the community are heading. This informs how humanitarian agencies, in coordination with the government and other agencies, can best assist these different groups with adequate and sufficient shelter to ensure that families can live with dignity and safety.

Sheltering affected communities should be seen as a process of incremental steps rather than simply the delivery of one or more products.

Shelter as a pathway

When designing shelter interventions it is important to understand that prior to disaster striking, each family is already engaged on a sheltering journey. This journey is influenced by 3 separate (but interlinked) pathways:

Each family's pathway

We start our lives living with our families or carers. This changes over time. Most families go through a process of upgrading their family home, moving, or extending their homes to meet the needs of a growing family. When a disaster strikes, each family is somewhere along this pathway. Where they are, and where they are heading, will affect their sheltering needs.

Each community's pathway

In the same way that a family is on a shelter journey, on a broader scale, communities are as well. This could be a journey from traditional housing to aspirational housing, or a changing position in social, economic, political, religious or cultural views of the community. To be accepted by a community, shelter interventions must be contextually appropriate and respectful of the pathway of that community. While one community may accept living in a temporary bamboo shelter during reconstruction, others may find it degrading and inadequate.

The national shelter pathway

Each country is also on a sheltering journey, guided by its host government and citizens. Policies and building codes are developed to guide construction from traditional forms of architecture, to buildings that conform to new standards and building regulations. Often these new building typologies will still retain a link to their traditional architectural roots while strengthening them to better resist hazards and allowing for the inclusion of 'modern' amenities. One key part of this pathway is vertical. As the world becomes increasingly urbanised[1], more and more multi-storey and multi-unit housing blocks are being built.

During a disaster response, shelter programs will typically support the work of the government in assisting communities to achieve a minimum national standard of housing while simultaneously supporting the affected communities to get back to the pathways of their choice.

1 UN DESA, 2014. World Urbanization Prospects

2.5 Shelter assistance must be targeted based on needs

As with all aid provision, shelter assistance is based on assessment of needs. Shelter needs assessments often require the use of context specific shelter assessment formats. The identified needs of the affected population must be at the centre of a shelter program. In larger disasters, there is often not enough shelter support resources for every affected family. Shelter support may need to prioritise assistance to address the needs of the most vulnerable, those who are least able to self-recover or those who face context-specific threats. Humanitarian organisations have to decide which families to target for assistance based upon actual need and specific vulnerabilities (see section 3). As an example, this could include disabilities amongst family members which may prevent the family from taking care of their own shelter needs themselves. Some of the common vulnerabilities identified have been listed in cross cutting issues (see section 3). This is by no means an exhaustive list and each disaster response will present a new set of challenges for recovery.

Shelter needs will vary across the affected population

Communities displaced by disasters may face weeks, months or even years of displacement before they are able to return to adequate, safe, secure, and permanent housing. While some people might be only temporarily displaced, others may never be able to return to their original location. The nature and length of a family's displacement will vary according to a range of factors.

The type of disaster

Different types of disaster will impact populations in completely different ways. A flood may leave families temporarily displaced but able to return home safely after a few weeks, while a volcanic eruption or tsunami may completely destroy the very land a family lived upon, leaving them with no physical place to return to. In case of armed conflict, or threat of violence, it may be many years before a family is able to return to their place of origin.

Housing typology and occupant's status before the disaster

Different types of housing (single dwelling, adjoined houses, multi-storey, etc) and the housing, land and property (HLP) rights of occupants will determine the possible recovery pathways for the affected population. Families living in high-rise buildings, or those renting / squatting might be unable to return to where they lived before the disaster and reconstruct their homes. Those who own land, may be able to repair their original houses or reconstruct a new home on their land.

The coping capacity of the family, community and those assisting them

In some cases, a disaster may strike a well prepared community, causing only temporary displacement. In other cases, a disaster may strike completely unexpectedly or impact upon an ill-prepared community causing much more devastation and resulting in slower recovery. Even within a well-prepared community, some families will have easier access to their own cash resources, labour for repairs or reconstruction, than others will.

Coping mechanisms are a positive asset. The disaster-affected community's capacity to recover should be a central consideration for all programming after disasters. Assessments conducted in communities should focus on what the communities themselves can achieve, as much as the shelter needs and gaps in assistance.

Government policy

In the aftermath of a disaster, government policies and disaster response measures vary greatly; such as providing instantaneous or delayed assistance, and supporting relocation or reconstruction. These variations strongly affect the time and type of displacement.

Shelter assistance should take into consideration the profile of the disaster and the individual needs and capacities of different sections of the community. Singular bulk shelter programs are unlikely to meet the needs of the entire affected population. To accommodate this, shelter programs can be divided into sub-programs, each specifically designed to target the needs of one section of the affected population. Each sub-program may be comprised of a range of shelter assistance types delivered over time through a range of implementation modalities. In a number of recent disasters around the world, governments have enacted post-disaster policies of 'no-build zones' to ensure that families do not rebuild in areas where the risk of future disaster (whether flooding, tsunami or landslide) is too high. However, such policies mean that the families who were living in those high-risk areas will now be permanently displaced and will need a larger and wider range of support in order to fully re-establish themselves in their new location.

2.6 Settlements planning & livelihoods

Refer to: + *Case Study 31: PHILIPPINES / 2013 - 2015 / Typhoon*

The local context surrounding a house, the neighbourhood and area where people work, live and thrive, is referred to as a 'settlement'. This can range in size from a small village to a city. This settlement includes the local environment, peoples livelihoods, access to food, services, and protection.

Humanitarian organisations are increasingly receiving funding and encouragement from donors to consider doing shelter at the 'settlements' or neighbourhood level. Typically, this includes working with the community to improve streets, pathways, drainages and lightings, as well as repair and reconstruction of houses. If this approach is well implemented, not only can it reduce the health risks and improve the safety of the community, but it can also be a catalyst to improve and expand the local economy. Better-planned streets can be more attractive for shops and their customers. Businesses can also benefit from improved transport circulation and infrastructure. Because the construction tasks are more varied and complex than mere supporting shelter or housing reconstruction, the project itself can be a boost to livelihoods, through direct employment or employment through local contractors.

It is very unusual for one single organisation to have the capacity and expertise to undertake the entire project itself. Most organisations will have to rely upon multiple partners in order to complete specific parts of the project, such as water infrastructure. These complexities should should always be resolved in close cooperation with the local community and local authorities. Often, such projects take years to complete, and there are considerable challenges to trying to scale up this approach so that it can be implemented in multiple neighbourhoods at once. Therefore, any organisation planning to undertake this approach must also have a strategy for how to support the community's shelter and livelihoods needs in the meantime, whilst the project is still under development.

2.7 The transitional shelter approach

Refer to:
+ *Case Study 02: INDONESIA / 2006 / Earthquake / Overview*
+ *Case Study 16: PHILIPPINES / 2012 / Cyclone*
+ *Case Study 26: PHILIPPINES / 2013 / Typhoon*

Shelter assistance aims not only to assist families with their immediate shelter needs but also to assist them to transition smoothly to safe and adequate permanent housing. Ill-conceived shelter programs may address immediate needs without assisting families to transition causing families to become stuck or even slip backwards on their journey of recovery.

> ***'Transitional Shelter: An approach rather than a phase of response'.***
> Sphere Standards, 2011. p. 252

As examples, constructing a temporary shelter on the site of a family's future home may solve immediate need while actually impeding recovery; providing a tarpaulin rather than a tent may provide immediate shelter as well as a useful future tool for drying rice.
A transitional approach to shelter considers how the assistance provided contributes to the overall strengthening of the capacity for recovery at individual, community and government levels. A key characteristic of a transitional shelter approach is that the assistance provided has the potential to be upgraded and/or reused in more permanent structures, relocated from temporary sites to permanent locations. They are designed to facilitate the transition to a more durable shelter. Transitional shelter responds to the fact that post disaster shelter is often undertaken by the affected population themselves, and that this resourcefulness and self-management should be supported (Sphere Shelter and Settlement Standard 1: Strategic Planning, Guidance Note 6).

In some contexts the term transitional or temporary shelters may be unacceptable, especially where reconstruction on a permanent site is possible. An alternative term may be "Progressive Shelters", which are household shelters planned and designed to be later upgraded to more permanent status.

Temporary shelter or transitional shelter?

Often there is confusion around the terms **temporary shelter** and **transitional shelter**. **Temporary shelter** is an impermanent structure built for a family to live in after a disaster, but which may not last until a permanent housing solution is available. The term **transitional shelter** refers to a conceptual framework that can be applied to all shelter programs whereby assistance aims to not only focus on short term needs but also assist families transition to permanent safe secure housing as smoothly and efficiently as possible (See also section 12).

Shelter checklist: Transitional shelter approach	
Actions that hinder transition	Actions that assist transition
Building a temporary shelter on the footprint of a destroyed house making it hard to reconstruct	Build a temporary shelter to the side of the permanent house site, with a potentially adjoining doorway
Constructing core houses with improper foundations makes it hard to extend securely	Designing a core shelter with strong permanent foundations and upgradable wall materials
Supplying temporary shelter to a relocated community but not assisting with land rights can leave the community being evicted later	Working with government to negotiate for relocation sites that suit the needs of the affected population whilst still ensuring their safety
Providing temporary shelters that are inappropriate so that families choose to stay in emergency shelter	Consult with families to design temporary shelters that are culturally, climatically, environmentally suitable.
Rebuilding shelters or houses from materials that communities are not used to, do not like, or do not have the skills to work with, repair / maintain	Construct temporary shelters from local materials that are suitable for later reuse in permanent reconstruction
Providing pre-made, pre-assembled shelters wastes an opportunity to use shelter to upgrade skills	Incorporating hazard resistant construction trainings into a temporary shelter reconstruction program
Providing excessive assistance to families in a public building may mean they have no desire to leave	Ensure adequacy of shelter while working with communities to develop long term strategies
Providing rigidly-designed shelters to those who have been temporarily displaced, which cannot easily be reused in part, or transported in whole, or otherwise easily distributed	Providing shelters which are designed to be easily assembled and disassembled, and easily transported and re-usable, at least in parts

Temporary shelters built with a transitional approach are sometimes called T-shelters or transitional shelters.

2.8 Camps and collective centres

Refer to:

- *13.2 Collective centres*
- *13.3 Support for camp-based shelter support*
- *Case Study 15: PHILIPPINES / 2011 / Cyclone*
- *Case Study 19: MYANMAR / 2012 / Conflict*

Camps

Camps are groupings of families in non-permanent shelter that are close enough together and in a large enough number, to need humanitarian assistance to support what happens in the spaces in between the shelters. Other than shelter, they most likely require support for other services, such as health or education services to be provided in the location as well. Some camps are planned in advance, but the majority of camps around the world are spontaneously settled by those living there with site planners only intervening afterwards, if at all. Camps can range from having only 30-50 families to the largest in the world having had a population of more than 400,000. The costs and complexities and multi-sectoral nature of establishing a camp or intervening in a camp are very large. The stresses, risk of attack and health risks arising from many people living in close proximity to each other means that camps are often labelled as a shelter option 'of last resort'. Nevertheless, the fact remains that millions of people live in camps around the world and that they have a wide range of shelter and other needs. Well-planned camps can also be the starting points for economic activity and recovery. However, this is only realistic if a plan for camp closure and the sustainable movement of people out of the camp is also included in the overall camp plan from the first day.

2012 Conflict, Myanmar
Constructing the 8-unit collective shelters.
Photo credit: UNHCR
www.shelterprojects.org

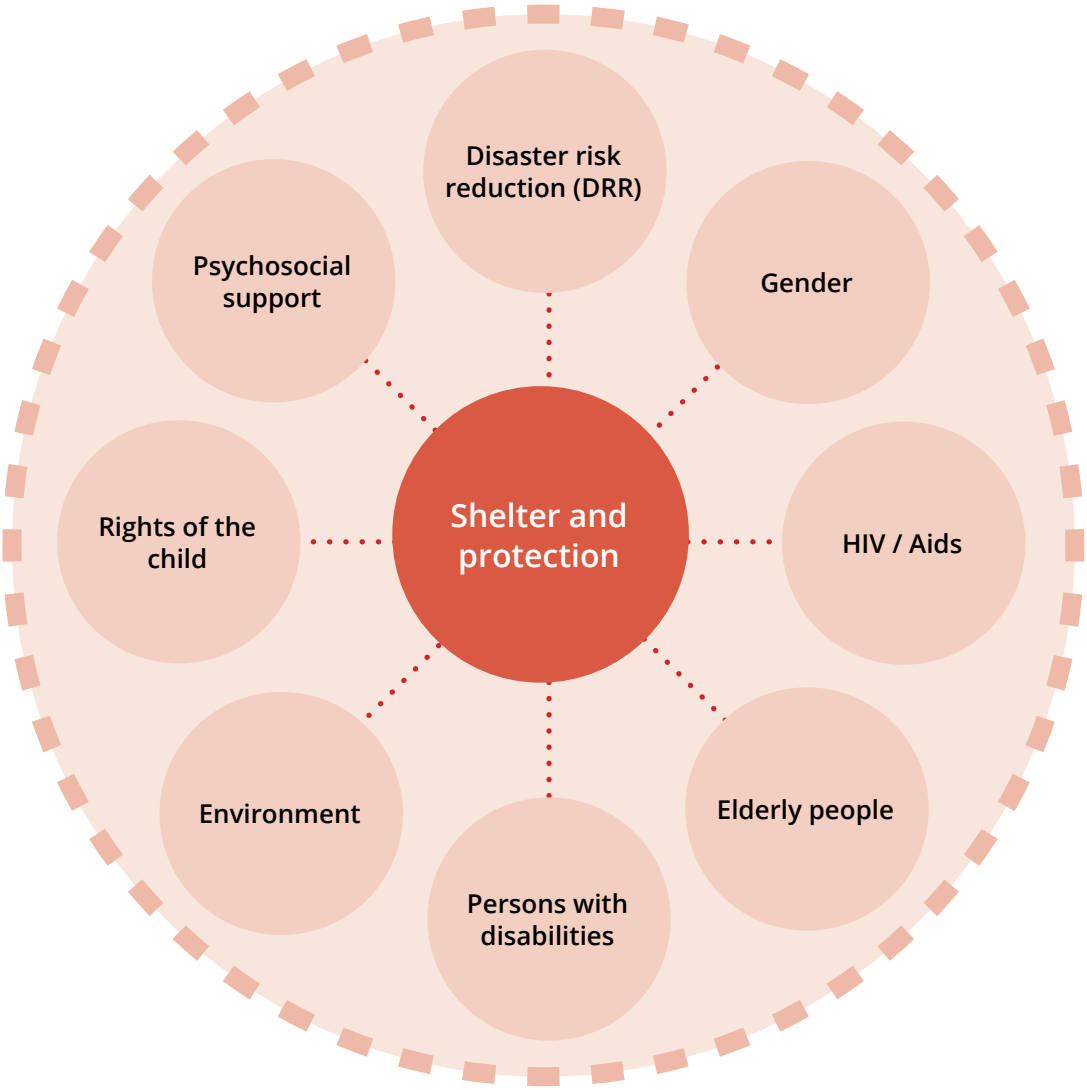
Collective centres

Collective centres are larger buildings or sometimes combined groups of buildings, which provide shelter to multiple families after a disaster. In a few cases, these buildings have been designed and constructed with the intention that they will function as collective centres, such as Cyclone shelters, when a natural disaster is rapidly approaching or has already hit. But in the majority of cases, collective centres are larger buildings such as sports halls, buildings of religious worship, schools or office centres, which were never intended as shelter for people. Those who take shelter in these buildings may do so because they are the only buildings left standing and the only place that they can find the security and protection of four walls and a roof. In other cases, families may take shelter in a larger building because it is one of the few remaining sources of water, sanitation, electrical power supply or heating. In a significant number of cases, even if a collective centre is full, more families may construct their own makeshift shelters nearby the collective centre in order to be able to use the facilities within the collective centre or be close to humanitarian support programs which are taking place within the collective centre.

The families' decision to move into the building is based upon calculations of safety. However, if families have to remain in a collective centre for a longer time, it may become increasingly unsafe. Trying to shelter in open spaces without privacy or dignity, or having to live and move around in spaces which were intended for other purposes can lead to stresses and violence between the occupants. Most of the buildings will not have sufficient toilets, sources of clean water or reliable electricity for all the needs of the occupants. This may bring its own dangers through public health risks or electrical faults. Like camps, collective centres should be seen as a 'least worst option', and any plan for responding in a collective centre should include a plan for how to support those in the centre to move out as soon as another better shelter is available.

3. Vulnerabilities

Humanitarian sheltering is not purely the provision of one or more products. Rather, it is focussed on addressing the shelter needs and rights of those considered at the greatest risk, and consequently the most dependent on assistance. These groups are identified as the most vulnerable; often they will be those least visible and least known within a community.



Cross-sectoral issues in shelter

3.1 Addressing the needs of the most vulnerable

It is important to understand that to be young or old, a woman or man, a person with a disability or with HIV/Aids does not, in itself, classify a person as most vulnerable. Instead, vulnerability is recognised as being the result of a combination of factors. For example, a single parent with two children who lives alone and is in poor health with no economic income is likely to be more vulnerable than a single parent with similar poor health living within an extended family and with sufficient income.

Humanitarian sheltering is about seeing who is recovering well and who is not; together with identify barriers and ways to overcome these barriers.

Effective shelter programs uphold vulnerable people's rights and provide support mechanisms for their pathway to recovery. Assistance offered must not place vulnerable people / groups in a position of increased dependency on aid and external support thus increasing their vulnerability.

One or more vulnerabilities can affect whether a family can recover comprehensively, including livelihoods recovery, after a disaster. Typically, integrating vulnerable persons within a shelter program involves a three-fold approach:

- All shelter interventions which are undertaken will recognise and take into account the presence of vulnerable people / groups, and integrate their concerns
- A targeted response might be required to ensure adequate protection for vulnerable people / groups in accordance with their vulnerabilities and needs
- Support and assistance to the vulnerable people / groups should come from other community members where possible.

Further information - Addressing the needs of the most vulnerable:

IFRC, 2006. What is VCA? An introduction to vulnerability and capacity assessment

3.2 Shelter and protection

Refer to:
+ *Case Study 16: PHILIPPINES / 2012 / Cyclone*
+ *Case Study 25: MYANMAR / 2014 - 2016 / Conflict*

Broadly speaking, ***Protection*** in the humanitarian context means assuring those affected by natural or man-made disaster, of all their human rights. For shelter programming, this can be described in two closely interconnected aspects of shelter. Firstly, there is the life-saving protection which shelter can provide against extremes of climate or physical attack. Secondly, there is the protection which shelter enables – for example, a place where children can study, where a family can follow their religious observances in peace, and to store the tools or materials for livelihoods and food security. It is the same structure, building or intervention which performs both of these protection functions.

Shelter programming must integrate both of these aspects. Any shelter program which succeeds in one aspect but not the other, is likely to fail overall. As with all other elements of shelter programming, Protection is a process, and shelter interventions may need to aim for an incremental approach to achieving ***Protection*** objectives, just as it might for shelter objectives generally. Similarly, the ***Protection*** aspects of shelter programming need to be integrated into all assessment and monitoring activities, as well as being central to any eventual handover of programming.

Further information - Protection:

IFRC, 2006. What is VCA? An introduction to vulnerability and capacity assessment

IASC, 2016. Protection and accountability to affected populations in the humanitarian programme cycle

3.3 Disaster risk reduction (DRR)

Refer to:

+ *Case Study 20: PHILIPPINES / 2012 / Typhoon*
+ *Case Study 27: PHILIPPINES / 2013 - 2017 / Typhoon*
+ *Case Study 30: PHILIPPINES / 2013 - 2015 / Typhoon*

This is the concept and practice of reducing disaster risks through systematic efforts to analyse and manage the possible causes of disasters. This includes minimising the exposure to hazards, reducing the vulnerability of people and property, wise management of land and the environment, and improvement of preparedness for adverse events. Disaster Risk Reduction (DRR) measures should be tailored to localities and context (including social, political, economic, cultural, religious and environmental context), informed by evidence based / scientific knowledge and complementary of traditional, indigenous and local knowledge and practices.

"The 4 priorities of action setout by the 2015 - 2030 Sendai Framework include:

- Understanding disaster risk
- Strengthening disaster risk governance to manage disaster risk
- Investing in disaster risk reduction for resilience
- Enhancing disaster preparedness for effective response, and to ***Build Back Better*** in recovery, rehabilitation and reconstruction".

- Sendai Framework for Disaster Risk Reduction 2015-2030

The following concepts are integral to the understanding and implementation of DRR measures:

Disaster mitigation

Structural and non-structural measures undertaken to limit the adverse impact of natural hazards; for example, planting mangroves to reduce the risk posed by tidal surges or raising awareness of natural hazards through school-based education projects.

Early warning systems

The provision of timely information, enabling people to take steps to reduce the impact of hazards. For example, local people accessing information concerning an approaching typhoon or tropical storm.

Disaster preparedness

"The knowledge and capacities developed by governments, response and recovery organizations, communities and individuals to effectively anticipate, respond to and recover from the impacts of likely, imminent or current disasters."

Resilience

"The ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions."[1]

Recovery

Decisions and actions taken after a disaster with a view to restoring or improving the pre disaster living conditions of the affected population, while facilitating necessary adjustments to reduce disaster risk. For example, assessing levels of future risk when planning housing projects in the aftermath of a disaster.

Further information - Disaster Risk Reduction:

DfID/Shelter Centre/OCHA 2012. Transitional Shelter and Reconstruction After Natural Disasters

UNISDR, 2015. Sendai Framework

1 UNISDR, 2009. ***2009 UNISDR Terminology on Disaster Risk Reduction***

3.4 Cross-cutting issues in shelter

Within every humanitarian response there are a number of topics which are relevant to all aid activities. They stretch beyond the key needs of survival and shelter, ensuring populations affected by crisis will have the greatest opportunities to benefit equally and fairly from assistance, whilst providing a foundation for long term sustainable recovery.
The following eight cross-cutting issues have been agreed upon by humanitarian actors as critical within all humanitarian responses:

• Gender • HIV / Aids • Older people • Disabled people	• Disaster Risk Reduction • Children's rights • Psychosocial • Environment

2006, Jogjakarta Earthquake, Indonesia
Children in temporary shelter
Photo credit: PMI 2006

Further information - Cross-cutting issues in shelter:

The Sphere Project, 2011. The sphere handbook: humanitarian charter and minimum standards in humanitarian response.

3.5 Mainstreaming cross-cutting issues into shelter programming

The checklists below give guidance on how to generally integrate cross-cutting issues into different phases of shelter responses. The actions to be taken are listed in the checklists following the same key principles on mainstreaming:

1. See mainstreaming as a positive force for improving the program, not as an extra duty or box-ticking exercise
2. See all of the different cross-cutting issues as connected to each other, as well as being connected to shelter intervention/program. For example, look for how environmental issues have an impact upon gender, or how Disaster Risk Reduction is connected to the need of older people
3. Have confidence that shelter responses can have a role to play in addressing some of the underlying or chronic challenges for each cross-cutting issue
4. Shelter intervention is a process – and mainstreaming cross-cutting issues is an integral component of this process. Look for ways in which cross-cutting issues can positively inform and impact implementation of a shelter program including selection of actual shelter material.

When considering shelter programming, the following questions should be used as umbrella guidance, followed by detailed checklist for each individual cross-cutting issue:

Design – What can be the impact of the design of the shelter on the amount of resources needed, future safety of the shelter, the way that the spaces in and around the shelter can be used by those with special needs, and the ways in which everyone in the community can participate in the construction of the shelter?

Materials – What impact will construction materials have on the sustainability of the shelter, and the degree to which all members of a household can participate in any future upgrades or maintenance? How does the cost of materials affect the way in which people use the shelter? How safe do people feel in shelters made with the selected materials? What will be the impact of the selected materials on the local resource markets and availability?

Methodology – What impact will the implementation of a proposed program have upon the local community. How many people are able to participate, and learn from, the shelter construction or distribution of emergency items? Is this an inclusive process? How can this methodology have a positive impact upon the sustainability of the shelter, and the community in which the shelter is built in?

Participation and ownership – How can multiple stakeholders, including the most vulnerable or marginalised, take ownership of the shelter processes as an assurance that all the cross-cutting issues will be addressed in a consensual manner?

3.6 Gender

Refer to:

+ *Case Study 08: INDONESIA / 2009 / Earthquake*
+ *Case Study 11: MYANMAR / 2008 / Cyclone*

Men and women are affected differently by a disaster. Women and children are 14 times more likely than men to die during a natural disaster. Risks for gender-based violence (GBV) can also increase during emergencies due to a breakdown in essential services, bad shelter design and absence of a referral pathway. Clearly understanding the differences for women, men, girls and boys in the roles, workloads, access to and control over resources, decision-making power and opportunities for skills development, allows for a more effective humanitarian response, adhering to the humanitarian aims of proportionality and impartiality.

2006, Jogjakarta Earthquake, Indonesia
Women participation in shelter construction
Photo credit: IFRC / PMI 2006

Shelter checklist: gender		
	Challenge	Action
Preparedness	• Minority gender groups not represented in planning and preparedness due to cultural and social norms • Men dominating preparedness consultations • Lack of information on services for gender based violence survivors	• Consult with all group of people, with a broad and diverse range of voices • Ensure the planning team has a sound understanding of gender issues and cultural sensitivities • Consider consulting men, women and other gender groups separately, providing a platform for all gender groups to contribute to decision making • Establish a referral pathway for gender based violence survivors, ensuring services remain functional during emergencies • Ensure 50% of membership on shelter site planning and decision making committee is composed of women
Response	• Lack of participation and inclusion of women in site planning and initial shelter construction • Harassment of women due to lack of private spaces and distance to basic services • Women excluded from the task of constructing shelter due to the perception that it is 'men's work' • Men and women who are not immediate family members sharing shelter increasing risks of gender-based violence	• Providing gender appropriate sanitation, privacy and lighting, while avoiding overcrowding, isolation and 'over spacing', greatly reduces risks of gender-based violence Specifically, this means, providing separate toilets for men and women with locks and proper lighting. • Toilets should be less than 500 meters from a shelter, or placed within the shelter • Where appropriate, provide opportunities for women to engage in new skills and trainings related to shelter construction • In cases of emergency group shelters, consult with the occupants, to consider separate and private shelter for single women • Consider separate and private shelter for single women preferably close to family shelters with easy access • Provide safe spaces within shelters for women and children.

Recovery	• Men experiencing social pressures and disruption of livelihood opportunities may struggle to provide for their families • Lack of privacy within shelters housing more than one family • Women excluded from the task of constructing shelter due to the perception that it is 'men's work' • Lack of livelihood opportunities for women linked to recovery	• Consider the impact of voluntary construction roles on other economic activities • Provide additional materials which allow for partition and privacy • Provide appropriate livelihood options for both men and women
Reconstruction	• Lack of construction knowledge and experience leading to poor permanent construction • Tenure and formal ownership of assets may favor men over women or vice versa	• Consult men, women, boys and girls on the culturally-appropriate construction and design of spaces. • Ensure planning team has a sound understanding of gender issues and cultural sensitivities • Collect information on land tenure arrangements and ways to ensure that women, the elderly and minorities are not excluded in the process

Further information - Gender:

IFRC, 2010. Gender sensitive approaches to disaster management

IASC, 2012. Gender and Shelter in Emergencies

IFRC, 2015, Minimum Standard Commitments to Gender and Diversity in Emergency Programming:

IASC, 2015. Mainstreaming Gender in Humanitarian Responses

IOM, 2016. Site Planning: Guidance to Reduce the Risk of Gender-Based Violence

3.7 HIV / Aids

Disasters may cause a breakdown of community structures, families may be separated, there may be a change in social and sexual norms, and an increase in sexual and gender based violence. This may lead to increased HIV / Aids risks and vulnerabilities. People living with HIV / Aids may suffer from discrimination and stigma which may impact their access to assistance.

Shelter checklist: HIV / Aids
Potential Shelter Actions
• Community awareness and education programs, which identify modes of transmission, prevention, access to services and non-discrimination assist in breaking down negative cultural and social attitudes of those suffering from HIV / Aids. • Providing confidentiality throughout the consultation process to those suffering from HIV / Aids eases the risks of social exclusion and stigmatisation. • Creation of safe communal spaces in shelter design and layout by ensuring a reasonable distance to health facilities and other communal services (considering the protection mechanism of shelter) decreases risk of unwanted sex and HIV / Aids infection. • Access to additional emergency medical care services and assistance decreases vulnerability to disease and illness associated with HIV / Aids. • Assessing the effect of a disaster on community support mechanisms and ensuring the availability of support, including actual support for construction activities, reduces the risk of exclusion.

Further information - HIV / Aids:

IASC, 2003. Guidelines for HIV/AIDS interventions in Emergency Settings

IFRC, 2010. IFRC Aids policy

IOM, 2008. Mainstreaming HIV into Camp Coordination/Camp Management (CCCM) & Shelter in Humanitarian Logistics

UNHCR, 2007. HIV Aids in internally displaced persons and other conflict affected populations

3.8 Elderly people

Refer to:
+ *Case Study 11: MYANMAR / 2008 / Cyclone*
+ *Case Study 16: PHILIPPINES / 2012 / Cyclone*

Elderly people possess a range of cultural, social, technical and context relevant information, skills, experience and knowledge that can often be overlooked or underutilised in response efforts. This can compound existing vulnerability and lead to increased isolation and disempowerment. Elderly people be given the opportunity to make key contributions to a community's recovery, including active involvement in the recovery process.

In addition to this, physical weakness and isolation are significant factors that make the elderly vulnerable in a disaster situation. A disaster may cause changes in livelihood opportunities and the ability of the elderly to take care of themselves. Family and community support structures in place to care for the elderly may be disrupted. The elderly may also suffer from chronic health and mobility problems and declining mental health. It is important to understand the special needs of the elderly and plan for how to address them.

Further information - Elderly people:

IFRC & HelpAge International, 2011. Guidance for including older people in emergency shelter programmes

HelpAge International, 2012. Older people in emergencies – identifying and reducing risk

IFRC, 2014. All Under One Roof

Shelter checklist: elderly people		
	Issue	Action
Preparedness	Unable to communicate with elderly persons due to local language constraints	Adapt communication styles and consider the use of local staff
	Elderly people can be overlooked in shelter preparedness and assessment activities	Take steps to ensure the community acknowledges the risks and vulnerabilities of older persons
Response	Older persons not represented in community based committees and decisions regarding their livelihoods	Include older persons in community based committees and ensure inclusion in decision making processes and complaint mechanisms
	Isolated or housebound older persons unable to access shelter assistance	Incorporate age friendly features in shelter design and settlements, e.g. ramps, handrails, grab bars, sufficient space and door width for accessibility
	Increased risk of injury and exclusion in shelter construction	Identify capacities / limitations, and include them in advisory or shelter construction roles where possible
	Shelters are inadequate for mobility impaired elderly	Allocate additional resources and budget for required shelter alterations
	Complete loss of livelihoods and assets	Include older people in livelihood activities related to the recovery
	Reduced mobility and access to basic health services	Consider community access solutions, or engaging local organisations and agencies for specialised support
Recovery	Knowledge of locally sourced materials and building techniques not utilised	Include older people in technical shelter design throughout the shelter program
Reconstruction	Design changes are required to suit elderly people's needs	Allocate additional resources and budget for required shelter alterations, and coordinate with agencies who specialise in the needs and rights of elderly in humanitarian response

3.9 Persons with disabilities

Refer to:
+ *Case Study 11: MYANMAR / 2008 / Cyclone*
+ *Case Study 13: PHILIPPINES / 2010 / Typhoon*

Disasters and conflict can cause increased incidence of impairment and subsequent disability. While persons with disabilities face disproportionate risks in disaster situations, they are often excluded from relief and rehabilitation processes. Furthermore, there are social and environmental barriers that hinder their full and effective participation in society on an equal basis with others. These barriers prevent persons with disabilities from fully and meaningfully participating in, or benefiting from, mainstream humanitarian assistance programs.

> ***"Organise focus groups where a range of community members (children, elderly, pregnant women, persons with reduced mobility or visual impairments, etc.) can discuss barriers and share experiences, instead of having separate groups for persons with disabilities."***
>
> - IFRC, 2015. All under one roof

Whilst reconstruction is underway, both damaged houses and rubble in the streets can create physical barriers, preventing those with disabilities from accessing basic services, such as education or health services, or from engaging in other social or livelihoods activities outside of their shelter.

When designing shelter programs which take into account the needs of persons with disabilities, it is vital to consider not only those individuals, but also the associated needs of their families and carers.

Shelter checklist: persons with disabilities	
Issue	Action
Difficulties communicating during assessments and consultation process	Adapt communication style and consider alternative communication techniques
Unable to self-recover due to both physical and mental disabilities	Create community awareness and highlight disabled persons risks and capacities
High risk of violence, theft and exploitation	Consider community led security and monitoring programs
Often excluded from shelter construction	Identify disabled people's capacities and include them in shelter construction
Design does not consider the needs of people with disabilities	Consider appropriate access to shelter and communal services
Shelters and communal services are unable to be accessed	Consult specialist to advise on best practice for disability compliant design
Increase in costs for the alteration of shelters to make them accessible for people with disabilities	Plan additional resources and budgeting to allow for required shelter alterations
Access to specialised facilities and support structures may be limited	Consider engaging local organisations and governmental agencies for specialised support

Further information - Persons with disabilities:

Handicap International, 2009. Guidelines for creating barrier free emergency shelter

IFRC, 2014. All Under One Roof

In addition to the Shelter Checklist provided on the previous page, the following list is a summary of recommendations provided in the "All Under One Roof" document published by IFRC. This document provides a comprehensive overview of disability-inclusive shelter:

"Inclusion in phases of disaster management

- Strengthen disability networks during the preparedness phase
- Identify capacities of persons with disabilities as well as the barriers persons with disabilities face in case of an emergency
- Involve persons with disabilities in planning and managing inclusive and targeted early warning systems
- Ensure that emergency evacuation centres are accessible
- Address disability issues from the outset of the emergency
- Consider lack of visibility as a possible sign of exclusion
- Consult persons with disabilities about shelter and settlement needs, and monitor the inclusiveness of the response
- Involve disabled people's organisations in the recovery
- Ensure that persons with disabilities can influence shelter designs and participate in reconstruction efforts
- In the recovery phase, build back safer and more accessible

Technical guidance for shelter and settlements

- Avoid man-made barriers in new, planned settlements
- Remove barriers that affect safety and access for persons with disabilities in settlements and collective centres
- Assist with transporting, erecting and maintaining tents
- Provide accessible transitional or permanent shelter for persons with disabilities through consultation and participation
- Carry out accessible adaptation of existing structures
- Provide priority lines for persons with disabilities and volunteers to offer assistance at distribution sites
- Include additional or adapted items in emergency household kits for persons with disabilities
- Offer training and technical support for persons with disabilities to make use of shelter kits and shelter support items.

Promoting participation and equal opportunities

- Provide information in multiple accessible formats
- Plan meetings to be inclusive of persons with disabilities
- Make monitoring and feedback mechanisms inclusive of persons with disabilities, and follow up barriers that are identified
- Consider shelter accessibility in rent support programmes
- Assist persons with disabilities in host family situations
- Design cash for work activities according to the capacities of persons with disabilities
- Use cash grants to provide personalised accessible shelter
- Make sure vouchers, tools and instructions are accessible for persons with different types of disabilities[2]".

2_- IFRC, 2015. All under one roof

3.10 Rights of the child

Refer to:
+ *Case Study 16: PHILIPPINES / 2012 / Cyclone*
+ *Case Study 30: PHILIPPINES / 2013 - 2015 / Typhoon*

Children often form the larger part of an affected population. Therefore, it is crucial that their views and experiences are not only elicited during emergency assessments and planning, but that they also influence humanitarian service delivery and its monitoring and evaluation. Children and young people are prone to the harmful impact of vulnerability in certain situations, such as malnutrition, exploitation, abduction and recruitment into armed groups and fighting forces, sexual violence and lack of opportunity to participate in decision-making.

Photo credit: Fabian Prideaux

Further information - Rights of the child:

IFRC, 2011. Eliminating health inequities. Every woman and every child counts

IFRC, 2017. PASSA Youth Manual and Toolkit

Shelter checklist: rights of the child		
	Issue	Action
Preparedness	Lack of structures in place to cope with a large increase in the number of orphaned children within a community	• Collaborate with local childcare providers to recognise capacities and plan for large increases • Train local staff about child protection in an emergency, introducing policies and tools
Response	Exploitation of orphaned children, including kidnapping, sexual abuse and pressure to join gangs	• Creation of safe spaces within shelter planning, design and layout • Engage local capacities to address violence and exploitation, such as law enforcement actors and support service providers
	Orphaned children unable to access safe shelter	Supporting community groups and families who have adopted orphaned children
	Children excluded from participating in shelter activities	Not all shelter construction activities will be appropriate for children, however there may be inclusive activities that enable children to be involved in the reconstruction process
	Education is often discontinued in a disaster, e.g. school buildings used as emergency shelter.	• Coordinate with other sectors, such as education, to help children return to their daily routine • Support the relocation of affected people in school buildings
Recovery	Excluded from distribution of non-food items and lack of adequate access to basic services, food and water, leading to malnutrition	• Ensure basic services are available to children and they receive food distributions. This might be made available directly or through support services / parents / carers
	Unable to access school and education programs	• Where possible consider community based and operated school programs within a response • Collaborate with sectors specialising in children's rights and protection to confirm roles, responsibilities and outcomes of interventions
Reconstruction	Orphaned children suffering long term psychological trauma, which may not be obviously apparent to adults	Support local partners in building capacity of government, community and protection systems for orphaned children

3.11 Psychosocial support

Some of the greatest sources of vulnerability and suffering in disasters arise from the complex emotional, social, physical and spiritual effects of disasters. In each humanitarian sector, the manner in which aid is administered has a psychosocial impact that may either support or cause harm to affected people. It is essential to organise locally appropriate mental health and psychosocial supports that promote self-help, coping and resilience among affected people. Humanitarian action is strengthened if at the earliest appropriate moment, affected people are engaged in guiding and implementing the disaster response.

Psychosocial support: Mentawai tsunami and earthquake operation 2010
Photo credit: PMI West Sumatra 2010

Further information - Psychosocial support:

IFRC, Reference centre for psychosocial support, 2010. Psychosocial interventions. A handbook

IFRC Psychological support policy

Psychosocial support in shelter		
	Issue	Action
Preparedness	Lack of understanding of potential community and individual psychosocial impacts of a disaster	• Build on community self-help strategies, promoting community ownership and control of identifying prior measures and instigating preparedness measures • Tailor assessment tools to the local context • Only where appropriate use methods from outside the local community and culture to build capacity and resilience. Where possible, refer to local methods, culture, work, etc.
Response	Stigmatisation and exclusion from shelter construction activities of those suffer psychosocial symptoms	• Promote inclusion and non-discriminatory service delivery • Promote the return of a functioning community social support system through the use of social activities and gathering on local structure, such as schools, mosques and community centres • Ensure that information about the shelter and reconstruction process, including technical guidance, is provided using multiple parallel methods, including 'passive' posters and information displays which can be approached by all in their own time and according to their own information-reception needs. • Work with professionals in the psychosocial support sector, to develop appropriate ways of bringing information to people, if their psychosocial needs prevent them from visiting public information sites
Recovery	Dependency on external psychosocial support aid	• Recognising and highlighting psychosocial support comes from within a community itself • Encourage building of psychosocial support on available resources
Reconstruction	Trauma leading to an inability to fully recover	Support community initiatives for durable family and individual support for those suffering long term symptoms
	Inability to fully access permanent housing assistance	Actively involve local partners - do not treat them as implementers of your ideas

3.12 Environment

Refer to:
- *Case Study 11: MYANMAR / 2008 / Cyclone*
- *Case Study 27: PHILIPPINES / 2013 - 2017 / Typhoon*

The environment provides the natural resources that sustain individuals and contributes to quality of life. It needs protection and management if essential functions are to be maintained. It is therefore necessary to prevent over-exploitation, pollution and degradation of environmental conditions and aim to secure the life-supporting functions of the environment, reduce risk and vulnerability and seek to introduce mechanisms that foster adaptability of natural systems for self-recovery.

2004, Aceh Tsunami, Indonesia

Photo credit: PMI 2004

Further information - Environment:

IFRC, 2010. Environment and Climate Change. The impact of environmental and climate change on human mobility

WWF, 2012. Green Recovery Toolkit

Shelter checklist: Environment		
	Issues	Action
Preparedness	Awareness of environmental issues and concerns may be relatively low	Train local staff on environmental issues / concerns and consider policies and environmental initiatives to understand wider environmental concerns
Response	As the demand for resources increases, availability in remote communities can decrease	Promote inclusion and non-discriminatory service delivery
	Environmental issues can trigger disputes between those receiving aid and host communities	Protection of environmental resources verified by surrounding communities
	Location of emergency shelter leading to soil erosion	Consider site contours in site planning to reduce likelihood of soil erosion and maintain as much vegetation cover as possible to minimise erosion
Recovery	Mass production and the use of building materials with high embodied energy places strain on the supply of resources	• Where possible, encourage the use of sustainable building materials that are locally sourced • Support the foundation of community led environmental committees to raise awareness and instigate protective initiatives
	Overuse and long term damage to primary forests for the supply of timber	Ensure timber is being harvested sustainably. This includes having a forest regrowth plan; only harvesting appropriate species, and in the correct season to encourage forest regrowth
Reconstruction	Contamination of safe water sources	Ensure water sources will be protected from livestock, latrines, washing, bathing and waste disposal sites
	Disruption to livelihood activities associated with the natural resources	Long term environment rehabilitation activities, such as tree planting and small scale agriculture projects
	Overuse of firewood and fuel for cooking and heating	Alternative sources for domestic energy and identified and promoted

4. Sustainability and settlements

4.1 Shelter and settlements

Refer to: + *Case Study 31: PHILIPPINES / 2013 - 2015 / Typhoon*

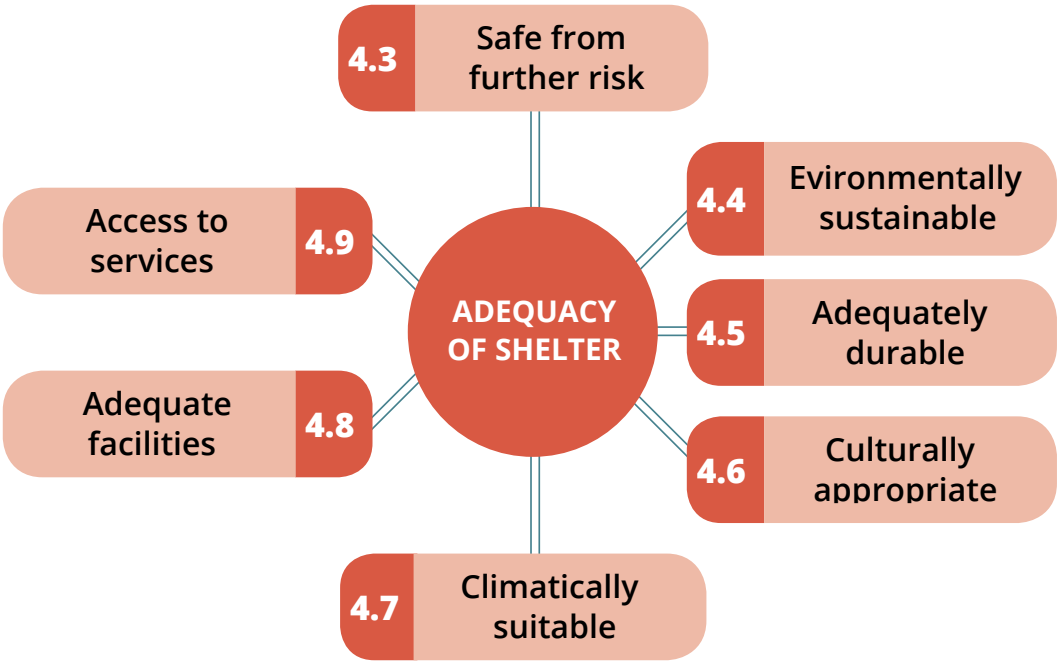
A home is intrinsically linked and interconnected with its surrounding neighbourhood / settlements and environment. This includes access to services, support networks, livelihoods and cultural / religious considerations. When a house is destroyed, this is not only the destruction of a physical shelter, but also the disruption of a range of other interconnected human factors, including access to food and services, and livelihoods of a community.

The type of sub-program and implementation modality of a shelter program can have huge implications on a broad range of factors that will determine how quickly and easily a household is able to recover after a disaster event. These factors can be very hard to predict. Shelter interventions should only be considered if there is a gap in local capacity. Programs should always be designed and implemented in close cooperation with local authorities and above all, with the community itself. There should always be a consideration of the broader settlements context to ensure that any response efforts are sustainable into the future and appropriate for the context.

When permanent / temporary relocation is the only remaining option for a household, careful consideration should be put into settlements planning and thinking. Settlements planning is a complex and long-term program and it can have broad implications on a community's **a**bility to self-recover.

4.2 Adequacy of shelter

It is necessary to ensure that shelter assistance is adequate for the needs of the affected population and complies with recognised shelter standards. This involves an assessment of needs and a participatory design approach. In determining what may or may not be adequate, there are a number of key points to consider; These include:



The 'adequacy of shelter' concepts can be applied to all types of shelter, from emergency to permanent - remember that shelter is a process. If the shelter does not reach all standards of adequacy on Day 1, make sure that you have a plan to work with the families to meet those standards as an eventual process.

The **Right to Adequate Housing** goes further to advocate that shelter is only adequate if those living in the shelter also have, in their settlements or communities, access to basic services, such as education and health, and the opportunity to undertake livelihoods activities.

While this guideline is not intended as a technical guide for shelter construction, the following chapter provides a brief introduction to some of the basic principles of ensuring adequacy of shelter. The design of the shelters used in humanitarian response should be based on the guidance found in the **Sphere Handbook** along with the results of assessments and input from local communities. Technical specifications may require input from local universities, engineers, builders or architects to ensure structural adequacy.

This chapter should be read with an understanding of the transitional shelter conceptual framework, which highlights the importance of ensuring that every shelter intervention is an incremental step towards recovery.

Photo credit: Fabian Prideaux

4.3 Safe from further risk

Safe location, safe design

Being safe from further risk depends upon two principles:

- Being sufficiently distant from any hazard
- Having a shelter whose design and materials can resist hazards

A risk assessment will determine whether shelter sites are safe from further hazard, for instance:

- Potential future disasters, such as fire, flooding and landslide
- Remnant buildings with the potential to collapse
- Social conflict or likely eviction within the time required

Remember that after some natural disasters, risk zones, such as river courses or landslide zones, may have shifted or widened beyond what was on the old maps.

To ensure safe design, it is often useful to break the design of the shelter or house down into parts: what makes a safe roof? What makes safe walls?

After a disaster, when families need to construct shelters rapidly, think about safe materials which can also be quickly installed. However, there are things to keep in mind regarding quick installation solutions. For example, if metal sheets are chosen for covering the roofs, a tie down is more critical than in tiled roof structures, as roof tiles help weigh down the building.

Safe materials

Adequate shelters are designed and constructed from materials that are safe for both the environment and the inhabitants of the shelters.

Materials also contribute to safety from vector borne disease and pests.

Materials should have adequate structural strength and durability for the purpose are selected. Where shelter interventions involve mass construction, engineering advice on specific designs or materials can ensure that safety standards are fulfilled.

At a minimum, all shelter materials need to be :

- Fire retardant to national legal standards
- Non-poisonous to humans
- Non-poisonous to the general environment
- Designed to minimise sharp edges
- Structural materials should be strong enough to support their estimated load

Often, a combination of materials can make a large difference in safety. For example. ensuring that the shelter roofing is attached with tensile, umbrella-capped nails or U-bolts can do much to reduce the danger of metal roofing sheets flying off in high winds.

Avoid the use of poisonous carcinogenic materials such as:

- Asbestos containing roofing and walling materials
- Lead paints and toxic glues or finishes
- Arsenic / toxic based preservatives. These are commonly used on timber / other exposed surfaces

4.4 Environmentally sustainable

When assisting communities with their immediate shelter needs it is important that the short and long term environmental impacts of our actions are taken into consideration. Negative impacts to the environment may have unexpected consequences - placing livelihoods at risk, or increasing the risk of future hazards (such as the increased risk of landslides as a result of forest clearing).

The massive scale and short time frame of large shelter programs create a great potential for negative environmental impact. What may seem like an environmentally sustainable solution for one individual house, such as thatched roofing or sourcing local timber, can cause environmental devastation when undertaken for tens of thousands of shelters. Encouraging diversity in shelter solutions can reduce environmental impact. Wherever possible, shelters should use sustainably sourced materials, see section 3.12 on environment for further details. Where possible, shelter assistance should be reusable, resaleable, recyclable or biodegradable. See section 2.7 on the transitional shelter conceptual framework.

Resources are only renewable if they are actively renewed.

Sustainability checklist	
The option I am choosing	Samples
Reduces the use of non-renewable resources	• Choose fast growing plantation timbers or bamboo over old growth forests • Encourage the use of recycled materials
Reduces the use of non-renewable energy	• Use locally available materials in preference to those bought from afar
Reduces impact on biodiversity	• Choose certified sustainably sourced timbers • Negotiate with communities and government on where to get sustainable resources
Reduces the use of materials that are far from the natural bio-cycle	• Reduce the use of plastics, paints and non- biodegradable chemicals where possible

4.5 Adequately durable

Tenure

It is important to ensure that families provided with shelter assistance have the right to stay in their shelter until a suitable alternative becomes available. Having permanent official tenure, however, is not a prerequisite to receiving assistance as the right to receive aid is one of the core humanitarian principles. Those who did not have adequate security of tenure before a disaster are often amongst the most vulnerable and the most in need of humanitarian assistance after a disaster.

Permanent tenure is often unclear and across many countries, a large proportion of the population lives on uncertified land or without clear contractual arrangements. Assistance in the form of advocacy for permanent or at least temporary right of tenure can become an important part of a shelter program. Where the only option is a temporary right of tenure, good agreements are those that cover a suitable period of time to allow for permanent solutions to be put in place with some built in leniency in case of delays in reconstruction efforts.

Quality of materials

The selection of quality materials will ensure that the shelter assistance provided maintains sufficient structural integrity for its expected period of occupancy. The distribution of more durable products that can be reused, sold or relocated may assist a family in their transition to permanent shelter; though this has to be balanced against speed of implementation and overall cost.

To ensure quality of materials is appropriate, it is good practice to work with communities and local technical experts to define minimum specifications and simple quality control checks. Where community based procurement (see section 12.3 for additional information on community based implementation) is used, there may be a need for training householders on material quality or working with suppliers to ensure minimum standards are adhered to.

Durability

When providing shelter assistance, the durability of materials should be taken into consideration. Durability may depend on material selection, quality of materials, design considerations and quality of construction. Assistance provided should be designed to last for as long as it will be required by the affected family prior to achieving permanent safe housing. Where this is not possible, multiple stages of assistance may be required over time.

Maintenance strategy

Where occupancy of shelters is expected to be for a prolonged period, it is important to work with community members and technical experts to design a maintenance strategy. To be effective, such strategies should use local materials and skills. They should be cost effective, well documented and ideally maintenance strategies should be developed by the community themselves.

Shelter construction: timber frame with wire mesh and plastering

Photo credit: Build Change

4.6 Culturally appropriate

What is considered as adequate and appropriate shelter in one culture will not be the same in another culture. This can include attitudes towards the daily use of a shelter, roles in construction, use, maintenance, hazards, risks, climatic adaptations, privacy, and the significance of particular materials / architectural expression amongst others.

The skills, desire and ability to build in a particular style or material will also vary from community to community. For instance, bamboo shelters may be culturally appropriate in one area, while in a neighbouring community they may not be perceived as adequate for shelter. Hip end roofs may be considered culturally strange and complex to build in one area, and only a few hundred kilometres they might be considered standard construction.

This not only applies to building materials and construction typologies, but also cultural norms and social activities, that can vary hugely across different countries, regions and areas, and will change the effectiveness of particular shelter modalities. The modality of implementation, for example. whether to use community voluntary service or individual approaches, work with contractors or through cash grants or vouchers, will also depend on the local context and community capacity.

One disaster response may include a range of culturally diverse groups with differing needs based on cultural or religious practice. To ensure culturally appropriateness of shelter interventions, it is important to **involve the affected population at all stages of the design and implementation process**. Socio-cultural assessments can form an important part of the shelter needs analysis process.

The more the community is involved in the design process, and the selection of materials, the more likely it is that the shelters will be culturally adequate.

Private space for conjugal rights, to change clothes, sleep and wash can be an important safety and protection issue.

Sphere Minimum Standard for Shelter, Settlement and NFIs also provides a useful checklist (Sphere Standard 3, Appendix 1).

Cultural consideration checklist	
Is the shelter assistance culturally acceptable and appropriate?	
Sleeping arrangements	• What are the usual sleeping arrangements? • Do men and women, children and adults commonly share sleeping space, or are they seperated? • Are separate rooms required for sleeping?
Food storage and preparation	• Are kitchen areas commonly inside or outside? • How much physical space is required for food storage and preparation activities? • Do people require separate space for eating? • Do people commonly eat together or alone?
Privacy for all family needs	• How space is commonly arranged for sexual relations between husbands and wives? • Do any groups or individuals (e.g. women, men elderly, youth, boys, and girls, those with disabilities or special needs) in the household require separate space for any of their activities?
Latrines, washing and cleaning	• Are there any taboos associated with the positioning of private or communal latrines, washing and cleaning facilitates? Are there religious / cultural considerations for the direction or placement of these services? • Do communities accept communal washing and cleaning facilities? • How are services maintained and cleaned?
Religious activities	• Do religious activities take place in the private home or communally? • Do religious activities require separate space? • Are there any taboos associated with the positioning of space for prayer / religious activities? • Are there any religious taboos associated with specific rooms in the house (e.g. kitchen, latrines, washing and cleaning facilities)?
Cultural activities	• Do household comprise of the nuclear or extended family? Where do young adults live before and after marriage and/or children? • How are people in need of special care (elderly, ill, people with disabilities) cared for?
Socio political structure	• Who are influential leaders or agents of change within the community? • What are the degrees and modes of social and cultural interaction, social networks and social support? • How to keep social fabric and community organisations as intact as possible? • What is the level of trust, reciprocity and social cohesion?
Building materials	• Which local construction materials are traditionally utilised or favored? • Are proposed materials suitable to the cultural context?
Shelter design	• Are there spiritual, customary or ancestral values to be taken into account in terms of siting and design? • Would traditional designs help promote heritage and ecotourism in the affected area? • Does the design need to incorporate space for commercial / livelihood activities? • Does the design allow home access for disabled / elderly family members (if assessed)?

4.7 Climatically suitable

One important consideration in ensuring that shelters are adequately comfortable is the effect of the climate on the choice of materials and design. Regional variations can be considerable and may impact greatly on the comfort of those living in post disaster shelters and hence their shelter assistance needs. As some families may need to occupy their shelter for more than one year, make sure to consider the climate suitability of the shelter for all seasons of the year.

Distance and height from the sea

The mass of the sea acts has a stabilising influence reducing the amount temperatures fluctuate from day to night. The further an area is from the sea both in distance and height will increase how much the temperature will fluctuate between day and night. Communities living on the slopes of a mountain face cold nights and hot days compared to the more stable coastal climate.

Distance from the sea may also affect durability of materials. Salty breezes will rapidly corrode metal frames, exposed rebars, and help breakdown substandard concrete, etc.
The use of beach sand in construction can also cause a quick breakdown of materials, due to the high level of salts present.

Distance from the equator

How far a location is from the equator or the poles will affect how much the temperature varies from season to season. Seasonal variations, fluctuations in temperature and weather patterns can drastically change shelter needs and need to be taken into consideration when determining appropriate assistance types and implementation modalities.

Climatic consideration checklist	
Does the shelter have adequate climatic features for the particular climate	
Weatherproof	• Strong enough to withstand wind and rain expected in the area (see section 15.4 and 15.5 on bracing and tie down) • Adequately waterproofed for forecast level of rain • Adequately insulated for expected cold of night • Adequate slope away from the edges of the building • Reduce standing water near the building and ensure adequate runoff to reduce mosquitos / vector borne diseases.
Light and ventilation	• Adequate ventilation and light control to enhance cooling breezes on hot days and block them off on cold nights. Verify annual wind direction information before placing openings. • Openings should make up approx. 5-10% of the wall area
Shade	• Adequately sheltered from east and west so as not to overheat • Are there adequate outdoor shaded spaces for essential activities?
Ceiling height	• Is the ceiling high enough to reduce the effect of radiant heat from the roof and allow for adequate ventilation? (commonly min 2.4m at walls)
Eaves	• Sufficient eaves to shade and protect the walls from excess rain and sun. This needs to be balanced against potential uplift forces from the wind (uplift loads increase with the size of the eave). • In heavy rain / cyclone areas there will be additional uplift forces on the eves. Additional protection measures from the weather may be needed. • (Commonly 1/3rd width of wall height, varies on forecast wind and rain)
Roof pitch	• Roof pitch needs to be steep enough to rapidly shed rain but shallow enough to prevent excessive wind load. (Min and Max Pitch depends on roofing materials but is commonly 20-25 degrees. Below 10 degrees is generally unsuitable for tropical areas and above 27 degrees is generally unsuitable for high winds)
Clothes and bedding	• Does the bedding include protection from adverse ground temperature? • Is there sufficient and appropriate bed covers and clothes for the climate? • Are there additional considerations for mosquitos and vector control? Are bed nets needed?

4.8 Adequate facilities

The Sphere Standards sets a minimum standard for covered living space as:

> ***"… sufficient covered living space provides thermal comfort, fresh air and protection from the climate ensuring privacy, safety and health enabling essential household and livelihood activities to be undertaken."***
>
> *- Sphere Project, 2011, The Sphere Handbook (Shelter and settlement standard 3)*

The amount of space required for a shelter to be adequate for the needs of the affected family may vary greatly depending on a range of considerations that have been discussed in this chapter of the shelter guideline. In the emergency phase of a disaster response where many of the above factors are still unclear, sphere provides a minimum indicator of 3.5m2 per person. This is an indicator only, and may vary to meet local conditions and operational realities.

Water Sanitation and Hygiene (WASH)

The provision of WASH facilities is commonly handled by specialist WASH teams, hence not usually the responsibility of a shelter program. It is however important that shelter programs and WASH programs are well integrated to ensure that shelters are fit for human habitation and safe from risk of vector borne disease spread.

Coordination of shelter, non-food items (NFIs) and WASH is an important consideration. Many tools and materials used to build shelters may be the same materials or tools used to build WASH facilities. NFIs distributed to ensure minimum standards of shelter may overlap with NFIs provided to achieve minimum WASH standards. A coordinated and integrated approach can ensure that the most appropriate NFIs are provided at the most appropriate time. Coordination is particularly important where WASH and Shelter assistance are provided by separate agencies.

Common WASH / shelter crossover items		
Non-food item	WASH usage	Shelter usage
Demolition, digging and cleaning tools and equipment	General clean-up, well and septic clearance and drainage	Clean up from disaster damage and demolition of dangerous house remnants
Construction tools and materials	Construction of Sanitation facilities	Shelter and house construction
Mosquito nets	Vector control as part of hygiene promotion activities	Vector control as part of bedding distributions
Water collection and storage containers	Clean up, water collection carrying and storage	Clean up and cement and concrete manufacture

Cooking

Cooking is an essential part of the daily function of a home, hence ensuring that families have the tools, fuel (with dry / safe storage options), and equipment to cook is the responsibility of shelter providers. Cooking and serving equipment such as: pots, bowls, cups, pans spoons and forks are commonly distributed non-food items. The way people cook is greatly influenced by culture and religion. Ensuring that the cooking NFIs supplied accurately match needs can be achieved through including representatives of the affected population at all stages of the selection and specification process.

Cooking fuel is also an important consideration; this is of particular concern in urban disaster and disasters where people will be displaced into one dense location for a prolonged period

IFRC Kitchen Set

Sleeping

Having somewhere safe and comfortable to sleep is an essential feature of a home and therefore an important part of shelter assistance.

It is important to consider what sheets and blankets are culturally and climatically appropriate, as well as ensuring thermal protection from hot or cold ground, and to consider mosquito nets in dengue and malaria prone areas.

IFRC Woollen Blanket

IFRC cotton blanket

4.9 Access to services

Refer to: + *Case Study 25: MYANMAR / 2014 - 2016 / Conflict*

Shelter solutions offered by the humanitarian community are sometimes abandoned by communities simply because they do not support access to external services that are needed to carry on their daily lives. Sphere standards state that adequate shelters provide:

> ***"... safe access to healthcare services, schools, childcare centres and other social facilities and to livelihood opportunities".***
> - Sphere Project, 2011, The Sphere Handbook (Introduction)

Ensuring access to all these services for affected populations can be a difficult task and may be beyond the capacity or budget of one shelter program. Shelter programs in response to disasters are unlikely to include all of the above components. It is important for shelter programs to coordinate well with government, local communities and other stakeholders and advocate for the needs of the affected population. Assisting families and communities to overcome access issues may be key to their ability to self-recover.

> ***When designing each component of a shelter program, copy the concerns in the checklist and create your own list of the access concerns of the affected population and the actions that can be taken to assist them.***

NOTES:

- Access issues are of particular concern where temporary or permanent relocation occurs. Assisting local communities to participate in the selection of relocation sites and assisting government to identify potential issues can greatly alleviate unnecessary hardship.
- Consider access issues in host family programs as families being hosted may be quite dispersed and potentially far from their original locations.
- Mass displacement to any one area may mean that existing services simply cannot cope with the new influx of displaced people. In these situations, shelter teams may need to work with other sectors to ensure that access needs are met.

Access checklist		
	Concern	Possible actions
Schools	• Are schools occupied by displaced people and if so what are the alternatives? • Have the access needs of all levels of education from kindergarten to university been taken into consideration? • Do vulnerable populations have safe and adequate access to schooling? • Are there additional cultural or gender considerations for schooling?	• Work with the department of education and the education cluster to determine education options • Identify through assessment which beneficiaries are studying and check on their access issues • Work with communities, government and other agencies to address the additional financial impact on the education needs of the affected population
Health facilities	• Can all members of the affected population access adequate health facilities to address their health issues? • Can affected families access family members or community who may be temporarily or permanently interned in a health facility? Are additional facilities, services or space needed to cater for these family members? • Are health services free? If not, how will they be paid?	• Work with government, clusters and other agencies to determine how the health care access needs of communities can best be addressed • When designing temporary relocation facilities ensure adequate space for temporary health facilities • Ensure an adequate number of female and male staff, particularly when there are cultural circumstances where it is not appropriate for men to treat women and vice versa • Ensure there is adequate signage / symbols indicating the location of nearby health care facilities
Public transport	• Have public transport facilities or routes been changed due to the disaster? • Are shelters located with access to public transport? • Are transport access points safe? • If communities have been relocated, do they still have access to livelihoods?	• Assist communities to form transport pooling groups • Work with local transport providers to develop new routes or services • Negotiate and advocate with government or other agencies for transport support

Government services	• Can the affected population access all standard government services? • Do they also have access to particular services that have arisen as part of the response, such as being listed for entitlements?	• Work with community and government to identify which services the affected population may need to access and how best they can be accessed. • Ensure there are 2 way communication channels for coordination between government, organisations, clusters and the affected community, including sharing program details and information
Livelihoods	• Do communities have access to both formal and informal employment and other livelihood opportunities? • Do communities have access to a range of suitable alternatives livelihoods to replace no longer viable options? • If communities have been relocated, do they still have access to livelihoods?	• Do communities have access to both formal and informal employment and other livelihood opportunities? • Do communities have access to a range of suitable alternatives livelihoods to replace no longer viable options? • Include livelihoods questions in assessments to gain an understanding of past and present livelihoods • Work with communities, government and other agencies to look at alternative livelihood sources • Design programs so that shelter programs themselves create and support new livelihood opportunities • Work with employer and employee groups to find solutions for the affected population
Agricultural land	• Does the affected population have adequate access to maintain their crops and agricultural resources? • Are access routes available for harvested crops to reach market?	• Work with government, clusters and other agencies to determine land for agriculture or transport solutions • Where longer term relocation occurs consider including small agricultural solutions such as kitchen gardens in shelter programs

Religious facilities	• Are all religious groups able to access the religious facilities that they require? • Ensure access considerations have been made for different ages, gender, and marginalised groups • Are all religious groups being provided with equal and appropriate support to carry on their religious traditions?	• Include religion in demographic analysis of assessments and work with communities to determine if all religious groups needs have been serviced. • Assist affected population to communicate with their religious organisations to seek solutions for access to appropriate religious facilities • Ensure that relocation areas have sufficient space for suitable religious facilities

2013, Jakarta Flooding, Indonesia

PMI evacuation

Photo credit: PMI 2013

Further information - Access to services:

Asian Disaster Preparedness centre, 2005. Design and construction of housing for flood-prone rural areas of Bangladesh.

IFRC, 2011. Shelter safety handbook. Some important information on how to build a shelter

IFRC, 2003. Water and sanitation policy

Rumöh Löen DW, Löen Syurga, British Red Cross, Palang Merah Indonesia. Antiseismic basic guidelines.

NRC/Shelter Centre, 2011. Urban Shelter Guidelines

5. Participation and accountability

5.1 Community engagement and accountability (CEA)

Refer to:

- *Case Study 09: INDONESIA / 2009 / Earthquake*
- *Case Study 10: INDONESIA / 2009 / Earthquake*
- *Case Study 27: PHILIPPINES / 2013 - 2017 / Typhoon*
- *Case Study 28: PHILIPPINES / 2013 - 2015 / Typhoon*
- *Case Study 29: PHILIPPINES / 2013 - 2015 / Typhoon*

Communities affected by disasters have a right to and should be encouraged to participate in all stages of their recovery, from the assessment of their needs, to the design and implementation of a response. Effective community participation should foster a feeling of ownership, providing communities the chance to make important choices to solve their own problems and rebuild their economies and social fabric. This process of involvement and participation also results in leveraging and strengthening social networks and social capital, which play a critical role in disaster resilience and recovery.

The aim of participation is not just to ensure that different demographic groups have a voice, but more importantly that this voice is heard and they are provided with the opportunity and encouraged to take part in making decisions which will affect their lives. If an affected population becomes passive beneficiaries of support and assistance, their dependency and therefore their vulnerability are further increased.

Participation should be core to humanitarian action, involving an ongoing process as a means to uphold human rights and improve assistance.

Within the design and implementation of a shelter program there is a distinct difference between meaningful participation and consultation. **Consultation is about obtaining the views of the community, whilst participation provides the opportunity for communities to promote their views and take ownership in decision making.**

It is commonly viewed within the humanitarian community that participation has a positive effect on humanitarian outcomes. Recognising existing social groups, participation and community involvement are considered fundamental to sustaining a well-functioning community, and different dynamics and social structures, determined in part by culture, beliefs, values and power relationships, shape these existing participatory structures.

Effective shelter programs have strategies for community participation that are tailored to the type of disaster, culture and socio-political context. Whilst always aiming for the highest level of participation possible, in many cases this will not be realistic or feasible. Therefore, communicating to the affected population the expected level of participation and clear details of what is to be achieved by all parties, best ensure maximum service delivery and success of shelter programs.

Having information is an important prerequisite for people to participate in their own recovery. Effective disaster response programs have established effective two-way communication systems that provide communities with information and opportunities to voice their opinions and concerns, e.g. about alternative shelter solutions, concerns about quality of shelter or lack of access to aid. This should include communicating the needs of the most vulnerable. Formal complaints and feedback systems are often instrumental to the successful implementation of a shelter program.

2017, Papua New Guinea
PASSA activity workshop
Photo credit: Fabian Prideaux

Shelter checklist: Community engagement and accountability
Potential Shelter Actions
Systems for community engagement and accountability are integrated into the design and implementation plan of shelter programs to ensure participation, transparency, ownership, mitigation of conflicts and effective implementation: • Effective beneficiary communication goes beyond one-way sharing of information, and instead forms a two-way dialogue with the affected population • Actively engage communities in all shelter activities • Develop community engagement and accountability with participation of stakeholders that ensures that women, men and the most vulnerable receive information and have safe opportunities to voice their concerns • Select context appropriate technologies and ways of communication • Use several communication channels, and link these to ensure that as many community members as possible are reached, and that communication is consistent • Be forthcoming and transparent about both positive and negative information, which will help build trust in the organisations • Develop appropriate confidential beneficiary feedback mechanisms including processes to ensure timely response • Establish formal complaints and feedback handling procedures that ensure safe, fair, timely response to community concerns • Establish reporting mechanisms that incorporate community feedback, with an active feedback loop that continually seeks to improve shelter activities and implementation practices

Further information - Community engagement and accountability:

IFRC, 2011. Beneficiary Communication and Accountability. A responsibility not a choice. Lessons learnt and recommendations. Indonesia. Haiti. Pakistan

IFRC, 2011. Beneficiary communication guide for the shelter cluster

IFRC, 2011. Beneficiary Communications Evaluation. Haiti Earthquake Operation 2011

IFRC, 2006. Working with communities: a tool box

IFRC, 2017. Community Engagement and Accountability Toolkit

IFRC, 2010. PASSA Toolkit

IFRC, 2017. PASSA Youth Manual and Toolkit

5.2 Coordination

Refer to:

- *Case Study 19: MYANMAR / 2012 / Conflict*
- *Case Study 24: MYANMAR / 2013 - 2016 / Complex / Coordination*
- *Case Study 27: PHILIPPINES / 2013 - 2017 / Typhoon*
- *Case Study 29: PHILIPPINES / 2013 - 2015 / Typhoon*

All humanitarian response requires good coordination to ensure the effectiveness, timeliness and efficiency of our work. This is just as true for shelter as it is for any other sectors.

Coordination can take a number of forms, depending upon the capacities of the local authorities, the scale of needs of the disaster-affected populations, and whether the emergency is caused by armed conflict or natural disaster.

Aims of coordination	
Shared needs analysis	To develop a common vision of what the affected population needs and how we can best assist
Developing common solutions	Design and agree on common solutions to the community's needs, including linking emergency shelter efforts to longer-term reconstruction and recovery programming
Reduce gaps	Between the assistance provided by different agencies, ensuring that some families don't miss out while others are assisted
Reduce overlapping	Ensuring that two or more agencies don't provide the same or equivalent assistance to the same families.
Increase efficiency	Sharing resources, knowledge, skills, ideas and capacities to improve our combined ability to assist
Ensure equitability	Ensuring that what is provided by one agency or in one area is of equal value or benefit to that provided by another agency or in another area
Accountability	Ensuring that the all planned activities and work completed can be held accountable to other agencies, actors, community and government
Transparency	Ensuring that the processes we use are transparent and public

Wherever possible, the national authorities can and should take the lead in coordinating the efforts of humanitarian organisations, in collaboration with affected communities who wish to help. However, if the nature of the disaster means that the national authorities need external coordination support, or if there is a need for additional funding sources which can only be triggered through alternative coordination mechanisms, then the national authorities and the UN resident coordinator in the country can call for the activation of a Shelter Cluster (as well as other Clusters to coordinate the responses for other key humanitarian sectors, such as WASH or Education). Additionally, in crises concerning only refugees, UNHCR may choose to activate a Working Group coordination mechanism, which shares many aspects of the clusters, but has UNHCR as the lead agency (rather than UNOCHA), and which has some different funding channels available.

Whatever the formal framework of the coordination, the key roles of the coordination team are:

1. Providing the space for all stakeholders to meet and discuss the shelter needs, response strategies, and appropriate technical interventions, through regular and accessible meetings, supported by a strong online presence
2. Highlighting both gaps in coverage and areas of over-coverage through information management, and in particular the collation of all partners' progress reports, and needs assessments
3. Leading discussions to develop appropriate technical responses, based upon the partners' experience in the field, and technical competence, through the convening of theme-specific technical working groups, and the channelling and highlighting of technical guidance resources from the global level
4. Coordinating responses with other humanitarian sectors, through participating in both inter-Cluster meetings, and participating in the writing of multi-sectoral funding appeals
5. Working with national and local authorities, to ensure that activities undertaken by Shelter Cluster partners as part of the Cluster strategy lay the foundations for long-term reconstruction and recovery, and by acting as advocates to the government for best practice in shelter programming.

Formal coordination may in reality occur at multiple levels and in multiple ways. This may include national, provincial, district level or even village level coordination meetings, departmental coordination meetings, inter-agency coordination or internal organisational coordination meetings. Shelter program representatives should also participate in coordination meetings with other sectors, agencies and a range of government departments. It is important to weigh up the multitude of coordination mechanisms that may occur and decide where

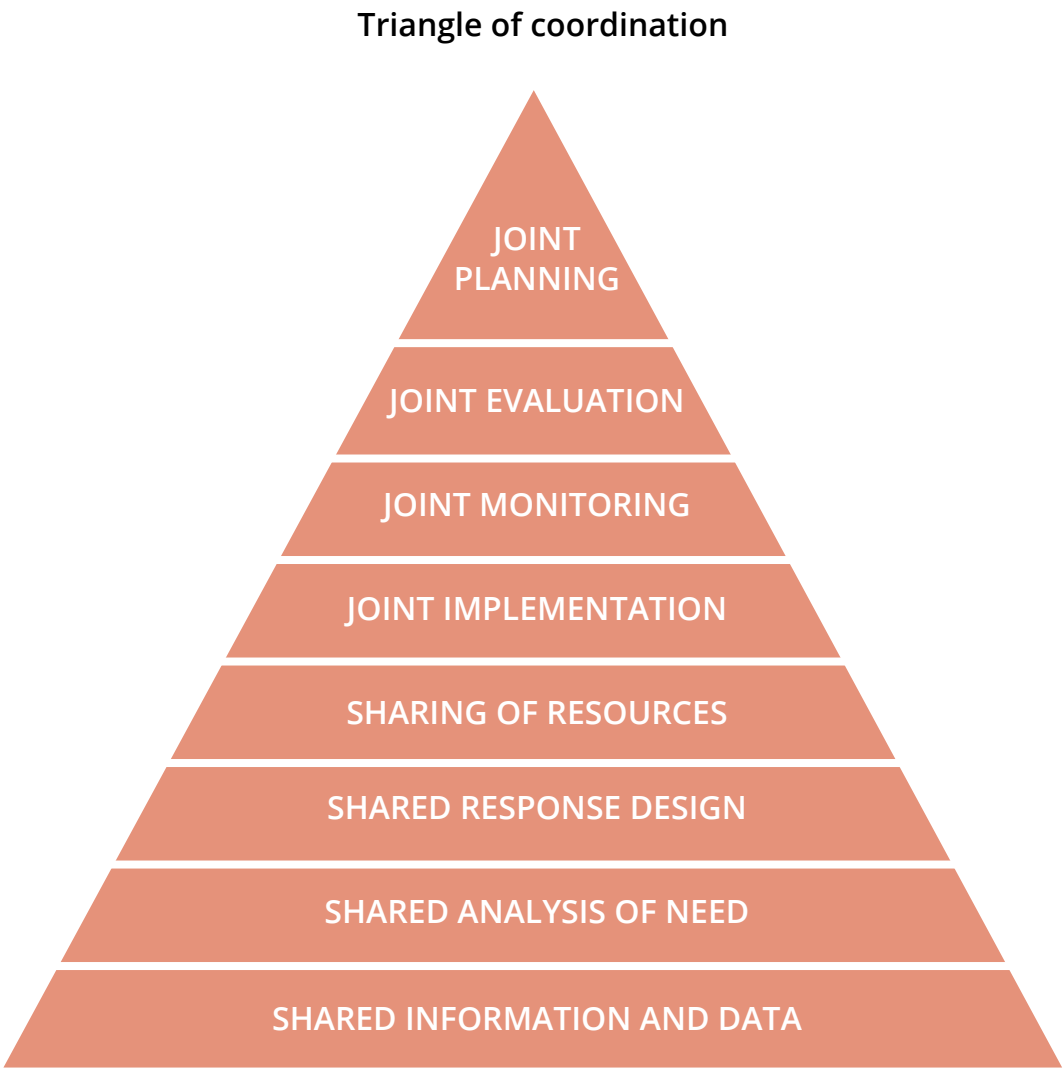
and how to focus coordination efforts, to ensure the best possible outcome for the affected population that we are there to support.

Where more formal coordination mechanisms are not yet in place or not appropriate for the issues that need to be discussed, informal coordination may also occur. Informal coordination may occur between different assistance providers at a local level, sitting together to ensure that the rainwater collections being designed by one agency fit well to the shelter structures being designed by another, or that the livelihoods programs one group are running can be incorporated as a supplier for another's program needs. Informal coordination meetings often develop to address conflicts or issues that occur that need to be handled with sensitivity and discretion. A remarkable amount of the coordination work of humanitarian responses may occur late in the evening at a local café, outside the governor's house, or under the shade of a tree in the field. The importance of these mechanisms to the success of our programs should not be overlooked.

Effective coordination requires:	**Tools used for coordination may include:**
• Commitment to the process • Clear agreed objectives and strategies • Agreed responsibilities • Good information exchange • Timeliness of activities	• Meetings • Maps • Websites • Mailing groups • Working groups • Social media and communication apps • Shared databases • Shared assessment, monitoring and evaluation tools • Shared simulations, trainings, or planning

Triangle of coordination

Note: Sharing information is the foundation of coordination, but also the lowest level of coordination.



Further information - Coordination:

IFRC, 2012. Shelter coordination in natural disasters

Global Shelter Cluster, 2018. About Us (overview of the Global Shelter Cluster, and its work)

5.3 Information management (IM)

Refer to:
+ *Case Study 18: THAILAND / 2011 / Floods*
+ *Case Study 30: PHILIPPINES / 2013 - 2015 / Typhoon*

> ***"Information management is an umbrella term for processes that take data in many different forms and transform them into the information and knowledge required for planning and implementing humanitarian action".***
>
> *- IFRC, 2012. Shelter coordination in natural disasters*

Information management is a critical component of any shelter program: without accurate information we cannot make intelligent decisions, without knowing the exact number of houses destroyed and where we can't know who needs assistance, without knowing quantities of materials used or shelters completed we cannot know progress. Data on its own, however, is not information; information is not knowledge, and knowledge alone does not provide us with the ability to act wisely. Information is, above all, a tool to inform decision-making. Information management is the continuous process of ensuring that accurately recorded and tracked data leads to wisely implemented decisions, ensuring the best outcome for the affected population.

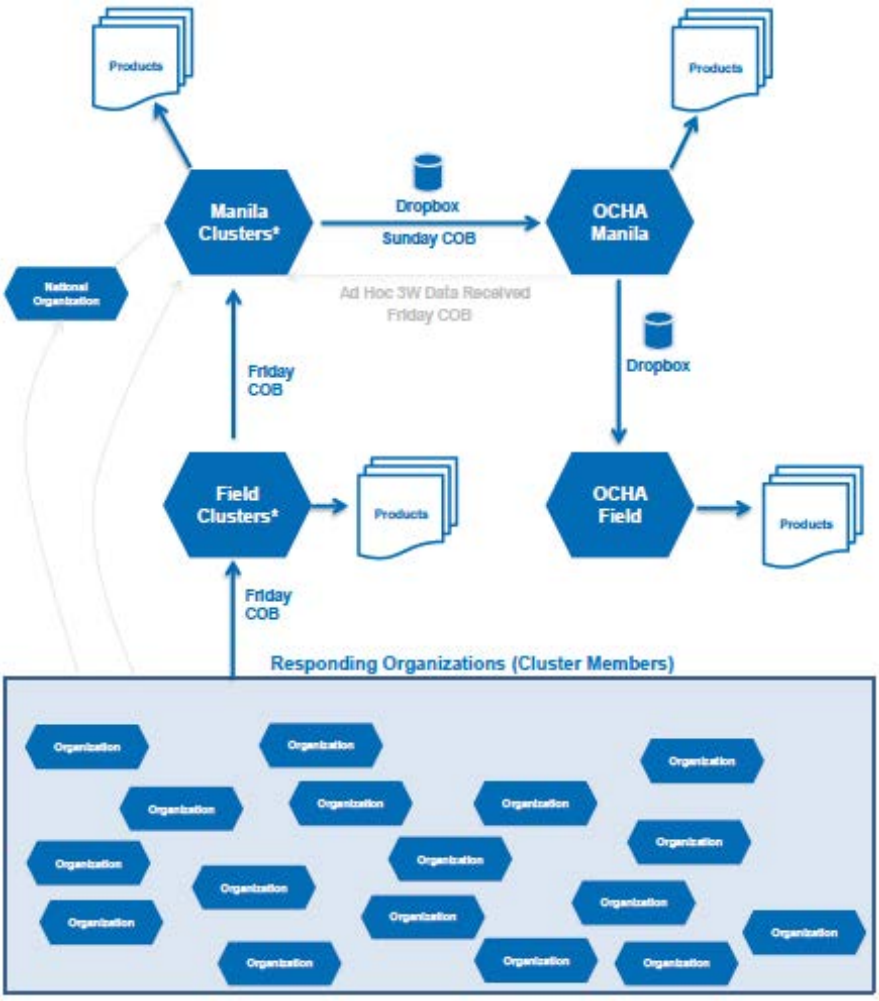
Information management cycle			
Collection provides DATA	Collation provides INFORMATION	Analysis results in KNOWLEDGE	Comparison to experience leads WISDOM
• Demographics • Damage • Risks • Actors • Beneficiary details • Costs and supply capacity • Environmental details	• What is damaged and where? • Who is doing what, where and when? • What resources and capacities are available? • How much have we completed?	• Where gaps are • How we might assist • How well communities are recovering • How well our programs are progressing	• What should we do next? • What should we keep an eye on? • What might go wrong? • What could we do better now or next time?

> ***Good information management ensures we act wisely.***

Information management in shelter programs begins with detailed data collection of shelter needs, market capacity and beneficiary demographics and progresses into ongoing monitoring of program progress, expenditure and rates of completion. Sources of 'baseline data', that is, data about how people were housed and earned a living before the disaster, are very important, but often difficult to come by in reality.

Common data collection tools include spreadsheets, databases and 3W's (Who does What, Where). 3W's or 4W's (Who's doing What Where and When) are simple tools that provide a rough overview of the operating presence within a response, potential gaps, overlaps and trends by sector and location. Further details of information management systems and procedures can be found in OCHA's Information Management Toolbox. The following diagram shows an example of the flow of data within the cluster system in the Philippines.

1



1 OCHA, 2014. OCHA Information Management Guidance for Sudden Onset Emergencies

The quality and accuracy of the data collected in the field directly determines the information that decision makers have and therefore the wisdom of their decisions. Good data management is essential to effective sheltering. The website www.sheltercluster.org is set up to manage information within the shelter and non-food item (NFI) clusters in an emergency, and is a useful information management platform and resource for context specific information and guidance.

2006, Jogjakarta Earthquake, Indonesia

Public information was a critical component of the project

Photo credit: IFRC

www.shelterprojects.org

Further information - Information management:

OCHA, 2017. Information Management Toolbox

OCHA, 2014. 3W Tool

DETERMINING SHELTER NEEDS

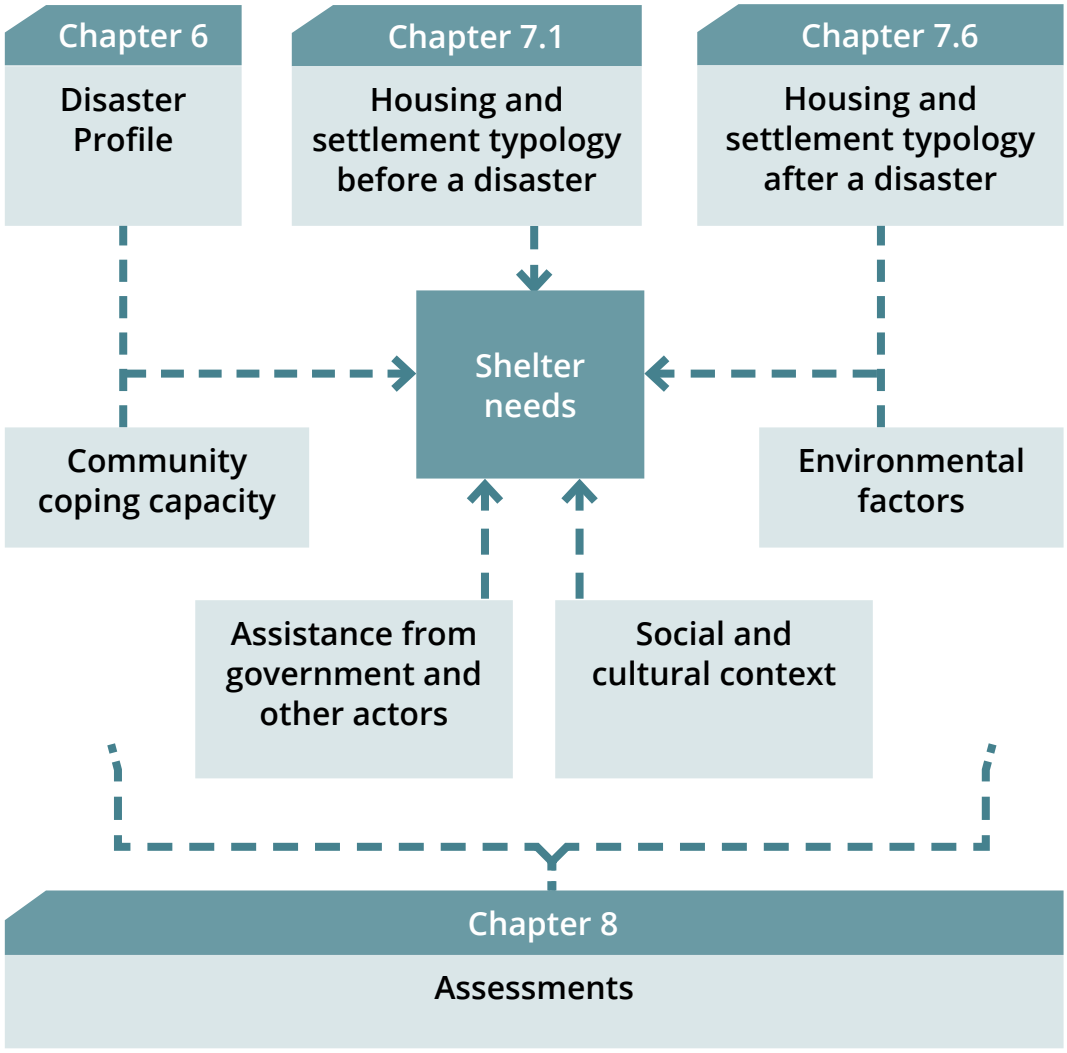
Pre and post disaster shelter conditions which impact effective program design. Understanding the provision of effective shelter must always be based on an assessment of needs.

Photo credit: Fabian Prideaux

DETERMINING SHELTER NEEDS

Any aid should be provided “solely on the basis of need”. This is just as true for shelter interventions as for any other form of assistance.

As shown in the diagram, a whole range of factors will influence the shelter needs of an affected population following a disaster.



6. Disaster profile

No two disasters are the same. Every disaster has its own unique profile. The profile of the disaster will directly affect the shelter needs of the impacted community. The following section of the guideline describes a range of factors that will be at play in determining the profile of any one disaster.

This chapter outlines key issues to be assessed to determine shelter needs to inform the basis of your shelter program design. The end of the chapter examines the basic elements of shelter assessments.

6.1 Natural disasters vs human-made disasters

Refer to:
+ *2.1 Shelter in the humanitarian context*
+ *Case Study 19: MYANMAR / 2012 / Conflict*

One division that may impact upon the affected population shelter needs is whether the disaster is natural or human induced. Rightly or wrongly, natural disasters such as earthquakes, tsunamis and volcanic eruptions are commonly seen as politically neutral, allowing greater space for unfettered humanitarian response. On the other hand, disasters induced by direct human action, such as industrial, technological and transport accidents, conflicts or food insecurity may come with political implications that limit humanitarian space.

The line between natural and human-made disasters is becoming ever more blurred. More and more natural disasters are brought on by climate change caused through human actions. In addition, increasing population density and rapid urbanisation - especially along coastlines or into ecologically fragile and risk-prone areas, means that natural and human-made disasters may overlap, merge or simply be hard to tell apart.

Whilst shelter needs will vary according to the nature of the individual disaster, the ways in which organisations are able to assist may be heavily impacted by whether the disaster is natural or human-made. At all times organisations should be guided by the humanitarian principles (See 2.1 Shelter in the humanitarian context), recognising that the humanitarian imperative comes first and assistance should always remain neutral, based on assessment of need.

Disaster profile - Natural disasters vs. human-made disasters		
	Natural disasters	Human-made disasters
Types	• Earthquakes, landslides • Tsunamis, volcanic activity • Landslides, floods • Extreme temperatures • Drought, wildfires • Tropical storms • Wave or tidal surges • Disease epidemics, insect / animal plagues	• Conflict or war • Geopolitical famine • Crop failure • Social or religious displacement • Industrial accidents • Transport accidents • Bushfires
Examples	• 2004 Indonesia - Aceh Tsunami • 2006 & 2011 Indonesia - Merapi Volcanic Eruption • 2009 Indonesia - Sumatra Earthquake • 2008 Myanmar - Cyclone • 2009 Vietnam - Multiple Typhoons • 2010 Indonesia - Mentawai Earthquake • 2011 Thailand - Floods • 2013 Philippines - Cyclone Haiyan	• 2014-16 Myanmar - Inter-communal violence, Rakhine • 2015 Indonesia - Sumatra, Bushfires due to illegal logging practices • 2018 Bangladesh - Rohingya response

6.2 Shelter as a response to armed conflict displacement

Refer to:
+ *Case Study 19: MYANMAR / 2012 / Conflict*
+ *Case Study 25: MYANMAR / 2014 - 2016 / Conflict*

Although there are cases of families being able to return back home only a few months after an armed conflict, it is more common for displacement due to armed conflict to last a number of years. Those who have been displaced by armed conflict may stay within their own country (as Internally Displaced Persons – 'IDPs'), or may be forced to cross international borders and seek asylum as refugees. In both cases it is likely that they will have experienced traumatic events, will be removed from their social and livelihoods networks, and may have brought few if any goods or resources with them. Whilst many families who have lost homes through natural disaster can and will start rebuilding on Day One after the disaster event, families who are displaced by conflict will always be imposed by questions about what is 'permanent' if they cannot predict when they will be able to go home.

For a few, the pathway to permanent housing will include being accepted into a local host community, putting down roots, and constructing housing there. For many others, whether they are renting apartments or resort to staying in camps or collective centres, the lack of permanency and the lack of predictability will always limit their ability to invest in their own housing and their own futures. Shelter programs will have to take in a number of considerations. Rental support to families allows them to live in towns or cities and take the first steps towards establishing livelihoods, and self-sufficiency. However, for families which need more time to establish themselves, such support may be seen as open-ended and costly. But building camps can also have significant recurring costs, also open-ended in nature, and may offer fewer opportunities for displaced families to become independent.

Further information -- Shelter as a response to armed-conflict displacement:

ICRC, 2018. In a Nutshell: Engaging with people affected by conflict and violence

6.3 Complex emergencies

Refer to:
+ *Case Study 19: MYANMAR / 2012 / Conflict*
+ *Case Study 24: MYANMAR / 2013 - 2016 / Complex / Coordination*

A number of countries across the world are at risk of complex emergencies – that is, more than one disaster occurring in the same region at the same time. Typically, this means a natural disaster occurring in the same region as a war or other form of armed conflict. But it can also include situations where a sudden-onset disaster (for instance, an earthquake) takes place in the same location where a slow-onset disaster (for instance, a famine or drought) had been occurring. This overlay of complex emergencies can often result in humanitarian organisations having to undertake emergency responses in locations with high levels of insecurity, or which are simply not accessible. There may also be repeated and unpredictable displacements of the affected population. With so much uncertainty and continued threat, it is likely that recovery and the establishment of durable housing solutions for much of the affected population will be delayed. The impact of complex emergencies may accelerate or increase the rate of population migration into major cities, and humanitarian responses will need to follow this trend. In some countries, during complex emergencies, governments have tried to concentrate populations displaced by the natural disaster into camps, 'for their own safety'. This should be strongly rejected by humanitarian organisations, especially if there is any hint that any of the population are in fact being forced into camps against their will.

Further information - Complex emergencies:

ICRC, 2018. In a Nutshell: Engaging with people affected by conflict and violence

6.4 Rapid onset vs slow onset

Whether a disaster strikes a population suddenly or gradually, greatly affects the ability of communities to prepare and respond, hence, affecting how severely and in what ways their shelter needs are affected.

Disaster profile - Rapid onset vs slow onset			
	Examples	Common characteristics	Shelter considerations
Rapid onset	Flash floods Earthquakes Volcanic eruptions Tropical storms Tsunamis	• Limited time for preparation and emergency response • Higher likelihood of loss of household assets as there is no time to save them • Massive loss of life and injury as a direct impact of the hazard striking on or within the first few days • High initial media and political attention commonly fading with time	• The initial shelter challenge is often to rapidly provide emergency shelter • Temporary and permanent shelter programs require a strong focus on DRR and construction training • Likely to require high levels of NFIs to replace household assets
Slow Onset	Social conflict Slow onset flooding Crop failure Drought Disease spread	• Loss of life, commonly increasing slowly over time. • Temporary or permanent relocation as families choose to move to areas which are perceived as safe • May involve a range of secondary hazards, such as disease caused by poor nutrition from drought • Commonly underfunded and under prioritised, with lower media or political attention	• May involve considerable loss of household assets through sale or abandonment • May result in a mixture of permanent and temporary displacement • Greater disparity in impact between the rich and the poor • Reduced coping capacity for vulnerable members of society

6.5 Type of disaster

There are various types of disasters Whether a disaster strikes a population suddenly or gradually, greatly affects the ability to prepare and respond, hence affecting how severely and in what ways their shelter needs are affected.

Disaster profile - Types of disaster	
Type	Characteristics (with a focus on shelter)
Floods and flash flooding (rapid or slow onset)	• Most common cause of displacement in Indonesia • Displacement is often only temporary • Some communities may require permanent relocation • Common cause of displacement across ASEAN member states • Displacement is often only temporary • Some communities may require permanent relocation
Tsunami (rapid onset)	• Large scale high level devastation and loss of life • Loss of skilled labour • Limited access to shelter materials and thus damage to the supply chain • Commonly very graphic and visual so high media attention and therefore funding • High loss of household goods and lack of reusable material • May involve temporary and/or permanent relocation • Often results in significant changes to the actual coastline and the coastal environment
Volcanic eruption	• Likely to involve low loss of life as there is usually time for evacuation • Devastation can be very sporadic across the affected population, varying from complete loss of home and land to dust and ash damage • Often involves a combination of temporary / permanent relocation
Earthquake (rapid onset)	• Largest cause of permanent loss of shelter in Indonesia • Prone to causing large scale permanent, partial or complete shelter damage • Usually potential for reuse of construction materials
Landslide and land slippage (rapid onset)	• Small geographical scale, though in dense areas may cause mass displacement • Commonly requires permanent relocation and ensuing land tenure issues • Commonly rapid onset
Drought or crop failure (slow onset)	• Often leading to families relocating to be closer to assistance • Often little or no housing damage • May result in loss of household assets through sale or abandonment

Disease spread or epidemic (slow onset)	• Often leading to families relocating to be closer to assistance • Often little or no housing damage • May result in loss of household assets through sale or abandonment
Tropical storms, cyclones or tornadoes (rapid onset)	• Commonly resulting in damage to roof structures • Unrepairable structural damage or destruction of homes is rarer, though may occur • Families often seek refuge in collective centres / evacuation centres or with host families • Can lead to high level of loss and damage to household goods
Forest fire (slow or rapid onset)	• May lead to total loss of house and household goods • Commonly short term displacement
Insects or animal plague (slow onset)	• Often causing secondary hazards such as food shortages and spread of disease • Often leading to families relocating to be closer to assistance • Commonly little or no housing damage • May result in loss of household assets through sale or abandonment
Conflict and war (rapid or slow onset)	• May lead to permanent or temporary displacement • All levels of social function may be disrupted • High levels of psychosocial trauma across communities • High trauma • Housing damage can be severe • Assistance can be difficult to provide
Industrial accident (rapid or slow onset)	• May lead to permanent or temporary displacement • Needs are hard to predict as the exact nature of the event can vary greatly • May result in loss of household assets through sale or abandonment • Complex political / legal battles may make it difficult to assist

6.6 Urban vs rural

Refer to:
+ *Case Study 16: PHILIPPINES / 2012 / Cyclone*
+ *Case Study 21: PHILIPPINES / 2013 /Typhoon*

Disaster events in urban areas bring increased complexity and pressure from a multitude of stakeholders, while disasters in rural areas may suffer from difficult access and poor flow of information. In urban areas, the presence of multi-storey and multi-unit housing, chronic problems with security of tenure, and the higher costs and time delays in reconstructing in 'urban' materials such as reinforced concrete means that full recovery may take many years – much longer than is typical after a rural disaster. There may be less community solidarity in urban areas – or else the 'community' may not be based on physical location but may actually be a subset of the population such as taxi drivers working in one depot. Members of communities in urban areas may therefore be living far away from each other in different parts of the city, rather than all living in the same street in a community where people are nearby to help each other out. The complex livelihoods economies in urban areas may mean that people have less time to devote to their own shelter and housing needs, and the more complex, professionalised designs of much urban housing may mean that fewer people have the competency to make a significant labour contribution.

Disaster profile - Rural characteristics
• Often greater distances from capital cities, national politics, and NGOs' national headquarters, signalling a disconnect from other communities, both before and after the disaster • Damage, and post-disaster displacement patterns of families may be dispersed and sporadic, increasing assistance costs • More access to natural resources for reconstruction, and high risk of environmental degradation and damage • Damage to water supply or loss of crops, leading to lack of food security • Lower access to health facilities, placing vulnerable members of society at more risk • Reduced access to information • Less likely to have skilled professionals, such as architects, engineers and universities to draw upon • Typically weaker and single-channel existing logistics pathways • Land rights, security of tenure, and civil documentation can be major issues, especially for the poor

Disaster profile - Urban characteristics	
Issues to consider	
Geographical features	• Limited available land especially when multiple storey residences have been destroyed • Land rights, security of tenure, and civil documentation can be complicated and unclear • Pre-disaster residency and actual effect of the disaster upon all claimants can be more difficult to determine, especially for those claiming that they have lost housing in informal settlements or slums without any documentation • Rubble may impede access • The only spaces available for shelter after a disaster may be buildings or spaces which are contested and needed for other purposes, e.g. schools or sports grounds • Commonly urban centres have strong and diverse existing logistics pathways
Labour considerations	• More skilled professionals, such as architects engineers and universities to draw upon • Residents may have limited construction skills, more commonly hiring in construction workers • Workers from other regions of the country may travel to the disaster-affected city during the construction phase looking for work, creating social tensions and competing for jobs with the local population
Likely secondary hazards	• Higher potential for mass social conflict • Increased risk of epidemic and disease • Increased dependency on food and water aid
Resource considerations	• Limited access to natural materials or resources, meaning dependency on earning livelihoods and buying goods and services • Mass media and other communications platforms are more easily and instantaneously accessible to a much larger population
Social considerations	• Higher access to information and media • A wide range of potential actors • Social networks can be more workplace or school based rather than neighbourhood • Higher media and political attention
Institutional and legal considerations	• Complexity of multiple stakeholders, legal frameworks, building regulations, etc.

Disaster profile - Urban disasters	
Possible solutions	
Shelter programs may include:	• Rubble clearance programs • NFI distributions and WASH facility upgrades to public buildings and collective centres • Increased sanitation training • Skills training and or bringing in skilled labour • Market reinvigoration programs • Negotiating with government and landlords • Housing rental and or relocation assistance • Host family support programs • House renovation and structural assessment / advice programs
Best practice in dense urban response requires:	• Contingency Planning and Disaster Preparation • Higher levels of coordination and communication with multiple stakeholders.

Earthquake, Indonesia, Padang, West Sumatera – 2010

Collapsed building due to the Sumatera Earthquake. The Indonesian government estimates that the earthquake caused significant damage to around 4,000 buildings

Photo credit: Technical Support Team of the Rehabilitation and Reconstruction, BNPB

Further information - Urban vs. rural:

IFRC/SKAT, 2012. Sustainable Reconstruction in Urban Areas

NRC/Shelter Centre, 2011. Urban Shelter Guidelines

7. Housing and settlement typology

7.1 Housing and settlement typology before a disaster

The way people are housed prior to a disaster directly affects their shelter needs when a disaster strikes. This will also indicate the most appropriate type of assistance that will support their journey of recovery.

A displaced family that rented an apartment prior to the disaster may be forced to move elsewhere in search of alternative rental accommodation. A family whose privately owned home was destroyed may choose to stay and reconstruct. All too often shelter assistance programs focus solely on the needs of owner occupiers as they are often the easiest to assist both legally and practically.

Pre-disaster housing typology can be broadly broken down into nine categories:

Housing occupancy types		
Occupancy status	Single occupancy (house or duplex)	Multiple occupancy (apartment, hotel, boarding home, shopfront)
Owner	Owner in a single occupancy dwelling	Owner in a multiple occupancy dwelling
Tenant (Rental)	Rental agreement in a single occupancy dwelling	Rental agreement in a multiple occupancy dwelling
Unclear or informal	Unclear or informal status in a single occupancy dwelling	Unclear or informal status in a multiple occupancy dwelling
Illegal	Living illegally in a single occupancy dwelling	Living illegally in a multiple occupancy dwelling
Other	Homeless	

7.2 Multi-storey housing

Refer to:
- *7.1 Housing and settlement typology before a disaster*
- *Case Study 21: PHILIPPINES / 2013 / Typhoon*

Disasters in densely populated urban areas bring a new layer of complexity to disaster response. When high-rise dwellings such as apartments, flats and condominiums are destroyed or badly damaged the footprint of the building and adjoining land is unlikely to be sufficient to house the affected families (during the emergency response phase).

7.3 Land status vs occupancy status

Differences in housing typology will change the type of shelter assistance best able to assist an affected family. They do not however change a family's right to receive assistance.

It is important to note that the legal status of a family's dwelling may be completely different to that of the land on which the dwelling is built. A family may live in a house that they have purchased that is built on land that they have no formal right to occupy Alternately, they may formally rent a house built on land where the ownership is unclear or informal.
This important factor adds a three dimensional level of complexity to the above table that can greatly affect both a family's entitlement to post disaster housing assistance from the government and the ways in which humanitarian agencies are best able to assist them.

Further information -- Land status vs. occupancy status:

UN HABITAT, 2010.Land and natural disasters. Guidance for practitioners

7.4 Housing, land and property (HLP) and security of tenure

Refer to:

- *Case Study 16: PHILIPPINES / 2012 / Cyclone*
- *Case Study 20: PHILIPPINES / 2012 / Typhoon*
- *Case Study 26: PHILIPPINES / 2013 / Typhoon*
- *Case Study 30: PHILIPPINES / 2013 - 2015 / Typhoon*

Often the greatest barrier for families wishing to rebuild a home after a disaster is not the materials, labour or other physical resources, but the lack of documentation or proof that they are actually permitted to occupy the land. Families who have lived informally in a place for generations without any occupancy documentation may be displaced by the disaster, but then prevented from returning by others who claim the same land. Even families who have had documentation proving their right to stay in a place, may have lost that documentation when their house was destroyed.

'Tenure' means the arrangements which families make in order to stay somewhere, without threat of being pushed off or being forcibly evicted. Humanitarians often refer to 'Security of Tenure' to talk about both the real levels of security a family has against being evicted or pushed out of a place, and about the family's own perceptions of how secure they feel from threat of eviction. This security can take many forms. Increasing, the trend is for families, especially in urban areas, to have their tenure made secure through paper documentation. This can be in the form of rental contracts or certificates and governmental registration of land and property ownership. However, a large percentage of families get their security of tenure from customary means: through verbal agreements, community understandings, or through the use of written agreements which are often not recognised in government offices. In some cases these customary agreements may be just as secure, and easier for families to get, than the written document versions.

After a disaster humanitarians may need to support families not only with physical reconstruction, but also with gaining or re-gaining the means to be secure in the tenure of their homes and shelters. Typically this programming is done by a combined team of those with shelter and legal backgrounds. Awareness of the potential types of disputes over land and security of tenure challenges must be included in both the needs assessments and the strategic planning for every humanitarian organisation.

Shelter support is often phased and incremental, starting off with emergency items, and then slowly moving to permanent repair and reconstruction. Providing support for security of tenure is also multi-stepped and incremental. Humanitarian organisations should take a 'good enough' approach. Initially working with communities to find agreements which can be secure enough but also quick enough to implement in the emergency phase, and then spending more time in the transition and permanent reconstruction phases to support families in accessing improved permanent security of tenure arrangements.

2007 Earthquake, Jogjakarta, Indonesia
Family and temporary shelter provided by PMI
Photo credit: IFRC / PMI 2007

Further information - Housing, land and property (HLP) and security of tenure

IFRC/NRC, 2013. Securing Tenure in Humanitarian Response

NRC, 2015. Securing Tenure in Shelter Operations

NRC/IFRC, 2016. The Importance of addressing Housing, Land and Property (HLP) CHALLENGES IN HUMANITARIAN RESPONSE

UN-HABITAT, 2013. Land and Natural Disasters. Guidance for Practitioners

7.5 Permanent vs. temporary displacement

The length of time and physical distance that a family is displaced will have a major impact on their shelter needs. Permanent displacement often means families are forced to start over in life, not just rebuilding and re-equipping their homes but also finding new schools and jobs, developing new friends and social networks. The more permanent and / or further the relocation, the longer it will take families to recover. In densely populated areas, relocation can also bring a range of complexities around land tenure and social acceptance.

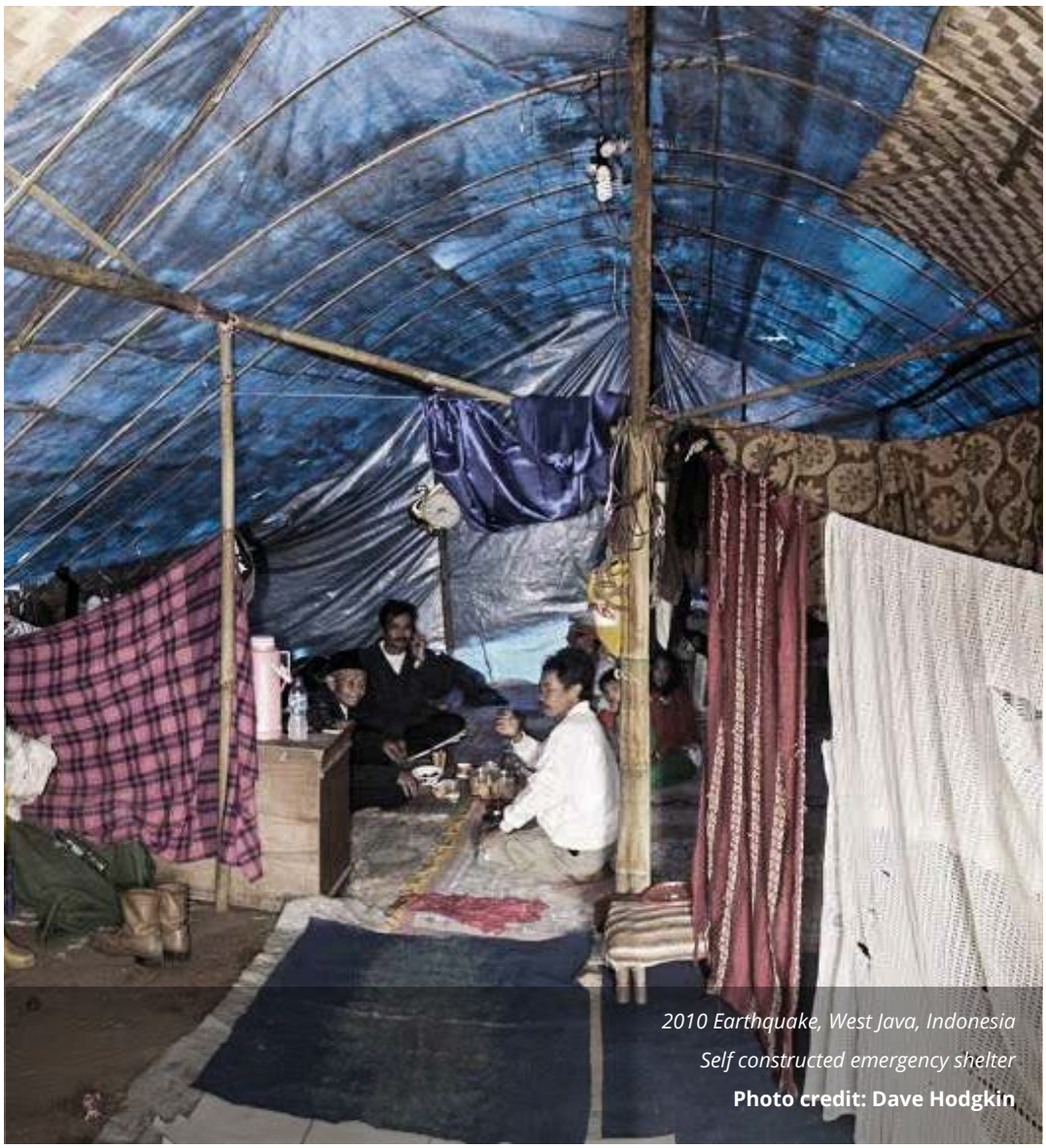
As the Sphere standards indicate, relocation should be avoided whenever possible. However, when displacement is unavoidable, it may be important for humanitarian agencies to provide shelter support to assist this process. Relocation assistance support may be in the form of: rental assistance, transportation assistance, advocacy for land tenure, replacement of household goods, training and technical advice, and socialisation support in the new location.

When possible, shelter assistance programs are designed to support early return. This should be based on detailed risk assessment and the implementation of appropriate risk reduction and disaster mitigation preparedness measures..

2011 Cyclone, Philippines
New relocation sites were planned in locations with lower cyclone risk
Photo credit: Mikel Flamm
www.shelterprojects.org

7.6 Housing and settlement typology after a disaster

In the immediate aftermath of a disaster, affected families may be forced to seek shelter through a range of options. Some may choose to continue to live in their partially damaged homes (if possible), whilst others may immediately relocate to a housing typology either temporarily or permanently. However, many will seek refuge in one form or another of shelter; either emergency, temporary, transitional, makeshift or another type of shelter.



2010 Earthquake, West Java, Indonesia
Self constructed emergency shelter
Photo credit: Dave Hodgkin

Post disaster shelter considerations		
Non displaced	Living in partially destroyed dwelling	• Engineering advice, relocation assistance or emergency repairs • Household NFIs to replace damaged items • Tools and technical advice for safe rubble removal and partial demolition • May need supplementary WASH/cooking items
	Emergency shelter on original site	• Tents, tarpaulins and NFIs • Tools and advice to demolish or make safe partially destroyed structures • Temporary shelter while they reconstruct • Assistance with WASH and cooking facilities
Displaced	Emergency shelter on different site	• Tents, tarpaulins and NFIs • Tools and advice to demolish or make safe partially destroyed structures • Temporary shelter while they reconstruct • Assistance with WASH and cooking facilities
	Relocate to standard dwelling types	• Relocation or rental assistance • Assistance to replace lost / damaged household goods (NFIs)
	Collective centres in public or private buildings	• Upgrading of WASH and cooking facilities • Emergency NFIs • Privacy barriers and safety boxes for personal goods • Assistance finding longer term solutions, including assistance to regain civil documentation, and for HLP rights • Assistance relocating or return • Access and transportation
	Formal camps	• Camp management and planning skills and advice • Tents, tarpaulins and NFIs • Assistance with WASH and cooking facilities • Assistance with access and transportation
	Informal camps	• Camp management and planning skills and advice • Tents, tarpaulins and NFIs • Assistance with WASH and cooking facilities • Assistance with transportation • Advocacy on right to use land
	Living with host family	• Relocation assistance • NFIs • WASH and cooking facility upgrades

8. Assessments

8.1 The assessment concept

Refer to: + *Case Study 22: PHILIPPINES / 2013 / Typhoon*

Assessments are central to all stages of participation, planning and coordination, and help ensure that the shelter assistance provided over time remains appropriate and in line with changing situations. They are commonly based on a vulnerability and capacity framework, determining whether a proposed shelter intervention is appropriate for the context, taking into consideration existing and potential vulnerabilities, in addition to the existing capacity in the communities to cope with the disaster.

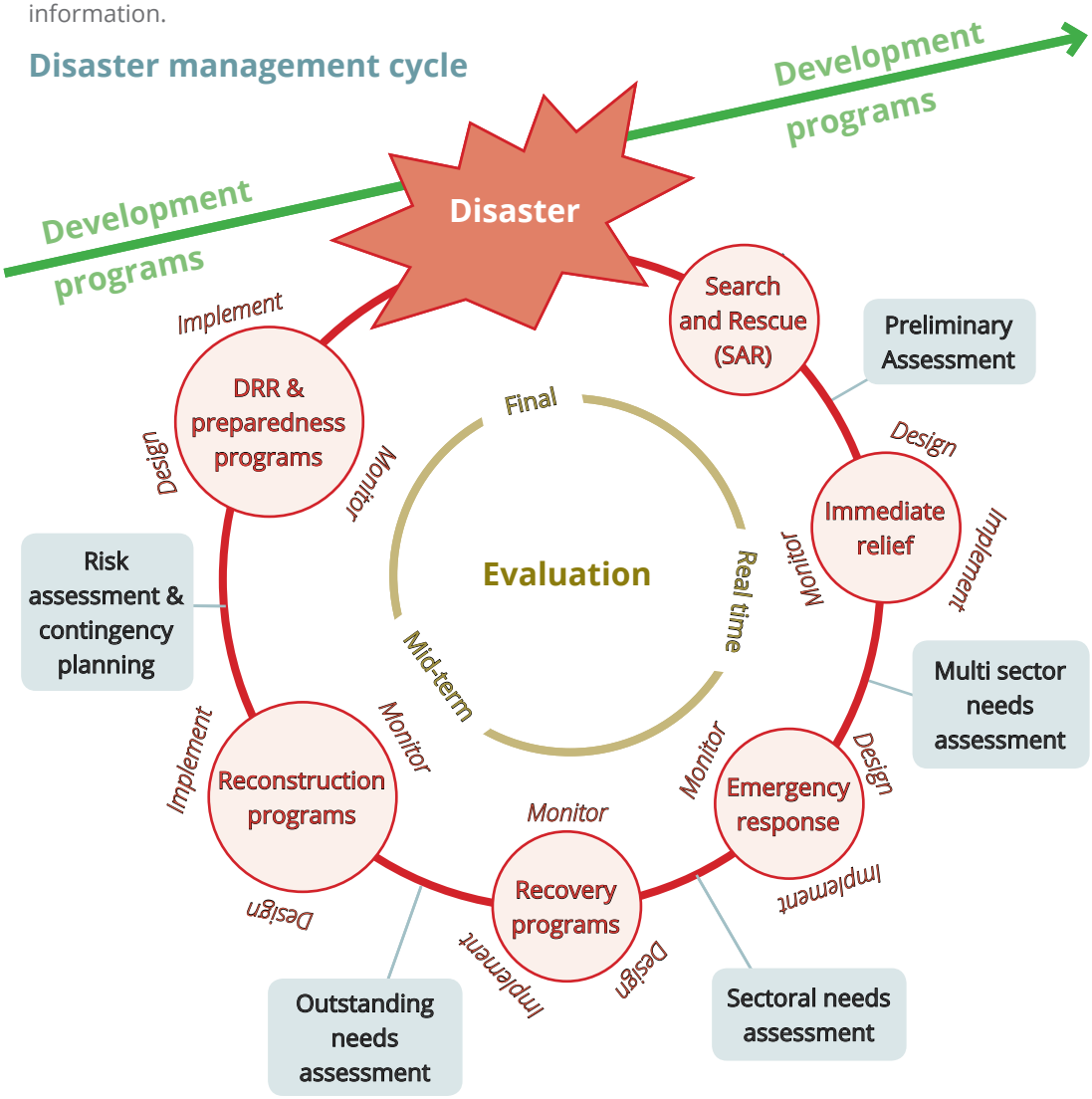
It is important to consider the cross-cutting issues (see chapter 3) within assessment to ensure the assessment captures the condition of men, women, boys and girls, as well as families and individuals with special needs, such as children, the elderly, people living with disabilities or HIV/Aids and the most vulnerable members of the community.

Assessments during the disaster management cycle

It is best to think of assessments as a continuous and cyclical process. Within a disaster management cycle, different types of assessments are carried out at different times. Common to all assessments is that they should be well planned, to ensure that information gathered in each stage informs the planning and implementation of an appropriate response, which meets the needs of the affected populations and is flexible enough to adapt to an, oftentimes, rapidly changing situation.

It is important to coordinate assessments to avoid over assessment, resulting in "assessment fatigue". This can cause beneficiary frustration, unrealistic expectations, and can propagate inappropriate / mixed messages. It can also compromise the privacy and dignity of the affected population, waste NGO / Agency resources and time, and result in conflicting assessment information.

Disaster management cycle



Shelter specific assessments

A series of shelter specific assessments are typically carried out with the aim of informing the planning and design of the shelter program, as per examples below.

Examples of shelter specific detailed assessments	
Type of assessment	Key points
Housing and building damage assessment	Determines the level and type of damage to inform decisions about appropriate shelter response
Households' preference for transitional settlements and shelter surveys	Maps out individual households options and choices
Housing, land and property analysis	Including ownership practices and legal frameworks
Social and cultural context analysis	Determines factors that inform settlement layout and shelter design and methods of implementation
Market capacity assessment	To establish available materials, costs and potential environmental impacts of an intervention
Hazard and risk assessment	To determine any potential risks to the affected population, staff / volunteers, assets and project implementation
Geographical, environmental and services / infrastructure mapping	Location of key infrastructure, availability of land, environmental considerations and geological features in regards to settlements
Additional needs assessments	Depending on the context and location. This can include the identification of special requirements, cross-cutting issues, vulnerable groups, etc.

Further information - Assessments:

IFRC, 2008. Guidelines for assessments in emergencies

IFRC, 2000. Disaster emergency needs assessment

IFRC/SKAT, 2012.Sustainable Reconstruction in Urban Areas – A Handbook

IFRC, 2010. "2.2. Planning and Assessments" in Owner-Driven Housing Reconstruction Guidelines, pp. 32-42.

Sphere Project, 2011, "Appendix 1: Shelter, Settlement and NFI Assessment Checklist" in Sphere Minimum Standard for Shelter, Settlement and NFI. P. 278-283)

EMMA (Emergency Market and Mapping Analysis toolkit)

Community meeting & shelter assessment

Photo credit: Fabian Prideaux

8.2 Market assessments

Refer to: + *Case Study 08: INDONESIA / 2009 / Earthquake*

Market-based methods are an increasingly mainstream way of supporting families with shelter and other humanitarian needs. However, such methods will only achieve their objectives if the local markets continue to function after a disaster. In order to check whether markets are still functioning, assessment teams will have to investigate, at a minimum:

- Are all main shelter and construction items, including tools, still available in local markets? If the items are being sold, are the market-sellers restocking the items, or are they just selling out of items which were in their storehouses prior to the disaster?
- Are all the main shelter and construction items, including tools, available in qualities and standards which are strong enough and durable enough for safe shelter, repair and reconstruction?
- Are the local markets accessible to all? Are there still functioning markets in every community? Are there any physical barriers to travelling to the nearest market? Has post-disaster social instability made it more risky for women or marginalised groups to visit the market?
- Are the prices for the main shelter and construction items more or less stable, or is there uncontrollable inflation, caused by post-disaster shortages?
- Is local transportation still available, at prices which most people can afford, to carry shelter and construction items from the market to people's homes?

As well as the market for physical goods, assessments will also need to take into account the 'market' for labour, and for workers who have the skills to help families with repair or construction. Be aware that after many natural disasters, numbers of workers travel to the disaster-affected area from other parts of the country, seeking work in the reconstruction boom.

The guidance above is for the supply of necessary materials for shelter and reconstruction. However, shelter program planners will also need to find out, through survey, whether a large percentage of the disaster-affected population has gone into personal debt, either before or after the disaster, that they would have to pay off these debts first and therefore still would not be able to buy any of the materials necessary for their shelter needs if supported with cash distributions.

8.3 Planning of assessment activities

Assessing natural disasters vs human made disasters

Assessments are often coordinated through the humanitarian cluster system. It is considered good practice to, as much as possible, coordinate assessment efforts to enable effective provision of assistance, develop standards, and, avoid assessment overlaps / assessment fatigue in the communities.

What information is needed?

Different types of information are needed at different times to inform the response in general and the shelter intervention in particular. Typically, the first question to ask when considering doing an assessment is: What information is already available (e.g. assessments done by other stakeholders or existing research)? If there are still gaps in information, an assessment is required. Assessment methodologies are selected based on a clearly defined purpose and the type of information required.
Typically, all assessments gather information to map demography, community capacity and vulnerability, risks facing the community, access to services, and response capacity of other stakeholders.

Of specific relevance to a shelter program is information about people's settlement and shelter situation, both prior to the disaster, and at the different stages of the response cycle, including:

- Which members of the community have selected different options for emergency or transitional settlement and reconstruction
- Where those community members have settled
- Level of damage to houses
- Social and cultural factors that will determine appropriate settlement and shelter interventions
- Market capacity to supply according to demand for materials and services related to shelter needs.
-
- The different types of assessments will provide different types of information, as outlined in this table.

Information that is required			
	Rapid	Detailed	Continuous
Demography and movement	What are the immediate priorities of the communities? Which communities should be prioritised for the most immediate support? To what degree will population data (women / men, different ethnic groups, different vulnerabilities, etc) have an effect upon the design of the shelter program? What are the general trends in movement?	What is the extent of the damage? What are the communities' own initial efforts at shelter construction or housing repair – and how safe are those efforts? Are there any clear barriers preventing significant numbers of the affected population from undertaking some shelter activities? Access to services	Are the objectives of the interventions achieved? Are there changes to the situation?
Shelter concerns, resources	• Rapid survey of building damage • People's settlement options and preferences • General adequacy and durability of the main current shelter options • NFI requirements, including climate related items	• Type of damage and appropriate responses • Individual families' choices regarding shelter and settlement options and future desires • Market capacity assessment • Social cultural assessment	• Mobility of communities • Rate of transition and recovery • Recovery trends
Coping capacity and protection issues	• Community coping capacities • Cross-cutting issues • Whether any of the current shelter options place the occupants in high-risk protection situations	• Issues of protection and vulnerability • Security • Stakeholder capacity • Cross-cutting issues	• Risk and hazards • Ongoing issues of protection and vulnerability • Cross-cutting issues

Further information - Planning of assessment activities:

2017, UNHCR. Emergency Handbook (Shelter Needs Assessments)

8.4 Assessment methodologies

Assessment methodologies relate to the way information is collected, e.g. surveys, interviews and observation. Selection of methodology is directly linked to the purpose of the assessment and the needed information, in addition to the type and scale of the disaster and the response. Below is a list of some of the most common assessment methodologies.

Examples of assessment methodology types	
Type	**Main features**
Surveys	• Predesigned questionnaires to be filled in by community members or enumerators, manually or electronically • Well suited for rapid assessments, when information is required quickly, and or when large numbers of people need to be consulted directly; when sought data is quantitative in nature • Be cautious to ensure that survey questions are articulated in ways that are unambiguous, and that answer alternatives actually fit the field reality • Ensure that enumerators are trained to understand how to use the tool and purpose for the information • Be aware that the set of questions cannot give alerts about whether the communities targeted for the surveys are indeed the ones with the highest needs – or merely the ones which have been the easiest and the quickest for the enumerators to reach
Survey / focus group discussions	• Discussions about pre-determined topics with groups in the community. Typically a facilitated discussion structured by guiding questions • Well suited when in need of information about wide range of topics and capturing the views of different groups in the community is required, i.e. men, women, widows, people living with disabilities, the elderly etc. • Avoid domination of the discussion by a few group members. • Ensure the FGD facilitator understands the topic and the purpose of the discussion, and that the discussion is documented efficiently • Can be used as part of rapid assessments, but only in very small (and therefore potentially less representative) samples
Interviews	• The backbone of most field assessments. Especially suited to obtain technical information from people obtaining specific knowledge (e.g. health workers, farmers, head of village, a specific head of household etc.); sensitive issues (e.g. sexual abuse, fraud allegations etc.); to save time when there is no time for group discussion • Select key informants carefully: who has specific knowledge about certain aspects of the community? • Can be structured (questionnaire), semi-structured (checklist) or unstructured (no points prepared in advance)
Participatory tools	• Tools that can be used in interviews or group discussions that are designed particularly for informants, who are not accustomed to analytical surveys. E.g. Daily calendars, historical timeline, seasonal calendar etc. • Select tools that are suitable for the purpose of the assessment, and that facilitators are trained in using them, eg Participatory Approach for Safe Shelter Awareness (PASSA), or other Community Engagement and Accountability (CEA) tools

Involving the disaster-affected community in the assessment design and implementation

Involving the disaster affected community in the design and implementation of the assessments can empower the community with a sense of ownership for the results, and provide better assurance that the eventual shelter response will be designed in accordance with the beneficiaries' needs and aspirations, and can ensure that the needs of all members of the community are reflected in the results - including those who are vulnerable, or living at the geographical edges of the community.

Make sure that assessment plans are sensitive to the fact that community members have other priorities for their time: they are restarting their livelihoods and normal lives. In addition, be aware that some members of the community may lack the mobility or access to take part in general assessments, and the assessment plan should make specific effort to reach underrepresented or marginalised groups.

The assessment team

Assessment teams are prepared based on type of assessment, information sought, and timeframe for recruitment. These are things to consider when assembling an assessment team:

- Structure of the team: Who / how many people are required?
- Generalists, i.e. people with experience but no specific technical background
- Specialists, i.e. one or more persons with specific experience and skills, e.g. architects and engineers
- A multidisciplinary team, which consists of people with different types of technical experience and skills (e.g. livelihood advisors and engineers etc.)
- Local staff and volunteers: Depending on the type of assessment, local staff or volunteers with relevant cultural and language skills should be involved in assessments, to ensure data gathered is accurate and relevant
- Gender balance: It good practice to ensure an equal balance between male and female members of the assessment team. For certain assessments, a strategic gender bias would be required, e.g. specific assessments on female headed households
- Local representation: On many occasions it may be specifically advantageous to recruit members of the local communities
- Bias: Consider how members of the assessment team may hold certain bias, e.g. ethnic, religious, gender. Ensure balance in perspectives

Sampling

Sampling helps decide where to do the assessment, who to select as households, and who to include as informants. Sampling depends on type of assessment, and time available. For example, a lower number of villages and informants are typically selected for a rapid assessment than for a detailed assessment. Sampling may be either random or purposive:

- Random sampling: When livelihoods and situation is similar across households, a random pick of households may be appropriate.
- Purposive sampling: If household livelihoods and situation differ significantly, a variety of locations are typically selected based on relevant criteria, e.g. ethnicity, livelihood, urban / rural, poverty level etc., or if the selected households or communities are thought to be examples of those who are extremely needy or extremely vulnerable.

Sampling needs to be done with a large enough number of responders so that the results are meaningful, and can with confidence direct the development of the response program. At the same time, the reason to choose a small number of representative households and communities is precisely because there is no time to assess the shelter situation of everyone, and still provide timely and helpful assistance afterwards.

Analysing and documenting assessment results

Analysis is the process of synthesising information from different sources to be able to answer questions such as:

- What are the main problems in terms of shelter?
- Who is affected?
- What types of settlement and shelter options do people currently make use of and prefer for the future?
- Where are the most badly affected geographical areas or communities?
- What are the shelter and reconstruction intentions of the affected population, including any intentions to change shelter options which may also result in another displacement to a different geographic location?
- What are the capacities of the local population, other stakeholders, infrastructure, supply chain and market actors etc?
- What are the key barriers to the affected population preventing them from taking charge and initiating their own shelter and reconstruction response?
- What type of shelter assistance is available from other sources?
- Is there a need to intervene, and if so, in which locations, and what intervention is appropriate?

Based on the findings, assessment reports are compiled. The level of detail in the report will depend on the situation. However, a good report is typically short, but without omitting important information. Remember that these assessments are different in purpose from the eventual beneficiary registration and selection activities. Assessments inform the choices for how to develop a program (they answer the "what" and "how" questions), whilst beneficiary registration and selection activities build upon the answers from the assessment analysis, to answer the "for whom, exactly" questions.

Shelter assessment, PNG (storm damage)

Photo credit: Fabian Prideaux

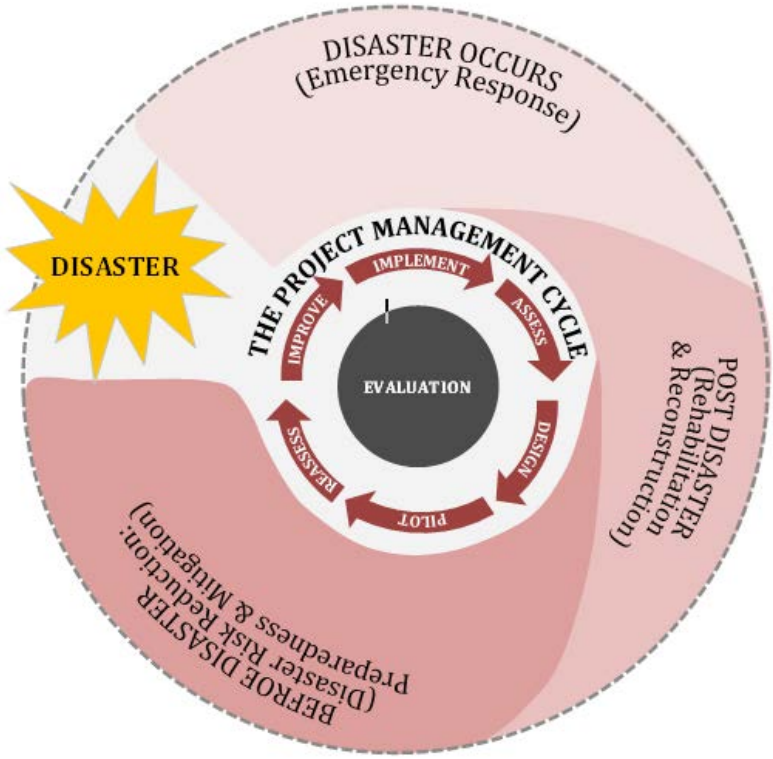
DESIGNING A SHELTER PROGRAM

Outlining in detail the key considerations and steps which underpin program design and the provision of safe, adequate shelter.

Photo credit: Fabian Prideaux

DESIGNING A SHELTER PROGRAM

1. Identify target groups
2. Identify appropriate assistance types
3. Identify implementation modalities
4. Create sub programs
5. Implement



9. Program design

Disaster-affected populations are on a pathway to recovery that may take many years before it is complete. At different stages along this pathway humanitarian agencies may intervene in a range of ways to make the process less difficult. Shelter interventions may come in many forms, from the more common traditional forms such as provision of tents and tarpaulins to less well known, though equally important forms of assistance, such as advocating for land rights, host family programming and clean-up or relocation assistance packages. Just as different types of disasters require a different response, people affected by a disaster may have different needs depending on their circumstances. Hence, a shelter response program may consist of different types of interventions. The following section of this guideline identifies a range of common shelter interventions implemented to address needs and discusses when they may or may not be appropriate.

The disaster-affected populations, including those who are indirectly affected because they are hosting others who have lost housing, should always remain at the centre of any shelter program. Shelter programs should not only respond to the needs of the affected population, but equally importantly, the shelter program should be shaped by the intentions of the affected population. Every effort should be made to promote and strengthen individuals and communities' own capacities foremost, whilst aiming to reduce vulnerabilities and future exposure to risk, through the choice of shelter assistance types and implementation methodologies.

Note: This section does not provide an exhaustive list of all possible shelter interventions, as the sector is dynamic and ever changing as agencies, communities and governments try out new ideas and new technologies / concepts are explored.

Shelter interventions are designed in consultation with the affected community to best meet their needs and ensure dignity, safety and adequacy of shelter at all stages of recovery.

Program design: Checklist	
1	Assess the current shelter needs and the future shelter intentions of the disaster-affected population
2	Identify the key capacities and positive coping mechanisms used by the disaster-affected populations in both recent and current disasters
3	Develop appropriate vulnerability and targeting criteria in coordination with other shelter organisations, local authorities and affected people
4	Identify target groups, based upon vulnerability criteria, and on lack of local presence of other humanitarian actors
5	Identify housing, land and property general trends and complexities, along with other settlement related vulnerabilities
6	Together with the target population, identify an appropriate range of assistance types, based upon the different types of shelter options of the target population, and their own intentions for reconstruction
7	Agree upon the implementation modalities with the target population, local authorities, and coordination partners
8	Ensure permission to undertake the program, from local authorities and community leaders
9	Make public in the communities, the beneficiary selection criteria, shelter assistance and modality, scheduling, and feedback mechanism
10	Based upon the intended number of households to be assisted, and the modalities of implementation, recruit a full team with the necessary transport and other resources
11	Produce pilot interventions with first target populations
12	Develop an appropriate range of monitoring tools
13	Undertake full implementation with a plan for a phased expansion into other communities with shelter needs
14	Review progress and impact where appropriate through regular monitoring activities, and new assessments as necessary

9.1 Components of a shelter program

Post disaster shelter response programs are typically made up of a range of Assistance Types clustered together to form Subprograms which are targeted to particular sections of the affected population, and then delivered through an appropriate implementation modality.

The needs of a family who is forced to permanently relocate may be very different to those of a family who expects to quickly return to their original home. The shelter needs of a family whose rented apartment has been destroyed vary greatly to the needs of a rural family whose house (that they own) has been destroyed. For all of these families, their needs will progress and change over time. Hence individual components of a shelter response are designed to address the specific needs of a portion of the affected population at a particular stage of their recovery. All modalities must be agreed upon beforehand with the beneficiary population. More detailed guidance on the appropriate use of each modality can be found in Chapter 12. The implementation modalities shown in the table below are given only to show part of the range of possible options.

Example of a shelter subprogram			
Sub program	Target group	Types of Assistance to be Provided	Implementation Modality
Host family support	Displaced families living with a host family or families hosting a displaced family	Family NFI kit	Direct distribution
		Bathroom and kitchen upgrade	Cash or voucher
		Return support	Transport subcontractor
		Hygiene and safety training	Local partnership, government partnership or community driven
		Cash support program	Direct distribution

10. Targeting shelter assistance

In only exceptional cases will there be the funding and the organisational resources to support 100% of disaster-affected families. With less funding and resources, the program must decide whether to still provide very small (and perhaps not very impactful) amounts to everyone (known as blanket distribution), or else to target a smaller percentage of the affected population, for support which might be more substantial and will make a real difference to their shelter situation, which would not be possible for them otherwise.

Targeting shelter assistance is about assessing the differing needs of the groups of families affected by a disaster as per Section 3 of this guideline. Groups are identified based on commonality of needs that have been determined through analysis of their shelter typology post and pre-disaster and their likely future shelter solutions. Additional support may be provided based upon certain vulnerabilities, for instance, families where one or more members has a disability and cannot undertake physical work, may be targeted to receive cash or other extra support for manual labour.

Mentawai Tsunami Response
Photo credit: Habitat for Humanity

If the analysis of the assessment shows that groups living in specific types of shelter options have the most barriers to adequate shelter, then the program may decide to target everyone in that group. Example of such a grouping may include:

- All families living with host families or hosting other families
- Homeowners living in dispersed tents and remnant buildings
- Renters and homeowners living in collective centres

The scope of targeting may change a number of times over the course of a shelter response, depending upon changing needs, and informed by continuous cycles of assessment and monitoring.

In the immediate phase directly after a disaster, it may be more realistic to start with blanket distributions of emergency materials for whole communities. Targeting can often take more time, and will need the trust and input of the entire community, and this level of engagement may only come after a first round of wider distributions has been completed.

Any form of targeting will need to be done with the consensus of the entire community, and any attempt to conduct the targeting or distribution in secrecy is likely to backfire, and can undermine or destroy the program. Transparency, and the key explanation of program objectives and program limitations, are key components. Only in extreme circumstances, such as the distribution of cash to women from marginalised ethnic minorities, have there been efforts to keep the distribution of support unknown to the general community. Using cash or voucher modalities may allow beneficiaries to choose their own timing to make purchases, and thus do so at times when less attention is being paid to them.

10.1 Assistance for those with specific needs

Shelter sub-programs often include specific forms of shelter assistance for specific groups with specific needs.

Targeting sub-programs is by its very nature a broad brush activity. The aim is to try and cluster people with similar needs together to make it easier, more equitable and more effective and efficient to provide them with assistance. Such broad level targeting may not fulfil the exact needs of all members of the population. To overcome this difficulty and ensure adequacy of shelter outcomes, shelter programs may include additional components that target specific needs. For example;

- Additional labour assistance for vulnerable members of the community such as the elderly, single mothers and people with disabilities
- Additional NFI assistance for those who have lost all possessions
- Additional relocation assistance for those who are forced to permanently relocate

The inclusion of additional assistance for specific sections of an affected population needs to be handled with great care so as not to create jealousy and ensuing conflict. It is best to design such additional components through a participatory process with the community itself. For example sitting with a community and asking who they see as vulnerable, and how to ensure those people achieve the same standard of shelter as others, can often lead to surprising and innovative solutions.

10.2 Staged assistance

As the shelter needs of communities change over time, sub-programs themselves may be staged to meet these changing needs or the delivery of components within those programs may be staged over time.

Staged assistance: Shelter program example - flood response	
Evacuation assistance	Day 1-3
Emergency shelter and NFI	Week 1-3
Clean-up assistance	Week 2-3
Return or relocation assistance	Week 2-4

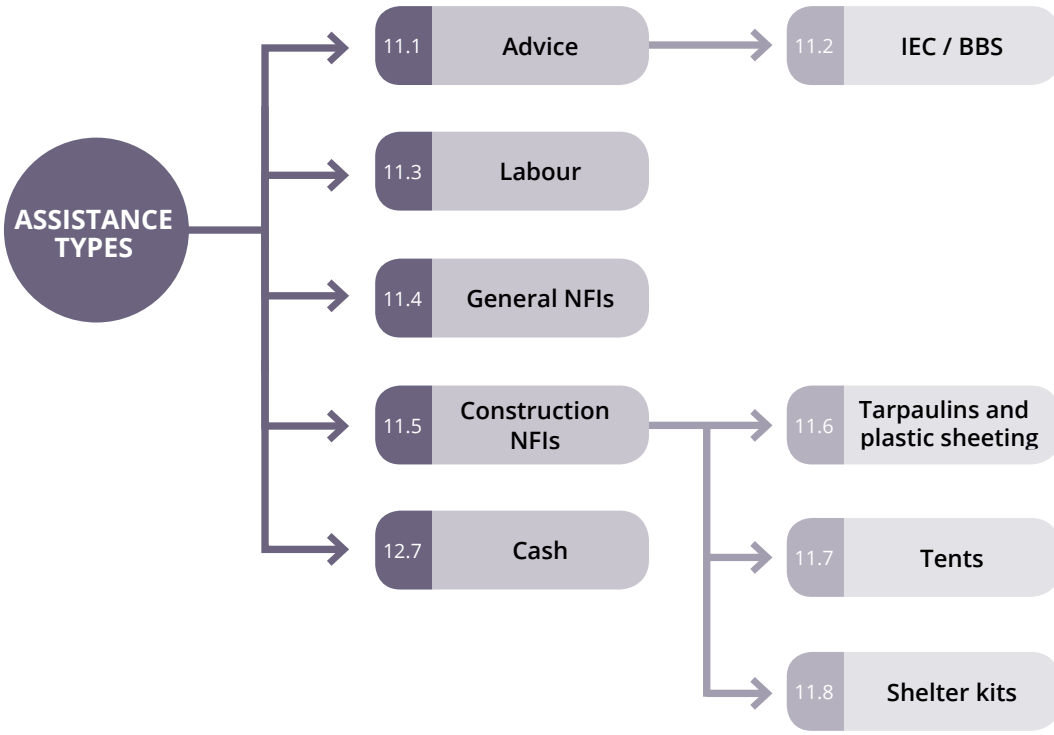
2010 Tsunami, Indonesia, Mentawai, West Sumatera

The process of evacuation of tsunami victims in Mentawai, West Sumatra, Indonesia by the Indonesian Red Cross in cooperation with Japan Disaster Relief Team

Photo credit: Technical Support Team of the Rehabilitation and Reconstruction, BNPB

11. Assistance types

Shelter response programs are composed of a series of separate types of assistance combined together to form sub-programs. Assistance is determined based on the needs of the affected population, their coping mechanisms and capacities, available resources, capacity of assisting organisations, and support already provided. In order for a shelter to be adequate, those living in the shelter must also have access to WASH facilities, livelihood opportunities and be able to find food and other basic services nearby. Participation of affected communities and consultation between humanitarian sectors, including inter-cluster coordination, is crucial to ensure appropriate and effective assistance. Assistance types can be broadly categorized into five groupings:



11.1 Advice

Refer to:

- *Case Study 12: MYANMAR / 2008 / Cyclone*
- *Case Study 18: THAILAND / 2011 / Floods*
- *Case Study 23: PHILIPPINES / 2013 / Typhoon*
- *Case Study 26: PHILIPPINES / 2013 / Typhoon*

Advice comes in many different types, including practical, legal, technical or psychosocial and may be provided through a range of forms of communication including workshops, trainings seminars, advertisements, negotiations, etc.

Types of shelter assistance: Advice		
	Assistance type	Examples
Advice	Shelter construction training	A common component of temporary shelter programs is trainings on safe, strong, shelter construction
	Safe reconstruction training	These trainings commonly target permanent reconstruction, and may be integrated into T-shelter programs
	Public outreach programs	Radio, newspaper, TV, village talks, to provide advice
	Advocacy	Advocate for land rights, administrative, legal, and access, to other sectors, government, etc

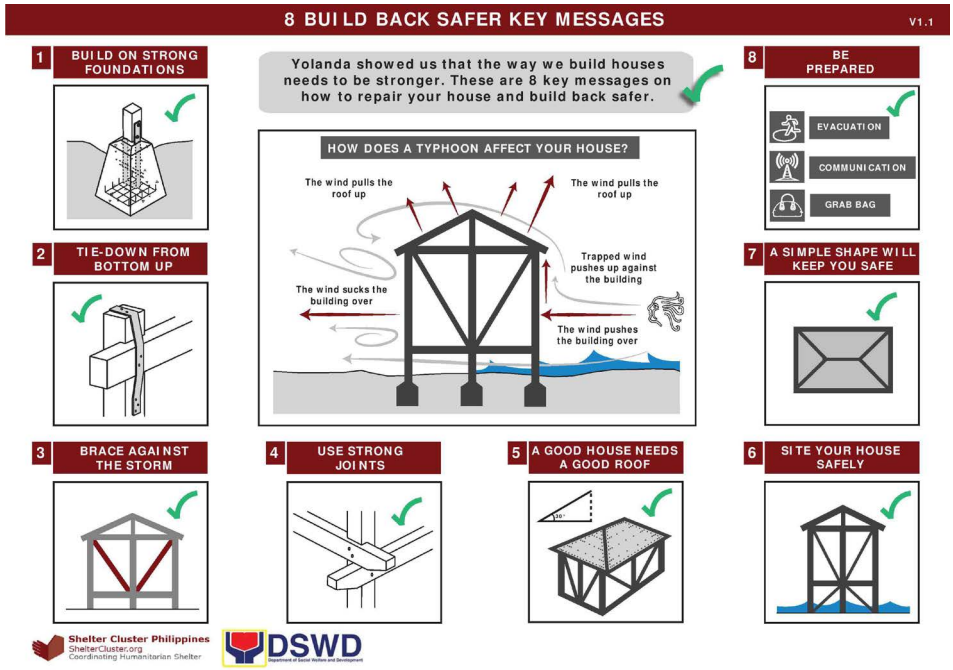
2012, Typhoon Bopha Response, Philippines
Community members trying different umbrella nail washers and nailing patterns on CGI roof sheeting
Photo Credit: David Dalgado

11.2 Advice: IEC / Build Back Safer

Refer to:

- *Case Study 12: MYANMAR / 2008 / Cyclone*
- *Case Study 22: PHILIPPINES / 2013 / Typhoon*
- *Case Study 26: PHILIPPINES / 2013 / Typhoon*

Information Education and Communication (IEC) material is most commonly thought of as leaflets and posters which provide technical advice regarding the use of emergency shelter items or building back safer, often through pictures.



2013, Typhoon Haiyan, Philippines

8 Key Messages for building back safer

Credit: Global Shelter Cluster

https://www.sheltercluster.org/typhoon-haiyan-2013/ments/8-key-messages-postersfinalv11front-page

IEC can be much more than this, and the evidence available suggests that if leaflets and posters are used as a standalone communication method they can have limited impact. It Is therefore crucial to understand the information gap related to making better use of emergency shelter items or build back safer for different audiences (households, skilled construction workers, municipal engineers etc.) and the best methods to engage and communicate this information to different audiences.

Some of the better uses of IEC material involve the delivery of leaflets and posters as a reminder of lessons learned - at the end of more significant engagement activities such as safe construction training.

Key points to consider when formulating IEC material include:

- What already exists, locally or regionally, and is it appropriate for the context or could it be rapidly changed
- Concentrate on principles and construction practices (not designs)
- Consider the recovery context and seek authority approval where appropriate. For example, there could be a risk of promoting something that later makes households ineligible for government assistance because the building code has not been followed
- Consider local building culture and the intentions and aspirations of households rebuilding
- Consider the knowledge, attitudes and practice in relation to safer building
- Consider all the hazards and their likelihood, not just the last event
- Consult the proposed audience to understand how best to communicate the message and their understanding of material
- Field test IEC materials as widely as possible
- Monitor the use of IEC material, and check it is meeting its intended aim
- Always consider the wider technical assistance framework that IEC material may fit within

If IEC is considered in its broader sense it can also include:

- Model houses (suggested to be one of the more effective communication methods)
- Radio talk shows (with callers phoning-in to ask technical queries about rebuilding for example)
- Information Kiosks (offering access to official design catalogues specific to context, and accessible building code documents)
- Videos (showing safer construction)
- Drama/Theatre and Song
- Demonstrations (for example, models of braced and unbraced structures that people can play with, or trials of people actually fixing sheeting on roofs)
- Household visits by BBS trained technical supervisors
- Advocacy documents and presentations to businesses (hardware store owners for example) promoting specific technologies or minimum standards on materials or practices. For example, twisted shank umbrella nails and hurricane strapping.

11.3 Labour

Refer to:
- *Case Study 03: INDONESIA / 2006 / Earthquake*
- *Case Study 28: PHILIPPINES / 2013 - 2015 / Typhoon*

Physical support that might be provided. This may include relocation or evacuation assistance, construction assistance, debris removal / clean-up.

Types of shelter assistance: Labour		
	Assistance type	Examples
Labour	Safe construction training	Lessons, videos, books, demonstrations on safe reconstruction
	Clean-up assistance	Physical assistance to clean-up, common after floods
	Demolition assistance	Labour to assist demolishing dangerous remnant buildings, common after earthquakes
	Construction labour	Physical assistance to those who, for whatever reason, cannot construct themselves
	Engineering inspections	Inspection of remnant housing to determine if it is safe for reuse, requires repairs, or is best demolished
	Relocation assistance	Assistance to pack up and move belongings
	Assistance to return	As above

11.4 General NFIs

Refer to:
+ *Case Study 20: PHILIPPINES / 2012 / Typhoon*
+ *Case Study 29: PHILIPPINES / 2013 - 2015 / Typhoon*

General NFIs are the non-construction oriented goods or products provided to communities that assist them in ensuring comfort, safety and dignity. This may include: bedding, kitchen equipment, clean up tools, clothes, etc.

Types of shelter assistance: General NFIs		
	Assistance type	Examples
General NFIs	Bedding	Sheets, blankets, sleeping mats, pillows, mattresses
	Clothing	Warm clothes, sarongs, sandals, underwear, general clothes
	Cooking facilities	Stoves, fuel
	Cooking equipment	Pots, pans, plates, cups
	Hygiene kits	Soap, shampoo, toothpaste, toothbrush, women's hygiene
	Clean-up tools	Spades, shovels, wheelbarrows, buckets, brooms, mops

Further information - General NFIs:

IASC, 2008. Selecting NFIs for emergency shelter

UNHCR, 2008. Cooking options in refugee situations

IFRC, 2018. Standard products catalogue

11.5 Construction NFIs

Refer to:
- *Case Study 06: MYANMAR / 2008 / Cyclone*
- *Case Study 25: MYANMAR / 2014 - 2016 / Conflict*

Products or goods that will form part of the physical construction of a shelter. This may include construction tools, materials or fixings.

Types of shelter assistance: Construction specific NFIs		
	Assistance type	Examples
Construction NFIs	Construction tools	Saws, hammers, hoes, drills, levels, chisels, stones, etc.
	Fixings and fastenings	Nails, screws, wire, rope, bolts
	Construction materials	Wood, bamboo, cement, bricks, roof tiles, CGI, plywood etc.
	Shelter kits	Tarp, shovel, hoe, hammer, nails, wire, rope, wire cutters machete
	Tents or tarpaulins	Dome or traditional Family tents, plastic sheets tarpaulins
	Temporary shelters	Program containing multiple elements from this list that results in a standalone temporary shelter
	Barrack / camp construction	Program containing multiple elements from this list that results in a camp or barrack

Further information - Construction specific NFIs:

IFRC, 2009. IFRC shelter kit

IFRC, 2016. Plastic tarpaulins and sheeting

IFRC/Oxfam, 2009. Plastic Sheeting Guidelines

11.6 Construction NFIs: Tarpaulins and plastic sheeting

Refer to:
+ *Case Study 04: INDONESIA / 2006 / Earthquake*
+ *Case Study 06: MYANMAR / 2008 / Cyclone*

Plastic sheeting is commonly distributed in two forms: by the roll or by the sheet. Distributions may include two or more tarpaulins or the equivalent length of plastic sheeting.

Locally procured plastic sheeting and tarpaulins can vary drastically in quality, and many international agencies have specific material and design requirements specially for humanitarian response purposes. One example of this, is Red Cross plastic sheeting, that has been specifically designed for humanitarian response; it has a lower spread of flame than normal sheeting and higher UV resistance and higher tear strength. These features greatly increase the durability and longevity of the sheeting. Commonly available sheeting material may be expected to last 3 - 6 months, while Red Cross sheeting can be expected to last 6 - 12 months, depending on its use and exposure to the elements.

Other forms of lower grade plastic sheeting is sometimes distributed for non-roofing applications such as walling, shade cloths, agricultural uses, floor mats etc.

IFRC standard issue tarpaulin

IFRC standard issue plastic sheeting roll

Tarpaulins and plastic sheeting	
Advantages for both plastic sheeting and tarpaulins	Disadvantages for both plastic sheeting and tarpaulins
• Available by roll or by sheet • Can be cut to suit any size • Can be as well ventilated as required, hence often considered better suited to the tropics • Works better with existing materials • Better suited to rural situations where communities may have much higher construction skills and access to a broader range of framing materials • Suitable for a wider range of uses, damaged roofs, communal structure, latrine walls • Multiple possible future uses • Much more flexible and adaptable solution • Less bulky, hence can fit many more on transport	• Limited ventilation can cause it to become too hot during day times and hence only suitable for night time usage • Increased fire risk for cooking • Do not integrate well with other shelter materials • Limited other alternative future uses, hence may not assist in a transition to permanent recovery • Expensive; commonly ten times the price of the equivalent local-market tarpaulin • Large, bulky tents may weigh 50-75kg depending on the exact model
General considerations	
• If being used to make remnant structures, weatherproof programs should include technical inspection and structural advice on safety • How much sheeting flaps or moves will directly affect wear and tear • See plastic-sheeting.org for technical details, tie down specifications	

Further information -- Tarpaulins and plastic sheeting:

IFRC, 2016. Plastic tarpaulins and sheeting

IFRC/Oxfam, 2009. Plastic Sheeting Guidelines

IFRC, 2018. Standard products catalogue

11.7 Construction NFIs: Tents

Refer to:
+ *Case Study 23: PHILIPPINES / 2013 / Typhoon*
+ *Case Study 24: MYANMAR / 2013 - 2016 / Complex / Coordination*

Tents and tarpaulins are one of the most common and perhaps the most recognised forms of emergency shelter assistance. These include family tents, and those for specific purposes such as Emergency Markets, Hospitals, Command centres, etc.

Tents: advantages and disadvantages

Advantages	Disadvantages
• Quick to erect, requiring limited tools and or knowledge • Instantly complete requiring no further work • Commonly valued more highly by communities • Better suited to camps and situations where slightly longer term habitation is expected • Better suited for cold mountain areas, only if insulated • Better suited to urban populations who may have much more limited construction skills • Can be packed away and stored for future disasters • Instantly waterproof • Relatively easy to insulate in colder climates	• Limited ventilation hence can become too hot during day times and hence only suitable for night time usage • Increased fire risk for cooking • Do not integrate well with other shelter materials • Limited other alternative future uses hence may not assist in a transition to permanent recovery • Expensive, commonly ten times the price of the equivalent tarpaulin • Large, bulky tents may weigh 50-75kg depending on the exact model • Limited possibilities for upgrading or repairing • Difficult to insert support elements for those with physical disabilities • Limited lifespan, depending upon the material -- can degrade within months, in tropical climates

Tents: general considerations

- Site should be flat, leveled and have adequate drainage
- Erect and well clear of remnant buildings
- Larger families may require two tents to reach an adequate minimum area per person (see Sphere Handbook)
- May require additional plastic sheeting to create outdoor habitable areas in hot areas
- May require internal dividers for privacy for women to change clothes etc.

11.8 Construction NFIs: Shelter kits

Refer to:

+ *Case Study 06: MYANMAR / 2008 / Cyclone*
+ *Case Study 22: PHILIPPINES / 2013 / Typhoon*
+ *Case Study 30: PHILIPPINES / 2013 - 2015 / Typhoon*

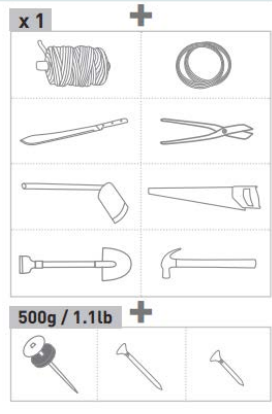
A common type of shelter assistance is shelter kits. Different organisations have standardised kits that are customised depending on the country or region. Shelter kits are often stockpiled in warehouses across the world and hence can be accessed in large quantities at short notice.

Shelter kit considerations	
More suitable for	Less suitable for
• Rural populations • Dispersed displaced groups • People living in remnant structures	• Host families programs • Collective centres
General considerations	
• Vulnerable groups such as the elderly, single mothers and those living with a disability may need additional assistance to erect a suitable shelter. • Urban population groups may not have the same construction skills as rural displaced populations • Often distributed with additional timber or bamboo where adequate remnant building materials are not available for shelter framing • May need to be enhanced with additional materials or tools depending on the particular context of the disaster	

Further information - Shelter kits:

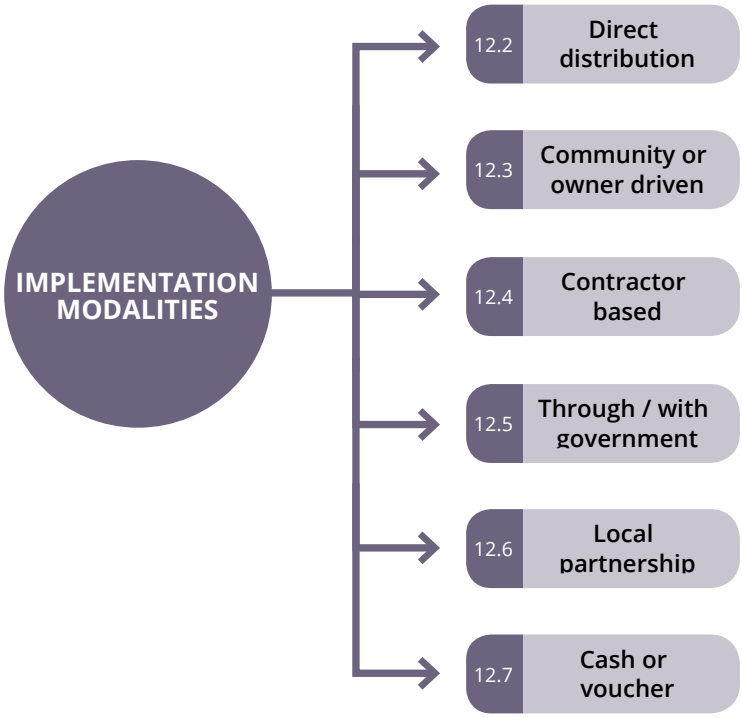
IFRC, 2009. IFRC shelter kit

IFRC, 2018. Standard products catalogue



12. Implementation modalities

Providing shelter assistance to an affected population can be done through a range of or combination of implementation modalities. Which methodology is best will vary depending on what type of assistance is being provided, our capacities and abilities along with those of the affected population. The following table provides an overview of six primary implementation methods:



Further information - Implementation modalities:

IFRC, 2010.Owner-Driven Housing Reconstruction Guidelines

IFRC 2007.Guidelines for Cash Transfer Programming

Shelter Centre/OCHA, 2012. Transitional Settlement and Reconstruction After Natural Disasters

NRC/Shelter Centre, 2010. Urban Shelter Guidelines

12.1 Combining multiple shelter assistance and modalities

Refer to:
- *Case Study 17: PHILIPPINES / 2012 / Cyclone*
- *Case Study 26: PHILIPPINES / 2013 / Typhoon*

The needs and capacities of individuals within disaster-affected communities can be very varied. And their current shelter situation and intended pathways to reconstruction may also vary. Therefore, it is unlikely that just one type of shelter assistance, or just one type of modality, will be a perfect fit for all. In many cases, programs can be designed to combine different types of shelter assistance, or different modalities. This can be done by:

- Different types of assistance being provided to different individual families within the same community
- Many families receiving more than one type of assistance, or assistance through more than one modality, either at the same time, or in different stages of support.

Examples:
In Iraq in 2015, both refugee renting families and house-owners were given vouchers to use at local shops. The house-owners bought permanent materials to improve their houses. The refugees also bought items to improve the house, but ones which they could then take with them afterwards, such as water boilers.

In Sri Lanka in 2005, an NGO did direct distribution of materials to construct a transitional shelter, as well as a small amount of cash for the beneficiaries to purchase sand and labour to finish the floor. Later, the NGO contracted local contractors from the community to visit each transitional shelter, to add extensions, and water harvesting pipes and barrels.

In Georgia in 2008, families whose houses had small levels of damage after the war were given plastic sheeting and fixings through a blanket distribution. For those who had lost their houses entirely, NGOs worked with the government to identify companies who could build a new core house, through a direct contractor scheme.

12.2 Direct distribution of shelter kits or shelter materials

Refer to:
+ *Case Study 21: PHILIPPINES / 2013 / Typhoon*
+ *Case Study 25: MYANMAR / 2014 - 2016 / Conflict*

Implementation modality: direct distribution of materials	
Where volunteers and staff go into the field and directly assess and then distribute, or build something predominantly by themselves. This approach assumes that a standard set of items are appropriate for all the beneficiaries, and it assumes that there are no safety and security concerns for either the distribution team or the beneficiaries. This modality is typically used in the phase immediately following a disaster, when there is a need for rapid response. At this phase of a disaster, the needs of those who have lost homes are focused on immediate shelter needs and local markets are often not yet functioning. Organisations must take care to first ensure that the intended beneficiaries know how to properly use the items, or that the items come with technical use information.	
Advantages	Disadvantages
• Greater control, which leads to ease of accountability and rapid implementation, as well as assurance of quality of items for all beneficiaries • Good when needs are identical and not complex. Ideal for rapid deployment of repurchased contingency stock	• Can mean reduced community participation • Can require large numbers of volunteers • Volunteers may not always have the best skills for the job • All logistics costs, including transportation and storage costs, are borne by the organisation • Requires larger public spaces, to organise safe distributions • Mis-targeting may result in re-selling or misuse of the items by some of the beneficiaries, for whom the items are not suitable to their shelter needs

Further information - Direct distribution of shelter kits or shelter materials:

IFRC, 2009. IFRC shelter kit

12.3 Community or owner driven implementation

Refer to:

- *5.1 Community engagement and accountability (CEA)*
- *Case Study 01: INDONESIA / 2004 / Tsunami & earthquake*
- *Case Study 21: PHILIPPINES / 2013 / Typhoon*
- *Case Study 24: MYANMAR / 2013 - 2016 / Complex / Coordination*

Implementation modality: community or owner driven	
Working with the community to empower and enable them to assist themselves and each other in recovery. This modality is often referred to as 'owner driven housing' reconstruction.	
Advantages	**Disadvantages**
• Greater sense of ownership by community • Is likely to have positive outcomes for the community, and increase resilience to future disaster events • Can have greater psychosocial benefit of getting people back up and actively doing something rather than feeling dependent	• Often end up in a quality control role • Harder to control time • Community may not always have the required skills or be too traumatized • Vulnerable members of society may not be capable on their own without support • Hard to manage money

Further information - Community or owner driven implementation:

IFRC, 2017. Community Engagement and Accountability Toolkit

IFRC, 2010. PASSA Toolkit

IFRC, 2017. PASSA Youth Manual and Toolkit

IFRC, 2011. Beneficiary communication guide for the shelter cluster

12.4 Contractor based implementation

Refer to:

+ *Case Study 01: INDONESIA / 2004 / Tsunami & earthquake*
+ *Case Study 17: PHILIPPINES / 2012 / Cyclone*

Implementation modality: contractor based implementation	
When an independent contractor is hired to act on behalf of the organisation to undertake a specific task on their behalf. This may include procurement, distribution, construction, training, evaluations etc.	
Advantages	**Disadvantages**
• Can provide access to skills that the organisation does not have	• Requires good contract supervision skills • Ideally needs a skills hand over process • Contractor may not have the same core principles as the organisation may be seen to affect the independence and neutrality of the organisation

2015 Conflict, Myanmar
Contractor-driven approaches were tried and later rejected by IDPs and the Shelter Cluster (Nidin IDP Camp, Kyauk taw Township)"
Photo credit: Myanmar Shelter Cluster
www.shelterprojects.org

12.5 Implementation through or with government

Refer to:

+ *Case Study 23: PHILIPPINES / 2013 / Typhoon*
+ *Case Study 25: MYANMAR / 2014 - 2016 / Conflict*

Implementation modality: through or with government	
Shelter assistance is provided to the affected population through or in conjunction with the government.	
Advantages	**Disadvantages**
• Supports and empowers government as the entity with primary responsibility for disaster management • May strengthen the relationship with local government	• May be seen to affect the independence and neutrality of the organisation • Need to ensure goals and objectives are similar

2012 Conflict, Myanmar

Constructing the 8-unit collective shelters. Only the government had the capacity to meet the shelter demands, so effective advocacy for increased government engagement was the deciding factor in meeting thousands of people's needs before the rainy season arrived

Photo credit: UNHCR

www.shelterprojects.org

12.6 Implementation through local partnership

Refer to:
+ *Case Study 12: MYANMAR / 2008 / Cyclone*
+ *Case Study 31: PHILIPPINES / 2013 - 2015 / Typhoon*

Implementation modality: implementation through partnership with an NGO or CBO	
Implementation through or in partnership with a non-profit organisation with similar goals and objectives.	
Advantages	**Disadvantages**
• The Implementing partner may bring on board specific skills or abilities that the primary implementing agency lacks, such as technical language or cultural knowledge, network or skills • May increase the capacity, speed and efficiency with which both agencies can assist	• May be seen to affect the independence and neutrality of the organisation • Need to ensure goals and objectives are similar • Ensure humanitarian principles and codes of conduct are understood, and applied • Other agencies may be perceived by the community as the sole assister

2011 Cyclone, Philippines
Construction was implemented using contractors, volunteers and by working with partner organisations
Photo credit: Mikel Flamm
www.shelterprojects.org

12.7 Cash or voucher based implementation

Refer to:

- *Case Study 03: INDONESIA / 2006 / Earthquake*
- *Case Study 08: INDONESIA / 2009 / Earthquake*
- *Case Study 09: INDONESIA / 2009 / Earthquake*
- *Case Study 10: INDONESIA / 2009 / Earthquake*
- *Case Study 13: PHILIPPINES / 2010 / Typhoon*
- *Case Study 23: PHILIPPINES / 2013 / Typhoon*
- *Case Study 24: MYANMAR / 2013 - 2016 / Complex / Coordination*
- *Case Study 30: PHILIPPINES / 2013 - 2015 / Typhoon*

Cash, vouchers or 'market-based approaches' covers a number of approaches designed to give beneficiaries maximum choice and control over the design and implementation of their shelter or reconstruction. It also has the potential to provide stimulus to the local markets.

Cash distributions which are 'unrestricted' and where there are no limitations on how the beneficiaries may use the cash, have the greatest potential to respond to the beneficiaries' needs and priorities across all humanitarian sectors. However, this modality has the greatest risk in terms of ensuring that the beneficiaries achieve the objectives of a shelter program – both in terms of using part or all of the cash for other emergency priorities (e.g. medicine, food or educational costs), and in terms of the beneficiaries knowing how to purchase high-quality materials, and how to use disaster-resistant construction techniques themselves.

In many cases, shelter program planners prefer to use modalities which are in some ways:

- Restricted – by replacing cash with vouchers which can only be used to purchase items from a restricted list of construction-specific materials or tools
- Conditional – having the cash given to the beneficiaries in tranches or instalments, dependent upon the beneficiaries having already completed the prior phase of reconstruction.

Cash or voucher based Implementation	
Where the community is directly supplied with cash or vouchers through which they can purchase their own assistance. 'Cash' is becoming an increasingly popular method of implementation with humanitarian agencies and donors.	
Advantages	Disadvantages
• Empowering for the community • Allows far greater flexibility, potentially ensuring needs are better addressed • Allows beneficiaries to control the timing of their own shelter and reconstruction development, potentially 'leapfrogging' beyond temporary solutions, and straight into permanent repair and reconstruction, where possible • Currently popular with donors • Ideal where markets are fully functional as it helps kick start the economy • Can be used to support a wider range of populations in need, including those who have been displaced into urban areas, and who are currently renting apartments or housing on a short-term basis	• Hard to control that funds are spent on items that have been agreed upon as important for shelter recovery • Requires tight financial control • Hard to control quality of construction • Hard to control source and impact of procurement • May not be appropriate where access and supply are not guaranteed

Further information - Cash or voucher based implementation:

https://www.crs.org/sites/default/files/tools-research/using-cash-for-shelter_0.pdf

http://ec.europa.eu/echo/sites/echo-site/files/doc_policy_n9_en_301117_liens_bd.pdf

IFRC, 2017. Cash in Emergencies toolkit

IFRC 2007.Guidelines for Cash Transfer Programming

13. Shelter subprograms

Shelter programs are commonly divided into a range of sub programs which commonly are:

- Targeted to a particular section of the affected population and their particular needs
- Made up of different types of assistance that have ideally been chosen to match both the immediate needs whilst also supporting the longer term needs
- Implemented through an appropriate modality

As an example, an emergency non-food item (NFI) distribution program may target all of the displaced families in a flash flood response, recognising that whether they live with a host family, in a camp, or in alternative rental accommodation, many may have lost the bulk of their household possessions. Other sub programs may target a more specific section of the affected population - for example, only families who have permanently lost their home or land may receive assistance.
Different target groups will have very different needs and may require a special response or sub programs to cater for these needs. This may require a variety of implementation modalities to ensure the assistance provided reaches the intended beneficiaries, and is relevant and effective. Eventually, all the sub-programs within a shelter program will need to clearly connect with the next steps towards each family's recovery.

In many cases, the duration of sub-programs will not be the same. Different phases of different sub-programs will overlap, reflecting the different needs, and the different speeds of recovery for different types of target beneficiaries.

Well-designed shelter subprograms include checks and balances to ensure the particular needs of vulnerable members of the community and other cross cutting issues are taken into consideration.

13.1 Emergency shelter

Refer to:

+ *Case Study 17: PHILIPPINES / 2012 / Cyclone*
+ *Case Study 25: MYANMAR / 2014 - 2016 / Conflict*
+ *Case Study 29: PHILIPPINES / 2013 - 2015 / Typhoon*

Example of an emergency shelter subprogram			
Subprogram	Target group	Types of Assistance to be Provided	Implementation Modality
Emergency shelter	Families without adequate shelter, requiring immediate assistance	Shelter kits	Direct distribution
		Tents and tarpaulins	Direct distribution
		Bedding	Direct distribution
		Clothing	Cash or voucher
		Hygiene kits	Direct distribution
		NFI kits	Direct distribution or vouchers

It is important to remember that the provision of emergency shelter is not just about tents and tarpaulins, as a tent alone is unlikely to ensure adequate safety and provision of dignity and comfort.

During the emergency phase the provision of emergency shelter assistance is driven by a need for fast and efficient delivery of support. In this hectic phase of the operation it is often difficult to identify vulnerable or marginalised people with special needs. It is therefore especially important for local, trained staff and volunteers to play an active role in seeking out these groups. to ensure they are provided with needed support.

2010 Merapi Eruption, Indonesia
Emergency Shelter
Photo credit: PMI 2010

Common components of an emergency shelter program	
Possible target group	
All displaced families with assessed shelter needs	
Possible types of assistance	Likely implementation modalities
• Tents and or Tarpaulins • IFRC Shelter kits • Bedding and or clothing • Cooking equipment and fuel • Hygiene kits • Cash support • Relocation assistance • Specific material or labour assistance for more vulnerable members of society	• Much of the Emergency Shelter assistance provided by the PMI is undertaken through direct implementation by volunteers or community based implementation. However this is not always the case and assistance may be provided through: • Support via government • Cash or vouchers • Subcontractors
Inter-linkages and concerns	
Emergency shelter programs commonly are deeply interlinked with other PMI activities including: • WASH programs • Cash for work programs to clean up or clear rubble • Public Kitchen • Family reconnection programs • Psycho Social support programs	

Further information - Emergency shelter:

UNHCR, 2018. Emergency Handbook

The Sphere Project, 2011. The Sphere Handbook: humanitarian charter and minimum standards in humanitarian response.

13.2 Collective centres

Refer to:

- *2.8 Camps and collective centres*
- *Case Study 15: PHILIPPINES / 2011 / Cyclone*
- *Case Study 18: THAILAND / 2011 / Floods*
- *Case Study 19: MYANMAR / 2012 / Conflict*

Example of a collective centre support subprogram			
Subprogram	Target group	Types of assistance to be provided	Implementation modality
Collective centre support	Families seeking shelter in a formal collective centre	Cooking equipment	Cash vouchers
		Relocation support	Transport subcontractor
		Bedding	Direct distribution
		Clothing	Cash or voucher
		Hygiene kits	Direct distribution
		Hard frames and plastic sheeting or plywood to create privacy barriers around single-household sleeping areas	Direct distribution
		Metal safe boxes, to hold personal possessions	Direct distribution

Following a disaster, families often seek shelter in large public or privately-owned buildings. These buildings are commonly referred to as collective centres. These buildings can range in type from schools, sports halls, to office complexes and unused shopping centres. There are also an increasing number of cases, especially in urban areas, where once a collective centre has become full, families install their own shelters in the open spaces nearby to the collective centre. These families rely upon the electricity or water supply within the collective centre, or the sanitation facilities, and should, in fact, be included in the overall collective centre population.

The original intended purpose of the building effectively determines how easily adaptable the building is to emergency occupation - in terms of how many latrines and wash basins there are, or how much electricity supply. Such occupation may be spontaneous or directed and

last for a shorter or longer period. Recent examples include the short mass occupation of a large stadium during the Yogyakarta Mount Merapi eruption in 2010. A case of a prolonged occupation was the evacuation of more than 600 families to a market building after the Sidoarjo hot mud flow incident. The occupation continued for years as families refused to move either due to the lack of an alternative or fear of losing possible compensation.

Challenges and advantages offered by collective centres	
Advantages	Disadvantages
• Communal centres provide 'instant' shelter as the structure is a pre-existing structure, rather than families having to build or erect their own shelter. This is of particular benefit in providing instant protection from nature • Being co-located with a large group of people means affected families are hard not to notice and may better ensure access to assistance • Targeting and delivering assistance can be easier as the bulk of people are in one location • More vulnerable members of the community can be more easily identified and are in close proximity to the rest of the community, and hence may be more easily assisted if active programs are set in place • The collective centre, with a large concentration of population, can also become the location of local livelihoods and informal markets recovery	• Increased density brings an increased risk of spread of communicable disease • Increased risk of mass social conflict and protest when assistance does not match need • A lack of privacy may lead to increased frustration and risk of sexual assault • A lack of space, may mean that more of a family's goods and possessions must be left behind or abandoned. This is particularly the case with livestock • WASH facilities can quickly become overloaded and WASH facility maintenance often becomes an issue particularly in communities where families are not used to sharing these facilities with other families or where cleaning up facilities used by others is seen as low or degrading work. • Assistance flows may become restricted when density is very high, such as when one location houses thousands • Multiple agencies operating in a confined space increases the risk of overlapping and gaps in assistance provision, and increases the need for strong and effective coordination • In the rush and confusion of mass assistance, vulnerable members of the community may easily be overlooked; the deaf may not hear announcements, children may become lost, old people may miss out on food distributions • Safety may become a major concern during distributions, or during panics • Families may become reluctant to leave communal centres • The electricity supply for the building may not be enough for everyone's needs, thus resulting in blackouts, or other risks. • Fire hazards from cooking

At least in the short term, ensuring adequacy of shelter in collective centres is often more about ensuring adequacy of services, safety and comfort rather than the provision of 'physical shelter' itself.

It cannot be emphasised enough that increased density brings increased risk, particular in terms of spread of disease, protection issues and risk of social conflict. Normal social practices of cleanliness and hygiene may be more than adequate for when families are living in separate households, but may not be sufficient to prevent spread of disease in close quarters. Experience both internationally and within Indonesia shows the need for increased Hygiene Promotion activities. The monitoring of health indicators for: vector borne diseases, diarrhoea, acute respiratory illnesses, and other diseases can become an important part of communal centre support programs.

Common components of collective centre assistance	
Possible target group	
All families living in communal buildings such as schools, hospitals, government offices, religious or sporting buildings	
Possible types of assistance	Likely implementation modalities
• Communal kitchens or catering • Communal WASH facilities • Bedding and clothing • Privacy screens • Mosquito nets • Hygiene kits • Return assistance programs • Special assistance programs to ensure the needs of the most vulnerable are met	• Commonly through direct implementation. Contractors may be needed if the collective centre is an abandoned or unfinished building, and needs substantial work in order to make it safe for the occupants • Subcontractors may at times be used for catering supply • Coordinated distributions may require implementation through or with implementing partner NGOs, CBOs or government
Inter-linkages and concerns	
• Communal centre shelter assistance programs commonly require strong inter linkages with WASH, Psycho-Social and Family Reunion programs • Increased density brings heightened risks for which robust monitoring mechanisms need to be put in place quickly • Security issues, particularly at times of distribution and for vulnerable members of society may be required; particularly protection issues around young women and children	

Further information - Collective centres:

UNHCR, 2010. Collective centre guidelines

13.3 Support for camp-based shelter

Refer to:
- *2.8 Camps and collective centres*
- *Case Study 17: PHILIPPINES / 2012 / Cyclone*
- *Case Study 24: MYANMAR / 2013 - 2016 / Complex / Coordination*

Example of a camp-based shelter support subprogram			
Subprogram	Target group	Types of assistance to be provided	Implementation modality
Camp shelter	Families seeking shelter in a formal camp, or already located in an informal camp	Cooking equipment	Cash, vouchers, direct distribution
		Relocation support	Transport subcontractor
		Bedding	Direct distribution, cash
		Clothing	Cash or voucher
		Hygiene kits	Direct distribution
		Advocacy	Community implementation
		Basic shelters (tents or other)	Direct distribution
		Distribution of other shelter materials to repair or improve the basic shelters	Direct distribution, cash, cash for work and vouchers

Clustering together in camps is one of the most common responses for those left homeless by disasters. Camps are different from other forms of shelter response, because of the complexity of the spaces needed in a camp, the need for support from all humanitarian sectors in a camp, and the density of different activities which take place in camps. Whilst a shelter is the first step towards a home, it is often better to think of camps as emergency towns, or emergency neighbourhoods, with all the needs which those names imply. Unlike more individualised and dispersed forms of shelter, the presence of even small camps can be overwhelming for the nearest host communities, although, at the same time the camps can act as economic centres for their surroundings.

Camps may form spontaneously as families move to where they believe assistance may be easier to reach or to what they perceive as safer ground. Camps may also be planned and

constructed by humanitarian agencies or governments to provide a place of safe refuge for those who are or may become displaced. Although, all major international humanitarian organisations emphasise that camps are an option of last resort, only to be used if they are the 'least worst' option. Planning for the closure of camps, and for supporting families to take the next steps to recovery outside of the camps, is often as important as planning the actual camp itself. In all cases a range of important issues need to be taken into consideration to ensure the health, safety and dignity of residents. The increased density that camps bring increases a range of risks such as contagious diseases, sexual harassment, potential for conflict and violence to name a few. This same increased proximity also brings advantages particularly in ease of distribution, monitoring and control of aid resources.

The advantages and disadvantages of camps are similar to those of collective centres - with a few noticeable differences: pre-determined collective centres can offer almost instant shelter, whilst camps will first need to be established (either formally or informally). Camps have the additional complexity that the physical enclosed spaces must also be provided, including the accommodation for individual families as well as the communal facilities required to support them. Depending on the setup, camps can offer more privacy - with families allocated separate tents / shelters.

The concepts of best practice in sheltering as discussed throughout this guideline apply as much to camps as they do to any other form of shelter. Participation, transition, coordination, adequacy, the right to live in safety and dignity, the needs of the most vulnerable and cross-cutting issues are all universal shelter concepts that are taken into consideration at every stage of every action.

2013 Floods, Jakarta, Indonesia
Palang Merah Indonesia (PMI) Camp
Photo credit: PMI 2013

Common components of camp support programs	
Probable target group	
All families living in both informal and formal camps	
Possible types of assistance	Likely implementation modalities
• Shelter Kits • Tents and Tarpaulins • Large communal tents for community functions such as schools, public meetings, camp management, religious or medical facilities • Either communal kitchens / catering or family level cooking facilities (SEE NOTE BELOW) • Communal WASH facilities MCK • Bedding and clothing • Mosquito nets • Hygiene kits • Return or de-congestion assistance programs • Special assistance programs to ensure the needs of the most vulnerable are met	• Commonly through direct implementation, either through distributions to the beneficiaries, or direct use of subcontractors to do larger construction projects, such as communal structures • Subcontractors may at time be used for catering supply • Coordinated distributions may require implementation through or with implementing partner NGOs CBOs or government
Inter-linkages and concerns	
• Camp support programs require full inter-linkage with all other sectors • Increased density brings heightened risks for which robust monitoring mechanisms need to be put in place quickly • Security issues, particularly at times of distribution and for vulnerable members of society may be required, particularly protection issues around young women and children	

Informal vs formal camps

It is important to note the difference between formal and informal camps. Whilst formal camps are likely to be created either in advance as part of preparedness for disaster response, or rapidly in predetermined locations immediately after a disaster, informal camps may crop up anywhere and may exist with or without government or landowner permission in places that may or may not be dangerous. Because of this, assisting informal camps provides a unique set of challenges for humanitarian agencies.

Informal camp support may require additional assistance in the form of: land tenure negotiations, conflict resolution skills and relocation or de-congestion programs. In many cases in urban areas, the challenge is more complex because informal camps can become spontaneously created by families gathering around the external areas near collective centres. Informal camps are much less likely to have either the space necessary for communal structures like health posts or distribution centres, or the space in between each of the shelters necessary to reduce the risk of the spread of fire or disease.

Communal vs individual facilities

Many camps when they are established have communal or shared facilities such as communal cooking, sleeping areas and toilets / showers. It is recommended best practice that camps encourage a return to family based services where possible, encouraging and supporting families to cook their own meals and take care of their own WASH facilities (or shared with a set of neighbours). This promotes social networks within the camp, encourages family activities, increased normality, and reduces risk of disease spread.

Camp planning and camp management

Camp planning and camp management / coordination are very specific activities requiring specific skills and training. The way a camp is laid out, its spatial planning, and day to day management greatly affect how well sheltering objectives are achieved. The global Camp Coordination and Camp Management (CCCM) through the leadership of UNHCR and IOM have developed specific tools and training resources for this aspect of sheltering. It is beyond the capacity of this Guideline to cover all aspects of CCCM or camp planning, hence it is strongly recommended that those interested see the further information section below.

Further information - Support for camp-based shelter

IFRC, 2012.Post disaster settlement guidelines

NRC, IOM, UNHCR, 2015. Camp management toolkit

Shelter Centre 2005. Transitional Settlement: Displaced Populations

IOM, 2017. Site Planning: Guidance to Reduce the Risk of Gender-Based Violence

13.4 Host family support programs

Refer to:
- *Case Study 15: PHILIPPINES / 2011 / Cyclone*
- *Case Study 27: PHILIPPINES / 2013 - 2017 / Typhoon*

Example of a host family support program			
Subprogram	Target group	Types of assistance to be provided	Implementation modality
Host family support	Families living with a host family Families hosting a family	Family NFI kit	Direct distribution
		Bathroom and kitchen upgrade	Cash or voucher
		Relocation support	Transport subcontractor
		Hygiene and safety training	Direct distribution voucher
		Cash support program	Direct distribution
		Finishing or repairing rooms to expand the livable internal space	Cash or contractor

A common solution for families made homeless by a disaster is to turn to friends, family or neighbours for shelter. In many cases this may offer a healthier and safer option than other sheltering alternatives. Host families and the families they host, although, often still in need of support, are easily overlooked in the rush to assist those who may be more visually apparent, such as families living in tents or public buildings. In reality, supporting families in their hosting arrangements can be an extremely effective form of shelter programming.

Host family programs consider the separated, though interlinked needs of both the family being hosted and the hosting family. Families being hosted may have lost many or all of their possessions, their home or even family members. They may be injured or in need of support to access new schools, government facilities, find new sources of livelihoods. While their hosting family may assist with some of these needs, they themselves may also be suffering from impacts of disaster. They too may have lost family members or relatives, be injured or traumatised, or have lost their sources of livelihoods. In addition to their entire individual needs living in a more crowded and condensed environment brings its own risks and stresses. Hygiene practices may need improvements; vulnerable members of society may be at more risk of abuse or violence.

Host family support programs face the additional complexity that families in need of support may be difficult to locate. They may have moved further afield or may not be so apparent. Pre-existing multi-headed households may try to take advantage of host family programs. Neighbours who may also feel they are impacted directly or indirectly by the disaster may become jealous or unwelcoming to new arrivals.

In addition to simply supporting families already hosting and being hosted, the purpose to build host family support programs may be designed to decongest public buildings, overcrowded camps or other dangerous emergency shelters.

Large family homes used to provide informal host family support during storm events

Photo credit: Fabian Prideaux

Further information - Host family support programs:

IFRC, 2012.Assisting host families and communities after crisis and natural disaster. A step-by-step guide

Host Family Support Key Points	
Description	• Programs that provide support to families being hosted by friends, family or neighbours as well as providing support to the families that host them. • May also include programs that support new families to host families to reduce overcrowding and burden in affected areas
Examples	• Danish Red Cross (DRC) and IFRC in Haiti 2010 • Aceh 2004
Notable features	• Components for both the host and the hosted • May involve NFIs or cash support • May include upgrading WASH or cooking facilities • May offer better security • May offer better health and hygiene environment • May reduce the risk of epidemic outbreak
Well suited to situations	• Other sources of shelter assistance are difficult to provide • There are nearby communities that are less affected • Social cohesion or family linkages are strong • Suitable to most disasters though often overlooked
Not well suited to situations	• Communities are fractured and high levels of conflict
Host family support do's and don'ts	• Needs of both the host family and the family being hosted need to be considered both jointly and separately • Programs require a high degree of flexibility to be effective at meeting what may be vastly differing needs • Both the hosting communities and the hosted communities need to be consulted in program design and beneficiary selection
Important considerations	• Displaced families may be difficult to locate and identify • As with many shelter programs supporting families may cause jealousy amongst neighbours • Host family programs may spread over a much larger area than other shelter assistance programs causing significant challenges for assessment, distribution, monitoring and evaluation • Protection issues need to be considered especially in regard to newly widowed women and children or those in need of medical or psycho social support • There may be donor restriction on how widely aid can be distributed • Strategies to assist with access to entitled support and future return or relocation may need to be included in program design • Requires strong coordination to avoid gaps and overlapping

13.5 Rental programs

Rental support comes in two main variants. Either, the humanitarian organisation negotiates a price with the landlord, and pays that directly, or the organisation gives cash to the renter family who then use the cash to pay the rent, at a price they themselves have negotiated. A third, indirect variant, involves the organisation paying for contractors to repair, finish or extend the building, in return for the landlord agreeing to a free or cheaper rental price for the renter family.

Rental support has been used in urban areas, where there are no possibilities for self-built non-permanent shelters, and where government policy does not allow camps. Rental support has also been used as an emergency option, when bad weather seasons are rapidly approaching, and there are significant numbers of families who are living in temporary shelters which cannot protect them from the bad weather.

Finding or approving the rental houses or apartments, and negotiating the rental prices, is very time-consuming, and so it is very difficult to do this method of support on a large scale. The time period of rental support is typically 6-12 months, and so organisations must be able to say what will happen to the beneficiaries after the end of the rental period, and must be able to know that the beneficiaries will have a reasonable chance of continuing to rent without humanitarian support, before the program is started.

Further information - Rental programs:

Global Shelter Cluster, 2012. Shelter Projects IOM Haiti case study

Global Shelter Cluster, 2014. Shelter Projects Lebanon case study

Example of a rental support program			
Sub program	Target group	Types of Assistance to be Provided	Implementation Modality
Rental support	Families renting an apartment or house, if they cannot re-occupy their own home	Cash payments to the renting family	Cash
		Cash payments to the landlord	Cash
		Finishing or repairing rooms to expand the livable internal space ('repairs-for-rent')	Contractor
		Legal advice on security of tenure rights and rental contracts	Specialist advice
		Cash payments to the renting family	Cash

Rental Support Key Points	
Description	Programs that provide support to families either currently renting accommodation, or who would like to rent accommodation with humanitarian support
Examples	IOM in Haiti 2010
Notable features	• Requires nothing in the way of logistics or materials delivery • Common option in urban areas • Provides the beneficiaries with four walls and a roof • Offers better physical security • Can be a first step out of camps or collective centres, and back into neighbourhoods • Longer-term sustainability relies upon the beneficiaries' ability to pay the rent themselves, once the humanitarian support is finished, or to move onto other more sustainable shelter
Well suited to situations	• There is a large amount of apartments available for rent, which are structurally safe, and of reasonable price • There is no wide scale competition for rental housing, between the displaced and host population • There is a clear pathway to eventual durable solutions, for which a 12-18 month waiting period is necessary
Not well suited to situations	• There are too few safe houses or apartments free to be rented • Inflation on the rental market is rapidly increasing • Those who want to rent are not able to do so legally, because of lack of legal status or lack of documentation
Rental support do's and don'ts	• Use specialist legal advice to draft or review the rental contracts • If the beneficiary receives the cash for rental, ensure that the method of transferring the money does not put the beneficiary at risk • Have a strategy in place for what will happen after the rental period is over • Monitor constantly for forced evictions, and ensure the agreement of the local authorities to intervene in any forced eviction cases
Important considerations	• Available apartments may be dispersed over a wide area, meaning many journeys in different directions in order to establish and monitor the contracts • Implementation of such programs requires a competent, field-based legal assistance department • Communication with the host community is vital to avoid accusations of helping the displaced population to 'take' apartments belonging to members of the host community. Consider combining this program with one to improve communal infrastructure in the same neighbourhoods

13.6 Temporary shelter

Refer to:

- *Case Study 03: INDONESIA / 2006 / Earthquake*
- *Case Study 04: INDONESIA / 2006 / Earthquake*
- *Case Study 19: MYANMAR / 2012 / Conflict*

Temporary shelter or transitional shelter?
Often there is confusion around the terms "temporary shelter" and "transitional shelter". A "temporary shelter" is an impermanent structure built for a family to live in until a permanent housing solution is available, whilst the term "transitional shelter" refers to a conceptual framework that can be applied to all shelter programs. This aims to not only focus on short term needs but also assist families transition to permanent safe secure housing as smoothly and efficiently as possible. **Temporary shelters built with a transitional approach are sometimes called T-Shelters or Transitional shelters; supporting rapid return to permanent housing through reuse, revitalisation or sale of the shelter.**

Temporary shelters are generally designed to last no more than a few years and therefore commonly not constrained by complex building regulations or requirements, hence relatively quick and cheap to construct. In urban settings, there can be additional complications including; often stricter building codes, limited available land, and complex housing, land and property (HLP) issues.

Temporary shelters may at times be permitted through negotiation on land where permanent construction may not otherwise be allowed, making this form of shelter more flexible than other solutions such as "Core Housing", and hence sometimes the only available choice for displaced families.

Where temporary shelters are built on land without clear land tenure, it is critical that assistance programs include a clear long term strategy for when temporary tenure will run out. Avoid constructing temporary shelters on the footprint of future permanent housing as this may slow down recovery. Temporary shelters may be called by a range of names depending on the socio political context in which they are built.

Further information - Temporary shelter:

IFRC, 2011. Transitional shelter; eight designs

NRC/Shelter Centre, 2011. Urban Shelter Guidelines

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Example of a temporary shelter subprogram			
Subprogram	Target group	Types of assistance to be provided	Implementation modality
Temporary shelter	Families without adequate shelter and in most need of temporary shelter	Safe construction advice	Partnership with NGO, local government or community driven
		Construction labour	Construction subcontractor, community or owner driven
		Relocation support	Partnership with government
		Shelter construction advice	Community implementation
		Cash support program construction of complete temporary shelters	Direct distribution
		Distribution of materials, including bamboo or timber, roofing sheets, and fixings	Direct distribution, vouchers

Temporary shelter program key points	
Temporary Shelters is a term used to describe shelter assistance programs that are temporary by nature. Temporary shelters are designed to provide a family with somewhere safe secure and comfortable to live until their permanent house is ready to be occupied.	
Examples	• Bamboo shelters built after the 2006 Yogyakarta earthquake • Steel frame shelters built in Aceh after the 2004 tsunami • Timber frame shelters built in Padang after the 2010 earthquake • See case study in annex
Notable features	• As temporary shelter are only "temporary" it is often possible to negotiate permission for them to be built on private or state owned land while repair, reconstruction or relocation to new premises occurs
Well suited to situations	• Permanent housing solutions are clear • Dislocation to the site is only temporary • Materials and skills are readily available close or at location
Not well suited to situations	• Situations where no other further assistance is likely to be provided, as families can easily become "stuck" • Length of likely displacement is unknown • High-density neighbourhoods, or neighbourhoods where rubble clearance will take a long time, so that there are not sufficient open spaces for the installation of the shelters for most families
Temporary shelter do's and don'ts	• Locate as close as possible to original site to ensure easy access to livelihoods, schools, community and government facilities • Take all cross cutting issues (p. 25) into consideration, i.e. special needs of the most vulnerable members of community, environmental impact and disaster risk reduction • Support local procurement and community based reconstruction wherever possible. • Ensure T-Shelters are not built on the footprint of future homes • If undertaken for communities displaced far from original land, then consideration is given to access to water, sanitation, education, livelihoods, government and community services • Although not designed to last a long time, Shelters need to be designed to last as long as the family is likely to need them, i.e. till permanent housing is ready for occupancy • May not require strong foundations, but will require adequate bracing (p. 101) and tie down (p. 102) • Most T-shelters do not come with any WASH facilities - ensure that these are provided somehow
Potential components of a temporary shelter program	• Shelter construction training • Non-food item (NFI) support • Cash or voucher distribution • Tool and material supply • Market interventions

13.7 Core house programs

Refer to:

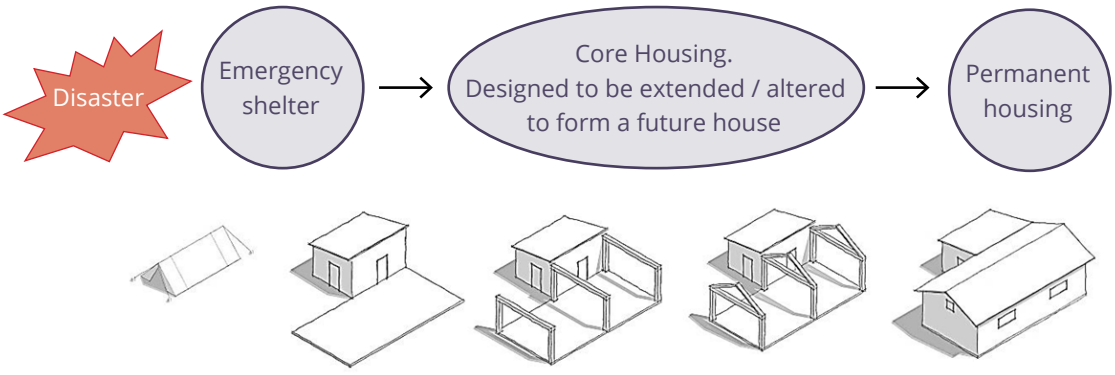
+ *Case Study 17: PHILIPPINES / 2012 / Cyclone*
+ *Case Study 27: PHILIPPINES / 2013 - 2017 / Typhoon*

Core housing programs, sometimes known as “One Room Programs”, focus on constructing part of what will become the future permanent home of a disaster affected family. Core house programs commonly consist of either a small but habitable section of a future house that has been designed to be expanded upon at a later date, or the frame and foundations of a permanent home with only temporary claddings for walls, roofs ceilings or floors, that are designed to be upgraded later. Many core-house designs are built on clear empty plots, but in some cases a remaining structurally safe room in a badly damaged house can also be repaired in order to be the core room. Most core housing programs are based on the premise that once families are rehoused they will be able to return to work, earn money and slowly upgrade or expand their home in the future.

2013 Typhoon Haiyan, Philippines
Core shelters were built in several batches by construction teams that included the beneficiaries. Material supply and monitoring were managed by the organisation
Photo credit: Sanjay Mukherjee
www.shelterprojects.org

Core housing programs are often proffered as a 'no waste' solution where all assistance provided goes on to form part of the family's permanent home. Core housing programs aim to provide a seed or starting point from which families can go on to recover on their own.
The permanent nature of core houses means they require clear long term land tenure and need to be engineered to be free from future risk and strong enough to be expanded upon. Core housing may be inappropriate where permanent construction material supply or access is damaged or restricted, or where delays in government permission to construct may be expected.

NOTE: It is critical to be clear about when it is appropriate to use a core houses or temporary shelter solution. Building a core house for a family who has no right of tenure may only exacerbate their situation leaving them evicted at a later stage with no further support. While building a temporary shelter instead of a core house for a family who has been permanently relocated and is unlikely to receive any further permanent housing assistance may leave them living in a rapidly collapsing building without the financial or physical means to build a new home.



Further information - Core house programs:

Shelter Projects 2009 Sri Lanka case study.

Example of a core house subprogram			
Subprogram	Target group	Types of assistance to be provided	Implementation modality
Core house	Families remaining on their existing site	Clean up tools	Direct distribution / implementation voucher / cash
		Construction labour	Construction subcontractor
		Demolition support	Demolition subcontractor
		Kitchen upgrade	Partnership with NGO
		Household NFI kit	Direct distribution
		Engineering advice	Engineering subcontractor
		Cash or vouchers to purchase construction materials or tools	Cash, vouchers

2009 Earthquake, West Sumatera, Indonesia
Core House
Photo credit: Habitat for Humanity Indonesia and HFH AP Office

Core housing key points	
Description	The aim of **Core House** is that in the future the family themselves can extend and renovate as finances allow. May be known as “one room shelter”, “seed house”, or “starting house”
Examples	• Shelters where a strong foundation wall and roof frame are provided with only light weight wall and or roof cladding materials that can be upgraded later • One room shelters, designed with strong foundations, walls and roof, with strategically placed door openings and windows so the shelter can be extended in the future
Well suited to situations	• Permanent land tenure is clear • Families have the potential capacity to go on to renovate in the future • Site is geographically safe • Future permanent housing construction assistance is unclear or unlikely • Construction materials are readily available, weather is good, time is available
Not well suited to situations	• Land tenure is unclear • Families may have to relocate • Families who are unlikely to ever have the ability to extend or renovate • Highly volatile soils, where separated foundations pose a threat • Municipal urban plan is for construction of multi-unit housing blocks, or other high-density housing options
Core housing do’s and don’ts	• Engineer structures to provide a strong base for future extensions, quality foundations, strong walls and roof frames. • Design buildings with a range of possible ways that it can be extended. Ideally design options are designed collaboratively then shared with communities • Construct from materials with a life expectancy of 20-25+ years • Need good permanent foundations (p. 100), bracing (p. 101) and adequate tie down (p. 102) • Resolve land tenure prior to construction • Good advice and training on how to expand structure in a safe manner in the future may be provided, particular for houses built on volatile soils or steep sites

13.8 Housing repair shelter program

Refer to:
+ *Case Study 13: PHILIPPINES / 2010 / Typhoon*
+ *Case Study 27: PHILIPPINES / 2013 - 2017 / Typhoon*

In the aftermath of a disaster, many families choose to seek shelter in the remnants of their damaged house. In many cases they may do so even though the building is dangerous and / or no longer weather-proof. Families do this for a broad range of reasons; to protect their remaining assets because they perceive they have nowhere else to go, because it is the only option near their source of livelihoods, or, because they have no other available land on which to construct a shelter.

In many cases humanitarian agencies express grave concerns that assisting families to stay where they are may expose both the family and the agency to unnecessary risks. In some cases this has meant that families have been left without assistance. Where no other land is available, such as in dense urban disasters, assisting families to stabilise and repair their remnant building may at times be the most effective shelter solution for the affected population. Due to dealing with complex permanent construction issues, housing repair shelter programs often need to consider a range of technical issues including:

- Government policy on reconstruction and how assistance provided may affect the family's future entitlements
- The legal right of the family to live in and repair the building
- The need for skilled and qualified engineers, builders and architects to provide clear technical advice, guidance and or construction skills/labour
- Clarity on required building permits or regulations to reconstruct.

Many housing repair programs function as a core housing program, repairing sufficient space to provide dignity and adequacy of shelter, leaving the family to repair the rest of the house as funds become available.

In a number of recent disasters, national governments have assigned specialist organisations with structural engineering expertise, to designate whether each house in the disaster-affected areas needs to be demolished, or can be re-occupied. Whilst this is a major and necessary step for reconstruction, these assessments do not state what exactly needs to be done in order to make a partly-damaged house re-occupiable, or what the costs might be.

Example of a housing repair subprogram			
Subprogram	Target group	Types of assistance to be provided	Implementation modality
Housing repair program	Families remaining on their existing site	Safe construction advice	Partnership with NGO
		Construction labour	Construction subcontractor, cash for work, community or owner-driven
		Engineering advice	Engineering subcontractor
		Bathroom upgrade	Direct distribution, cash
		Cash support program	Direct distribution

2011 Cyclone, Philippines
Non-food items and housing repair kits were distributed to 5,000 households
Photo credit: Leonilo Escalada
www.shelterprojects.org

13.9 Retrofitting

Refer to:
+ *Case Study 11: MYANMAR / 2008 / Cyclone*
+ *Case Study 26: PHILIPPINES / 2013 / Typhoon*

Retrofitting a house involves replacing parts of a house with elements which are of similar dimensions, and play a similar structural role (for instance, replacing a wall column with a wall column), but where the new replacement is stronger. This is designed to make the house more resistant to future disaster. The parts of the house which are replaced may or may not have been damaged in the previous disaster. Retrofitting is a realistic option where the costs of the retrofit are still significantly less than the cost of demolishing the house and building a new one. Retrofitting focuses on structural elements of a house, whilst repairing can include elements which are structural, but can also include elements which are not structural (for instance, replacing damaged windows). The objective of a retrofit is closely connected to national building safety standards. Because of the specialist nature of the work, and the safety issues involved, retrofitting is typically undertaken by contractors.

Example of a retrofitting subprogram			
Sub program	Target group	Types of Assistance to be Provided	Implementation Modality
Retrofitting	Families remaining on their existing site, or wanting to return to their site of origin, where the house is still livable, but has suffered some structural damage	Engineering advice	Engineering subcontractor
		Extractive demolition support	Demolition subcontractor
		Construction labour	Construction subcontractor
		Plastic sheeting and tape, to protect the rest of the house during the works	Direct distribution

Retrofitting key points	
Description	The aim of **Retrofitting** is that in the future the family can return to a damaged house which has been made safe, and stronger against future disasters, without the full cost of a new house.
Examples	• Houses where only one corner has collapsed, and where there is space to install a new corner column properly attached to the foundations, and a segment of the wall with stronger mortar • Punching in of longer, wood or reinforced concrete lintels above the windows and doors, to replace lintels which were too short, and made of rows of bricks
Well suited to situations	• Permanent land tenure is clear • Families have the potential capacity to go on to renovate in the future • Site is geographically safe • Future permanent housing construction assistance is unclear or unlikely • Construction materials are readily available, weather is good, time is available
Not well suited to situations	• Land tenure is unclear • The original home was part of a multi-storey, multi-unit building • Families are not permitted to return to their original house • Building codes, lack of workspace, or other restrictions, mean that retrofitting takes more time and costs more money than demolition and building a new house • Contractors are not available to undertake specialist structural engineering work
Retrofitting do's and don'ts	• Always employ specialists • Make sure that the new retrofitted elements are integrally and strongly connected with all other parts of the building • Remember that the family will still need some form of shelter, whilst waiting for the retrofit, and whilst the retrofit work are ongoing • Ensure that the materials to be used are just as strong and of good quality as the engineering design • Make sure that by making one part of the house stronger, other parts of the house are not made weaker in the process

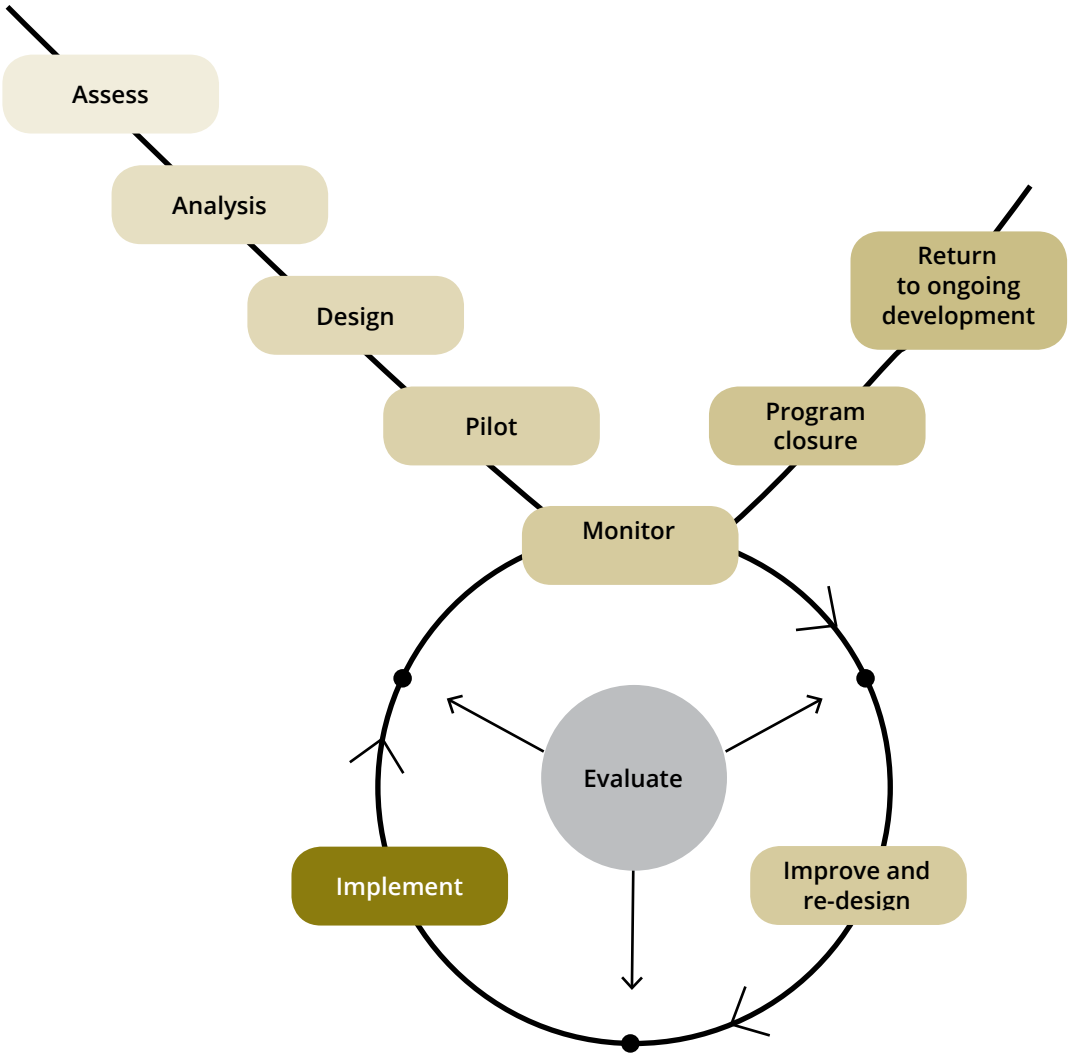
IMPLEMENTING

Delivering a shelter program within the project management cycle. Highlighting measures which are vital to ensure the efficiency and effectiveness of assistance.

Photo credit: Miguel López Beraza

IMPLEMENTING

Implementation of humanitarian shelter programs should never be a static process, but rather a continuous cycle of monitoring and evaluation, reviewing and feedback, and improving and piloting. Implementation should be based on evidence-based research, needs assessment and analysis, design, and careful consideration of the local context, including active participation with the affected community, and engagement with local organisations, coordination agencies and government.



Stages of a program management cycle

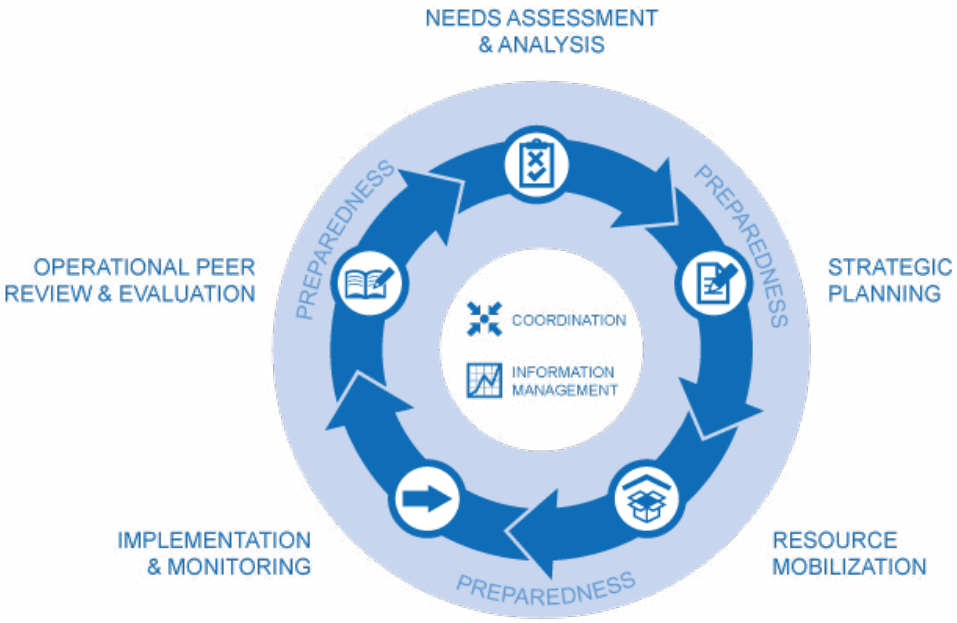
14. Managing a shelter program

14.1 Program management cycle

Like all humanitarian and development programs, the management of shelter programs is based on stages of a program management cycle.

The program management cycle is based on the concept that program design is founded upon evidence based, assessment and analysis of needs, and that implementation is constantly monitored and improved to ensure those needs are adequately addressed. The evaluated results of the program should inform improvements for the next response in the future.

Constant monitoring helps ensure that standards are maintained and programs are on track towards their objectives. The use of continuous cycles of monitoring helps to ensure that the track was correct in the first place and allows the program to detect and address changing needs. Individual sub-programs of a shelter response program may progress through separate, though interlinked management cycles, as sub-programs may require different timeframes to achieve their goals.



1 2018, UN OCHA. Humanitarian Programme Cycle

Smart objectives

Managing a shelter programs is much easier when we are clear about what we are trying to achieve (GOALS) and have SMART objectives to help us achieve this. Objectives should be:

S SPESIFIC	**SPECIFIC:** Clear and unambiguous stating; Who we are going to assist and How, by When, with What, Where and Why
M MEASURABLE	**MEASURABLE:** Both in quality and quantity so we and the community know if we are achieving our goals: When, What, Where, Who, Why and How
A ACHIEVABLE	**ACHIEVABLE** - realistic and **RELEVANT:** To the needs of the affected population and to orgnisational mandates or goals
R RELEVANT	
T TIME BOUND	**TIME BOUND-** realistically achievable in the available time-frame

Log frames in shelter programs

The program management cycle is dependent on clarity about the goals that we aim to achieve, objectives to achieve those goals, and results-oriented activities designed to meet those objectives.

Ensuring shelter programs achieve their goals and objectives requires a clear strategy based on logical assumptions about what is likely to occur over the cycle of the program. This requires a series of indicators that are measurable and verifiable.

One common method of expressing and tracking all of the above factors is through a Logical Framework Matrix.

Further information - log frames in shelter programs:

World Bank, 2005.Log Frame Handbook

Structure of a logframe (Logical Framework Matrix)				
	Strategy	Indicators	Means of verification	Assumptions
	What impact do we hope to achieve from the overall program	What are the things we will be able to measure to show how well the purpose is being achieved including Quantity, Quality, Time and Budget	What Methodology will be used for measuring indicators and how will this be integrated into the program design	What are the external factors that we assume will exist or occur
Goals (IMPACT) The expected benefits to the affected population				
Objectives (OUTCOME) The intended changes of that the program aims to achieve				
Results (OUTPUTS) The tangible products or services that the program will deliver				
Activities (INPUTS) Assistant types / the actual actions that will be undertaken				

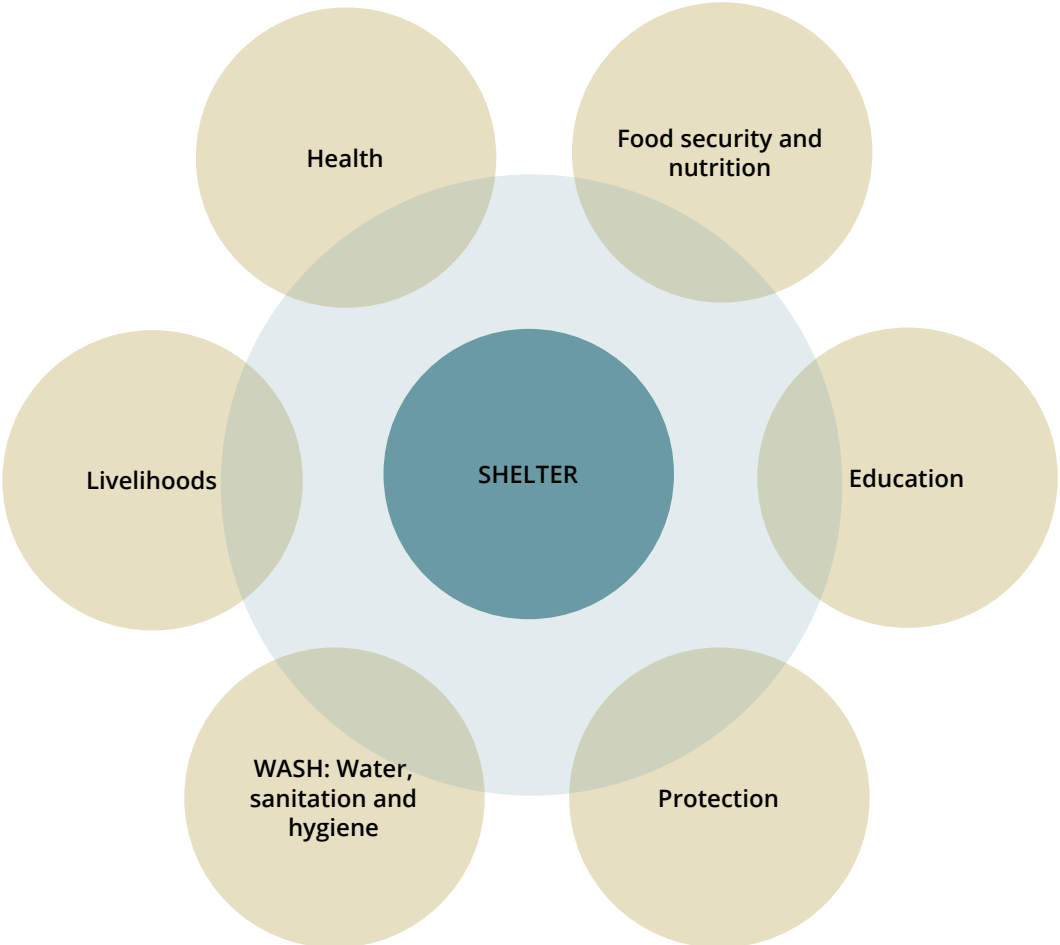
Planning for staffing and resources

Developing each step of the program management cycle, ensuring that each step conforms to SMART objectives, and using tools like Log Frames, allows program planners to develop an accurate budget, and to plan with confidence for a phased approach to staff hiring, and the purchase or rental of resources like vehicles, storage space and office equipment. Program management planning also allows the program manager to see how the different staffing positions will evolve. At the outset of a program, most staffing needs may be met by larger teams of items distributors, or social mobilisers. Later on, planning may be needed in order to hire the specialists who can best implement more complex repair or retrofit sub-programs.

14.2 Shelter as part of an overall response

Shelter programs do not stand on their own; they will almost always form one part of an integrated response with many elements. Depending on the profile of the disaster, the shelter element may be a small or a large component of the overall response.

The place where people live is one of the defining factors for where support programs will occur and because of this, shelter is often a foundation upon which other programs can be built. Communal WASH facilities may be built next to clusters of shelters. Nutrition programs may be divided up per camp or barrack. Improving the inter-linkages between shelter programs and other sectors improves the effectiveness and efficiency of the overall response.



15. Basic construction principles

Throughout this guideline it has been emphasised that sheltering affected populations is not only about constructing physical shelters, but also about ensuring the dignity, safety and comfort of the affected population until a permanent, safe and durable housing solution has been found. Ensuring dignity, safety and comfort may or may not involve the construction of shelters. For example, families temporarily housed in a public building awaiting flood waters to recede may have no need for physical construction, whilst families permanently displaced may require assistance to build core homes.

The shelter guidelines do not attempt to give a "one size fits all" design that can be implemented regardless of country or region, but rather offer an inclusive process approach to get to the right design suiting the needs and desires of the affected population. This should take into account cultural and context specific considerations. Having said this, it is still considered important to include some of the basic principles of construction. Shelter assistance programs in emergency situations can be an opportunity to educate people about safe construction principles, and how to build back better; reducing the impact of future disasters.

In a healthy economy, around 2-5% of the housing stock may be being built at any one time with a similar percentage being renovated or extended. When a disaster strikes, mass destruction generally means that reconstruction is beyond the supply ability of the local construction industry. A surge in capacity can be encouraged by sourcing either external labour and building supplies to be brought in on mass, or to boost the local construction and building material supply. As communities continue to expand and reconstruct what was lost in the disaster, there is an opportunity to assist communities in increasing their construction knowledge and skills. This can be facilitated through Information, Education and Communication (IEC) promotion campaigns, construction training and local government / community driven programs.

Further information - Basic construction principles

IFRC, 2011. Shelter safety handbook

IFRC, 2011. Participatory Approach for Safe Shelter Awareness (PASSA)

IFRC, 2018. Standard products catalogue

The following chapter of the guideline looks at basic construction principles such as:

- Building shape
- Roof design
- Layout
- Foundations
- Bracing and tie down
- Materials, tools and fastening selection

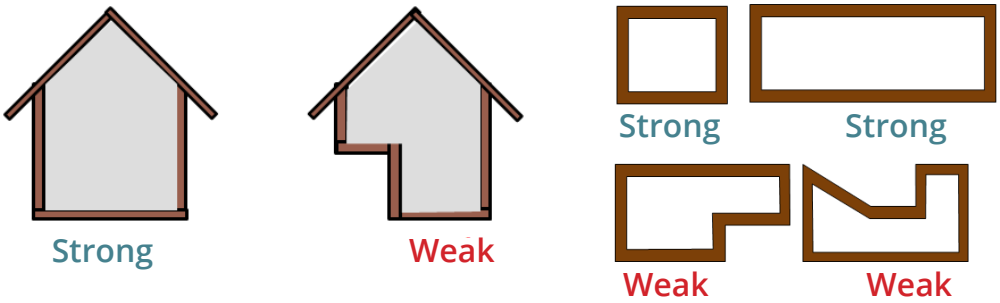
NOTE: This chapter is only intended as a brief introduction to core concepts. More detailed training on the specific technical construction details involved in any one response should be incorporated into each shelter response program individually.

Photo credit: Fabian Prideaux

15.1 Building shape

Refer to: + *Case Study 22: PHILIPPINES / 2013 / Typhoon*

The shape of a building (in plan, and vertically) can affect its structural strength and integrity. Simple geometric floor plan layouts such as squares and short rectangles, have much greater strength than more complex shapes such as elongated rectangles, central courtyards, cross, U or L shaped constructions. Most complex shapes transfer stresses to their internal corners where the building will then fail. Always consult first with national building codes - however, a general rule of thumb is that the longer wall should not be more than three times the length of the shorter wall.



If it is the cultural norm to have a courtyard, or inner space within the house, so that the house forms a U-shape, then make sure that this U shape is created through three separate buildings – two as the parallel 'legs' of the U, and another one placed at a 90-degree angle between the other two.

If either spatial limitations or cultural norms mean that many houses must be built together in a row, then make sure that between each house there are perpendicular internal walls with bracing strength, integrated into the structure of the longer front and back walls, and that there are no more than three houses without a space gap between them.

Internal load-bearing walls in the house must go all the way from one side of the house to another. If an internal load-bearing wall only goes partly across the interior of a house, or ends in a junction with another internal wall, then there is a high risk of failure of all walls to which it is attached, during an earthquake.

Practical demonstrations can be undertaken by cutting out pieces of plywood into regular and irregular shapes and seeing how difficult one is to break compared to another, or else commonly by looking around at which buildings survived better. Simply convincing communities to build in regular shapes can greatly reduce the impact from future hazards.

Irregular vertical shapes can be just as hazardous - if not more - as irregular floor plans. In these instances, construction materials falling from poorly built multi-storey buildings have a much greater potential to cause harm. Lower storey walls should be continuous and even with upper walls centred above them. Overhanging sections and elongated vertical skinny structures should also be avoided. Unless balconies are constructed as continuous extensions of the floor beams, they are liable to fall off during an earthquake, harming or killing both those standing on the balcony, and those below.

Window and door placement can also greatly affect the structural strength of a building. Avoid placing windows or doors in the corners of buildings and ensure both windows and doors have adequate lintels or ring beams above them to spread the load of upper floors or roof loads. Neither windows nor doors should cut through columns or beams which support the weight of upper storeys. As a rule of thumb, the combined horizontal measurement of all the apertures in a wall, should not exceed one third of the total horizontal length of the wall.

All of the above considerations need to be balanced against the needs of the family, the shape of the building site, the need for cross flow ventilation and a myriad of other considerations.

Examples of window and door placement: Structural column, ring beam, lintels and sills shown in green

Strong

Weak

Further information - Building shape

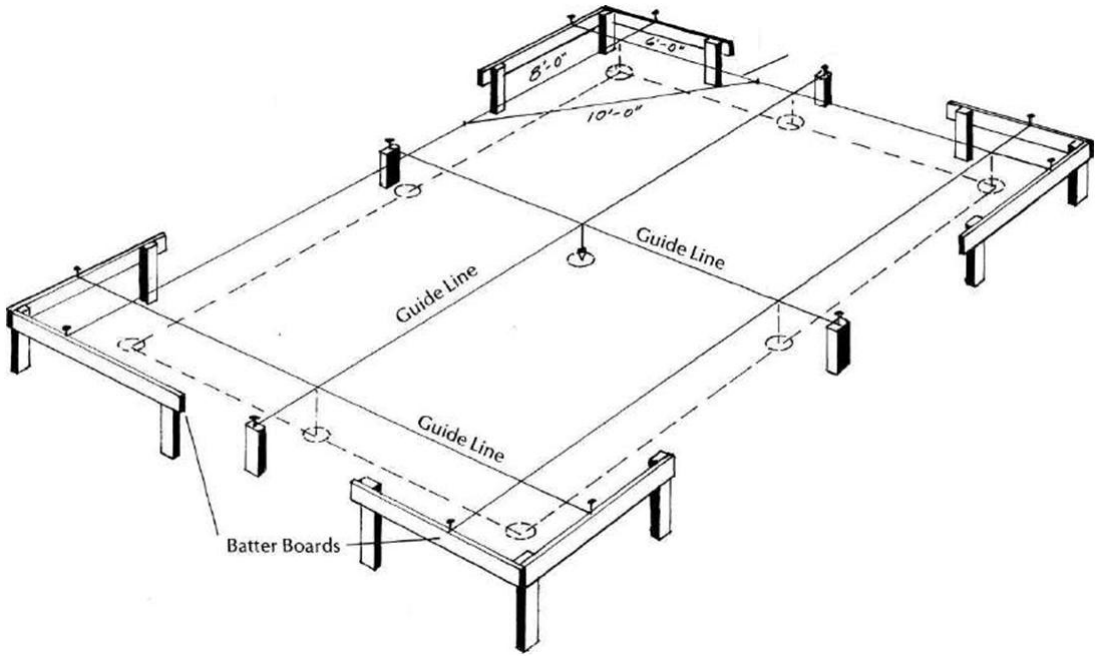
IFRC, 2011. Shelter safety handbook

IFRC, 2011. Participatory Approach for Safe Shelter Awareness (PASSA)

15.2 Site selection

Selecting an appropriate site is an essential aspect of ensuring the safety of any construction. Unfortunately in post disaster situations, the affected population may not have much control over where shelters are constructed, as available locations may be limited. When considering different site selection locations or advising communities on site selection the following concepts should be considered.

When a building is constructed accurately, to be level and square, the more evenly it can dissipate loads from future hazards such as earthquakes and strong winds. Hence, it is important when setting out a building site to ensure the site is level and square.



Setting out a shelter using "batter boards" and guide lines

Considerations in selective shelter sites	
Consideration	Further detail
Tenure	Does the affected family have right of occupancy for the period they are likely to require before future shelter solutions are put in place? NOTE: lack of tenure may change the type of assistance provided but does not change a family's right to be assisted.
Safe from further hazards	Is the location safe from: • Potential collapse of remnant buildings? • Floods, landslides, tsunami, eruptions or strong winds? • Potential social conflict or man-made hazards?
Suitable terrain	It is important to consider where water will flow across a site during peak periods of high rain. As a rule of thumb, the ground level around the shelter should fall 10-20cm over the first 1 meter from the inside floor level.
Drainage	It is important to consider where water will flow across a site during peak periods of high rain. As a rule of thumb, the ground level around the shelter should fall 10-20cm over the first 1m from inside floor level.
Adequate access	Does the location have access to: • Education, health and other government facilities • Religious and cultural practice facilities • Friends family and community support • Water, sanitation, fuel and electricity • Markets, public transport and sources of livelihoods • Where some or all of these facilities are not accessible, shelter programs may need to include these elements or encourage other organisations to provide the facilities.
Not blocking early recovery	Consideration should always be given to the long term plans for the site where a shelter will be constructed to ensure that shelter placement does not slow down longer term recovery. Avoid constructing T-Shelters on the footprint of future houses.

Further information - Site selection

IFRC, 2011. Shelter safety handbook

IFRC, 2011. Participatory Approach for Safe Shelter Awareness (PASSA)

15.3 Foundations

Refer to: + *Case Study 22: PHILIPPINES / 2013 / Typhoon*

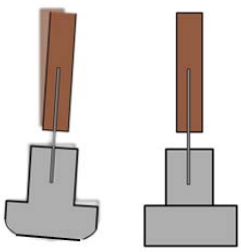
Good foundations are essential to the strength and durability of any construction. Foundations form a number of essential roles.

Firstly and perhaps most importantly, for small shelters, foundations hold light weight buildings down to the ground. They do this through their own weight but also through the ground pressure around and above them. To be effective they must be well attached to the posts to prevent uplift from wind (see section on tie-down) and be embedded sufficiently deeply in the ground below them, ideally thinner at base than top.

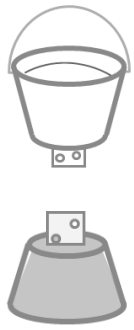
Secondly, foundations spread the load of the building evenly across the ground, stopping it from rolling or tipping over. To do this effectively, they must be deep enough to reach solid ground and flat on the bottom with square edges to prevent rolling over.

Thirdly, foundations provide a barrier between structural timber or bamboo posts and beams, and ground moisture, ensuring that these elements last longer, reducing the risk of rotting and termite infestation.

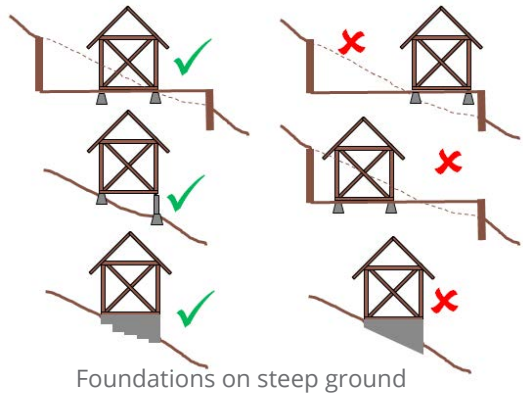
In broad terms, foundations can be divided into two general groupings; strip foundations and pad foundations. Pad foundations are the most common form of foundation used for temporary shelters, consisting of individual concrete pads at the base of each structural post. Strip foundations are more common for permanent construction and core housing.



Non-square foundations roll over easily



Example of a simple foundation suitable for temporary shelters made in a bucket with a steel connector plate



Foundations on steep ground require particular attention: Don't build too close to cuttings or on filled soil. The base of the foundations should step down the slope with flat bases

15.4 Bracing

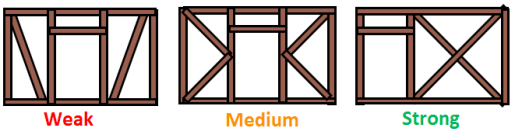
Refer to: + *Case Study 22: PHILIPPINES / 2013 / Typhoon*

As with any construction, shelters require sufficient bracing to ensure that they are protected against future earthquakes and strong winds. The forces exerted by earthquakes and strong winds can push against the structures of houses in different directions, all of which can be resisted by well-constructed bracing.

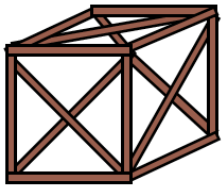
Bracing can either strengthen a house structure through compression (resisting a force which is pushing against it) or through tensile (resisting a force which is pulling against it)

It is best to think of each house as a box structure, where the bracing on each of the six sides is integral to the strength of the entire structure.

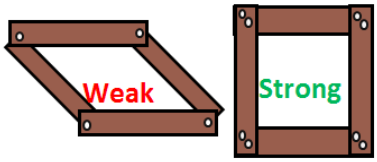
In earthquake-prone areas, braces should reach from the top of the structure to the base of the structure to allow energy to dissipate along the length of the brace and the column. Bracing is more critical on tiled roof structures as the mass of the roofing rapidly gains momentum if allowed to move at all.



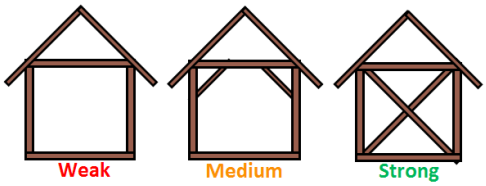
Examples of a bracing applied to a wall with a doorway.



Bracing applied in all three dimensions



Two screws or nails at each joint helps stop buildings collapsing



"Knee" braces as shown in diagram two is primarily intended to reduce the span of wall beams carrying roof loads. They have very limited bracing effect against earthquakes and wind.

Walls are not the only part of a house which needs bracing. Roofs also need to be braced.

15.5 Tie-down

Refer to: Case Study 22: PHILIPPINES / 2013 / Typhoon

In high wind prone areas, roofs need to be tied down to stop them being sucked off by the vacuum caused by strong winds passing over them. If the roof is tied down to the walls but the walls are not tied down to the ground, both walls and roof may be lost. Hence tie down should be implemented from the bottom up.

Remember: tie down from the bottom up

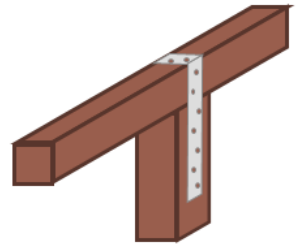
In high wind areas, tie the floor to the foundation, the walls to the floor, the roof frame to the walls, then the roofing to the roof frame. Simple ways to improve tie-down include:

- Skew nailing instead of vertical nailing
- Using metal straps
- Twisted roofing nails or roofing screws rather than plain nails.

NOTE: Tie down is more critical on sheet roofed structures than tiled roof structures as roof tiles help weigh down the building.

Roofing Screw

Roofing Nail



Metal Strapping: used to hold a top plate to a column

Further information - Tie down

IFRC, 2011. Shelter safety handbook

IFRC, 2011. Participatory Approach for Safe Shelter Awareness (PASSA)

15.6 Building in timber

Refer to: + *Case Study 10: INDONESIA / 2009 / Earthquake*

A number of simple principles can be applied when working with timber that will increase the strength and durability of shelters.

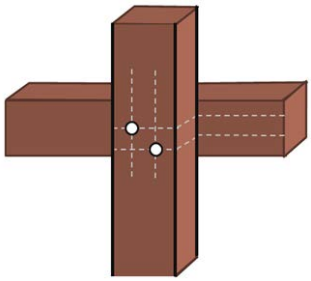
Selecting timber

Make sure that each of the pieces of timber to be used in a shelter conforms to the following checklist:

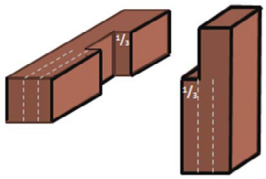
- Timber is straight, not bent, curved or warped, in any direction
- There are no splits at the ends of the piece
- There are not enough knots, and the knots are not of sufficient size to weaken the timber

The one third rule

When joining timbers the 1/3rd rule can be applied. This construction principles says that when nailing, screwing or bolting two pieces of timber together, fasteners should be attached 1/3rd of the way from each of the edges for maximum strength.



When lap jointing or mortising two pieces of timber together the same rule applies. The joint is at maximum strength when the recess is only 1/3rd of the width of each piece of timber.



Protection timber from weather and pests

Bamboo and timbers degrade rapidly if exposed to direct ground contract, excessive sun and or rain. Timber that is constantly wet is easily attacked by fungus, rot, termites and other pests. This is particularly true for softer timbers such as coconut or rubber wood, though less true of harder more resistant timbers such as Ulin (iron timber). Hence, shelters should be designed with sufficient eaves overhang to protect timber walls and structural posts from direct rain and with raised foundations to protect posts from direct ground contact.

Skew nailing

Where possible, nails should be hammered in at a slight angle from vertical and from alternating directions. This is known as skew nailing and greatly increases the resistance of the joint to being pulled apart.

Connection detail: timber column and top beam

Photo credit: Build Change

Further information - Building in timber:

2009. Humanitarian Timber Guidelines

15.7 Bamboo construction

Refer to:
+ *Case Study 02: INDONESIA / 2006 / Earthquake / Overview*
+ *Case Study 12: MYANMAR / 2008 / Cyclone*

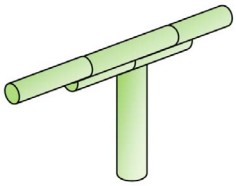
With the tensile strength of mild steel and a three to five year growth cycle per column, when culturally acceptable and regionally available, bamboo can be an ideal resource for shelter construction. For many people new to using bamboo, the fundamental principles of bamboo construction can be unfamiliar and perhaps baffling. The following provides a very brief outline of some of those principles.

Tubular strength and nodal placement

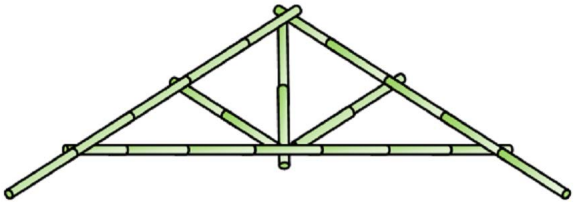
Bamboo tubular structure and long fibers make it extremely strong in end to end compression, resistant to bending forces, and provide it with high tensile strength. Unlike timber though, sections of bamboo between nodes can be easily crushed, and where tubular end of culms are cut well after the last node, the ends of bamboo poles can be quite fragile.

Examples of good and poor nodal placement

Therefore, one of the primary considerations in bamboo construction is about designing structures limiting the application of forces to the bamboos's tubular sections, preventing them from crushing easily. The two most basic ways of achieving this are through careful nodal placement in regards to joints and through three dimensional bracing.
Wherever possible and particularly with load bear joints, joints should occur close to or at the nodes. A rule of thumb is that joints should occur within 1.5x the width of the bamboo culm. Where joints must occur far from the node "fishplates"made from larger sections of bamboo can be wrapped around the joint to help spread the load"



Fishplate to spread load



Examples of nodal placement in a roof truss

Correct nodal placement is not actually that complex or wasteful to do. Rather, it requires a little pre planning and selection of which piece of bamboo would be best suited to which position. As an example, when laying out roof trusses for a roof, all trusses can be laid out parallel on the ground, then cut so that the best node placement can occur for the structurally critical ridge beam joint, and, as close as possible for less critical rafter ends.

Three dimensional bracing

Bamboo's high flexibility makes it an ideal material for dissipating forces such as those generated in an earthquake or by strong wind, but it also increases the need for effective bracing. The loads on bamboo joint can be greatly reduced if all joints are securely braced in all three dimensions. Ideally, braces should be full length to transfer loads from joints to joint.

3D bamboo bracing
Photo credit: PMI 2007

Bamboo preservation

To treat or not to treat bamboo is often a debate in mass bamboo shelter projects. Treating bamboo increases cost and at least initially can slow down delivery, while treated bamboo has a much greater life expectancy; approximately 25 years as compared to only a few. The real answer to this debate how long the bamboo shelters are expected to be needed for. When unsure and concerned about how long shelters may need to be occupied, or when building bamboo core houses, or else when providing materials that will go on to be used in permanent construction, bamboo treatment should be seriously considered. Aside from treating bamboo, a broad range of steps can be taken to increase life expectancy, including harvesting at correct times, leaching of sap, careful transport and storage, design and construction to provide protection from rain, sun and groundwater. Well-constructed untreated shelters can be expected to last 2-3 years.

Bamboo fastenings

Bamboo can be joined effectively with a wide range of materials, rope, wire, dowels, nails or bolts & concrete. The most important point when selecting a jointing system is to choose a method that is well known to local bamboo tradespeople. Introducing a new jointing system may lead to unnecessary confusion and hence reduced joint quality. Local jointing methods should then be cross checked with local engineers to ensure that all stress loads have been considered.

When jointing bamboo, it is important to use methods that prevent the bamboo from splitting. Bamboo splits much more readily than timber and, once split, the strength it gains from its tubular shape is lost. A combination of pegs, nails, pins and bolts along with string wire or rope provides a good balance of strengths. Holes should always be pre-drilled or carved for pegs, pins or nails to carry the load between joints, while wire, rope or string is wrapped around the joint to ensure close contact and maintain tubular integrity.

> ***Further information - Bamboo construction:***
>
> 2018, Humanitarian Benchmark Consulting. *Humanitarian Bamboo Guidelines*

15.8 Roof design

Refer to:
- *Case Study 01: INDONESIA / 2004 / Tsunami & earthquake*
- *Case Study 20: PHILIPPINES / 2012 / Typhoon*

Roof design varies based on climate and cultural considerations, changing climate along with changes in construction practice, which may mean that roof design needs to be reconsidered in an area if damage is occurring from rain or wind. As can be seen in places like Padang, roof design can be important to cultural identity. What one community may see as complex to build may be considered simple by another and vice versa. As always it is important to involve communities in all stages of the design and implementation of shelter programs to ensure the shelters accurately match both needs and desire.

Pitch

The shape of the roof of a shelter or house also has a critical impact on the performance of the building particularly in terms of wind and rain. A steeply pitched roof sheds water quickly making them more suitable for high rainfall or snow areas, whilst low pitched roofs offer less sideways wind resistance making them more suitable for wind prone areas. As a rule of thumb, a Corrugated Iron and Fibrous Cement roofs should have a pitch greater than 5 degrees in the tropics, whilst cement or clay tiled roofs should have a minimum pitch of 12 degrees to cope with high rainfalls. Given that roof frames may sag through under engineering, it is wise to recommend a 15 degree pitch except in very high wind areas. Pitches greater than 27 degrees are extremely difficult and dangerous to walk on, whilst roofs with pitches greater than 30 degrees are unnecessarily prone to wind damage except in high snowfall areas or tropical rainfall areas where thatching is used. Hence, 12-25 degrees is considered the norm for most roofs.

NOTE: The wind load on multi-pitched roofs can be considered at the average of the pitches

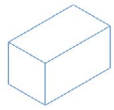
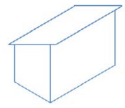
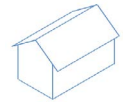
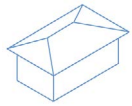
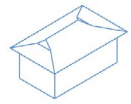
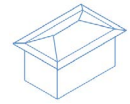
Asbestos roofing

Asbestos roofing deserves its own special mention in regards to roofing. Asbestos has been outlawed in more than 60 countries in the world due to being highly carcinogenic and responsible for 3 fatal incurable diseases; Mesothylioma, Lung Cancer and Asbestos. Due to this, there are strict guidelines prohibiting the use of asbestos. Refer to the links below for more information. The ground rules of Asbestos are:

1. Asbestos is deadly
2. Don't buy it
3. Always consult with local authorities first, before attempting to dispose of it
4. If it's not broken don't break it, seal it in
5. If you must remove or handle it keep it wet
6. Wrap it, seal it, bury it somewhere it will never be dug up again

Ridge design

The shape of roof designs varies across Indonesia with each shape offering its own distinct advantages and disadvantages. Changes in climate and roofing material may mean that traditional roof shapes are less appropriate than they used to be.

Performance considerations	Flat roof	Single pitch "lean-to"	Twin pitch gable end
Example			
High rainfall	Poor, hard to waterproof	Good, depending on pitch, need to waterproof upper edge	Good, depending on pitch
High wind	Excellent	Quite Poor: requires strong tie down at edges	Not so good
Ease to build	Easy	Easiest	Relatively easy
Cost to build	Cheapest	Cheap	Relatively cheap
Notable feature	Cheapest to build	Easiest for rainwater harvesting	Most common and easy to build. End doors safe in earthquakes
Performance considerations	**Four pitch hip end**	**Four pitch dutch gable**	**Twin pitch hip end**
Example			
High rainfall	Good: though requires extensive ridge capping	Good, though requires good waterproofing at roof openings and extensive ridge capping	Good due to upper pitch, though needs good waterproofing and extensive ridge capping
High wind	Good	Very good	Very good
Ease to build	Medium	complex	complex
Cost to build	Cheapest	Cheap	Relatively cheap
Notable feature	Good bracing, low wind resistance	Good bracing low wind resistance, good ventilation	Low average pitch but still sheds rain well

15.9 Tool selection

Commonly shelter programs involve the distribution of tools. These may be for clean-up, demolition, shelter or WASH facility construction, or even to assist with permanent reconstruction. The need for assistance in the form of tools is based on a number of factors, primarily whether the clean-up, repair and reconstruction will require more tools than the likely existing capacity within the affected population. A further factor for the specification of the tools is the specifications and dimensions of the shelter materials which will be distributed, or which the beneficiaries would be likely to purchase themselves. For instance, only heavier hammers will be effective for nails which are longer and of wider diameter. Only shears with longer handles may be able to cut through some of the thicker-gauge roofing sheets.

Tool selection is heavily dependent on local preference, and should involve close collaboration with affected communities, and local suppliers to ensure tools selected are appropriate for the context.

There are a number of standard issue shelter kits provided by international humanitarian agencies, that include the basic tools to build a basic shelter. The following table describes tools that may or may not be considered in addition to these tools.

Potential tools for post disaster distribution	
Type	Description
Clean-up	Buckets, mops, brooms, shovels, wheelbarrows, hoes, pumps, brushes
Safety equipment	Dust masks, gloves, boots, safety goggles, wellington boots / heavy duty rubber boots
Demolition	Long-handled / two-handed sledge hammer (for knocking over or breaking up larger elements of a building), short-handled / single-handed sledge hammer (for knocking pieces of concrete off re-bar), crow bar, flat bar, claw hammer, winch, rope, chains
General construction	Claw hammer, saw, drill, drill bits (both wood and metal), basic chisels, set out string, water hose, level, sharpening stone, metal shears, spanners
Specialist construction	Mortice chisels and sharpening stones, electric tools such as circular saws, drills and planners, builder's squares, plumb bob, wider range of drill bits

Tool selection: General considerations	
Procurement source	• Consideration should always be given to the supply capacity in local markets. When access is restricted, importing tools from a non-affected area may be essential. When access is not restricted, local procurement is encouraged to boost the local economy. • Care must be taken neither to not deplete local markets and hence slow down the self-recovery process nor to flood the market with supply, hence reducing livelihoods opportunities for local retailers and wholesalers.
Specification and tool selection	• The tools we use are determined by a range of physical and cultural factors. The timber or bamboo in one region may cut differently to that in another. It is critical to involve local tradespeople in the process of selecting and specifying tools that suit local culture and need. • If beneficiaries have been selected on the basis of vulnerabilities which might have an impact on their ability to undertake some physical tasks (e.g. those with disabilities, or child-headed households), then select tools with weight and grip specifications which will allow a wider range of beneficiaries to safely use them.
Distribution level	• Some tools are more suited to distribution on a per household basis, others at a community level. When considering household level, look for how many tools any one family needs to own and how many hands there are to use those tools. When considering community level distributions, consideration should be given to who will have ownership and responsibility for the tools into the longer term. Tools may be given to small groups of households to share with clear agreement on how they will be divided up later. At a community level, it can be valuable to identify potential future tradespeople, collectives or CBO's who will hold longer term responsibility for the tools.
Durability	• Lower quality tools may break before the shelter or construction tasks are completed, especially if the tools are being shared at a community level. This can create frustrations on the part of the beneficiaries, and can also pose a risk of injury to the users. Most tools that are distributed for the short term needs of recovery can go on to play a valuable role in longer term recovery. This potential benefit needs to be weighed up against additional cost. It is critical to involve local tradespeople in the selection and specification of appropriate tools.
Connections with recovery	• Most tools that are distributed for the short term needs of recovery can go on to play a valuable role in longer term recovery, as tools for a wide range of livelihoods activities. This potential benefit for stronger, more durable tools, needs to be weighed up against additional cost. It is critical to involve local tradespeople in the selection and specification of appropriate tools.
Do no harm	• Be aware that in some countries, either the national authorities or the humanitarian coordination forums ban the distribution of some tools which may be used for shelter and construction purposes, but which could also easily be used as lethal weapons, such as machetes.

15.10 Construction material selection

The selection of materials that are both well suited to the purpose of shelter construction, durable, environmentally friendly, affordable and culturally acceptable is one of the major challenges of the shelter sector. Ensuring quality control, determining whether local national or international procurement is most appropriate, supply chain management, transport and storage all pose considerable individual challenges that involve input from procurement experts, shelter experts and advice from the local community. The following offers some brief guidance on common issues that need to be considered with a range of common building materials.

As well as ensuring beneficiary safety and proper use of donated funds by procuring materials of adequate quality, all post-disaster programs must take steps to ensure that procurement is done in ways which minimises the environmental impact. Often, the impact of a natural disaster is increased through environmental degradation, with deforestation, coastal erosion, and sand excavation all responsible for increasing the exposure to risk of local communities. Work with accreditation organisations such as FSC, to procure timber and other materials from sustainable sources.

Rebar - ribbed steel

Recycled rebar

Crushed sand

River sand

Beach sand

Material selection for post disaster construction	
Type	Description
Water	• Should not be brackish or salty • Should be free from vegetation or rubbish
Sand	• Ideally sand is broken jagged sand rather than river sand as it has a higher surface area and grips cement better • Beach sand should not be used as it contains salt and has an overly smooth surface, where it must be washed extensively first to remove salt • Should be free from vegetation; sift before use
Steel	• Deformed steel bar grips the surrounding concrete much better greatly increasing strength • Seek engineering advice on minimum steel thickness and ensure checks are in place as undersized steel is common in Indonesia • Steel joints should overlap considerably for strength commonly 30-40cm • Regular steel bands, commonly 10cm are critical to foundation and column strength • Steel should be covered by 3 cm of concrete in all dimensions • Without specialist testing, used rebar recovered from destroyed buildings is not strong enough for reuse
Cement	• Cement must be stored carefully and kept dry till time of use
Stones	• Foundation stones should be selected in consultation with local tradespeople and engineers, to ensure they do not crumble • Round river stones should be avoided
Gravel	• Gravel made from broken rock rather than river stones has a higher surface area and creates a stronger joint. Ideal gravel in concrete has a mixture of sizes from between 10-50mm
General considerations	
• For greatest strength, concrete should be made with as little water as possible; only sufficient to start the thermochemical reaction and to provide sufficient malleability for purpose. Overly wet concrete eventually dries out leaving gaps where the water was • Once concrete has reached initial hardness after a few hours it should be kept wet for as long as possible to increase strength over time • Concrete that is vibrated, pounded, or shaken has much greater strength • When mixing cement for mortar between bricks or as plaster, bricks should be watered prior to application so they do not leach water from the cement. Adding a little detergent to mortar increases malleability and ease of handling without requiring excessive water which weakens the mortar	

Standard mix ratios for concrete, mortar and render				
Standard mixes may vary slightly due to characteristics of local materials. The below are general rules of thumb. Check with local tradespeople and engineers but don't be convinced to make it too wet or too weak as that's why houses fall down				
Type	Mix ratio			
Concrete mix	½ bucket water	1 bucket cement	2 buckets sand	3 buckets
Mortar mix	1 bucket water	1 bucket cement	4 buckets sand	
Render mix	1 bucket water	6 buckets cement	1 bucket lime	

Preparation of temporary foundations, Padang

Photo credit: PMI 2010

15.11 Framing materials

Framing materials selection	
Type	Description
Timber	• Sustainable sourcing is a key concern for timber shelters; shelter programs are often of such a large scale that they can have considerable environmental impact. Timber certification should be considered. • Work with local communities and tradespeople to ensure specifications are in place for a minimum acceptable standard of timber and correct species of large scale procurement of timber commonly requires a timber procurement specialist as there are many factors to consider. • In general construction, minimum moisture levels are specified for timber. This may not always be an available option for shelters. Where unseasoned timber is used, joints should be designed to allow for shrinkage and structures should be slightly over engineered to allow for shrinkage and cracking. • It's critical that timbers are kept free of ground contact and protected from rain unless of high durability class. • Reuse of timber from old homes should be encouraged but may require some training on visual inspection. • Engineers or local building experts should be used to check designs for adequacy of bracing tie-down and strength, and remember the 1/3rd rule as clarified early in this section of the Guidelines.
Coconut wood	• Coconut timber varies greatly in strength depending mostly on age of the coconut and from what part of the tree the timber is sourced. Unlike normal timber where the outer layer of timber is weakest, the strongest timber in a coconut stem is the outer edge and lower down. The higher up and closer to the centre the weaker timber. • Harvesting storm damaged coconuts may be a viable material supply in some disasters. In these cases ownership and replanting issues should also be dealt with.
Bamboo	• Bamboo can be a great environmental alternative to timber for large scale shelter programs, but consideration must be given to supply chain management to avoid deforestation and depletion of resources. • Bamboo clumps generally reach full maturity at 12 years and flower and die at 50-100 years. During this time culms can be sustainably harvested at 20-30% of the clump per year. Culms are most suitable for harvesting when they are older than 3 years and younger than 6, otherwise they are weak. Sap levels are lowest towards the end of the dry season and at the beginning of the day, so bamboo harvested at these times is more pest resistant.

Steel framing	• Highly pest resistant, durable and strong for their weight makes steel frames ideal for when building materials must be carried in from far away and shelters may be occupied for prolonged periods. • When building near the sea, galvanized, zinc coated or painted framing should be used. • As steel frame construction technology is still relatively new in many ASEAN countries, steel frame shelter programs should contain extensive trainings both to participants in construction and the broader construction community so that families are able to renovate and extend structures without reducing structural integrity.

General considerations

- Framing material used should be selected to match local skills and capacities. Where new technologies are introduced, extensive training is likely to be required to ensure that local tradespeople really understand how the material works and how to renovate, repair and maintain structures built using theta technology.
- It is important also to remember that existing understanding of construction technology is commonly lower than it should be and that this is often one of the reasons that houses have been damaged by the hazard that struck them. A critical part of building shelters is improving community construction skills.

Timber frame with wiremesh and plastering

Photo credit: Build Change

15.12 Selection of roofing materials

Selection of roofing materials	
Type	Description
Thatching	• Thatching is in many ways an ideal roofing material for the tropics; lightweight and renewable, providing good insulation and relatively simple to construct. • Thatching does however have considerable drawbacks for large scale shelter projects. It can be difficult to procure in bulk, is prone to fire, can take a long time to construct and uses an extremely large volume of material per house to construct. Hence, can have a high transport cost By far the biggest issue with thatching, however, for large scale shelter responses is community acceptance. Many communities see thatching as old fashioned and lacking dignity. • Thatching commonly uses palm thatch; such as cabbage palm or sago palm, or grasses such as alang-alang / kunai grass. There are a broad range of other materials that can be used depending on available resources. Bamboo thatching, using the skin of the bamboo culm is one such example. • Quality of thatching is very dependent on the time of year at which it was picked and the way in which it was dried, this varies from location to location and local expertise should always be sought.
Ceramic tiles	• A wide variety of standards exist in Indonesia, from factory made glazed tiles to handmade unglazed tiles made locally; costs vary accordingly. It is important to ensure tiles used in any one shelter are from the same source as exact sizes may vary. • If produced locally, it can be a fairly environmentally friendly option, though the impact of fuel used for firing should be considered in large scale programs. • Increased weight of tiled roofs requires extra bracing in quake prone areas, though reduces uplift in high wind areas.
Cement tiles	• Concrete roof tiles come in two forms: low compression thicker harder tiles, or high compression (reinforced) thin tiles. • Concrete tiles have the advantage that they can be produced in any area that has sand gravel, cement and water, and, can provide meaningful livelihoods. • Although less common in much of Indonesia than other forms of roofing they are a viable alternative to clay roof tiles.
Corrugated iron (CGI)	• Durability depends greatly on thickness and quality of galvanizing. CGI roofs offer the advantage of a broad waterproof area at relatively low cost and allow roof frames to build on shallower angles, of particular benefit in high wind prone areas. • CGI roofing is available in thicknesses from .2mm through to .5mm in .05mm increments. Thicknesses below .35mm are suitable for walling, while .35mm and above are suitable for roofing.

Asbestos PROHIBITED	• Asbestos roofing is made from a combination of asbestos fibers and cement. Asbestos is a naturally occurring mineral imported into Indonesia from Brazil, Russia, China and India. Asbestos is a well-known and serious carcinogenic that has been outlawed in more than 60 countries and its use is banned by the Federation of the Red Cross. Versions of Asbestos sheeting that claim to be Asbestos-free should also be avoided as there is no enforcement of this claim in Indonesia. Either way, when it comes to renovating or extensions, the only product available to affected families may contain asbestos.

General consideration

- Lightweight roofing materials such as CGI require a higher degree of tie down, while heavy roofing materials require additional bracing.
- CGI roofs can be installed at a much lower pitch (5-100) than other forms of roofing (12+0) making them quite suitable in high wind areas. Ensure a lateral overlap of at least two corrugation ridges across the edges of each sheet.
- Use only umbrella-headed nails or bolts to attach CGI sheets to roof purlins. Make the attachments at the ridges of the CGI sheets, not in the valleys. There should be a maximum 50 cm between each attaching bolt or nail.
- Choice of roofing material must be based on a range of cultural and environmental considerations, the local community should always be consulted prior to the decision being made

2010 Mentawi tsunami, Indonesia
Temporary shelter with CGI roofing
Photo credit: PMI 2010

15.13 Utilising recycled and salvaged materials

Many construction materials can be salvaged from damaged or destroyed houses, either in their original form, or re-formed (for instance crushed rubble from old brick or concrete walls, used as the base for flooring). The materials can be used either for non-permanent shelters, or for repair or reconstruction of permanent housing.

Be aware that there are some common materials which may not be usable in its original function, once it has been salvaged. Salvaged reinforcement bar, even if it has been re-straightened, may have lost much of its strength, even if it this is not visible to the naked eye. Crushed concrete does not have the same chemical bonding qualities, or the same strengths, as freshly mixed concrete.

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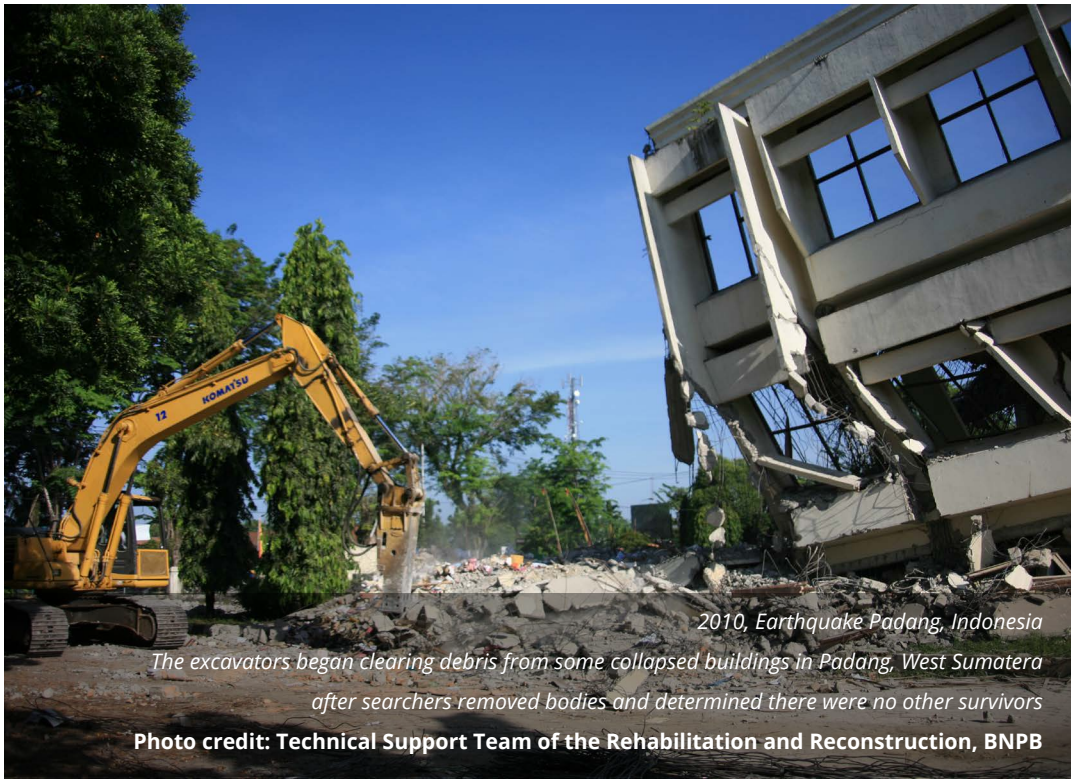
Salvageable materials			
Type of material	How to use in shelters	How to use in houses	Don't use it like this
Reinforcement bar	Poles to hold up plastic sheeting, or security barriers to keep makeshift doors shut and locked	Strapping for connections between roofing frames and walls	Do not re-use as reinforcement bar inside formed concrete, even if re-straightened
Wooden beams	Framing for plastic sheeting or other soft-shell shelters, or combined to make walls or half-walls for shelters	Shorter bracing elements, window or door frames, external fencing	Use for load-bearing or bracing elements only if there is absolutely no signs of damage or stress
Wooden planks	Framing for plastic sheeting or other soft-shell shelters, or combined to make walls or half-walls for shelters	Walling, roof covering if water-proofed	Do not use for load-bearing or bracing elements
Metal or PVC piping	Framing for plastic sheeting or other soft-shell shelters, piping for drainage channels around the shelter	Replacement piping, where of appropriate length and diameter, roof guttering, and rainwater-harvesting piping	Do no use for sewage pipes, if cracked or no longer completely water-tight

Bamboo poles	Framing for plastic sheeting or other soft-shell shelters, roofing frame for shelters with CGI-sheet roofs	Roofing frame for lightweight housing types, external fencing, lightweight door and window shutters	Do not use for any load-bearing or bracing element, if the bamboo shows any signs of lateral stress-induced splits
Plywood, or chipboard sheeting	Lean-to walls, sloped emergency roofs	Walls for lightweight ancillary structures, such as outdoor kitchens or outdoor latrines	Do not use as a substitute for bracing, in order to reduce movability of shelter or housing frames



2010, Earthquake Padang, Indonesia
The excavators began clearing debris from some collapsed buildings in Padang, West Sumatera after searchers removed bodies and determined there were no other survivors
Photo credit: Technical Support Team of the Rehabilitation and Reconstruction, BNPB

16. Closing a program

Closing a shelter program well is a critical part of ensuring overall success. Leaving too soon may leave communities with unmet critical needs that they are incapable of meeting. Closing too late may add to aid dependency and reducing self-sufficiency and hence impacting on the impetus to self-recover.

16.1 Plan an exit strategy from the start

To ensure the success of a shelter exit strategy it is important to start thinking about and planning for it from the very beginning of the shelter response. Whilst circumstances may change and plans may need to be altered, there should be plans in place to ensure that both the beneficiaries and the people working on the program have a clear idea of how and what is expected in the long run. Shelter Program designs should include clarity on:

Evaluation of a shelter program	
Key questions	• How will we 'phase-down' our program? • Will we 'phase out' activities or 'hand them over' to a local actor? • What is an appropriate timeline? • How will we know we are on track? • What indicators / benchmarks will we use? How will we monitor them? • What are the specific action steps to reach the indicators / benchmarks? • How to ensure all legal and contractual issues are covered through formal handover of assets and closure of contracts. (Example of handover certificate is provided in Annex B).
Guiding principles	• Flexibility: consider the timeline. Beneficiary needs are not static, many things change. • Include ongoing program review and revision. • Transparency: especially regarding program limitations and funding cycle. • Participatory.
Challenges	• Allow adequate time and staff resources to build capacity, and to work with other organisations. • Respond to changing needs of target groups. • Resist the tendency to cover for a lack of sustainability by handing on unfinished business or financial/resourcing commitments to others.

16.2 Partnerships and local linkages

Closing a program can be greatly impacted by who we handover to and this in turn is influenced by the strength of the relationships we have developed both with local government and community groups and other agencies working or planning activities in the area. Organisations with strong existing local linkages are well placed to understand local context and develop meaningful relationships, however this can also pose challenges in ensuring objectivity and transparency and therefore ensuring the most effective and appropriate outcome for the affected population. The following checklist can assist in ensuring the strength and appropriateness of the partnerships and linkages required for effective program closure.

Checklist to develop partnerships and local linkages early on	
Key questions	• What types of organisations should we partner or develop links with exit in mind? • What will they bring to us and what can we offer to them in terms of exit? • How can this help facilitate a successful exit?
Guiding principles	• Diversity: consider what other program inputs may be needed as well as the core one. • Build in good coordination and communication from the start. • Ensure goals are shared and clear.
Challenges	• Aligning the needs and goals of diverse stakeholders. • Supporting and building the capacity and institutions of local partners without building dependency.

16.3 Strengthening local capacity

Exit strategies are most successful when they leave behind a strengthened and empowered local community with the skills and abilities to carry on recovery and reconstruction by themselves. The strengthening of local branches, staff, volunteers and community should be designed into programs from the beginning as a core objective of the shelter program. Strengthened local capacity not only makes program closure and handover easier, it also helps reduce risk, by building local awareness and coping capacity. The following checklist can assist in providing guidance.

Strengthening local capacity	
Key questions	• What capacities already exist within the local community and how can these be strengthened through ongoing collaboration and partnerships? • Are there local organisations that are under-resourced? How can these organisations be supported through ongoing shelter response activities? • Which community members, organisations and staff require capacity building? How can this be achieved? • What staff do we need within our program, and how can we develop meaningful partnerships with local communities or organisations? • How can we ensure that staff and volunteers from the local community are adequately engaged to ensure relevant skills are left behind? • What indicators and methods will we use to monitor progress in local capacity building? • What skills will be needed within communities when we leave? How can these skills be improved through partnerships and collaboration?
Guiding principles	• Build on existing capacity wherever possible • Create environments that foster skills development and passing on skills to counterparts. • Where local capacity exists; support and empower local organisations, communities and individuals to take the lead in activities. • Develop advocacy strategies with communities and build their capacity to access what they need in the future from other agencies (empowerment). • Monitor progress.
Challenges	• Slower progress when working with a capacity building approach. • Retaining experienced staff (build this into your HR policies and benefits system). • Designing monitoring to track capacity building.

16.4 Resourcing an exit strategy

Finding adequate resources for needs identified in exit strategies can be particularly challenging especially where it is expected that communities may take a long time to completely re-achieve permanent safe and secure housing. Building local coping capacity, assisting to overcome blockages in local markets and empowering and connecting communities to work strongly with local government and other organisations can form an important part of this process.

Checklist: Resourcing an exit strategy	
Key questions	• What inputs are needed to ensure program outcomes are maintained in the long term? • Which benefits of the program can be sustained without continued inputs? Which can't? • Are they available locally? Internally or externally?
Guiding principles	• Build sustainability into program from outset, look to using local resources as much as possible. • Support communities to advocate effectively for their long term needs.
Challenges	• Difficulty finding resources locally. • Ongoing or excessive community expectation. • Resist the tendency to cover for a lack of sustainability by handing on unfinished business or financial/resourcing commitments to other organisations.

16.5 Staggering or staging exits

Wherever possible shelter exit strategies should be based on a staged or staggered exit. The use of transitional shelter concepts can ensure that contributions made to the community continue to have a lasting effect and go on to provide value to assisted families.

16.6 Ongoing volunteer engagement strategy

In large scale shelter responses thousands of new volunteers may be engaged and deployed to assist communities. Exit strategies should consider the future role of these volunteers both as organisational assets, and as a future resources if disaster should strike again. Ongoing volunteer engagement strategies may include;

- Ongoing training
- Counseling, debriefing or ongoing support as required
- Creation of alumni networks, through social media
- Ongoing planned activities and capacity building
- Development of rosters listing skills, experience and availability.

Disaster response can be a harrowing experience for staff and volunteers. It is important to remember that local staff and volunteers are often directly affected themselves, in addition to being first or second responders. Returning home at the end of a major disaster response deployment can be a traumatic process. This process can be much more traumatic for those who are directly affected as well. It is important that exit strategies include support plans for staff and volunteers.

16.7 Asset management plan

Large scale shelter programs may involve the deployment of large volumes of assets such as computers, vehicles, coordination tents, radios, etc. It is valuable to be clear from the beginning of a program as to what is planned for these assets as the program winds up.

Checklist: asset management plan	
Key questions	• Which assets should be returned to international partners, national, provincial or district head quarters? • Which assets will be handed over to the community or local government? • Will some of the assets require repair or servicing? • Do assets require special packing for protection in storage? • What are the transport requirements? • When will each asset be decommissioned from the program? • Who has responsibility for each asset? • What mechanisms can be put in place to ensure assets are not misplaced or stolen?
Guiding principles	• Where the affected population will have an ongoing need of key assets to fully recover, then solutions should be found to make them available for as long as possible. • Assets that may be of use in future disaster responses should be repaired, cleaned, packaged and stored to ensure maximum operability when next needed.
Challenges	• Community, branch or local government expectations of ownership. • Tracking and maintaining assets in the field.

16.8 Outstanding needs assessment

Exit strategies commonly include some form of assessment of outstanding needs. Outstanding needs assessments include cross checks to ensure that:

- The needs of the most vulnerable members of the community have been addressed
- All cross cutting issues have been adequately taken into consideration
- Targeted needs have been met
- Critical humanitarian needs have not been overlooked or that new needs have not arisen
- Communities are now capable of recovering on their own
- Future risks have been assessed and risk reduction / disaster preparedness measures have been put in place

16.9 Final evaluation and lessons learned

Commonly the final stages of a shelter response include a final independent evaluation as part of the process of trying to capture and record the lessons learned to improve future responses.

Final evaluations can be challenging for staff and volunteers who have just dedicated a portion of their life to sheltering an affected population. Many will be justifiably proud and defensive of their work and easily feel criticized, others may be deeply frustrated and feel that they did not achieve as much as they hoped and be deeply critical. Capturing, filtering and reflecting upon the mixture of experiences that have unfolded for volunteers, staff, donors, and the affected population is an important part of the process of closure.

MONITORING, EVALUATION ACCOUNTABILITY AND LEARNING

Photo credit: Fabian Prideaux

17. Monitoring and evaluation

A well-functioning M&E system is a critical part of good project / program management and accountability.

To be effective, both Monitoring and Evaluation need to be developed during the program design stage. Monitoring and evaluating shelter programs offers some unique challenges as it requires a combination of technical construction skills along with socio-cultural understanding. Therefore, Shelter Monitoring and Evaluation systems must include elements of both physical inspection of quality, progress and safety along with socio-cultural assessment.

Evaluation of safe-shelter training
Photo credit: Fabian Prideaux

Further information - Monitoring and evaluation:

IFRC, 2011. Project/program monitoring and evaluation (M&E) guide

IFRC, 2012. PMER (planning, monitoring, evaluation, reporting) pocket guide

17.1 Monitoring vs evaluation

Monitoring and evaluation are often referred to jointly as Monitoring and Evaluation; in reality they are two separate processes.

Monitoring			
Definition	**Ensuring**	**Checking**	**When**
An ongoing process of observation for a program, based on the collation and analysis of program data and other sources of information	• Quality • Quantity • Progress over time • Inclusivity • Transparency • Accountability	• Inputs are being delivered • Outputs are progressing • Objectives are being achieved • Standards and guidelines are being maintained • Cross cutting issues are being addressed • Risks and hazards • Coping capacity • Changing needs	Ongoing at all stages of the implementation of a shelter program. Monitoring is a day to day activity incorporated into all aspects of program delivery
Evaluation			
Definition	**Ensuring**	**Checking**	**When**
• Assessment or judgement based on program data or parameters such as amount, number or value	• Efficiency • Effectiveness • Relevance • Sustainability • Impact • Inclusivity • Transparency • Accountability	Objectives are on track to meet goals Goals remain relevant to both needs and capacity Monitoring mechanisms are working effectively	Intermittent at key stages of the program cycle

17.2 Monitoring and evaluation tools

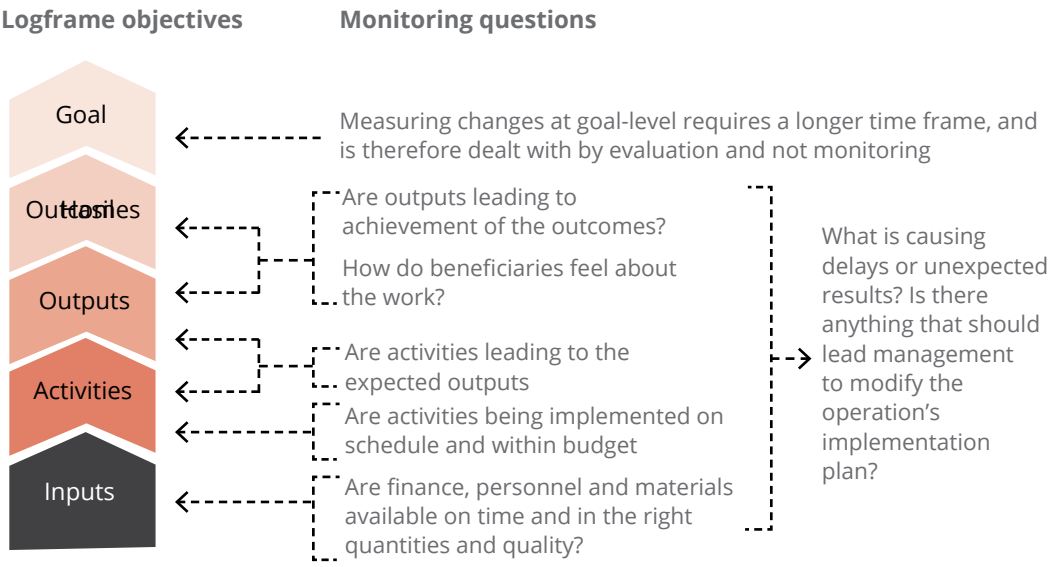
A broad range of tools are available for monitoring and evaluating shelter programs. These vary from informal tools, such as staff perception and daily discussions, to formal mechanisms, such as surveys, checklists and measurement tools. Informal tools tend to provide qualitative information, such as how beneficiaries are feeling about the program, what people are concerned about, whilst more formal tools are often better at providing quantitative data that can be objectively compared and tracked over time.

Examples of tools used in monitoring and evaluation		
	Qualitative	Quantitative
Informal	• One on one unstructured interviews • Passing discussions • Monitoring media • Newsletters and articles	• Measurement of happiness or contentment through observation of participation • Random spot surveys
Formal	• Desk review of program documents • Structured interviews • Group discussions • Open question surveys and questionnaires • Beneficiary feedback mechanisms • Photographs and video interviews • Feedback workshops	• Regular measurement regimes, for weight, size, quantity, quality, cost, speed of delivery or assembly • Spreadsheets and databases • Checklists • Closed question surveys and questionnaires • Regular reports • Random checks • Audits

Program monitoring commonly utilises more formal and quantitative tools and less informal qualitative tools, whilst program evaluations commonly use the output from program monitoring as a starting point, combined with a range of formal and informal tools that look more for qualitative input.

17.3 Monitoring in a shelter program

Below are common questions to seek answers to in the monitoring of a shelter program.



(Source: IFRC 2011)

17.4 Evaluation of a shelter program

Evaluation of a shelter program	
	Question
Impact	• What planned changes has the program achieved and what is it on track to achieve? • What unplanned changes (negative or positive) is the program achieving or likely to achieve?
Sustainability	• Are the benefits delivered by the program likely to be maintained for an extended period after assistance ends?
Effectiveness	• Were the operations objectives achieved? • Did the outputs lead to the intended outcomes?
Relevance	• Were the operation's objectives consistent with beneficiaries' needs and with agency policies and mandates?
Efficiency	• Were stocks of items available on time and in the right quantities and quality? • Were activities implemented on schedule and within budget? • Were outputs delivered economically?