

Communicating Technical Evidence

Supporting people making decisions about shelter after disasters

Technical evidence after disasters: a review of documents from Haiti, Peru and Pakistan

21st March 2013

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ARUP



Evaluating the technical evidence

Is it user-friendly?

Clarity:

- Number of pages
- Document type (purpose and audience;)

Timeliness:

- How long before/after the event was it available?

Scale of focus:

- What are the photos showing?
- What is the level of detail of maps?

Strategic Analysis

- existing processes?
- appropriate processes?
- acceptable processes?

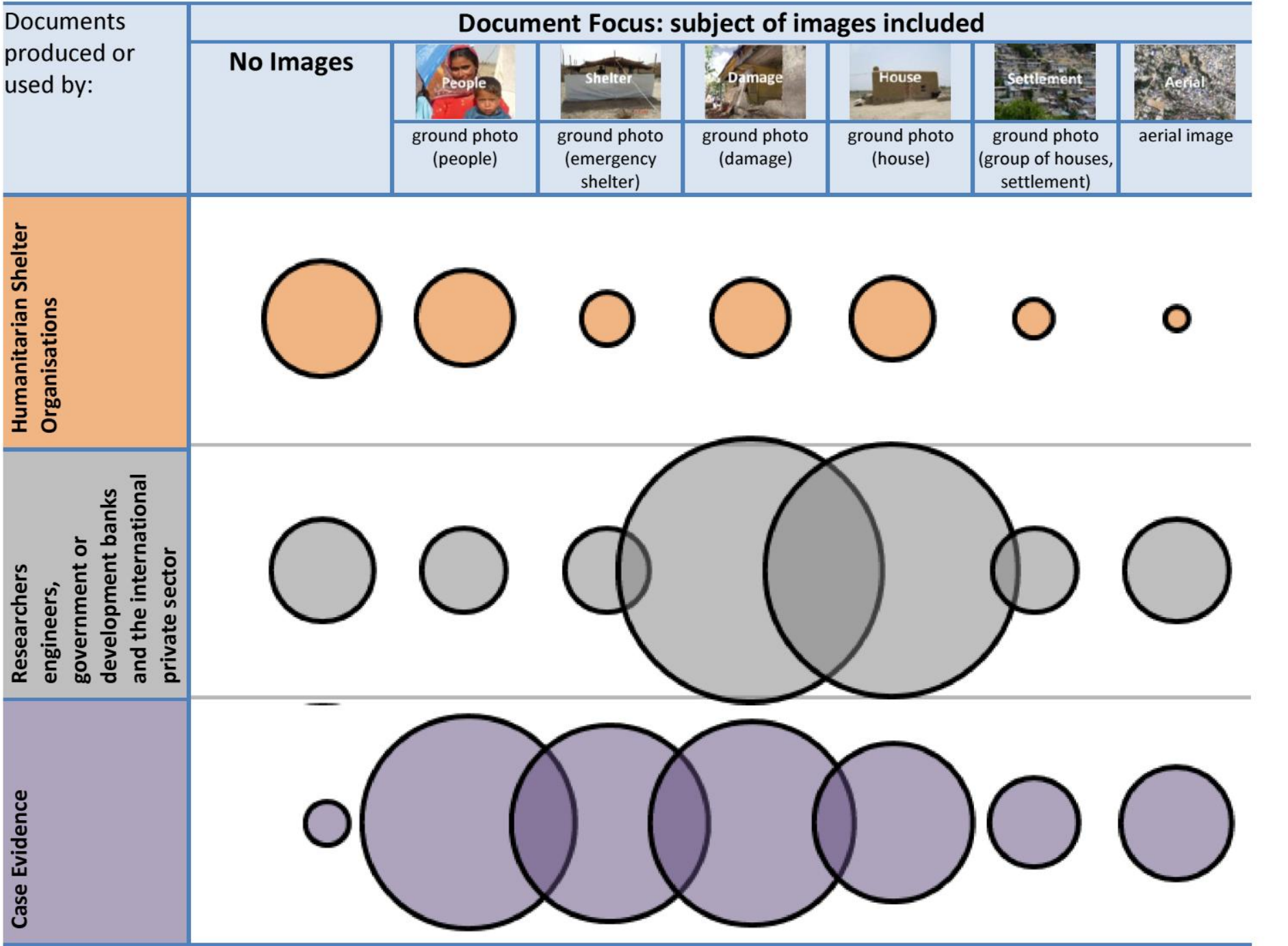
Is it relevant?

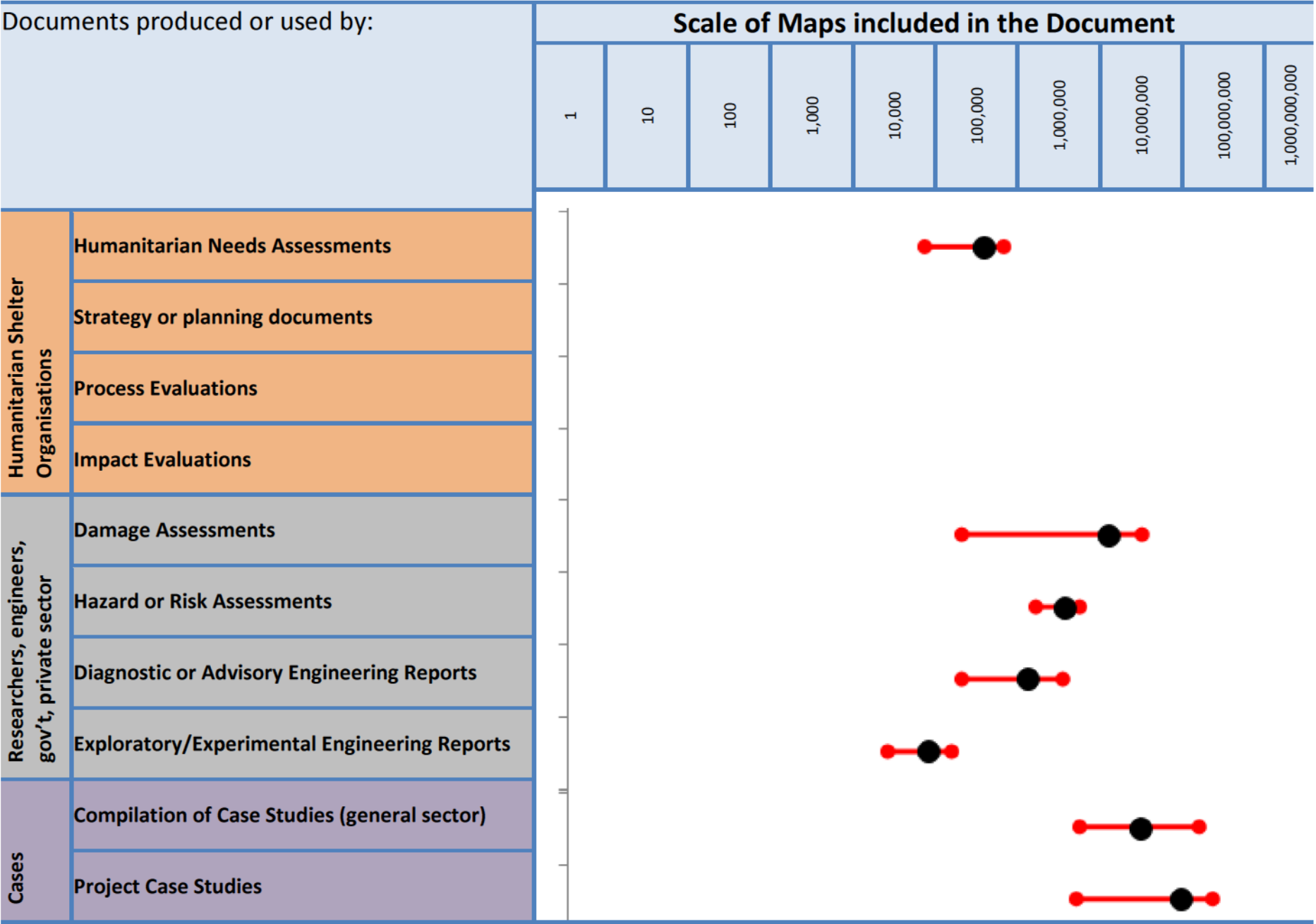
Humanitarian Priorities:

- Who is affected,
- Where are the affected and
- How much need/how many people
- Why were people affected?

Shelter Processes:

- Counting,
- Describing,
- Diagnosing,
- Strategically interpreting: different damage for different people/places

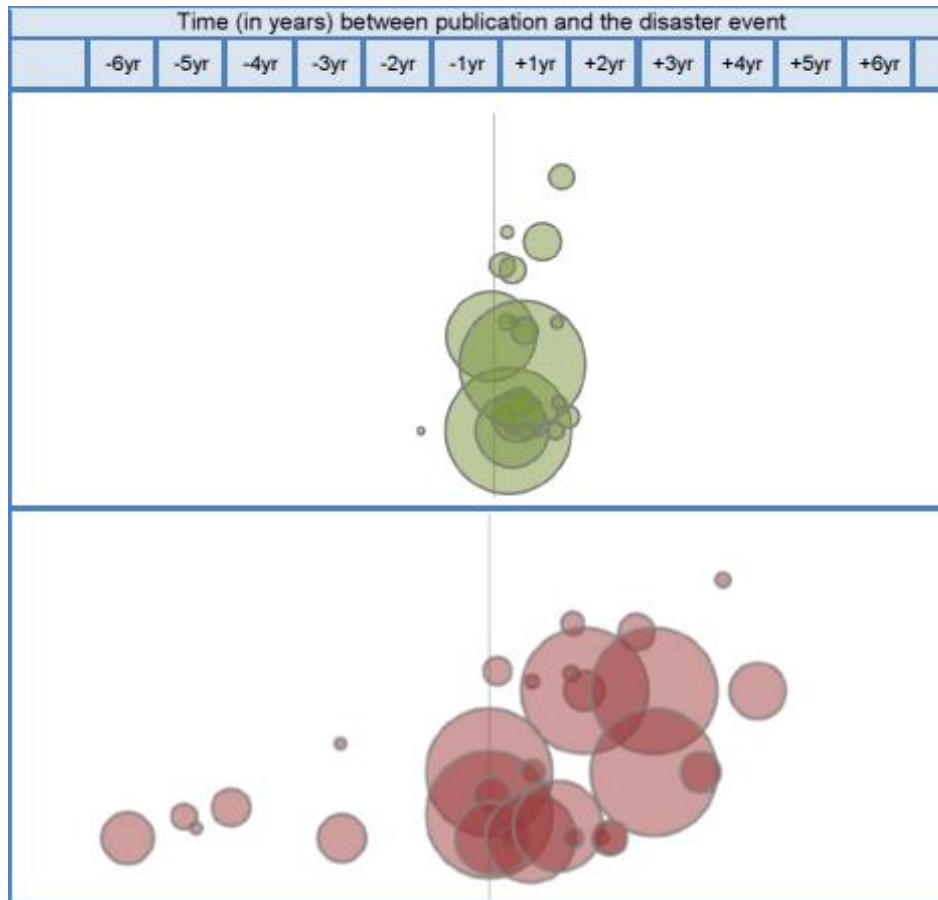




Comparing document samples from Haiti and Peru

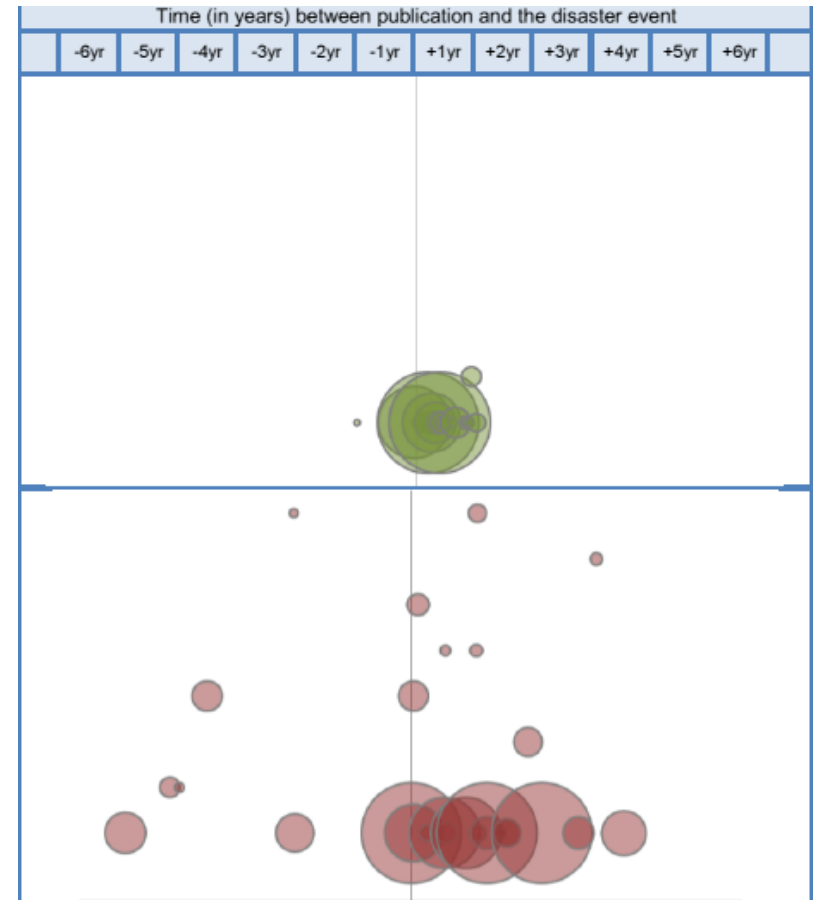
Evidence on Humanitarian Priorities

- Who?
- Where?
- How many people/how much need?
- How/why such damage?



Evidence on Housing and Shelter Process:

- Count damage
- Describe damage
- Diagnose damage (social and physical factors)
- Interpret impacts on different people or places
- Interpretation then informs response



Recommendations: gaps, marriage, synthesis

Filling Gaps: do more thinking ahead of time... let's consolidate experiences of post-disaster repair and retrofit and alternative approaches for rented, informal, traditional or vernacular types of housing

Marriage: do the same thinking in the aftermath but do it together... let's put our information together to try to answer with technical ministries and disaster-affected communities

Synthesis: think in new ways... let's develop techniques to **synthesise and interpret technical evidence** to understand the context of the shelter process.



Did we manage to communicate technical evidence?!



Capturing the humanitarian imagination

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Communicating Technical Evidence: supporting people making decisions about shelter after disasters



Organisation:
UCL

Partners:
CARE International UK, Arup

Location:
UK

Project status: Completed

Timeline: 1st August 2012 - 30th November 2012



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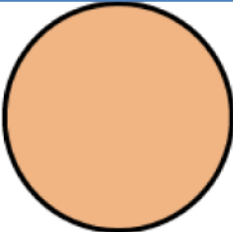

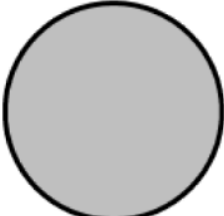
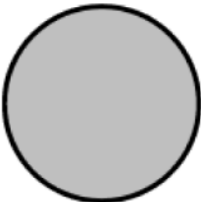
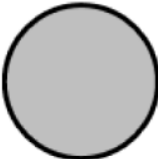
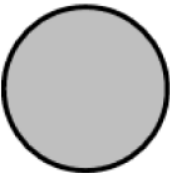
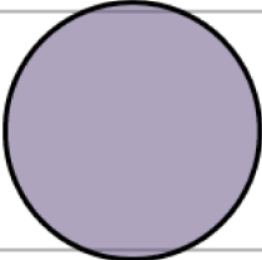

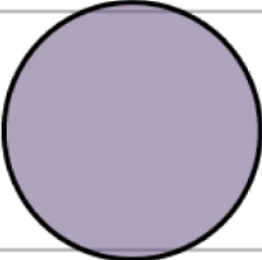

Summary: This project takes a fresh look at the collection and communication of evidence about hazards, damage and needs after disasters.

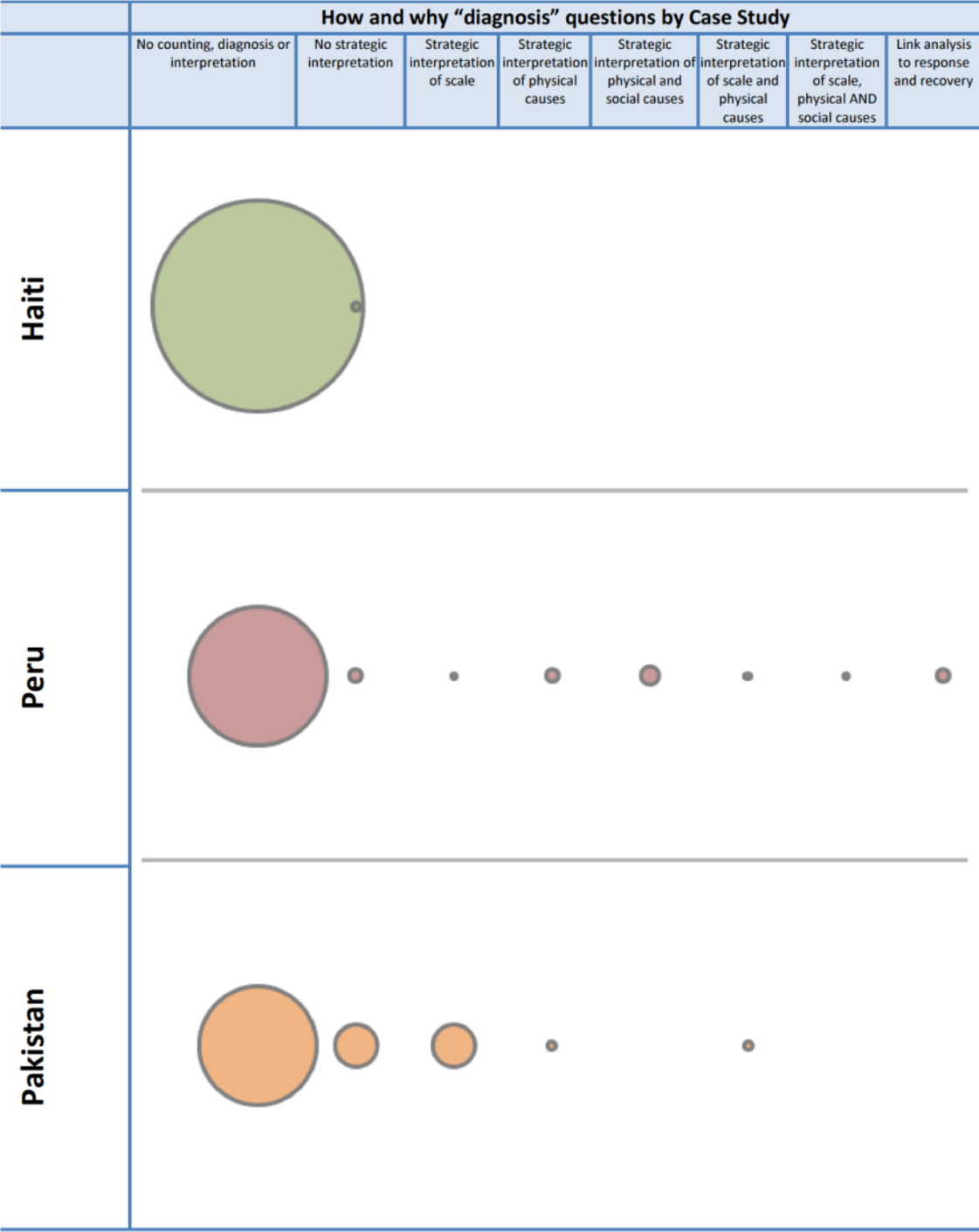
<http://www.humanitarianinnovation.org/projects/small-grants/UCL>

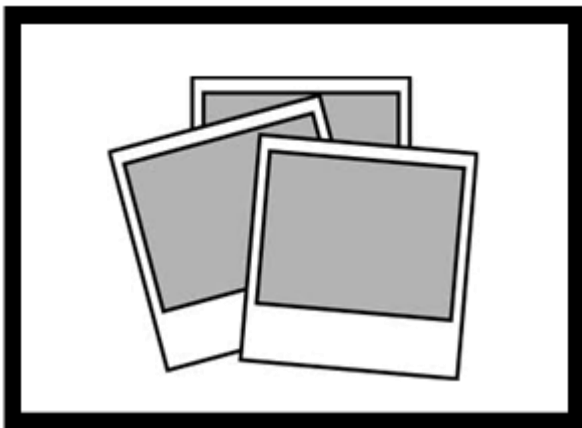


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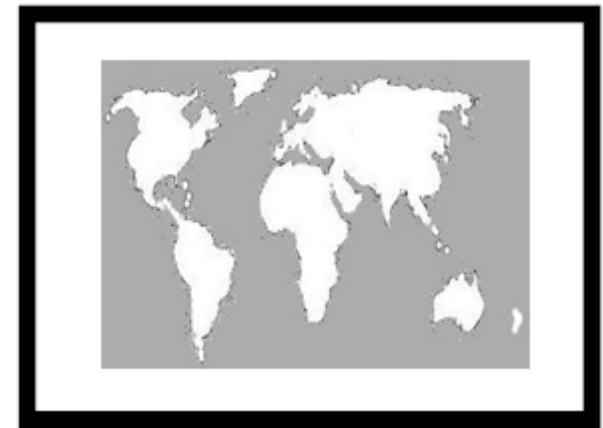


Documents produced or used by:	Who, Where, How much/how many, how/why “diagnosis” questions			
	Who	Where	How many/how much	How/why damage
Humanitarian Shelter Organisations				
Researchers, engineers, gov't, private sector				
Case Evidence				





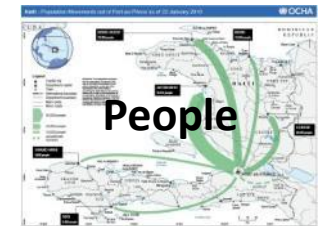
Images or Photographs
(standalone)



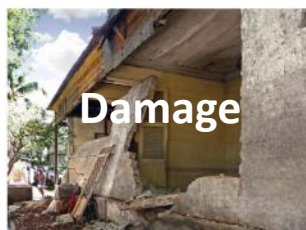
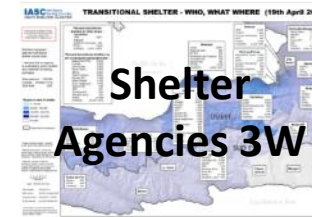
Maps
(standalone)



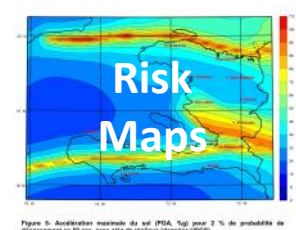
Who and where?
Numbers,
displacement,
vulnerabilities

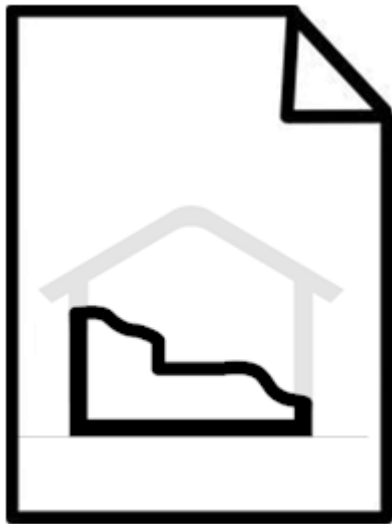


How much?
Meeting Shelter
Needs

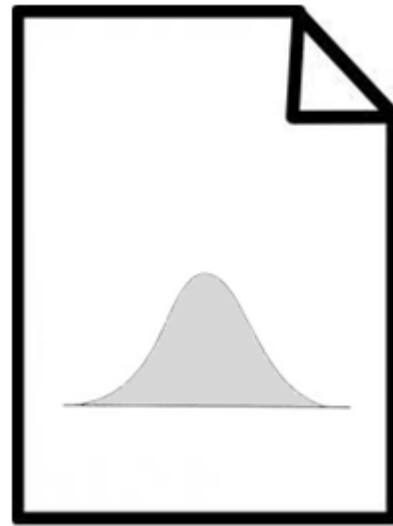


How come?
Context, risks,
damage





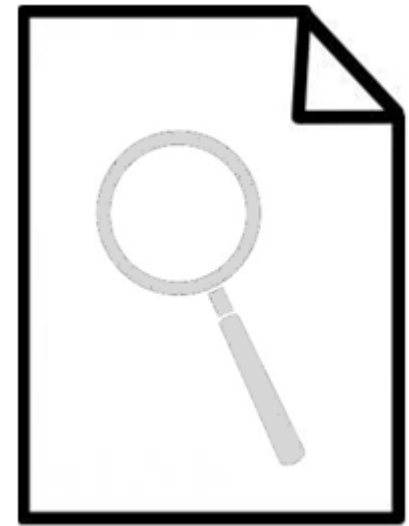
Damage Assessments



Hazard or Risk Assessments



Diagnostic or Advisory Engineering



Exploratory or Experimental Engineering

Executive summary

Notes for review draft

All paragraphs in this report are numbered thus 1.1 in the left margin for ease of reference. This numbering will be removed in the final report. Recommendations are in italics and are numbered without the 1. prefix.

Introduction

- 1.1 The evaluation was led by an external evaluator with assistance from the Sector Advisor for Assessment, Design, Monitoring and Evaluation attached to the Emergency & Reconstruction Assistance Unit in Atlanta. The Terms of Reference are attached as appendix 2.

Country	2015-2017 (USD million)	2018-2020 (USD million)	2021-2023 (USD million)	Total (USD million)
Algeria	1.0	1.0	1.0	3.0
Armenia	1.0	1.0	1.0	3.0
Azerbaijan	1.0	1.0	1.0	3.0
Bangladesh	1.0	1.0	1.0	3.0
Bhutan	1.0	1.0	1.0	3.0
Bolivia	1.0	1.0	1.0	3.0
Brazil	1.0	1.0	1.0	3.0
Bulgaria	1.0	1.0	1.0	3.0
Cameroon	1.0	1.0	1.0	3.0
Canada	1.0	1.0	1.0	3.0
Chad	1.0	1.0	1.0	3.0
China	1.0	1.0	1.0	3.0
Cote d'Ivoire	1.0	1.0	1.0	3.0
Croatia	1.0	1.0	1.0	3.0
Cuba	1.0	1.0	1.0	3.0
Cyprus	1.0	1.0	1.0	3.0
Czechia	1.0	1.0	1.0	3.0
Denmark	1.0	1.0	1.0	3.0
Dominican Republic	1.0	1.0	1.0	3.0
Dominica	1.0	1.0	1.0	3.0
Ecuador	1.0	1.0	1.0	3.0
Egypt	1.0	1.0	1.0	3.0
El Salvador	1.0	1.0	1.0	3.0
Equatorial Guinea	1.0	1.0	1.0	3.0
Estonia	1.0	1.0	1.0	3.0
Ethiopia	1.0	1.0	1.0	3.0
Finland	1.0	1.0	1.0	3.0
France	1.0	1.0	1.0	3.0
Ghana	1.0	1.0	1.0	3.0
Guatemala	1.0	1.0	1.0	3.0
Guinea	1.0	1.0	1.0	3.0
Honduras	1.0	1.0	1.0	3.0
Hungary	1.0	1.0	1.0	3.0
India	1.0	1.0	1.0	3.0
Indonesia	1.0	1.0	1.0	3.0
Israel	1.0	1.0	1.0	3.0
Italy	1.0	1.0	1.0	3.0
Jamaica	1.0	1.0	1.0	3.0
Japan	1.0	1.0	1.0	3.0
Jordan	1.0	1.0	1.0	3.0
Kazakhstan	1.0	1.0	1.0	3.0
Kenya	1.0	1.0	1.0	3.0
Korea, Rep.	1.0	1.0	1.0	3.0
Kosovo	1.0	1.0	1.0	3.0
Kyrgyzstan	1.0	1.0	1.0	3.0
Latvia	1.0	1.0	1.0	3.0
Lebanon	1.0	1.0	1.0	3.0
Lesotho	1.0	1.0	1.0	3.0
Lithuania	1.0	1.0	1.0	3.0
Luxembourg	1.0	1.0	1.0	3.0
Macao	1.0	1.0	1.0	3.0
Macedonia	1.0	1.0	1.0	3.0
Mali	1.0	1.0	1.0	3.0
Malta	1.0	1.0	1.0	3.0
Mexico	1.0	1.0	1.0	3.0
Moldova	1.0	1.0	1.0	3.0
Morocco	1.0	1.0	1.0	3.0
Mozambique	1.0	1.0	1.0	3.0
Netherlands	1.0	1.0	1.0	3.0
Nicaragua	1.0	1.0	1.0	3.0
Niger	1.0	1.0	1.0	3.0
Nigeria	1.0	1.0	1.0	3.0
North Macedonia	1.0	1.0	1.0	3.0
Oman	1.0	1.0	1.0	3.0
Pakistan	1.0	1.0	1.0	3.0
Panama	1.0	1.0	1.0	3.0
Papua New Guinea	1.0	1.0	1.0	3.0
Paraguay	1.0	1.0	1.0	3.0
Peru	1.0	1.0	1.0	3.0
Philippines	1.0	1.0	1.0	3.0
Poland	1.0	1.0	1.0	3.0
Portugal	1.0	1.0	1.0	3.0
Romania	1.0	1.0	1.0	3.0
Russia	1.0	1.0	1.0	3.0
Saudi Arabia	1.0	1.0	1.0	3.0
Senegal	1.0	1.0	1.0	3.0
Serbia	1.0	1.0	1.0	3.0
Slovakia	1.0	1.0	1.0	3.0
Slovenia	1.0	1.0	1.0	3.0
South Africa	1.0	1.0	1.0	3.0
South Korea	1.0	1.0	1.0	3.0
Spain	1.0	1.0	1.0	3.0
Sri Lanka	1.0	1.0	1.0	3.0
Sweden	1.0	1.0	1.0	3.0
Switzerland	1.0	1.0	1.0	3.0
Taiwan	1.0	1.0	1.0	3.0
Tanzania	1.0	1.0	1.0	3.0
Togo	1.0	1.0	1.0	3.0
Tonga	1.0	1.0	1.0	3.0
Turkey	1.0	1.0	1.0	3.0
Ukraine	1.0	1.0	1.0	3.0
United Kingdom	1.0	1.0	1.0	3.0
United States	1.0	1.0	1.0	3.0
Uruguay	1.0	1.0	1.0	3.0
Uzbekistan	1.0	1.0	1.0	3.0
Venezuela	1.0	1.0	1.0	3.0
Vietnam	1.0	1.0	1.0	3.0
Yemen	1.0	1.0	1.0	3.0
Zambia	1.0	1.0	1.0	3.0
Zimbabwe	1.0	1.0	1.0	3.0

Table 3. Estimated total needs of children (7 children and/or permanent housing)



\$

Executive summary

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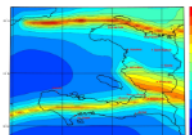


Figure 4. Evaluation map showing the risk of flood. Top right 0-1% no analysis as floodwaters are not expected to reach this area.

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Executive summary

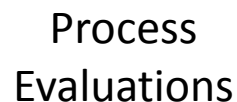
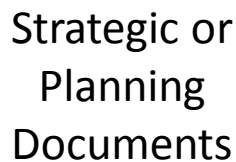
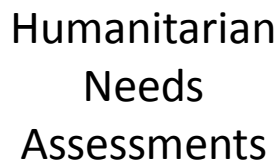
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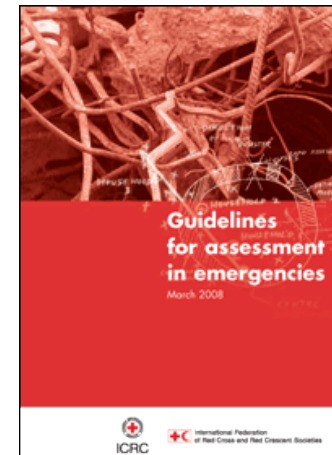
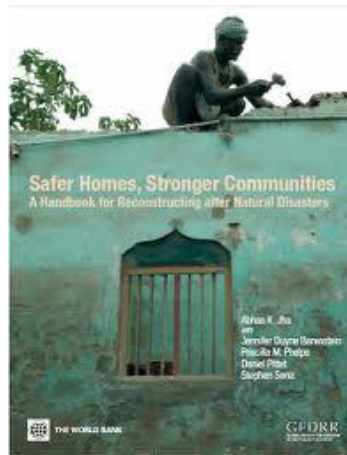
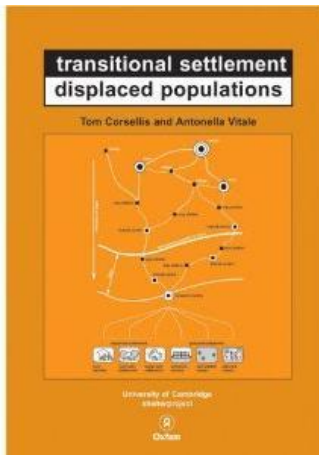




Procedural
Guidelines

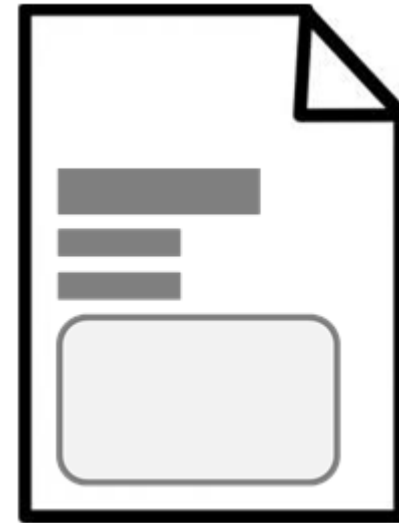


Assessment
Guidelines

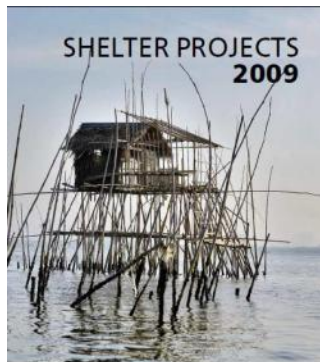




Compilation of
Case Studies



Individual Case
Study



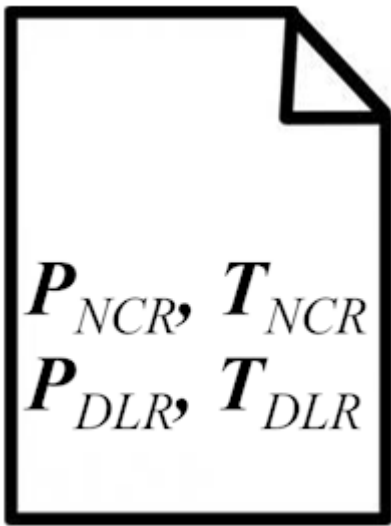
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FOR A BETTER URBAN FUTURE

International Federation
of Red Cross and Red Crescent Societies
www.ifrc.org



Shelter Case Studies:
Haiti - LAC
After the earthquake

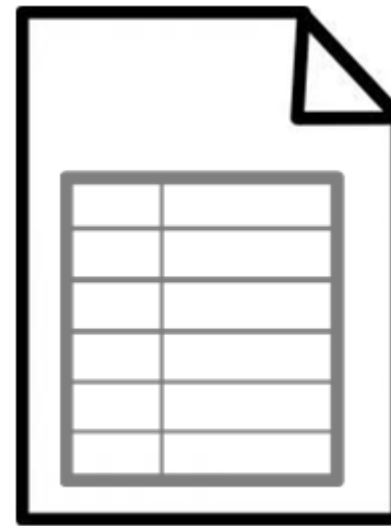




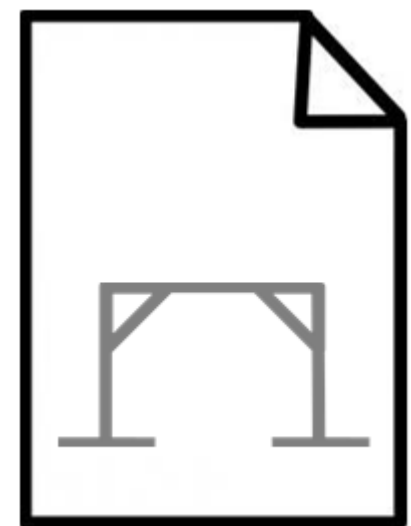
Structural Design Parameters



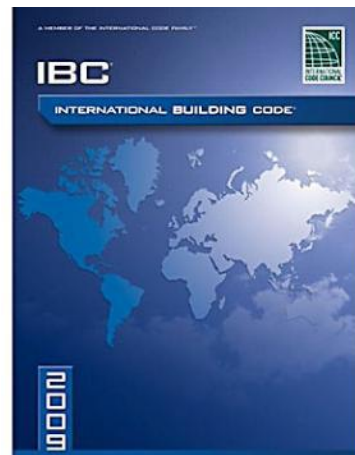
Building Codes



General Design Brief

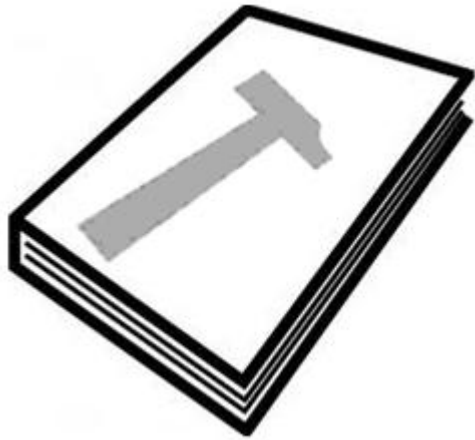


General Construction Principles



IASAC Working Group HAFS-2018-0000018		
TRANSITIONAL SHELTER PARAMETERS		
Performance standards and indicators for transitional shelters		Remarks
	Measures	
Structure	<p>Material and shelter construction to allow for reuse</p> <p>Shelters should allow for easy maintenance and</p> <p>allowing future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>
Design	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>
Location	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>
Construction	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>
Management	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>
Monitoring	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>	<p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p> <p>Shelters should be constructed in a way that allows for future use of the shelter for other purposes</p>





Building Instruction
Manual



Standard Design



Design Options
Catalogue

